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KNOWLEDGE ECONOMY SOCIETY

MANAGING
ORGANIZATIONS:
CONCEPTS AND THEIR
APPLICATIONS



Edited by

Andrzej Jaki, Bogusz Mikuła

KNOWLEDGE – ECONOMY – SOCIETY

MANAGING ORGANIZATIONS: CONCEPTS AND THEIR APPLICATIONS

CRACOW UNIVERSITY OF ECONOMICS
Faculty of Management
FOUNDATION OF THE CRACOW UNIVERSITY OF ECONOMICS

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Andrzej Jaki, Bogusz Mięka

Cracow 2014

Reviewer

Piotr Wachowiak

All papers have been prepared in English by the Authors

Wydanie publikacji zostało sfinansowane z dotacji na utrzymanie potencjału badawczego przyznanej Uniwersytetowi Ekonomicznemu w Krakowie

The book was financed with subsidies for maintaining the research capacity granted to the Cracow University of Economics

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ISBN 978-83-62511-54-9 (on-line pdf)

ISBN 978-83-62511-19-8 (printed version)

Publishing House

Foundation of the Cracow University of Economics
ul. Rakowicka 27, 31-510 Kraków, Poland

Table of contents

Introduction	9
--------------------	---

PART I SELECTED CONCEPTS AND METHODS OF CONTEMPORARY MANAGEMENT

Chapter 1

Jolanta Walas-Trębacz

Business Model and Value Chain of the Enterprise	13
--	----

Chapter 2

Adam Stabryła

Situation Analysis and Corporate Development Programming	25
--	----

Chapter 3

Mariola Wiater

The Impact of the Concept of New Public Management on the Development of Organizational Culture in the Civil Service	35
---	----

Chapter 4

Joanna Sobula

Modern Management Concepts in Work Organization Real Estate Managers	45
--	----

Chapter 5

Bartosz Bednarz

Sports Management: Case Study of a Polish Football Club – KKS Lech Poznań, Years 2009-2013	53
---	----

Chapter 6

Monika Salata

Modern Production Concepts	61
----------------------------------	----

Chapter 7

Jarostaw Żerulik

Project Assumptions, Development and Procedures in Quality Function Deployment Method	69
--	----

Chapter 8*Jarosław Nowak*

Impact of Business Intelligence Technology on Business Productivity 79

Chapter 9*Jan Jekielek*

Enhancing Project and Enterprise Agility to Respond to Change 87

Chapter 10*Beata Tarczydło*

Scents and Elements of Aroma Marketing in Building of an Appropriate Brand Image 97

Chapter 11*Mirosław Woźniak*

The Specificity of Talent Management Process 109

Chapter 12*Małgorzata Adamska-Chudzińska*

Determinants of Managerial Capability in Circumstances of Uncertainty and Risk 119

Chapter 13*Beata Olszewska-Labędź*

Employee Assistance Programmes, as a Part of a Modern Business Management 127

Chapter 14*Jadwiga Ślawska*

Information Security Risk Management 135

Chapter 15*Ryszard Pukala*

Insurance as a Tool for Limiting Corporate Operational Risk 143

Chapter 16*Kanhiya Lal Chawla, Pankaj Kumar Gupta, Arunima Sirohi*

Managing Quality Risks in Indian Higher Technical Institutions via KM Interventions 157

PART II
DEVELOPMENT OF KNOWLEDGE AND COMPETENCES
IN MANAGING ORGANIZATIONS

Chapter 17*Paweł Łukasik*

Organizational Learning Factors 171

Chapter 18*Božidar Leković, Slobodan Marić*

Knowledge as a Source of Entrepreneurial Venture and Key Success Factor of Small Business ... 183

Chapter 19*Grażyna Śmigielska*

Core Competences and Managerial Competences in Developing the Sustainable Competitive Advantage 195

Chapter 20*Stefan Alimpić*

Intellectual Capital Aimed at Creating Value and Competitive Advantage of Enterprises 203

Chapter 21*Michalina Szczepańska*

Usefulness of Different Intellectual Capital Models for Media Industry. Missing Elements in Terms of Media Characteristics 213

Chapter 22*Małgorzata Dolińska*

Open Innovation 221

Chapter 23*Marian Bursztyn*

Educational Significance of Emotional Intelligence in Development of Tourism 229

Chapter 24*Nataliia Zavydivska, Olga Zavydivska*

Health Management as a Component of Modern Higher Education System 239

Chapter 25*Anna Piwowarczyk*

Social Competences and Cross-Cultural Differences from a Perspective of Glottodidactics 247

PART III**DETERMINANTS OF FINANCIAL PROCESSES – ECONOMIC AND MANAGERIAL PERSPECTIVE****Chapter 26***Tomasz Rojek*

Capital Flows in the Contemporary Economy 257

Chapter 27*Andriy M. Lyubenko*

Conceptions of the Centralized and Decentralizing Organization of State Internal Financial Control 267

Chapter 28*Tetyana Novikova, Snizhana Pashova*

Optimization of Management Processes of Crediting Innovation in Ukraine 277

Chapter 29*Katarzyna Frodyma*

Sources of Financing in the Market of Renewable Energy in Poland 287

Chapter 30*Tetiana Girchenko, Kateryna Kupriyenko*

Evaluation of Organization of Retail Lending 297

Chapter 31*Marina Puchkova, Michail Romanovskii*

Project Finance in a Modern Volatile Economic Situation 305

Chapter 32*Yuriy Nemish*System of Enterprise Financial Liquidity Rating as an Instrument of Company
Management in the Variable Economic Environment 313**Chapter 33***Artur Holda, Anna Staszal*

Is it Creative Accounting, Risk Management, Manipulation or a Fraud? 325

Chapter 34*Agnieszka Giszterowicz*

Management and Tridimensionalism 333

Chapter 35*Jurij Renkas*

The Human Capital Theory as a Basis for the Development of Financial Reporting 343

Chapter 36*Anita Mrówka*

Labour Costs vs. Economic Performance of Companies 353

Chapter 37*Anna Jonkisz-Zacny*

In Quest of the Most Selected Depreciation Method 363

Authors 375

Introduction

The end of the 20th century was marked with a change in the structures and conditions of the economic world functioning, from industrial to post-industrial economy. The contemporary economy is defined as knowledge-based economy and can be considered to be the first stage of the development of post-industrial era. The scale of features characterizing it has now reached an unprecedented level. These are mainly qualities, such as: globalization of the business world, the network structure, turbulence, the acknowledgment of knowledge as the key factor of production which determines the way of using the remaining assets of an organization, broad use of computer technique in business activities. The occurring significant diversity of the economic world and the network-turbulent environment of business entities functioning within its framework have made organization management particularly complex and difficult. The first group of difficulties results from the necessity to include in management some assets which so far have often been neglected, at least partially, such as, for example, knowledge, human capital, talents, or intellectual property. It enforces changes in employees' ways of thinking and implementing the whole number of new management tools in practice. Secondly, the lack of possibility for highly probable forecasting future requires, among others, to improve business models, strengthen and develop new methods in the area of risk management. The development of IT technology requires further improvement of IT systems used in organizations, with special consideration given to the safety of information. Another group of difficulties arises from a high level of competitive struggle and imposes theoretical and tool strengthening of the concepts of innovation management, organization learning processes management and competence management, among others. On the other hand, a difficult situation on the financial markets and, arising from it, problems with financing activities of enterprises, the fall of demand on the world markets and the worsening financial situation of enterprises enforces the optimization of financial processes and the improvement of instruments applied in finance management. The economic situation of enterprises also necessitates the improvement of the fundamental areas of their activities and the systems of managing them, such as the production management systems.

The mentioned conditionings became the starting point for the creation of this book showing the selected theoretical, methodological and practical aspects of managing organizations. The entirety of the publication is divided into three following parts, linked to each other:

- I. Selected Concepts and Methods of Contemporary Management.
- II. Development of Knowledge and Competences in Managing Organizations.
- III. Determinants of Financial Processes – Economic and Managerial Perspectives.

Part One of the work presents a broad context of the occurrence and evolution of different management concepts and methods. The need to develop and improve management solutions used in contemporary organizations is related both to the formation of new business models and a necessity to adapt management concepts and methods to unquestionable specificity of various organizations (e.g.

public entities, football clubs, universities and colleges), or their use with reference to various areas of management (e.g. production management, marketing management, human resources management). Volatility and unpredictability of the conditions in which contemporary organizations are functioning also bring the need for the development of concepts and methods of risk management, and thus, efficient adaptation to the turbulent social and economic environment.

Part Two of the work focuses on exposing the significance of knowledge and competences in the process of managing organizations. It is a consequence of transformations occurring in recent years in the sphere of economic assets and their role in shaping economic processes. It is directly related to the growing significance of intellectual capital as the base for the functioning and development of organizations, and, in particular, the key determinant of the growth of its effectiveness and the capability of accomplishing their objectives. Its effect is the formation of the intellectual capital management concept and the knowledge-based management concept exposing the importance of knowledge, being both the component of an organization's economic assets and the product of its activity, as the object of management.

In the last, third part of the work, attention is paid to the role of financial processes, both in shaping the effectiveness and efficiency of the functioning of economies and the management of the sphere of contemporary enterprises' finance. Such an approach displays a need for the integration of macroeconomic and microeconomic perspective of perceiving and analyzing economic processes, and within them, financial processes because the financial system, including two sub-systems: the public and the private one, constitutes an integrated legal and economic mechanism enabling the fulfillment of cash flows among all entities functioning on the market.

This book was created as an effect of cooperation of the academic environment of Faculty of Management of the Cracow University of Economics and the employees and doctoral students of other University faculties, as well as representatives of various Polish and foreign academic centers. The work inscribes into the cycle of publications with the common title "*Knowledge – Economy – Society*" which are one of the effects of this many years' cooperation¹. As scientific editors, we would like to thank all the Authors for accepting the invitation to co-create this publication and for their dedication and contribution to its creation.

Andrzej Jaki, Bogusz Mikula

¹ See: *Knowledge – Economy – Society. Challenges of the Contemporary World*, Edited by R. Oczkowska, B. Mikula, Faculty of Management of the Cracow University of Economics – Foundation of the Cracow University of Economics, Cracow 2011; *Knowledge – Economy – Society. Dilemmas of the Contemporary Management*, Edited by A. Malina, R. Oczkowska, T. Rojek, Faculty of Management of the Cracow University of Economics – Foundation of the Cracow University of Economics, Cracow 2012; *Knowledge – Economy – Society. Transfer of Knowledge in the Contemporary Economy*, Edited by P. Lula, B. Mikula, A. Jaki, Faculty of Management of the Cracow University of Economics – Foundation of the Cracow University of Economics, Cracow 2012; *Knowledge – Economy – Society. Global and Regional Challenges of the 21st Century Economy*, Edited by P. Lula, B. Mikula, A. Jaki, Faculty of Management of the Cracow University of Economics – Foundation of the Cracow University of Economics, Cracow 2013; *Knowledge – Economy – Society. Challenges of the Contemporary Management*, Edited by A. Malina, R. Oczkowska, T. Rojek, Faculty of Management of the Cracow University of Economics – Foundation of the Cracow University of Economics, Cracow 2013 and *Knowledge – Economy – Society. Dilemmas of the Economic Resources Management*, Edited by R. Oczkowska, G. Śmigieliska, Faculty of Management of the Cracow University of Economics - Foundation of the Cracow University of Economics, Cracow 2014.

PART I

SELECTED CONCEPTS AND METHODS OF CONTEMPORARY MANAGEMENT



Chapter 1

Business Model and Value Chain of the Enterprise

Jolanta Walas-Trębacz

1. Introduction

The dynamic growth of competition, in a large extent associated with the globalization of the economy, causes the necessity of creation the concept of running a business. In the strategic management increasing attention of many researchers and business strategists is focused on explaining the impact of business models on creating value, results, and enterprise competitive advantage in the market. As it turns out, based on numerous empirical researches one of the conditions for the enterprise success is properly developed business model. The substance of the business model are its three components: the competitive advantage, resources and skills, and the value chain, which allow to create and retain value in the enterprise.

The design of the business models is a complex process which requires an interdisciplinary approach. The design process of business models should arise directly from the strategy of the enterprise. Changing the model may occur in the context of changes in the value chain at the interface of the relationship between suppliers, the enterprise and customers, but also in the context of innovative technologies, products, and creating new markets.

2. The concept and components of the business model

The term “business model” has operated in the global economy and science management for over fifty years. The attempt to explain what the business model is, was made for the first time in 1957 by Professors R. Bellman and Ch.E. Clark in the elaboration entitled *On the construction of a Multi-Stage, Multi-Person Business Game*. Over the years, with the development of the market and the global economy, the term “business model” has become the subject of many debates and scientific considerations, resulting in the creation of many definitions (Bąk, Kulawczuk, Szczeńiak (eds.), 2011, p. 9).

The business model is the method acquired by the enterprise to enlarge and use resources in order to present products and services offer to customers, in which the value exceeds the competitors’ offer and simultaneously provides the profitability to the enterprise (Afuah, Tucci, 2003, p. 20),

or some other term that says that it is a combination of strategic concept of the enterprise and technology of its practical realization understood as the construction of the value chain allowing for efficient exploitation and renewal of resources and skills, at the same time defining its purpose and answering questions:

- what organization will do?
- what are the basic sources and competencies?
- how the resources and competencies are configured in practice of everyday activities? (Oblój, 2002, pp. 97-98).

The business model is a description of running a business by which the enterprise is profitable. It can also be defined as a specific and individual place of creating value for each enterprise. An essential element of the business model is to identify the role of the entity in the value chain in which it participates. The business model determines who, what, to whom, at what cost and at what price is provided, in other words, provides a description of creating value added in the enterprise¹.

In the analytical context, it is a system model containing one central object, which is an analysed entity and interacting objects being suppliers, consumers, restriction sources. The business model is the configuration of the following elements: the proposition of the value for customer, resources/competencies, the position in the value chain and sources of revenue (Johnson, Christensen, Kagermann, 2008, p. 51; Gołębiowski, Dudzik, Lewandowska, Witek-Hajduk, 2008, p. 62)².

According to H. Chesbrough and R.S. Rosenbloom the business model is determined by following decisions:

- establishment of the value for the customer,
- identification of the target segment or segments of the market,
- determination of the structure of the value chain,
- determination of the costs structure, sources of profit, and estimation of the level of the potential profitability of the given offer,
- determination of the enterprise position in the context of the network that creates the value for the end-users,
- formulation of the competitive strategy that ensures to obtain and maintain an advantage over competitors (Chesbrough, Rosenbloom, 2002, pp. 533-534).

Table 1 contains an overview of the business model definitions due to various authors.

¹ Contribution to the development of definitions of business models have various researchers and practitioners, inter alia, P. Drucker, J. Magretta, A. Slywotzky, D.J. Morrison, B. Andelman, R. Amit, C. Zott, L. Massa, D.J. Teece (Zott, Amit, Massa, 2011, p. 1024).

² Regardless of whether there is creating the new business model, or follows the development of the existing one, elements are always: the type of competitive advantage (natural, relational, operating system, barriers to entry), resources and strategic skills, and the value chain. The advantage is the conceptual dimension of the business model and resources, skills, and the value chain comprise the practical extension of intellectual decisions (Oblój, 2002, p. 100).

Table 1. The interpretation of the term “business model”

Author	Definition of the business model
A.J. Slovtzky, D.J. Morrison, B. Andelman (2000)	The business model is the enterprise’s ability to obtain and maintain profitability (remain in the “profit zone”).
R. Boulton, B. Libert, S. Samek (2000)	The business model is a unique combination of tangible and intangible assets that determine whether the organization is capable to create or destroy values.
M. Rappa (2001)	The business model describes how the enterprise generates profits, determining the position of that enterprise in the case of the value chain.
J.C. Linder, S. Cantrell (2001)	The business model is the idea of running a (profitable) business in the changing environment, containing the proposition of the value for customers developed with key stakeholders, and including operations which serve creating and offering this value.
K. Obłój (2002)	The business model is a combination of strategic concept of the enterprise and technology of its practical realization understood as the construction of the value chain allowing for efficient exploitation and renewal of resources and skills.
H.W. Chesbrough, R.S. Rosenbloom (2002)	The business model is a heuristic logic linking the technical possibilities with the implementation of economic value.
L. Morris (2003)	The business model describes how the ways of creating and delivering value (for customer) can evolve along with changes in needs and preferences of customers.
J. Rokita (2005)	The business model reflects the ways of achieving appropriate economic results expressed by the relation of revenues, costs and profits in the entire organization.
A. Osterwalder, M. Rossi, M. Dong (2010)	The business model describes the architecture of the enterprise and the system of relationships with external partners, created as a tool for forming values to final customers, serving to ensure the competitive conditions for sustainable growth of the enterprise (and increase its value for investors).
D.J. Teece (2010)	The business model characterizes how the enterprise provides value to the customer and how transforms payments into profits.

Source: own elaboration based on the quoted literature.

A brief overview of business model definitions presented in Table 1 shows the diversity and the complexity of this issue at the same time. For this reason, the authors of the above-mentioned definitions also give different views of elements constituting the business model. The authors involved in discussing and explaining the issues refer to various theoretical concepts of economics and management, inter alia, the concept of value for customer, the concept of business strategy, the innovation theory, the resource theory of the enterprise, the concept of the value chain, the transaction costs theory, or the concept of strategic networks.

The most frequently discussed issues in defining the business model include: sources of revenues/profits (of earnings money), the value for customer, key resources, key processes, the architecture of the enterprise, relationships with partners (suppliers and customers), logic and the way of action, the position in the chain and the competitive strategy³.

3. Classifications of the business models

Over the past few years, has managed to notice some changes in building the business model resulting from the following facts:

- key role in new models play intangible assets (however, the success is achieved by the combination and interaction of various assets);
- new models create new varieties of risk and existing management and measurement systems do not match to the assets used to create value;
- success of the enterprise requires new processes and new tools (most of the enterprises do not have formalized processes and systems to manage the intangible assets and generated by them types of risk);
- transparency of information is crucial for creating value (Boulton, Libert, Samek, 2001, p. XVII; Kwiecień, 2007, p. 299).

Among many types of business models can be distinguished those popularized by K. Oblój, which include:

- conductor's model, in which the enterprise rather than integrates, coordinates and controls all activities needed in the sector, decides to outsource those activities that are not crucial, and create a network of partners, acting in it as coordinator. In Poland has been implemented such the model in the fashion industry, which deposes performing certain specific phases of production outside (it is mainly associated with the reduction of manufacturing costs, leaving also other processes itself, *i.e.* distribution, designing clothes *etc.*, then being sold under their own brand name, for example Redan S.A., LPP S.A.);
- operator's model, in which the enterprise concentrates on the one of chosen aspects of the value chain. This model takes into account the usage of skills of specialized enterprises rendering services in specified conditions with the selection of specialized equipment or having certain certificates. The assumption of this model is the subordination of the whole configuration to one enterprise's core business which the enterprise perform the best. A prime example of this model is the enterprise Impel S.A.;
- integrator's model, in which the enterprise expands its value chain of consecutive links in order to obtain control over the entire process of producing and appropriating value. This model functions among enterprises operating primarily in the sectors in which the key to success are: economies of scale, opportunity to diversify, repeatability of production, *i.e.* metallurgy, energy production, or mining industry (Oblój, 2002, pp. 100-102).

³ The basic features of business models are: innovation, revolutionary, appropriate long-distance character, flexibility, ease of destruction (in leaving), creating it in the base of the effect of learning, building relationships with the environment and also as a result of assessing the profitability of customers and profitability of the sector in which the enterprise operates (Kozłowski, 2004, p. 136).

The business models' activities can be categorized according to specific criteria. The most complete list of business models presented A. Slywotzky, D.J. Morrison, and B. Adelman. These models were divided according to the following criteria:

1. Configuration of the value chain.
2. Strategic resources and skills of the enterprise.
3. Innovation.
4. The type of the competitive advantage (see Tab. 2).

Table 2. Classification of the business models of enterprises

The division criterion	Types of models
1. Configuration of the value chain	<p>The source of obtaining profit and the basis of innovative model of activity is a specific configuration of processes (functions) realized by the enterprise. The organization analyses the value of individual components of the value chain, and then pays special attention on a particular element or expands the surveyed value chain. For this reason, the following business models can be distinguished:</p> <ul style="list-style-type: none"> – multielement profit model which is used by enterprises in food sector supporting many various distribution channels, inter alia, coffee producers, – profit model from the liaisons, which is the basic business model of web sites and online shops or sector of financial counselling and insurance services, – profit model from specialization in a particular field of activity, – after-sales profit model, – profit model from the position in the value chain.
2. Strategic resources and skills of the enterprise	<p>In enterprises disposing of strong assets in the struggle with competitors, in which key competencies are used, the essence of their functioning is to protect the ownership of strategic resources and their effective usage. According to this criterion, can be distinguished:</p> <ul style="list-style-type: none"> – profit model from existing customers base being a fundamental model of functioning in the sector of machinery and equipment vendors of small polygraph operating in Poland, – profit model from brand which is used by manufacturers of youth clothing, for example Reserved, House, – profit model from the gains multiplier which in recent times is used by mobile networks, – profit model from the super-production.

3. Innovation and speed of operation	<p>These models are being used mainly where the product life cycle covers a relatively short period, and the enterprise draws its above-average profits primarily from the fact of “being first”. From this point of view can be distinguished:</p> <ul style="list-style-type: none"> – profit model depending on time, – profit model from the specialized product, for example in markets of computer processors, automobiles, pharmaceuticals, – profit model from new products (especially popular in regional clusters focused on the production of, for instance Christmas decorations, garden gnomes, chess <i>etc.</i>)
4. The type of the competitive advantage	<p>The enterprise functioning in various sectors, which wants to be successful in the long time horizon should be based on specific sources of competitive advantage. Within this group can be distinguished:</p> <ul style="list-style-type: none"> – model based on natural advantage – profit from the leadership at the local scale, – models based on a favourable price-performance ratio – profit model from transactions scale and profit from the experience curve, profit model from the low-cost activity, profit model from transactions scale, cyclical profit model, – models based on the advantage of handling and offering solutions systems – profit model from solutions for the customer, – models based on creating barriers to entry – profit model from standard de facto, profit model from the products pyramid.

Source: own elaboration based on Slywotzky, Morrison, Andelman, 2000, p. 81, 88, 96.

In addition to presented business models, can be distinguished those that pay attention to the way of creating value added. Among them may be mentioned models based on:

- differentiation of products (or specialization),
- low prices (or on massive scale),
- advantage in time (priority of entry gives a huge competitive advantage),
- having own norm (patent) binding in the market or using other barriers to entry,
- having particular products that enable full exploitation of the market or at deployments which have been made,
- complete integration with a customer,
- a particular structure of the enterprise which allows for significant savings or high efficiency activities (Muszyński, 2006, p. 12).

4. The role of the value chain in forming the business model

The foundation of each being created business model is the value chain, whose an efficient structure requires to answer to the following questions:

- who exercises control over key activities for achieving success in the given sector?
- what are the basic possibilities and limitations in the development of the enterprise?

- in what extent the position of the enterprise created by the given model is resistant to the attack of competition, in other words, what are the barriers to entry?

The analysis of chain of activities constituting on the creation of the value offer for customer involves the following elements:

- value-creating entities, their number and nature of the activities,
- nature of relationships connecting the individual links (links: technology, capital, information, transaction),
- the position of particular entities in the chain (coordinating or passive),
- level of “added” value by each links measured by the difference of the cost of acquisition and resale price to the next link (Gołębiowski, Dudzik, Lewandowska, Witek-Hajduk, 2008, p. 70).

With the business model closely corresponds profit model, therefore, can be indicated at least three such models using the value chain in order to create a competitive advantage:

- profit thanks to improvements with the customer (from customer solutions),
- profit from low operating costs model,
- profit from the position in the value chain (Ciesielski, Długosz (eds.), 2010, pp. 39-41).

Taking into account two criteria: the length of the internal value chain and resource potential of the enterprise can be distinguished six business models. They were synthetically characterized in Table 3.

Table 3. The typology of the business models due to the length of the internal value chain and resource potential of the enterprise

Model	The most important features of the model
Traditionalist	<ol style="list-style-type: none"> 1. Constituting elements: the source of value for the customer are material benefits associated with the product and the ratio of benefits to costs; crucial are financial resources, moreover, there is a lack of unique resources/competencies; implementing the following activities within the value chain: design, manufacture of goods and services and their sale, what means that its internal value chain is relatively long; dominated by transactional relationships with the participant of the supply chain; passive role in creating value chain for the ultimate customer/user; sources of revenue are mainly sale of produced tangible goods and rendered services. 2. Assessing elements: low/medium level of mastery of the key success factors in a given field; weak to strong bargaining position in relationships with suppliers and customers; limited capability to form strategic alliances; the enterprise is able to realize an autonomous market strategy or lead it in cooperation with brokers; limited capability to make changes in the business model; moderate ability to capture value in the value chain.
Market player	<ol style="list-style-type: none"> 1. Constituting elements: the source of value for the customer are both material and emotional benefits associated with the product, the value delivered to customers at various stages of the transaction, as well as the relationships formed with the ultimate user/consumer of the product; disposing of the following essential unique resources/competencies: managerial, advanced technology, brand/utility models, machines, devices or infrastructure, financial resources, and knowledge about the market; concentration on the following activities: design, manufacture, marketing, and sale (selected operations can be outsourced), and control, the internal chain remains relatively long; dominated by partnerships with participants of the supply chain; the enterprise coordinates creating value chain for the end-customer; the basic sources of revenues are: sale of produced tangible goods and rendered services, and other forms of making the product available. 2. Assessing elements: the high level of mastery of the key success factors in a given field (gain competitive advantage and strong, expressive positioning the offer); the business model furthers creating advantage for differentiation or integrated advantage; strong/medium bargaining position in relationships with suppliers and customers; high capability to form strategic alliances; the enterprise realizes an autonomous market strategy; significant possibility of modifying the business model; great opportunities to capture value in the value chain for strategic control of the value chain.

<p>Contractor</p>	<ol style="list-style-type: none"> 1. Constituting elements: the source for the customer are tangible value of product and an attractive cost-benefit ratio of obtaining the value; a unique resource are machinery and equipment; focusing activities on the production of material goods and services to order; the internal value chain is short; dominated by transactional relationships with participants of the supply chain; passive role in creating value chain for the ultimate customer; sources of revenue are mainly sale of produced tangible goods and rendered services. 2. Assessing elements: high degree of efficiency in implementing selected operations (the enterprise has not many important competencies); the competitive advantage (mainly cost) associated with the effect of experience in implementing the outsourced activities; weak/medium bargaining position in relationships with customers-contractor, determining the value for the end-customer; lack of capability to form strategic alliances; customer-contractor realizes an autonomous market strategy; limited possibilities of modification of the business model; limited possibilities to capture values in the value chain.
<p>Specialist</p>	<ol style="list-style-type: none"> 1. Constituting elements: the source of value for the customer are both material and emotional benefits of the product, and the value delivered to customers at various stages of the transaction, as well as the relationships formed with the ultimate user/consumer of the product; unique resources/competencies are: managerial competencies, advanced technology, brand/utility models, knowledge about the market; the enterprise is focused on: design and marketing; the internal value chain is relatively short; production of material goods or render services can be performed by the whole or in part either alone or outsourced controlling these activities; in relationships with customers dominate technological relationships with a partner character; the basic sources of revenues are: sale of produced tangible goods and rendered services, and other forms of making the product available. 2. Assessing elements: a high degree of mastery of selected, unique key success factors (B+R, manufacturing operations, services), which result in the possibility of obtaining a clear competitive advantage and strong positioning offer; the business model furthers creating advantage for differentiation or integrated advantage, element of the cost advantage is associated with the effect of experience in the realizing operations; strong bargaining position in relation with customers, the enterprise can be an attractive, strong participant of the strategic alliance; possibility to realize an autonomous marketing strategy focused on direct customer; possibility to affect on end-customers in the case when the product has a significant influence on the value for those customers; limited capability to change the business model (the deep specialization effect); ability to capture value in the value chain depending on the level of competitive advantage and the importance of the product offered to the direct customer.

Distributor	<ol style="list-style-type: none"> 1. Constituting elements: the source of value for customer is the value being delivered to customers at various stages of the transaction, and favorable ratio of benefits to costs; distinctive resources/competencies are mainly knowledge about the market; focusing activities on sale what causes that its internal value chain is very short; dominated by transactional relationships with participants of the value chain; the basic source of revenues is brokerage. 2. Assessing elements: low to high degree of mastery of key success factors in the field of trading and logistics operations; the type of competitive advantage depends on the character of suppliers' competitive advantage; the model may contribute to create cost advantage or differentiation; weak to strong bargaining position in relation with customers and suppliers; capability to create strategic alliances depending on the size of the enterprise and the degree of mastery of key success factors; the enterprise conducts market strategy in relations with suppliers (manufacturers) or realizes an autonomous strategy; moderate possibility to change the business model and capture values in the value chain.
Integrator	<ol style="list-style-type: none"> 1. Constituting elements: the source of value for the customer are both material benefits delivered by the product, and also emotional benefits and the relationship created with end-customer of the product; the availability of unique resources/competencies (managerial competencies, IT systems supporting management, brand/utility model, and knowledge about the market); focusing activities on: design, marketing and sale; the internal value chain is relatively short; dominated by partnership with participants of the supply chain; coordinating the creating value chain for the ultimate customer, the primary sources of revenues are the brokerage and/or other than the sale of forms of making product available. 2. Assessing elements: high degree of mastery of key success factors in a given field; the business model furthers creating advantage for differentiation or integrated advantage; weak/medium bargaining position in relationships with suppliers and customers; high capability to create strategic alliances; the enterprise realizes an autonomous market strategy; significant opportunities to make changes in the business model; big opportunities to capture value in the value chain.

Source: own elaboration based on Gołębiowski, Dudzik, Lewandowska, Witek-Hajduk, 2008, pp. 82-93.

5. Conclusion

Changes in operating conditions cause, that every business model meets limitations and that is why the winning business models constantly evolve, and together with them the construction of the value chain, in other words rules associated resources, people and costs.

The enterprise may perform joining the various business models in order to create innovative, hardly copied meta-model functioning in the market area. The example of the enterprise, which performed successful joining the two various business models is Microsoft (profit model from the standard de facto merged with profit model from existing customers base at the level of strategic resources and skills) (Slywotzky, Morrison, Andelman 2000, pp. 314-343; Obłój, 2002, pp. 119-121).

In situation of constant development and implementation of the innovative solutions, very important role in forming the business models play every innovations. Large complexity of the market and fluctuation of operating conditions of enterprises require constant redefinition of the business, changing the products and reshaping the processes, in other words, adjusting them to the increasing consumers' requirements of products and services. Innovative enterprises, which succeed in the market, unite all participants of the product elaboration process (the value chain consisted of customers, partners and suppliers), effectively synchronizing their processes and the data connected with specified products.

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Chapter 2

Situation Analysis and Corporate Development Programming¹

Adam Stabryła

1. Introduction

The paper aims to present a methodological concept which combines diagnostic research and corporate development activities. This concept can be applied to particular areas of corporate activity as well as to institutions and larger systems. The proposed approach sets directions for research and implementation studies and research methodologies.

The particular parts of the paper focus on the following issues: the scope of a company's situation analysis, situation analysis methods, the range of tasks related to corporate development programming, and methods for developing a corporate expansion programme.

The above issues represent a group of problems which generally confirm the validity of the diagnostic and functional approach in management methodology.

2. The scope of a company's situation analysis

A company's situation analysis is a research process designed to identify the impact of the external factors of the business environment as well as to assess a company's internal conditions. Situation analysis is based on a diagnostic function and, in a limited way, the performance of functions related to restructuring and development. The diagnostic function identifies external factors (positive, negative or neutral) as well as the areas in which a company can expand and effectively compete on the market.

The right approach for situation analysis is used in formulating diagnostic conclusions concerning the impact of external and internal factors on a company's condition. These findings can be treated as introductory hypotheses which are, at a later stage, subject to an analytical process (finding evidence and verification). The diagnostic objective of research is to identify and assess

¹ This paper is part of a research project financed by the National Science Centre pursuant to decision No. DEC-2011/03/B/HS4/03585.

the reasons for (factors) deviations/gaps between the actual and planned (normative) condition of a company's organization and functioning.

Situation analysis leads to a diagnosis of the following factors: a) the impact of a given factor (a group of factors) on the analysed corporate activity, b) possible future effects of specific factors on company performance².

3. Situation analysis methods

The proposed situation analysis methods comprise the following stages:

1. Identification of the actual condition of the analysed business activity (overall activity).
2. Identification of gaps between the actual and target (normative) condition.
3. Classification of the impact of factors leading to the occurrence of gaps:
 - application of reduction-based (or deduction-based) concluding,
 - classification of factors into significant and insignificant (negligible),
 - determination of weightings for significant factors.
4. Calculation of the index of impact of factors on a given corporate activity (overall activity),
5. Projection of the future effects of specific factors on company performance.

The characteristics of the particular stages are presented below.

3.1. Identification of the actual condition of the analysed corporate activity (overall activity)

This stage focuses on the measurement of the actual condition of the analysed area. The identification process makes use of different values – parameters and characteristics (values referred to as the functions of time), both quantitative and qualitative characteristics. With regard to the implementation process, such values include costs, labour productivity, performance rates, operating potential, product quality, labour intensity, reliability, default rates and the ability to counteract threats.

3.2. Determination of gaps between the actual and planned (normative) condition

This stage comprises two sub-stages:

1. Verification assessment.
2. Categorisation of the efficiency of a given area of organization and functioning (or overall activity).

The verification assessment indicates whether a given entity has met its targets or acts in compliance with the adopted requirements. The interpretation of results and trends is of key significance to the right diagnosis, especially in the case of multi-criteria assessments. The verification assessment is expressed by the relation between the actual and planned (normative) condition, and refers to the adopted assessment criteria (economic, organizational, HR- and

² The paper is a further study of development processes: (Stabryła, 2012, pp. 11-22; 2013, pp. 191-204).

information-related, technical, production-related, *etc.*). This type of measurement verifies the effectiveness of operations, being a basis for calculating deviation indicators and the accuracy of operations.

The final stage is the sub-stage of the categorisation of the organizational and functional efficiency of the analysed corporate activity (overall activity). The process is based on the calculated aggregate or point index of the analysed activity.

The categorisation process can be followed by an in-depth diagnosis. In particular, it applies to cause-effect analysis (in connection with the detected dysfunctions and threats) as well as to comparative analysis.

3.3. Classification of the impact of factors leading to the occurrence of gaps

This stage focuses on creating a list of significant factors leading to the occurrence of the detected gaps³. The detection of gaps leads to reduction-based concluding because the identification of the type and size of gaps results in identifying the reasons for the detected gaps (groups of factors). Reduction-based concluding can be ineffective. Therefore, deduction-based concluding can be applied to confirm the validity of conclusions.

Cause-effect analysis comprises two main steps:

1. The first selection of reasons into: a) relevant reasons and b) secondary reasons – of limited or no significance.
2. Division of relevant reasons into types. This step expresses the significance of identifying the structure of reasons.

The closing of this stage consists in assigning weightings to significant reasons, which identifies the impact of particular factors on the actual condition of a corporate activity (overall activity). Weightings can be determined on the basis of the following scale:

>> 5 points: weighting of factors of extraordinary significance,

3-5 points: dominant significance,

1-2 points: moderate impact.

3.4. Computation of the index of impact of factors on the analysed corporate activity (overall activity)

This index measures the impact (of a given factor) on a given area or entity. The index is expressed as IWP_i , – it measures the impact referred to the i -th object (area, process or system). It is determined on the basis of expert assessment.

Index IWP_i expresses the intensity of impact of the identified factors on a given object, and its computation is based on point assessment (simple or weighted).

The formula of IWP_i is as follows:

³ Deviations (gaps) can be both negative and positive (*e.g.* exceeding sales targets, shortened investment cycles and reduced costs).

$$IWP_i = \sum_{j=1}^r \bar{w}_j \cdot \bar{s}_j \quad (1)$$

where:

\bar{w}_j – average weight of j -th reason (determined on the basis of expert assessment),

\bar{s}_j – average intensity of occurrence of j -th reason (expert assessment)⁴.

Intensity of the occurrence of j -th reason is expressed in points (similarly to weights), and it can be expressed as follows:

5-4 high intensity of impact,

3-2 average intensity,

1 sufficient intensity.

IWP_i can be separately applied to negative and positive impacts. The index can also express the combination of negative and positive impacts.

3.5. Projection of future effects of particular factors on the analysed activity (overall activity)

This stage represents the final step of the proposed situation analysis methods. It is based on the projection of the parameters and characteristics treated as the effects of the identified factors (Williams, Hummelbrunner, 2011, pp. 31-74). These parameters and characteristics constitute a temporarily adopted assumption (quantitative and qualitative hypotheses) for the needs of further analytical research. This process consists in setting objectives, priorities, time frameworks, risk and feasibility levels (Urbanowska-Sojkin, 2013, pp. 157-181).

These activities are the basis for programming corporate activities, especially the ones related to a company's expansion.

4. The scope of tasks in corporate development programming

Programming as opposed to non-coordinated "action"-based operations facilitates a company's effective functioning in the context of external conditions as well as a company's internal potential. Programming represents a certain stage of designing methodology understood in a broad sense (in the area of technology, economics, *etc.*), in which corporate development is created in a consistent and well-organised manner on the basis of feasibility studies (Jeston, Nelis, 2008, p. 87-).

The scope of programming tasks at corporate, strategic and functional levels is presented below.

4.1. The scope of programming tasks at a corporate level

1. Selection of sectors (business areas) and market segments.
2. Setting primary objectives on the basis of the following effectiveness criteria: profit, ROI, competitive position, market share and manufacturing costs.

⁴ Expert assessment can be verified by the concordance coefficient – the degree of agreement between expert opinions.

3. Identification of the scope of activities, *e.g.* production, provision of services and cooperation programmes.
4. Identification of the territorial scope of company operations.
5. Selection of the sources of corporate financing.
6. Identification of special-purpose activities (*e.g.* with regard to cooperation, business intelligence, lobbying, HR tasks, product quality, technical advancement and inventiveness).
7. Programming changes to production potential in the functions of special significance:
 - innovation: R&D, improved management systems, investment,
 - restructuring.
8. Allocation of funds.
9. Budgeting of design work and implementation programmes.

4.2. The scope of tasks at the level of strategic economic entities (SEE)⁵

1. Setting primary objectives for the sector and market segments (reference: product – market).
2. Identification of the scope of operations for the sector and sub-sectors (groups of assortments and individual assortments).
3. Product development (modelling and introductory designing).
4. Selection of market segments (recipients).
5. Selection of suppliers.
6. Territorial scope of the sector and sub-sectors.
7. Marketing mix.
8. CRM.
9. Identification of special-purpose tasks for the sector.

4.3. The scope of programming tasks at the functional level

1. Technical and economic programming in the following areas: R&D, marketing, logistics, HR management, quality management, management information and investment.
2. Specific designing related to particular types of undertakings:
 - technical designing (products, technology and investment),
 - designing of economic undertakings, *e.g.* promotion and advertising, financial and HR strategies, procurement policies,
 - organizational designing: management information systems, quality management systems, organizational structure, logistics, controlling, monitoring.
3. Implementation of management strategy projects (production start-up operations).

In closing remarks to the above considerations it should be noted that the starting point for programming decisions (apart from developing a vision and mission) is the selection of sectors (business areas) and market segments. Decisions related to the selection of sectors and sub-sectors are determined by the following factors: product complexity, a company's core activity and strategic economic entities, development predictions, risk, raw materials safety, terms of coopera-

⁵ SEE – strategic economic entity.

tion, market share and market competition. The selection of market segments, on the other hand, are determined by customer requirements and customer purchasing power, segment dynamics, customer loyalty, distribution and competitors' activities.

5. Methods for developing a corporate development programme

A corporate development programme – being a fundamental management strategy – constitutes a basis for a company's manufacturing activities and refers to projected global production output, sales volumes and economic results. This projection can represent change, maintain the status quo or set new directions on the basis of a company's history of business activities (for existing entities), or in comparison with other similar companies (in the case of start-ups).

A corporate development programme has the following characteristics:

1. It specifies the objectives set in a strategic option in connection with the adopted assumptions for performing programmed tasks.
2. It is presented analytically and graphically as a diagram of a company's projected economic and organizational parameters.
3. Projections are subject to the varianting process, depending on the adopted values of selected parameters, which, in turn, results from a diagnosis of the external environment and a company's general condition.
4. This programme is typically developed for longer periods of time, or even the entire projected life cycle of an organization.
5. Programme variants can correspond to strategic option variants, but they can also be generated for individual options as so called sub-variants.
6. As compared with a strategic option, a development programme is more detailed with regard to:
 - diagnostic research, which is reflected in a review of external conditions, a company's economic and organizational assessments and, in particular, strategic analysis,
 - thematic extension of such areas as the functioning and effectiveness of particular business activities, competition strategies, allocation of funds, improvements in corporate organization and particular functions,
 - dividing programme tasks into stages.

5.1. Stages of developing a development programme – a standard version

The specific activities carried out during the particular stages are as follows:

Stage I. Setting company objectives

1. Mission and primary objectives.
2. Adoption of effectiveness criteria for selecting objectives (strategy).
3. Setting specific objectives.

Stage II. Adoption of assumptions for programme implementation

1. Situational requirements related to company operations.
2. Determinants of the continuity of company functioning.
3. Company-driven factors.

Stage III. Dividing a development programme into stages

1. Diagnostic research and verification of the adopted strategic option.
2. Dividing programme tasks into stages.
3. Presentation of projected parameters for the adopted time framework.
4. Identification of effectiveness levels for specific projections.

A brief description of the particular stages of a development programme is presented below.

Setting company objectives

The fundamental practical directive in developing a corporate development programme is an effort aimed to maintain or reach equilibrium in the development process. It is determined by the adoption of appropriate objectives in the context of recipients' needs. Generally, objectives should be designed to meet the expectations of society or its specific groups in a given period of time or within a specific geographical territory.

General objectives described in a mission are divided into sub-objectives, and the sets of objectives create a system of objectives represented as a classifier (objective tree). The classification of objectives is based on various criteria (type, space, quantity, *etc.*).

Adoption of assumptions for implementing a corporate development programme

Assumptions for programme implementation include conditions, recommendations, directives and standards which create a framework for a company's functioning in the context of adopted objectives. Therefore, such assumptions are the determinants of programme implementation. They can be classified in the following way:

1. The situational requirements of company operations.
2. The determinants of the continuity of company operations.
3. Company-driven factors (15300 tl).

The situational requirements of a company's operations include the factors which are relatively independent of its activity. Some of them represent the conditions to be fulfilled by a company in connection with adopted world or European standards. Typical situational requirements are reflected in customer needs, competitors' activities, legal, economic and financial regulations, technical standards, sources of energy and ecological conditions.

The area of **continuity (unchangeability)** refers to certain permanent planning assumptions and conditions of key significance to a company's existence, or conditions which cannot be changed in a given period of time. This area mainly refers to a company's statutory objectives, core activity, the territory of business operations, infrastructure and employee qualifications.

Major **dependent factors**, which affect programme implementation, include changeable statutory objectives (the ones which refer to diversified activities as well as original core activities), development prospects, R&D and implementation projects, and the scope and modes of cooperation activities. Cooperation is likely to have a major impact on future strategic solutions because the sphere of core activities (production and technology) is affected by agreements concluded with other business entities. Such agreements enhance current operations, lead to new activities or eliminate some of existing projects.

Stages of a corporate development programme

The stages of a corporate development programme perform two functions. Firstly, they identify specific tasks to be implemented in a given period of time and, secondly, they specify the type of expected effects to be achieved in the particular time framework (Kaplan, Norton, 2011, p. 278-).

The stages of a programme can have a short or long time horizon. Short-term stages cover periods from six months to two years, while a long time perspective may cover periods even up to 25 years. It should be noted, however, that neither theory nor business practice impose any strict time horizons for management strategies. A time horizon is a relative value which is closely correlated with a company's size, core activity and financial condition.

The programming process stresses the significance of the planning and controlling function of particular stages⁶. The planning stages of an undertaking represent specific types of tasks (processes), management levels and the manner of making planning decisions. The division of the process into stages is also related to economic and organizational parameters, *e.g.* cost levels, effects and other indicators.

Control stages reflect planning stages or – due to the specific character of control activities – are separated from the preceding stages and planning cycles. The controlling process performs measuring, verifying and regulatory functions.

Dividing the process into task-related stages can take two different forms:

1. Setting calendar periods (identical or different) for particular tasks.
2. Dividing the adopted planning time framework into calendar-based time units (typically identical, *e.g.* one year, six months or a quarterly period) and assigning particular tasks to specific periods.

A major problem related to the planning methodology is posed by setting one- and multi-stage programmes. One-stage programmes are applied in the case of uniform tasks and decision-making processes which take place within a given time framework. Multi-stage programmes are applied when planning decisions are made in sequences.

Planning stages are linked to management levels as a result of a company's organizational hierarchy which imposes specific structures on the planning system and leads to the division of particular tasks. A planning horizon for higher management levels is typically longer than for lower levels. The same undertaking, then, can be planned as a one-stage process (*e.g.* corporate activity programmes) or a multi-stage task at executive level.

6. Conclusion

The problems presented in the paper lead to certain methodological proposals concerning situation analysis and programming the operations of economic systems, contributing to currently existing approaches and methods. These proposals should be considered in the context of instruments used in development programming understood in a broad sense. They represent a trend in strategic management aimed to introduce changes to corporate activities in the context of advancement in all business activities and the implementation of management strategies (Kaplan, Norton, 2010, pp. 181-203).

The programming process is designed to find solutions to all the economic, organizational and technical problems that reflect the strategic dimension of a company's business activities. In this case key issues include decisions concerning the choice of management strategies (programmes) and preparing budgets for market, investment and R&D projects. Strategies – developed at vari-

⁶ The programming of activities indicates framework (general) programming, as opposed to operational programming.

ous management levels – represent the programmes which offer model solutions, research studies and implementation programmes.

In summarising all the above considerations, attention should be given to development management prospects considered in the context of theory as well as managerial business practice. This area of research is likely to be enhanced by primary research as well as situation analyses (e.g. more effective instruments in monitoring systems and forecasting external, macro-system and sectoral conditions). Scenario planning is likely to play a more significant role in the future, especially in the context of economic globalization and the development of powerful centralised market steering systems, as well as in face of political, military and energy security issues. It would be advisable to develop new management systems (processes) supported by diagnosing and forecasting methods.

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Chapter 3

The Impact of the Concept of New Public Management on the Development of Organizational Culture in the Civil Service

Mariola Wiater

1. Introduction

The main objective of the public government is to serve the public. The role, organization and the scope of power and accountability of public administration, as a result of political changes, is now subject to transformation (Zawicki, 2011, p. 16). These changes in public administration are expressed *e.g.* by the concept of New Public Management (NPM) established at the turn of the 1990s, whose main idea is the implementation of business management methods and techniques used in the private sector to the activities in the public one (Hood, 1995, in: Ochnio, 2012).

A proper operation of the administrative apparatus of the state, along with improvement of the efficiency and effectiveness of its bodies, ensures the functioning of the corps of civil servants (http://dsc.kprm.gov.pl/sites/default/files/sluzba_cywilnapodstawowe_informacje_v_6_06_2013.pdf), which was established “in order to ensure a professional, diligent, impartial and politically neutral discharge of the State’s obligations” (Article 153 item 1 of the Constitution of the Republic of Poland). The functioning of the civil service in Poland is regulated by the Law on Civil Service of 28 November 2008.

Currently, the way Poland’s civil service operates is significantly influenced by the concept of New Public Management, the implementation of which required appropriate modifications in its organization management system. The aim of the article is to present the changes in an organizational culture sparked by the implementation of components of the New Public Management. The presentation of these changes will be carried out on the example of Poland’s Ministry of Defense. The choice was conditioned by the interesting implications of the implementation of New Public Management reform in the shaping of its organizational culture. The aim of the paper will be realized through:

- presenting the importance of organizational culture on the basis of assumptions of the management science,
- characterizing NPM concepts mentioned in the literature,

- showing the changes in the organizational culture caused by the implementation of the New Public Management in the civil service on the basis of social research conducted in the Ministry of National Defense in 2009.

2. Organizational culture and its significance in the organizations' functioning

G. Hofstede adopts a broad understanding of organizational culture as “the collective programming of the mind”, that distinguishes members of one organization from those of another (Hofstede, 2000, p. 267).

Interest in the culture of the organization stems from its uniqueness and singularity, which is a source of competitive advantage, particularly important in terms of complexity and the highly dynamic environmental changes. The recognition of the importance of culture in the functioning of any organization is encouraged by cultural features extensively described in the literature, *e.g.* in terms of:

- a satisfactory level of employee motivation and commitment to the objectives of the organization (Tyrańska, 2012, p. 167);
- determination of acceptable behaviors in participants in the organization (Stoner, Freeman, Gilbert, 2011, p. 186);
- delivery of behavioral patterns that make functioning in the organization more stable and predictable, elimination of interferences that hinder efficiency (Machaczka, Machaczka, 2005, p. 6);
- defining the principles of cooperation, creation of a common vision to focus resources and skills on appropriate actions, providing measures of performance evaluation without the need of operational procedures and a control system (Schein, 1984, in: Nogalski, 1998, p. 111).

Organizational culture plays a special role in the process of organizational change management. Determinants of the change management process are divided into “hard”, such as the duration of the project or the number of people needed to make the changes and “soft” which include the culture of the organization (Jackson, Keenan, Sirkin, 2009). In the planning process, the changes in the organization should take into account the degree of consistency between expected and current characteristics of the organizational culture. Efficient implementation of the changes requires the creation of circumstances conducive to improving the organizational culture (Tyrańska, 2012, pp. 173-175).

3. New Public Management assumptions

Models of public administration in the light of the concept of New Public Management differ country to country (Lynn, 1998, p. 107, in: Supernat, 2004), however they are always based on similar assumptions:

1. Public administration should be focused on achieving results and the quality of services that determine the efficiency of its operations. For this purpose, it is necessary to take over the management by task and result oriented individuals, and assess it on the basis of measur-

able (quantitative) standards and performance indicators (Kettl, 1997, p. 448, in: Supernat, 2004).

2. Use by the public administration of the mechanisms of market competition, such as privatization and outsourcing, reorganization of bodies of the public administration modeled on private companies and government agencies competing with each other, as well as with private owned and nongovernmental organizations (breakdown of the public sector).

It is recommended to use organizational solutions used in the private sector, including:

- the abandonment of the career system (promotions awarded by decision of leaders, conditioned by seniority and special achievements, career based on winning new levels of competence) to a positions system (establishing the employment relationship on the basis of competitions announced for the position in which everyone who meets the specific requirements can participate, and recruitment is carried out by specialized entities) (Hausner, 2002, in: Supernat, 2004),
 - introduction of decentralization and privatization of recruitment,
 - shifting formal power to increasing the importance of experience, along with hard and soft competences (including interpersonal competences) (Kwiatkowski, 2011, p. 51, in: Ochnio, 2012).
3. The priority of the customer, whose needs must be identified and addressed. The foundations of this approach were created in 1936 by the administration theorist Marshall Dimock who saw that “consumer satisfaction is equally the task of public administration and business” (Lynn, 1996, p. 86, in: Supernat, 2004). Realization of this requirement is to move away from the treatment of recipients of public services as petitioners for the approach to see them as customers.
 4. Administrative authorities can perform their functions using private organizations and NGOs. This creates a network, contrary to a hierarchical way of delivering public services by public administrations, private organizations and NGOs, expressed by the term *governance*, as opposed to *government* and defined as “governance without government” (Kwaśnicki, 2001, p. 44, in: Supernat, 2004).
 5. Implementation of the idea of empowerment conducive to teamwork and allowing employees of public administration to take on initiative and express creativity in order to better meets the needs of consumers and achieves better results, along with the concept of release of management concepts, enabling politicians and lawmakers to manage (Boston, Martin, Pallot, Walsh, 1996, p. 446; Terry, 1998, p. 194, in: Supernat, 2004).
 6. Reducing the costs of providing public services, increasing their quality and optimizing the use of human, material and financial resources (Hood, 1995, p. 104, in: Supernat, 2004). The change has involved the approach to control in administration, from assessment in terms of “fraud, waste and abuse” to assessing “economy, efficiency and effectiveness” (Hausner, 2002, pp. 64-65, in: Ochnio, 2012).
 7. Managers in the public administration should, apart from the traditional roles of leadership (Mintzberg, 1990, p. 223, in: Supernat, 2004) pursue further five, namely: (1) the consensus architect; (2) the promoter of local affairs; (3) the interpreter of the local values; (4) the model of ethical behavior; (5) the local co-authority.
 8. Changes in the culture of the organization.
 9. Enduring political neutrality of the public administration.

4. Methodological aspects of research

Changes in organizational culture have been identified based on the results of surveys filled by civil servants employed in the Ministry of National Defense in 2009. The participants were 70 workers in the Departments: Administrative, Personnel, Military Education, Social Affairs and Defense Education and Promotion, which then accounted for approximately 9% of all employees in the institution. The study included:

According to gender:

- 50 women,
- 20 men.

According to position held:

- 13 inspectors,
- 11 specialists,
- 32 senior specialists,
- 14 main specialists.

According to seniority:

- 0 to 3 months – 1 employee,
- 3 months to 1 year – 8 employees,
- 1 to 10 years – 21 employees,
- over 10 years – 40 employees.

The following research methods were used:

- literature studies on organizational culture and the concept of New Public Management,
- an analysis of internal documents of the Ministry of Defense,
- surveys conducted among civil servants in the Ministry of Defense.

5. The implications of the implementation of the concept of New Public Management in the Civil Service – empirical verification

5.1. New Public Management and HR management processes

Implementation of New Public Management components in the civil service required a number of changes in the practice of human resource management.

Moving from the consideration of formal competences in order to increase the importance of experience and skills (including interpersonal) characteristic of the NPM (Kwiatkowski, 2011, p. 51, in: Ochnio, 2012) has been implemented in the civil service. In the area of recruitment, the expectations towards candidates for the positions have changed significantly. Traditionally, applicants for employment in the civil service were expected to manifest professionalism, competence in a specific area and suitability to work in administration. The change of management priorities in the civil service, resulting, among other factors from the implementation of NPM, meant that candidates with an outstanding openness to change ability to work in a team, creativity, kindness towards customers became the most sought-after ones (<http://dsc.kprm.gov.pl/system-sluzby-cywilnej>).

Changes also included the scope of training. Improving the quality of public service and focus on results as part of the NPM require familiarizing employees with issues of change management and time management (*Strategia Zarządzania Zasobami Ludzkimi Służby Cywilnej. "Profesjonaliści w służbie obywatelom"*, 2006, p. 6).

Customer orientation was another priority, also reflected in the training. The customer service delivered by civil servants is now subject to a rule expressed by the slogan: "Competence and Kindness". The claim that an issue addressed in 99% remains not addressed at all is significant.

The civil service changed its assumptions towards its incentive system. Increasing the orientation on results requires a change in the culture of the organization, consisting of recognizing, celebrating and rewarding individual success, learning from failures and – if necessary – penalties. The culture of "staying in line" is avoided. The aim is learning to take responsibility by the staff and preparing for delegation of competences (*Zarządzanie w służbie cywilnej – poradnik praktyczny*, 2002, pp. 3-5).

The implementation of NPM instruments resulted in that the assessment of employees – beyond the control of the fulfillment of obligations, developing and motivating employees and guaranteeing optimal choices regarding career advancement and remuneration – has, in accordance with the concept of NPM, contributed to improving the quality and efficiency of their work (Potyrało, in: *Vademecum pracownika*, 2007, p. 96).

The changes did not include the remuneration of employees, which consists of the main salary and an allowance for long-term service (Article 90, item 1 of the Law on Civil Service), which does not correspond to the assumptions of NPM assuming that salary should depend on economic indicators (Ochnio, 2012).

5.2. Changes in the culture of the civil service in the Ministry of Defense as a result of the implementation of the concept of New Public Management

The implementation of the NPM reform is accompanied by completed and planned changes in the culture of the organization. The background is made up from the changes of priorities observed in the public administration, resulting from an increase in the needs of the society. It is widely expected to "increase the efficiency and effectiveness of the [public] offices and change the attitudes towards the citizen – the customer in the office". It is also important to make changes in the exercise of power "in the face of the dwindling social acceptance for authoritative resolution of issues, based on the principle of formal hierarchies, increasing importance of the resolution of issues through dialogue with public participation. (...) Everyone must learn to participate in this dialogue". The most important values of the civil service shall include: "to be effective and creative, provide quality services and effectively use the available resources" (*Zarządzanie w służbie cywilnej – poradnik praktyczny*, 2002, p. 3).

The literature indicates that the organizational culture of the public administration should be characterized by flexibility, reducing hierarchies, innovation, problem solving and entrepreneurship, and, therefore, by solutions that are appropriate for adhocracy, which is the opposite of bureaucracy (Waterman, 1992; Handy, 1996, in: Supernat, 2004).

The internal documents of the Ministry of Defense define civil service culture as bureaucratic and legislative, to be transformed so as to keep pace with the rest of Europe (*Strategia*

Zarządzania Zasobami Ludzkimi Służby Cywilnej. "Profesjonaliści w służbie obywatelom", 2006, p. 6). The assimilation of changes corresponding to modifications in other areas of organizational culture is facilitated by setting ethical standards for employee behavior by codes of ethics and conduct (Ordinance No. 70 of the Prime Minister of 6 October 2011 on the guidelines for compliance with the rules of the civil service and on the ethical principles of the civil service).

Training shapes the organizational culture corresponding to modifications made in other areas in the institution, among which adaptation training *Vedemecum pracownika (Employee's Manual)* plays a special role. The training is designed for new employees whose proper adaptation to work determines their effective integration into the team.

The scope of the training includes the following topics:

- The culture of the civil service with elements of communication,
- Constitutional grounds of the Republic of Poland's system of sources of law, organization and functioning of the public administration, administrative procedures,
- The legal bases for the functioning of the office of the Minister of National Defense and the organizational structure of the Ministry,
- Opportunities for professional development,
- Tools for Human Resource management in the Ministry of Defense,
- The civil service: duties and powers.

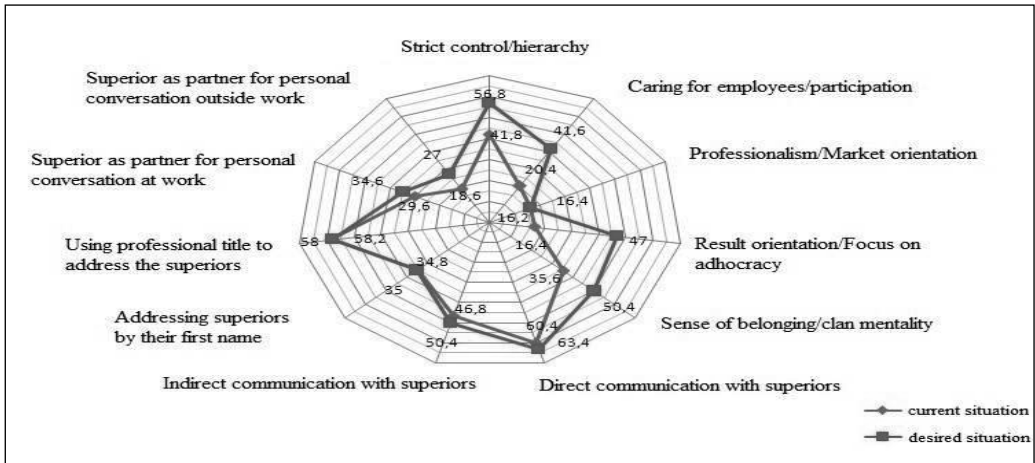
In this article, we shall discuss only the first part of the training related to the culture of the civil service.

The first issue is "My role in the Ministry of National Defense" which provides information about being a professional civil servant how should be understood. Professionalism should be manifested, among others, by: competence, physical appearance adapted to the nature of the office; work ethics and the highest performance efficiency, internal and external customer satisfaction. According to the information provided by the document, the image of the civil servant has changed as a result of adaptation to the requirements of the European Union, the growth of expectations of the society and raising labor standards, which is a clear reference to the assumptions of the concept of New Public Management. The second area, "Representing the Ministry", includes emphasizing the impact of the quality of customer service to creating a positive image of the institution. A positive opinion about the work of a specialist and the whole institution is shaped by two guiding principles in how to represent the institution: "Competence and kindness" and the priority of appropriate behavior in the relations between co-workers in the presence of stakeholders and visitors (sections "Behavior in your group in the presence of a visitor" and "Competence and respect"). Creating a positive first impression, discussed in the next part of the training entitled "The mechanism of first impressions" is important for shaping a positive image of the civil service. The most widely discussed issue is communication with the customer, understood not only as a visitor from outside, but also a co-worker. The section "Culture of the Ministry of Defense civil servant" precisely defines the standards to be followed regarding the personal culture of employees in the work place and ways of handling telephone calls ("Rules of telephone conversation").

It is recommended to create an organizational culture based on empowering the employees, delegating decision-making powers to the lowest acceptable level to relieve managers of organizational units and focus their attention on strategic decision making. Actions conducive to creating the desired organizational culture should include: organizing at least a weekly meeting with

employees, encouraging the provision of feedback, rewarding and recognizing employees for good work, care of young workers (*Zarządzanie w służbie cywilnej – poradnik praktyczny*, 2002).

Figure 1. Diagnosis of current and desired organizational culture



Source: own work.

Figure 1 illustrates the differences between the current and desired organizational culture and was developed based on the results of empirical research.

The greatest differences between the current and desired culture of the organization are concerned with enhancing the orientation towards results by transforming the existing culture towards rewarding flexibility, creativity, and willingness to take risk. Such is the opinion of employees with seniority less than 10 years, occupying various positions. According to 30% of the participants of the survey, the employees capable of taking risks, flexible and creative had the greatest chance of promotion. 79% of respondents declared that this situation was desirable. It can be seen that the same part of the employees surveyed (16%) denied the statement and believed that it was not desirable for the institution. These were usually civil servants with longer seniority.

The areas in which the current state was consistent with the desired one were communication and cooperation in the institution. In the opinion of 56% of the respondents, the most common means of communication between superiors and subordinates was direct communication, and 60% of them considered it desirable. Due to the criterion of how to address the supervisors, the use of professional title was dominant in the opinion of 96% of the study participants. In terms of power distance and the availability of superiors within working hours, 39% of the respondents believed that supervisors were not partners in casual conversations about personal issues and as many as 87% believe that they should be. Currently, 53% of the survey participants denied that their supervisors often advised them before making a decision. In contrast, as much as 76% believed that it was desirable. The desire to give more power and to consult decisions with subordinates is common for employees and management, as evidenced by the declared activities in the management of the organizational culture of the institution.

It captures our attention that the shift from bureaucratic culture postulated by the advocates of change is inconsistent with the opinion of employees. 77% of respondents were positive about

the statement that ways of performing tasks were defined by formal procedures and regulations, while 90% declared that they would like these activities to be regulated.

6. Conclusion

The changes taking place both in the civil service and in the entire public administration in Poland can be considered for recognition of the impact of various concepts of public management, including the New Public Management. Due to the variety of processes occurring in modern economies is justified to adopt an interdisciplinary approach to examining the results of the changes being made. This speaks for the inclusion of the impact by the changes made in the civil service on the development of organizational culture. The article presents the changes in the organizational culture in the civil service identified on the basis of source materials and empirical studies conducted in the Ministry of National Defense of Poland in 2009.

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Chapter 4

Modern Management Concepts in Work Organization Real Estate Managers

Joanna Sobula

1. Introduction

This article presents the contemporary concepts, applicable to the organization management. These include: strategic management, benchmarking, outsourcing, innovation, total quality management, knowledge-based organization as well as socialization: social participation and privatization. Activities related to the management of the property are carried out by persons with appropriate skills and qualifications, as well as persons performing tasks under their personal supervision (real estate administrators). In this paper we have shown that the use of modern concepts is important for the operation and management of the company. Successful management organization will depend not only on the adoption of a concept of operations, but also on the conditions and the competitive environment. The implementation of modern management concepts in practice is an activity that gives great opportunities not only to deepen their knowledge (for example on business competition), but also more efficient operation of the organization by delegating some activities to other companies from the outside, as well as improving the quality of service. The use of modern concepts is the result of globalization, the development of new technologies and the increasing competitiveness.

As a result of growing globalization process, each organization requires continuous evolution of its business. Contemporary management of organizations is a challenging task. In practice, this means the need to seek new patterns of institutional and managerial behavior. Many organizations perfected management system, so as to enable the improvement of key skills and problem solving.

On the nature and effectiveness of management determines the appropriate use of potential relationships within the organization and between the organization and the environment. The rapid development of techniques and technologies, economic changes and globalization contribute to the adaptation of traditional techniques and current methods of management organization to the market situation and the specific needs of customers. The purpose of property management companies is a focus on key skills. They are based on the mastery of basic business processes from the point of view of speed, quality and precision. They are based on both the technical

skills, organizational and marketing. Traditional real estate management organizations should pay attention primarily on the technical and technological aspects. Change should not only certain organizational standards and their scope but also their character. Consistent should be but the quality of these standards, their meaning and their development to enable effective reconciliation of the interests of the organization and the people who are their resource.

2. Objectives of the organizations of property management

Each organization contains three basic elements: the objectives and tasks, structure and technique. The main feature of the organization is its openness or relationship with the environment, which allows adaptation to constantly changing conditions. The objectives of each organization are the result realized in her actions and are very diverse and inextricably interdependent.

The composition of each organization has a specific team. It is an organized whole in which the individual elements of the specified range and specialization, implementing a comprehensive manufacturing process. Human Resources Management runs on level: individual, group, and cultural (associated with the social climate within the organization in comparison with the environment).

Social activities of the organization can proceed both in the formal and informal structures. The formal structure consists of three main elements connecting: business ties (connecting the unit with the child paramount), ties technological, functional and information (necessary to provide information to decision-making and execution of tasks) (Nalepka, 2006).

3. The nature and scope of property management

The purpose of property management is taking all decisions and take actions which seek to maintain it in a condition not deteriorated and in accordance with its intended purpose. The decisions and actions are made to ensure proper economic and financial management of real estate, as well as ensuring the safety and proper operation of the property. The tasks related to achievement of objectives for the owner, consist of: dependent properties without deterioration, consistent with its purpose, justifiable to invest in a property, aimed at the further development and lead to an increase in its value, providing regular income, return of capital invested in real estate, through its sale for a price. Real estate management is the exercise by the manager strategic and operational objectives referred to it by the property owner.

Property manager is an individual who has the appropriate permissions, which is representative of the owner or owners of the property. The responsibilities and rights of the property manager is defined in the Real Estate Management Act, as well as in the property management agreement, which is obligatory basis for its action. Property management agreement should be in writing to be valid, the owner or other person entitled to the right to the property.

It is pointed out in the contract manager responsible professionals for the execution, his professional license number and information about your insurance liability for damages in connection with the performance of property management. The specific actions managers can be implemented either in person or through other persons acting under his direct supervision. He shall be responsible for their actions occupational defined in the Act. Working property manager requires, in addition to knowledge and competence, experience and professional skills, specific

professional aptitudes and character traits. It is a job that requires a lot of responsibility, mainly because of the value of the facility and the safety of people. A good manager should be characterized by a sense of responsibility for the life, health and property entrusted to him. This involves accuracy, diligence, punctuality and reliability. In addition, the manager should be a confident person, firm and resolute. He should also be available person, mentally resistant and has the ability to establish contacts (Tertelis, 2001).

4. Areas of residential property management

Real estate management company operates in the interests of the owner of the property and takes as its maintenance. Residential property management covers three main areas: technical maintenance of property management, space management, and financial management. Technical maintenance is one of the most important areas of property management, aimed at: ensuring the functionality of the object and all equipment, ensuring safe operation of real estate, performing maintenance and repairs and management of technical services. The main tasks related to the technical maintenance of the property are: the prevention of defects, failures and faults, making renovations and repairs and ensuring constant maintenance. Space management aims not only optimum use of space, but also to ensure the provision of basic services, marketing (promotion) real estate and leasing management. Property management includes physical management structures and open areas.

Landscaping, electricity, plumbing equipment, roofs, walls and many more – are a natural part of the facility. The task manager is also keeping in touch with repair companies and monitoring the quality of all repairs and maintenance (Bryx, 2004).

Financial management is an activity comprising: determining the rates of rent and service charges, as well as: real estate development budgets, recording revenues and expenses, and to establish their control and analysis of financial results. Proper financial management of real estate is subject to prior analyze the economic situation of the managed property and its technical condition for the fulfillment of the applicable standards for the needs renovations. The economic situation of the property is determined by the ability to generate revenue and management costs.

Property management is a task that requires carrying out a clear and coherent action. They aim to make the best use of it in terms of economic value and utility. The property manager is on the one hand by the owner is obliged to provide the best financial revenue, on the other hand to ensure best usage (Brzeski, Cichoń, Jurek, Rogatko, 2008).

5. Hierarchy in the organization of property management

There are three basic levels of hierarchy in the management of the property, they are: real estate manager, property manager and asset manager investment property. They are employed by the owner of the property or by a management company. They can also be a self employed person (Zimniewicz, 2009).

The first place in the hierarchy should be the administrator of the property. This is the person responsible for the ongoing operation of the property and keeping it in good condition. He has a comprehensive technical knowledge, enabling skillful service and a basic knowledge of main-

tenance (including heating and electricity, elevators, ventilation). He is also running the database files on the property and supervise the tasks performed by maintenance crews. Real Estate Administrator is also responsible for collecting rents, as well as activities related to debt collection (Błaszczuk, 2005).

Higher in the organization is the property manager, who often acts as a superior administrator. For more elaborate organizational structure manager is accountable to his superiors, which may be a general manager, which deals with a specific type of property, or the president of the management company. Manager is based on signed between his company and the owner of the property, the management contract. He has not only the appropriate knowledge (in the regulation of construction, financial and administrative law) but also skills, but also appropriate interpersonal skills. He is an advisor to the owner of the property in terms of strategic, long-term use of the property. It also rests on the obligation to initiate repairs and modernization of real estate, as well as monitoring of contracts with suppliers and contractors renovations media. The administrator of investment assets, occupies the highest position in the organization management. His main task is to make decisions about buying or selling a particular kind of property in which the owner should invest in order to achieve maximum return on investment. Investment asset manager acts as the guiding the entire organization, which builds its policy and determines the directions and objectives of its development. The activities management organization, is based on the fact that the administrator the property is permanently resident in the territory of subordinate objects. Property Manager half of his time is spent on overseeing their property, and the other half to contacts with the leadership of the chief of the management company or the owner. His duties include supervision of administrators. Investment asset manager has no contact with the administrator of the property. He works on the basis of information obtained from the manager, as well as information from the real estate and financial markets (Stabryła, Trzcieniecki, 1982).

6. Modern techniques in work organization property manager

6.1. Strategic management

The purpose of strategic management is a way of managing an organization, allowing, in adverse conditions constantly changing environment, take advantage of some changes to take new action. These actions can better meet the needs of consumers and the interests of the company. Strategic management concerns shaping the fate of the organization. It aims to: the alignment of the organization for competitive companies in the industry, maintaining and improving its status through the development and provision of adequate resources and responding to changes in the environment, – monitoring and responding to the needs of key stakeholders and other organizations taking an active part in the creation of project company.

Purpose of property management organization is making strategic and tactical real estate, linked to the objectives of the owner. Purpose of strategic activities of the organization is to choose a particular method of operations, together with an analysis of the current and foreseeable environment. Managers shall select a long-term strategy, which purpose is to manage real estate in the most effective manner. There are five basic strategies, focused on: income and capital value, the value of capital and income, utility task, liquidation of the property.

6.2. Benchmarking

Benchmarking involves comparing the organization of property management with a direct competitor, and with the best organizations in the industry. Benchmarking involves: learning from the best organization by comparison with them, search of the most effective methods of activities, that allow to achieve a competitive advantage, compared with the best service of competitors, evaluated their services and methods of the organization in light of the achievements of competitors or leaders, search of standard practices by learning from others and use their experience (Stabryła, 1982).

6.3. Outsourcing

The objective of outsourcing is to improve the organization by reducing certain functions that were exercised immediately and transfer them to the realization of other economic operators. The organization of property management, the concept of outsourcing is applied: at the time of the decision to order an accounting residential community for workers from outside. As a result, the service turns out to be more profitable. Self perform certain tasks, it seems the wasteful and more costly, than to entrust them to other entities that specialize in this kind of business. By entrusting certain tasks to outsiders, outsourcing also gives the opportunity to improve the quality of services. As a result, the organization has the opportunity to expand the current market audience. Outsourcing is beneficial for both parties – for the commissioner because of the opportunity to reduce costs and for contractors from outside – because of the possibility of obtaining higher wages.

6.4. Knowledge-based organization

Perfect knowledge-based organization of property managers is one in which people change knowledge in all functional areas of business through technology and established processes. Purpose of the organization “knowledge” is to survive and gain advantage over other organizations in the property management industry. The main feature of this organization is a smooth adaptation to the environment. Organization “knowledge” of property managers is an organization which was established not only as a result of fast learning, but also as a result of the creation and dissemination of acquired knowledge. Knowledge in real estate management organization has the source from: knowledge of customers, financial knowledge and practical knowledge of staff (Janasz, Janasz, Koziół, Szopik-Depczyńska, 2010).

6.5. Concept of Innovations

The concept of innovation is the introduction of the real estate management company completely new and never encountered services on the market, which will differ significantly from the others. An example is to invest on the stock exchange of funds collected for the fund repair the property, in bonds, in order to make a profit. Innovation can also specify innovative procedures within the company, so that it can provide services at a surprisingly low and competitive

price. Innovation can also be a separation of the role of the owner of the manager – the principal of the contractor. In order to more effectively exploit the potential of the organization suggests a possibility to bring innovation to all its employees. To do so, it is necessary a good atmosphere in the organization, which is conducive to this type of behavior.

6.6. The concept of quality management

The purpose of quality management is also improving the quality of service provided by the study that the quality is consistent with the quality of service, and whether corrective actions have committed mistakes. By implementing the concept of quality management in the development of the company, we can improve not only the quality of services, but also development of the company, we can improve not only the quality of services, but also reduce the cost of its operations. In addition, it increases the productivity of services, which helps in attracting new clients. Only companies providing services of the highest quality are recognized and attract new customers. Currently, professional firms operating in Poland management, there is very little. Monopoly on municipal property management frequently have little effective budgetary units of municipalities. Optimistic fact is an attempt to reform the local property management organizations, including through professional training of municipal government, the privatization of specific areas of service the residents, and the admission after a transitional period (2-3 years) to the resource council, a private company from the outside (Penc, 2003).

6.7. Social participation

The exchange of information shall be at the meetings of the board of the community in which each of the participants can express their opinion. Besides, it is also possible to identify and develop optimal solution. In these meetings, in addition to the owners, they can also take part tenant premises who use common parts. Replacing mutual opinion helps to reconcile the specific strategy that is supported by most of them. The method uses social participation synergies – a joint collaborative action that is more effective than individual action. Another example of social participation is consultation with members of the community, project marketing plan. The final shape of the strategic plan should be discussed jointly by the manager and the owners of the property. Talking about the draft plan takes place during the annual board meeting of the total.

Social participation is a key element of the transformation of the organization of property management, with the board of the municipality. Only by involving representatives of all interest groups, we can confront the decisions that are taken by the municipal authorities, with local communities (Jenkins, Cooke, Moreton, 2004).

6.8. Privatization

Privatization involves changing the ownership structure in favor of private property. Private companies tend to be better organized and managed. They also hold a much lower cost of operations, (approximately 25-40%) than the cost of public entities. To increase the guarantee of success of privatization, it is necessary to have appropriate professional qualifications. The obligation

established by the law on real estate, for mandatory occupational license by property managers, and continuously improve their skills, contributed to the rapid development of vocational training. Currently, there are about 20 organizations offering professional courses property managers. The most popular are courses organized by associations that are conducted by licensed managers (www.realestate.about.com).

In the case of the municipal sector, privatization is not always and not everyone seems to be feasible. Especially with reserve approach to municipal authorities. The privatization of residential property management industry appears to be unprofitable, so it is not worth it to privatize. In Poland, the difficulty of privatization also result from ownership transformation. Poland is a country that is still struggling with the transition from the communist system of the market economy. To achieve the purpose, it is necessary to clearly defined policy for the municipal authority and a clear financial condition of the utility companies (Awad, Ghaziri, 2001).

7. Conclusion

Currently, effective business real estate management company should be based on professionalism and cooperation of all members of the team. Position property manager as the team leader should result not only possessed the authority, but also of having appropriate expertise and skills. Employees of the company management should be appropriately qualified. The scope of their activities in each case should be clearly and precisely defined by the administrator. Each team should also have the support of the people hired from the outside, such as marketing specialists, lawyers, real estate advisors, planners, architects, economists, *etc.* The activities of real estate management company should be based on procedures, which defines the rules of professional service customers.

Big importance for the success, has the correct implementation of managerial function, and meeting the needs of employees, related to: higher pay, adequate working conditions, safety, stabilization and the ability to upgrade their qualifications. Big importance, is also the choice of location of the management company (its location, accessibility, adequate number of parking spaces and standard rooms of the building). In the case of a good location property management company can count on a large number of orders. Good location and a high standard of office and the appropriate number of qualified employees are the recipe for success of the company. We can not expect that the application selected by management concept will give a ready recipe for success. This will depend on certain factors, conditions and situations where a company is located.

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Chapter 5

Sports Management: Case Study of a Polish Football Club – KKS Lech Poznań, Years 2009-2013

Bartosz Bednarz

1. Football club in its environment

Many management thinkers who represent administrative and scientific management are focused on the interior of an organization. Nevertheless external conditions are equally important, especially nowadays, when conditions in 21st century are unstable and unpredictable (Lichtarski, 2011, p. 19). Jack R. Meredith defines the environment as “several elements that lie outside the system in the sense that they are no inputs, outputs, or processes. However, they have impact on the system’s performance and consequently on the attainment of its goals” (Meredith, 1991, p. 28). Sports market has few unique characters, which should be deeper examined.

First of all sports market is an example of market where on the one hand entities (professional sports clubs) need to compete each other to achieve the best scores, but on the other – are strongly dependent of the opponent’s actions. We can exclude a monopolistic market structure, a kind of situation where only one club (or player) takes part in competition and having no competitors. After all, rivalry is the essence of sport. This phenomenon is referred as the paradox of Louis-Schmelting¹, introduced to economy by Walter C. Neale. Of course that the strategy, in which two companies compete and cooperate with each other at the same time is widely known and used, but in the case of entities operating in the sport it isn’t one of the option of choice, but a necessity.

What’s more, Walter C. Neale says that the more powerful and well-known competitor is, the more profit club gains. This statement is completely true, and the benefits can be seen both in economic terms (higher profits from ticket sales) and sports (defeating champion is much more valuable than winning with outsider).

The next important thing is unique group of consumers – football fans. Arthur Koestler was right when he said that “there is nationalism, and there is football nationalism – and that the latter is the more deeply felt” (Baruma, 2006, p. 270). Fans are very emotional and fully identify

¹ The concept comes from the names of two prominent professional boxers, fighting each other in the 30s of the twentieth century.

themselves with victories and losses of their favorite club. In extreme cases we can even say about fanaticism. But what is important for managers – more than $\frac{3}{4}$ of the supporters are faithful to their club for their whole lives (Pogorzelski, 2008, p. 72). Brand loyalty is unique, it is a huge capital, which cannot be missed. It's also an additional pressure for managers.

Football Fans often think that they are experts (Mullin, 1985, pp. 15-22) and call for current information coming from the club. In such situation managers, coaches and players have to deal with the fact that their actions (positive and negative) are openly discussed and judged. Media are extremely interested in the current activities of the club, what is best described by the term “transparent aquarium” (Sznajder, 2008, p. 62), used by experts to character those specific circumstances. Managers need to cope with that when make any decisions and sometimes they cooperate with the special public relations department.

Like all other businesses, the main principle which must be guided by managers is cost-saving performance and rationality of choice (Sznajder, 2008, p. 15). But that, what makes sport-business special, is absolutely unique product – emotions. It cannot be surprising that sports market is controlled by other rights, than other markets which offer tangible goods or services. Competitive sport is also a big show-business, which focus millions of viewers from around the world. Sports market is global, and its increasing development forces transformation of clubs to the legal form based on the Commercial Code.

Sports organizations have more varied purposes than those of any other industries. George Foster, Stephen A. Greyser and Bill Walsh in their book “The Business of Sports” pay attention to such issues as sports victory, gathering trophies, integration of the local environment and financial gain. Interestingly, profit-making is not always the only one motivation of possessing football club, there is plenty of clubs where wealthy owners treat their teams as a hobby, rarely based on the return on investment. In addition, the most important objective of amateur and youth sports is young staff training.

Sports market is regulated. It means, that all clubs are required to comply not only the general law, but also specific, dedicated for sport. The basic form of the organization of sporting events is professional league, which determine the national champion for each season. To participate in such league club must have a license for the game, mostly issued by the relevant sports federation. To obtain this license, club must meet a number of criteria, including sports, infrastructure, legal and financial conditions. For example, to take a part in the league in Poland, a football club must complete around 40 points, like own adequate lighting, certain amount of seats in the locker room, carport of press and honor tribune, train youth groups and demonstrate a lack of debt (confirmed by relevant documents from the IRS).

Moreover clubs which participate in the competition are required to accept the league rules set by the league management. Those regulation contains the principle of promotion and drop, schedule and number of games, as well as the marketing responsibilities. All these criteria are very precise and strictly observed, even that international competitions are much more rigorous.

The last specific feature of the market is its dualism. Clubs operate simultaneously in two markets: sports and advertising. The recipients for the first are individual consumers and on the other – institutional. The reason for this “duality” is the inability of sport products to cover all the expenses of the club, although it is sold in two ways; during sporting spectacle in the stadium (primary market) and through the media (secondary market).

Market sports (despite having some specific features) still remains a part of the entire economic system. It would be a big mistake to claim that the sports market acts in some kind of iso-

lation, being only supplement to the economy or a form of fun. In the middle there is always a human, who needs to focus on 2 tasks: conceptual work and setting work schedule (Mintzberg, 2012, p. 68).

2. Management of a football club

Mary P. Follett defines management very simple as “the art of getting things done through people” (Freeman, 1997, p. 53). By “things” Follett means tasks to do, “done” represent accomplishing goals in effective and efficient way, and “people” just insist the importance of human in whole process. Using some general definition of management, we can say that it is “the process of planning, organizing, leading and controlling of individual’s activities, focused on achieving an established set of goals” (Lichtarski, 2011, p. 27).

Management of sports club is very similar to management of any other organization, however we need to remember of its dualism, mentioned in the previous chapter. Understanding the nature and functions of management process, we can distinguish the following elements:

- **Planning:** it means that managers think through their plans and actions to take (Schermehorn, 2008, p. 108). They need to schedule both sports and financial goals – on the one hand each team scheme football trophies, like national championship or victories in European cups and on the other financial directors need to obtain sponsors and negotiate numerous agreements. Their actions are based on some methods and logic, rather than on the premonition. Another part of planning is gathering necessary resources. It applies that appropriate players need to join the team before the season to help to achieve established goals.
- **Organizing:** it means coordination of human and material resources. It determines not only what needs to be done, but also in what order and by whom. The effectiveness of an organization depends of its flexibility and ability to transform. The more united team is, the more effective club (organization) can be.
- **Leading:** it describes how managers influence subordinates, getting them to perform essential tasks. By assignation the proper conditions, they help their subordinates do their best. Football players are usually well-paid, what help them focus directly on their job.
- **Controlling:** it applies that managers attempt to assure that club is moving toward its goals. If any part of the club is on the wrong track, managers try to find out the reason for this fact and fix it. They monitor activities to ensure that final result will be achieved.

3. Management strategies on sports market

Small and medium-sized enterprises (SMEs) in European Union constitute 99.8% of companies operating in its area (Makieła, 2009, p. 49). Football clubs definitely are in that group. Just like any other company they need to increase their revenues and gain profits. There is a special role for managers to choose an appropriate management strategy to achieve those goals. Prof. Harry I. Ansoff² developed in the 50s of the last century 4 concepts of product-market strategy, which can be easily adopted to the sports market.

² Harry Igor Ansoff – Russian American, applied mathematician and business manager. He is known as the father of Strategic management.

There are 4 strategies of managing of the development of organization sharing two criteria: the market and the product (Ansoff, 1965). These strategies include:

- **strategy of penetration** (old product – current market),
- **strategy of the market development** (old product – new market),
- **strategy of the product development** (new product – current market),
- **diversification strategy** (new product – new market).

Strategy of **penetration** is the most popular and the easiest to apply, where the same products are being sold on the current markets. It's the least aggressive strategy (mostly focused promotional marketing activities) and can be based on – for example – lower prices of tickets or expansion of the distribution system. It may help local clubs to raise the number of fans at the regional and national levels, as well as increase the size of current groups of supporters (for example women, children or students).

Strategy of the **market development** means expansion on the new markets. It concerns the most television rights to matches³ rather than products. Spanish economist involved in the football business – John M. Gay from the University of Barcelona says, that profits from the sale of broadcasting rights for Spanish League only for the Chinese market are worth more than 150 million euros per year. Moreover, the biggest clubs in the world are leaving for a special tour of Asia once a year, where club promotes products (mainly T-shirts) and gain new fans. Improving sports skills in this time is less important.

Polish teams are not so attractive to turn up to play for the Asian audience. But it doesn't mean that polish T-Mobile Ekstraklasa is not shown abroad. Starting from the season 2011/2012 one game each leg is broadcast live on Eurosport 2, where is shown in more than 20 countries in Central and Eastern Europe and Scandinavia (for example Denmark, Finland, Norway, Czech Republic, Serbia, or Sweden). Each two clubs, which the game is broadcasted earn 100,000 PLN (www.eurosport.pl).

Another strategy is the strategy of **product development**. It means offering new products for current fans from the domestic market. It might concern new offer for television stations, new types of sponsorship or “refreshed” sports gadgets. On the other hand there is also some risk of loss the reputation of the club if their quality would be unsatisfactory. The most well-known example of “refreshing” is selling new model of T-shirts (or its slight modification), so that the fans are on time and constantly bring money to the club.

Much more complex is open a new section inside the club. The biggest sports company have several sections, but of course not every is successful. Globally, Real Madrid is a good example of club which both football and basketball sections makes European victories. In Poland copes well hockey team of Comarch Cracovia Krakow, which is a multiple Polish Champion in 21st century, having also a football team in the polish T-Mobile Ekstraklasa.

The last strategy is the **strategy of diversification**, where new products are offered to buyers in new markets. In addition, these products should be specifically tailored to the needs of the local population. Due to the enormous risk and huge costs of this project, it is very rarely used by both businesses and football clubs.

All four strategies explored by prof. Harry I. Ansoff have been simplified to two variables (product and market) and their two opportunities (new – old). What strategy should therefore

³ Globally, the largest expansion from Europe is through Asian market, even early hours of games are specially tailored to viewers in Asia in order to simplify them watching matches.

be chosen in case the product is not entirely new, but only slightly modified? Or how to manage with the new audience of products, and the old segment of viewers in the same time? These questions indicate a greater number of potential strategies to use (bring the need for flexible modification of existing ones).

For a sports organizations seeking new markets and expanding the “old” audience segments is extremely important. To perform that club needs to determine which groups of buyers are already customers of the club, and which have to be reached. Then organization must identify their needs and refer to them specific marketing activities (showing benefits for coming to the match and the purchase of products). We can distinguish two market segments to which companies can reach:

- customers of competitors,
- potential buyers of the segments, to which neither the organization nor its competitors have not reached yet.

Due to the specific nature of football clubs, the first group is usually unattainable. This is because of a big loyalty and commitment to the club, and it’s impossible to attract fans to their side, especially in the one city. But it is definitely possible to reach new, undiscovered segments in the market using some marketing tricks. These are both people interested in soccer and neutral spectators. From different groups of fans clubs can attract “lovers of celebrities” – people who participate in events for famous people. We can observe growing attendance at matches with famous European teams with world-class athletes, even despite of the increasing ticket prices. To have that opportunity of rival with the greatest teams, the club needs to qualify for European competitions such as the UEFA Champions League or UEFA Europa League.

Another strategy is transfer of the foreign star, but this involves a big expense and there is some risk that such player will not play good in the local reality or catch injuries. It is more often used in the Western Europe, and such player “pays for itself” by a selling few thousand T-shirts with his name. Sometimes it brings income for several seasons. If his star shines strongly in next seasons, then he receives a new number and the fans make additional purchases, as they must be up to date. Managers know that and generate additional income for a club.

It is also worth to take care of the youngest fans, for example by creating a special family sectors, which can also result in better attendance of women. Another interesting idea is the construction of the VIP sectors, which allow making business meetings during the match and any other time (tenant has an access to them by 24 hours a day). These are also more common used in the polish reality, mainly due to improved stadium after the organization of the European Football Championship UEFA EURO 2012.

It usually provides more comfortable watching a game on a wide seats in the central part of the stadium with full access to the restaurant. These are addressed to rich fans and offers at least annual lease term. Despite of the high prices, there is a plenty of buyers. At the National Stadium in Warsaw for an annual rental price ranges from 450,000 to 700,000 PLN (www.warszawa.gazeta.pl), depending on the capacity and location. Nowadays, the construction of stadiums with VIP lodges is already a standard.

4. Sponsorship and fundraising

To have that opportunity of implement management strategies, it is necessary to secure the finance first. In 2011 in Poland, sponsorship and advertising were the most important source of club

incomes – it was approx. 35% of their budgets (www.ey.com/pl). The strongest point of negotiation with sponsors is numerous sports victories and attractiveness of the team. Another thing is the average attendance at the stadium, good brand awareness and mediality. Sponsors (just like fans) prefer to keep their companies associated with success, rather than failures.

Moreover very important is some kind of compatibility between the two entities. Maybe that's why on the shirts of players very often appear logos of famous breweries and betting companies. Football clubs guarantee access to these customer segments, which both sectors are particularly interested in – men, aged 18-35, which is characterized by youth and the tendency to seek fun and excitement.

Optimistic information for managers is that more and more noticeable is the phenomenon of **zapping**, what means switching to other programs at the time of the commercials (what conclude a significant drop in audience). This makes a necessary to search for a new, more attractive forms of promotion. It's obvious that every fan notice advertising on the shirts of his favorite team or advertising board during the broadcast of the match. This form of promotion is seen as less aggressive than traditional advertisements which interrupt movies in tv (Sznajder, 2008, p. 244).

On the other hand there is also some risk and difficulties in fundraising. There were many scandals related to corruption, hooliganism, irregularities of managing of the Polish Football Association (www.gwizdek24.se.pl) and finally poor results polish teams in European competitions. Nevertheless, football in Poland is considered to be a national sport and polish clubs can still count on the financial support.

5. Case study of KKS Lech Poznań, years 2009-2013

The last part of paper aims to examine the problem of relationship between the effective management of the club and its results on the pitch. As an example will be taken business and sport actions of polish runner-up of the season 2013/2014 – KKS Lech Poznań. The financial and football condition of the Lech in years 2009-2013 presents Table 1.

Table 1. Financial and sports results of KKS Lech Poznań, years 2009-2013

Season	2009/2010	2010/2011	2011/2012	2012/2013
Place in the polish Ekstraklasa	1	5	4	2
Participation in European cups	4 th qual. round	1/16 final	-	3 rd qual. round
Income (in thousands PLN)	54 151	85 989	50 552	52 965
Revenue growth	2.0%	58.8%	-41.2%	4.8%

Source: *Ekstraklasa Piłkarskiego Biznesu*, EY 2013, <http://90minut.pl/liga/0/liga5020.htm>.

Based on the above data we can notice how sports success, which undoubtedly was promotion to the 1/16 finals of the Europa League, was reflected in the budget of the club. It was possible through effective planning by managers and building a strong team that reached the Polish Championship in the season 2009/2010, which gave a chance to play in European competitions. Revenues increased from the level of approx. 50 mln PLN to 85 mln PLN in the season 2010/2011. One of the reason were profits from a “match day” – a sale of tickets for four matches played in Poznań against Manchester City, Juventus Turin, Red Bull Salzburg and SC Braga (average attendance: 38,000 spectators) and additional three matches played in earlier qualifying rounds

with Inter Baku, Sparta Prague and Dnipro Dnepropetrovsk (average attendance: 13,700 spectators (www.90minut.pl)). Moreover there were gains from UEFA and transfers – most of all 4.5 million from the sale of Robert Lewandowski to Borussia Dortmund (www.transfermarkt.de). Such glory was a good occasion to attract new sponsors as well.

Unfortunately, as it happens in sport – Lech finished his league season in fifth place, which resulted in a lack of opportunity to play in the next edition of the Europa League. There was a significant decrease in revenue, furthermore the best players have been sold. Currently, managers try to build a new team that will at least repeat the success achieved four years ago. Directors of the club are on the good road, which is best evidenced by the two runners-up reached in the season 2012/2013 and 2013/2014.

6. Conclusion

Example of Lech Poznań clearly shows that not everything in sports business can be planned. Despite of the success and financial gain, the next years for the club were unsatisfactory. That way met many clubs, not only in Polish league. There are many examples of teams which got the championship of their country and then fell to a lower division in the result of incorrect decisions of management. On the other hand, their vision and consistency in building a team and can bring sports and financial benefits.

Managers associated with the sport have difficult work, as shown in the article, it differs from the work related to other industries. First of all, their actions are noticed and commented by media and fans. In addition, the managers are strongly dependent of the attitude of the other teams, which – one the hand they need to compete with, and on the another – must cooperate. Unique is also a group of consumers – sports fans. Their huge credit of trust brings additional pressure on managers not to disappoint their hopes. For principals, victories on the pitch are equally important to marketing and financial success, which mostly depends of the number of trophies

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Chapter 6

Modern Production Concepts

Monika Sałata

1. Introduction

Almost all companies in the whole world must resolve problems and decide about their organization strategy. Management strategies and methods change over time very much because societies and businesses are changing as well. That's why necessary is to apply new methods of organization. However, many of modern production concepts are not in fact completely new. Very often they are basing on the methods functioning in the nineteenth century. These techniques which were good years ago, may be a poor or even counterproductive techniques today. These new concepts, when properly applied, do lead to better economic performance, discovering the best processes for performing work and optimizing productivity (Czermiński et al., 2001, pp. 1-3).

The globalization of the world economy still needs the standardization and innovation of actions run by enterprises in all countries. Therefore, it is so important to have a knowledge of the macroenvironment, as well as, the competition which is giving the knowledge essential to implement changes and in the future will develop enterprises. Of course this process brings a lot of problems, because in the organization we are dealing with processes of constant changes. However, in the same time, it gives a lot of development possibilities about which I will be writing in a moment in this work (Roberts, 2004, pp. 1-3).

In the article were presented a few chosen conceptions of the management which are more often exploited in enterprises than the rest. The diversity of concepts show a lot of possibilities. From all of them we must choose the one which the most match to our environment, conditions and the current situation of the enterprise.

2. Chosen concepts assisting processes of organization and management

2.1. Reengineering (Process Business Reengineering – BPR)

Reengineering causes total reengineering entire enterprises, demolishing old structures and building new, in such directions as: costs, quality, service, speed. Thanks to that, arise an or-

ganization based on processes which seek to satisfy needs of the customer. To the basic tasks of the reengineering belong:

1. Defining all purposes of the company, so that they were definite for every department of the enterprise, at paying special attention to quality purposes.
2. Exchange of the role of managers into coaches, managers shorter rank are coordinating entrusted tasks for employees and they are more concentrating on helping members of the team in the realization of entrusted tasks.
3. Reducing rungs of the hierarchy of the organization, losing the clearly defined scope of responsibilities on meaning, and gaining the multifunction, self-control.
4. Implementing the multidimensional work, in which on the success is working the entire team; teams are being rewarded for their work, because is taking place connecting the efficient effectiveness with the amount of salary.
5. Strengthening a direct contact of employees with the customer so that they are convinced of the fact that they are working for the customer.
6. Replacing all trainings with the education, employees must alone make crucial decisions and deal with difficult situations.
7. Exploiting information technologies, in the purpose of the cost cutting as well as creating new solutions, contributing to facilitate the quick access for employees to all the information (Janson et al., 1992, p. 45).

Authors of the reengineering M. Hammer and J. Champy claim that the successful application of this method in the enterprise allows on:

- shortening cycles of the production about at least 70%,
- cost-cutting for the minimum of the 40%,
- improvement of the quality of products and satisfying customers about over the 40%,
- raising the profitability for the minimum of the 40%,
- extension of the market share about at least 25% (Zimniewicz, 2003, p. 26).

The reengineering is contributing to facilitate work and eliminating unnecessary activities, shortening them or reducing delays. Thanks to that, outdated and ineffective management methods are eliminated what improves to keep the current position on the market. However, in practice implementation this concept is associated with applying modern technologies, modern computer systems and the total reorganization enterprises what unfortunately is connected with spending enormous capital outlay. Exist many companies which try to lead new concept to the enterprise and they made it successfully. To them should be counted such as.: Rank-Xerox which shortened the waiting time from 33 days to 6. Other good example could be American Express Company which found remedies of shortening the time of approval for new credit cards from 22 up to only 11 days. Thanks to that, it receives better quality of services. Different example of the company can be enterprise – Ford in America which used the reengineering only for one process which were cash flows. Implementation this method let to reduce about 75% of financial operations and reduce the lead time bank, by 80%. However, it is a lot of firms which failed in this subject (Szymańska, 2001, p. 361).

2.2. TQM (Total Quality Management)

In this method the quality is the key element bonding the whole of the organization together and all it spheres. The quality relate only to the produced product and includes all features which satisfy current customer needs. Therefore, it is possible to mention a few indicators of quality

such as: the functionality of the product, its high dependability, the permanence, the agreement, aesthetics and the quality which is perceived by the customer.

The first step to implement quality management system is introducing of raising the quality of products, thanks to constant staff trainings, to realize them that they must execute their tasks properly from the beginning, avoiding their correcting in the future. Of course the key element is a man who has huge influence on the quality of made products. That's why is so important, to continually work out for improving services on possibly minimum prices. Motorola company can be good example, in which contemporary chief executive officer, Robert Galvin, established, that the first point in the agenda of all board meetings in the company, will be issues of the quality.

Other company is Ford Motor Co. which decided to install the nationwide telephone system which is free of charge for customers who are using the service, in order to know their level of satisfaction. In the same time they left telephone lines of regional centrals which irritated customers of the long time of reaction and frequent appearing of the engaged tone. In a word, satisfaction of customers is really profitable! Management of Ford Motor is estimating, that canvass in their company, costs five times as much as, maintenance old costumers. However, in the Toyota was implemented operational plan named "becoming involved into the excellence, the care of the best quality and worry about people based on communicating and the cooperation". The concern created also a team of the customer service which, reports directly to the principal management. Their based task is to measure degree of satisfaction of customers. About 40 employees of this centre are making over 300 thousand phone calls a year. Moreover, the company instituted "active dealers" who are responsibility for settling customers complaints. Such a dealer has a duty within two days for getting in touch with the customer and fifteen days for solving a problem. The Toyota company is exerting the certain kind of pressure on non-effective employees, including them to so-called "program of 20 the weakest". Employees are obliged to submit their action plan to the head office for the constant improvement of the quality (www.ekonomiczne.pl).

We can exchange a few principles managing the TQM idea:

1. The customer is the most important person, his opinion is counting and the quality must be adapted to his needs.
2. Reducing unfocused tasks; focusing only on the ones which are needed.
3. People are responsible for the quality, therefore they must fully to involve in taking by them tasks.
4. Ceaseless progress.

The progress is one of key elements of this method, because is conditioning the high customer value in the quality, costs and dates. Next – it is activating the potential lying in employees. Caring about the stimulation of the creativity among them, spurring them on to express their own suggestions and ideas. Care for their stimulation of creativity and their satisfaction. Everything is aimed at it stimulating their potential and the efficiency rise and productivities. Thanks to that, the current concentration of the enterprise on profits and the amount is supposed to be transformed on increasing the quality and satisfaction (Brzeziński, 2007, p. 231).

A method of improving the internal quality can be a system of improving the kaizen. Its task is a permanent improvement which is taking place by using a method of so-called "little steps". They are improving the efficiency, cost cuttings or streamlining the performed work. This concept is based on two fundamental principles:

- constant improving and changes for better,
- continuous process.

2.3. Logistic managing

Every enterprise has its suppliers and recipients, creating chain compound of three basic elements such as: for suppliers – enterprise – recipients. We should remember that the purchase isn't regarding only a product, but also the service, what's putting new needments in front of logistic systems.

Concept just-in-time is an Americanised version of Kanban system, developed in Japan by the company Toyota Company Motor. The name Kanban refers to information cards attached to carts, which delivered small amounts of materials for bets of the company in Japan. On each card were specified essential amounts of material which were necessary for the replenishment of supplies and exact time of starting the delivery (*Koncepcja Just in Time*, 1995, pp. 76-79).

It is possible to exchange the process of actions harmonizing logistic activities which is actually establishing to four the most crucial elements of this system:

- supplies, their storing and monitoring,
- storing and performing loading operations,
- information and everything what is connected with them *i.e.* recruiting, generating new *etc.*
- transport, transporting materials to the production.

The most popular instrument of logistic managing is the method which is so called Just in time (JIT). Its purpose is to eliminate all waste and hold-ups in production in order to deliver the product to the customer, without the wastage of materials, the time, the workforce and the energy.

McDonald company is a good example of the firm which applied JIT. Its main purpose is executing every order of the customer. This company is able to operate two buses of trippers which are ordering all sorts sets almost in the same time and expecting on them no more than a few minutes. Almost in all companies fast food achieving market successes, an evolution took place towards the production line. Mc Donald all the time is trying to react as quickly as possible for needs of its customers, preserving minimal stores, and short time of realization of these services.

We can say that four main assumptions are important for method JIT:

- Lack of supplies – saving in the form of not-storing,
- Short cycles of order execution,
- Frequent complementary of individual goods,
- Putting on the best quality or zero defects.

Core of the concept Just in time is a time, what it means examination of decisions from the standpoint of costs. It must be also consider all together: the time, the amount, the assortment and the place. Because it is important to deliver the appropriate product to appropriate place:

- in the right date,
- in the appropriate amount (Witkowski, 1997, pp. 49-51).

2.4. Lean Management

It's differently "slimmed down" or "made look slimmer" management. Here an employee is playing the leading role. This method consists on considerable limiting stores needed for the production: of people, the areas, investments and the time.

It is possible to single a few components of the lean management out:

1. *Group work.* In Japanese enterprises a group work is well known. It results among others by conviction, that the work of the group is bigger and more efficient than of individual em-

ployees (synergy effect). On the group are putting tasks and the responsibility, and what's more important a decision-making self-reliance. As a result is limiting the inspection from the part of the manager and in the same time a self-control is being increased. A view is appearing, that the greatest autonomy is the greatest motivation of all the group.

2. *Decentralization of the decision.* It relies on this, that decision-making competence are handed over to the bottom rungs of the organizational structure. As a result, the responsibility for the group and a self-control are growing. The decentralization of the decision causes the elimination of middle levels of the management.
3. *The customer orientation.* It is element which is inculcated for all employees from the management to employees by the production line. Wanting to bound the customer with the product, must be sensitive for its needs and listen to its remarks.
4. *Improving – kaizen.*
5. *Flattening the hierarchy.* Thanks to that is more simple coordination of activity and more efficiently communication is proceeding and an interest in the customer is growing.
6. *Repelling mistakes at the source.* For searching and removing of defects are involved all the workers.
7. *Avoiding the prodigality and wastes.* Actions which aren't enlarging values are prodigal. Entire material is in motion. Creating supplies means freezing capital, and it of course doesn't create the value (Zimmiewicz, 2003, pp. 71-72).

Correct application of the method can bring the following results:

- shortening the time of moving devices about 40%,
- shortening a production cycle on average 37%,
- increasing the productivity for about 35% during two years,
- reducing the demand for the staff by 30% during two years,
- reducing the number of absence because of illness to less than 3%,
- reducing the number of products with gaps from 2.5 to 0.4%.

Defects of lean management can be transformations of the concept into the streamlining what can cause the threat of lowering the fluidity and the quality. Moreover, can appear the stress and the fall of motivation amongst employees, caused by the reduction in places of employment.

2.5. Outsourcing

It is a concept of management consisting in entrusting other outside partners of certain functions in the enterprise. Is appearing a new spin which including the function of the supply. That establish the concentration of the company in all crucial areas of the functioning. It means, the resignation from the production of the wide range of parts, for the most important. The rest parts and components are staying delivered by partners – such a name is being granted supplying firms. Partners will be selected according to special criterias to which the good cooperation is recognized.

A large car concern Mercedes is a great example of applying the outsourcing which is limiting the own production consciously and with premeditation. On the spot are being produced only such main parts as: the engine, the gearbox, axes and the car body. We can say that the mother production has 40% participation in the total production. Of course sub-assemblies coming from cooperators which are subjecting to laws of competition (Zimmiewicz, 2003, p. 69).

The controlling consists on assisting or total taking over processes of planning, the guidance and controlling with enterprise. Enabling its coordination into this way. In the process of planning future purposes of the company are determined. In the process of directing the prevention is also coordinating, in which the company prevents of future problems. This philosophy can be used for detection of potential crises in the enterprise (Zimniewicz, 2003, pp. 24-31).

It is possible to distinguish controlling:

- strategic – in order to achieve as the biggest profits as possible,
- operating – is coordinating current action through analysis and the inspection of the expenses and income. It is concentrating on success.

2.6. Benchmarking

It is nothing else like comparing itself from best, equaling them, the sense of direction to the best class of products or services, learning from competitors. Still the imitation and equaling others, and it is taking place in all sphere of activities of people such as: sport, the culture, the learning and the economy.

It is possible to distinguish a few kinds of this philosophy:

1. Internal – applied in large firms, consists on searching best at business data and following the example of its (departments, branches).
2. Outside – called competitive (comparing with competitors in the own industry, placing on their background) – A defect is the fact that sources are hard to reach.
3. Functional – searching of the template in other companies carrying the same function out *e.g.* department of the logistics, accounting department, and the like, need for the customization – virtue: many improvements, defect: – many alterations are needed so that it can't be applied.
4. General when is regarding all aspects of functioning of the organization.

Should be noticed, that this method is treated only as the imitation, isn't leading for getting the long-lasting competitive edge. Moreover, the imitative thinking is limiting the innovation and the creativity of own employees. can A good example of the benchmarking companies can be Coca-cola and Pepsi, so well-known on our market (Zimniewicz, 2003, pp. 12-14).

3. Conclusion

Globalization of the economy, European integration, undoubtedly caused the need of replacing old concepts of new more effective, working in new economic conditions. All methods and new concepts in the business administration have one common goal, staying at the market, and elimination of the competition. The competition renders that the manager is still testing new concepts: total restructuring of the enterprise from the function to the process, flattening hierarchy, creating crucial competences, quality management, unceasing learning, building a lot of kinds of strategies *etc.* And everything is done only for the reason to be better than competitors, to be more efficient, to achieve the competitive edge. Unfortunately, not always applying the specific concept is giving the anticipated effects. Such a situation causes, that the manager is losing his patience. He is feeling discouraged, when isn't achieving immediate results. And then tightly is clutching the new concept of management. The new idea seems to be drawing and guaranteeing the success. Unfortunately, very often these are only illusions.

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Chapter 7

Project Assumptions, Development and Procedures in Quality Function Deployment Method

Jarosław Żerulik

1. Introduction

To fully gauge how well an organization performs one might analyze several different factors based on finances, ethics, environment, marketing or efficiency. What links all these factors together in a coherent management system is quality. Thanks to improving the quality of one's services, it is possible to better adjust to each individual client's needs, thus increasing one's share of the market; of course, this leads to better price flexibility, lower production costs and above average profit (Hamrol, 2005, p. 54).

One of the effects of good quality management has always been the development of new methods to better manage one's personnel, production process, or adjust to client's needs. There are different ways to achieve that, each based on a distinct approach to how detect and change different factors determining the current and future success of a given service or product. What they do have in common, though, is they put a strong emphasis on improving the efficiency and quality of goods and services by using different materials in the production process, improving the functionality, and either focusing on one specific use of a product or broadening the spectrum of possible uses.

Modern quality management methods come from long years of research on management processes; this lets us distinguish between methods that can function autonomously and the ones that are only to be used as tools. One of the approaches is the Quality Function Deployment (QFD). Within that approach one can find tools that directly influenced the way it has been developed: Voice of the Customer, the Kano model, or House of Quality.

2. Instruments for quality management

Quality management needs to be a living and dynamic mechanism in order to perform the best way possible; as such, its methodology should not be dependent on blindly following the rules

or bureaucratic requirements imposed by the company or outside environment. It is essential to introduce additional instruments, which:

- gather and process data regarding various events and procedures occurring in the system itself as well as within its environment,
- help make decisions based on verified info,
- are attractive in terms of their form and approach to data interpretation,
- motivate the staff to work as a team.

These instruments are called the tools and methods of quality management assessment and improvement. We use them to solve specific problems on different levels of a company. Each is a well-structured procedure that can be described by a precisely defined algorithm. They significantly improve quality management by supplying with specific data. Even though the ‘tool and method’ division is commonly perceived as discretionary, the general classification is as follows:

- tools – characterized by their simplicity, used for gathering and processing data connected with different aspects of quality management, their effect is constrained by time,
- methods – more complex than tools; they are different approaches to completing different tasks connected to quality management, scientifically derived on the basis of data gathered by quality management tools.

These tools can be used autonomously or as a part of a specific quality management method.

Areas of application of such methods include:

- designing products and processes,
- static supervision and systematic process control,
- research on the usefulness of products and processes,
- client satisfaction surveys (Hamrol, 2005, p. 126).

Within such classification, Quality Function Deployment will be most successfully applied to the ‘designing products and processes’ stage. Referring back to the dynamic division between methods and tools, in a bigger quality management system, QFD can be used as a tool, just like TQM (Total Quality Management), but, it can also function as an autonomous element of said system. Furthermore, it is entirely possible to dissect this method to define its specific elements. Quality Function Deployment consists of such tools as: Voice of the Customer, Kano model of customer satisfaction or House of Quality. The dynamic division between tools and methods is still applicable here, *e.g.* Voice of the Customer can be used both as a method or as an autonomous element of a given system.

Quality Function Deployment, just like other tools and methods, help the company to achieve specific goals set by quality management systems and, despite their generally universal construction, must be adjusted to company’s specific inside and outside requirements.

3. Basis and the development of QFD

The most important element of Quality Function Deployment is the identification and proper structuring of client’s needs, and then, based on the results of the identification, choosing the priority of company’s actions. This element is called Voice of the Customer. QFD can be defined as a process of product or service development, based on the cooperation of interfunctional subsystems that combine engineering, production, marketing and R&D. These subsystems employ a special matrix called House of Quality (the name is derived from the fact that it is shaped

like a house) to define the relationship between client's wants, needs and desires with regards to the product, its design, production and delivery processes. Even though it is possible to find several definitions of Quality Function Deployment, the most commonly used is the one provided by the American Supplier Institute. According to the Supplier Institute, Quality Function Deployment is a method used to translate client's requirements to specific product or service features at each stage of its development cycle, starting with R&D, through designing and production, and following through to marketing, sales and distribution (*Quality Function Deployment*, 1989).

This method was developed by professor Yoshi Akao when he was working in Mitsubishi shipyards in Kobe in 1972. Then, at the end of the seventies, it was adopted by Toyota. By 1986, mainly because of the need to cut down on the design cost and time, it was brought to America to Ford and Xerox. It is estimated that by 1991 over one hundred companies have been using Quality Function Deployment method.

QFD is based on the model of how improving the synergy between marketing, production and designing a new product or service is directly linked to its future success and the potential to generate increased profit. This method allows for better communication between these departments, simply by taking advantage of the clients' opinion when working on specific areas of the product or service. QFD allows for more precise client surveys to better understand which product features drive client's satisfaction. The data can be presented in the form of four Houses of Quality graphs. The first one connects the clients' needs to the design stage, the second one points to specific actions the company can take to better apply VoC (Voice of the Customer) to the product's design, the third helps the company make specific decisions dependent on previously defined actions, and the last, fourth House of Quality, implements these decisions into the product's production stage. It's safe to say that QFD is an outline of how to apply client's needs and opinions to the design of a product or service (Wójcik, Jaśkowski, Żerulik, 2011, pp. 138-139).

4. Application of Quality of Deployment method

Using the QFD method results in:

- Detailed records of clients' requirements and updating any missing info regarding these requirements,
- Records of quality characteristics of products expressed through measureable units,
- Team analysis of a product's development and production processes, its characteristics, setup and control, conducted by different departments of a company,
- Team-based choice of optimal solutions and deciding on priorities for repairing and revamping actions,
- Team-based comparison to competitors' products or services,
- A record of: the relationship between quality requirements (VoC) and quality characteristics of a product, the relationship between quality characteristics of a product and its construction, functions and other interconnections (Kleniewski, 1997); all of these have been assigned different values.

The most basic tool used in QFD is the House of Quality (the name derives from the graphic representation of this tool). The biggest importance in building a proper HoQ lies in the information flow between the company (or, more specifically, the research team of a company) and the client. It is essential to conduct numerous surveys and interviews – this is where it might

be helpful to use Voice of the Customer as a tool. But for the whole process to succeed, it is essential to first accurately determine clients' needs. Kano model is perfect for this purpose. The whole line of subsequent actions in QFD method can be closed in using HoQ, but supplying that with the other tools allows one to maximise the quality of the results.

4.1. The role and employment of House of Quality

The main tool used in QFD method is a matrix of eight squares called House of Quality. It is an outlet for a comprehensive evaluation of a product in terms of clients' requirements. House of Quality consists of the following sections which describe:

- client's requirements,
- importance index and comparison evaluation,
- technical features of the product,
- relationship between client's requirements and the technical features of the products,
- proper level of different attributes,
- relationships between different technical features,
- technical comparison,
- special requirements (Obora, 2000, pp. 114-117).

The goal of creating the list of client's requirements is to compile a comparison sheet for all the features important for the final customer. In this stage Voice of the Customer is utilized to determine the most desirable features without confusing the client with specific technical language, since it might pose a problem for a number of clients. The data acquired this way is organized from the most to the least important aspects.

Importance index and competitor's comparison evaluation are conducted to gauge which client requirements are most important for the client and how the product of the company and the company's competitors meets said requirements. The evaluation is best expressed on a numeric scale; the importance index can be expressed on a different scale (mostly because of different brackets), but as a rule, it should not prove interpretative difficulties.

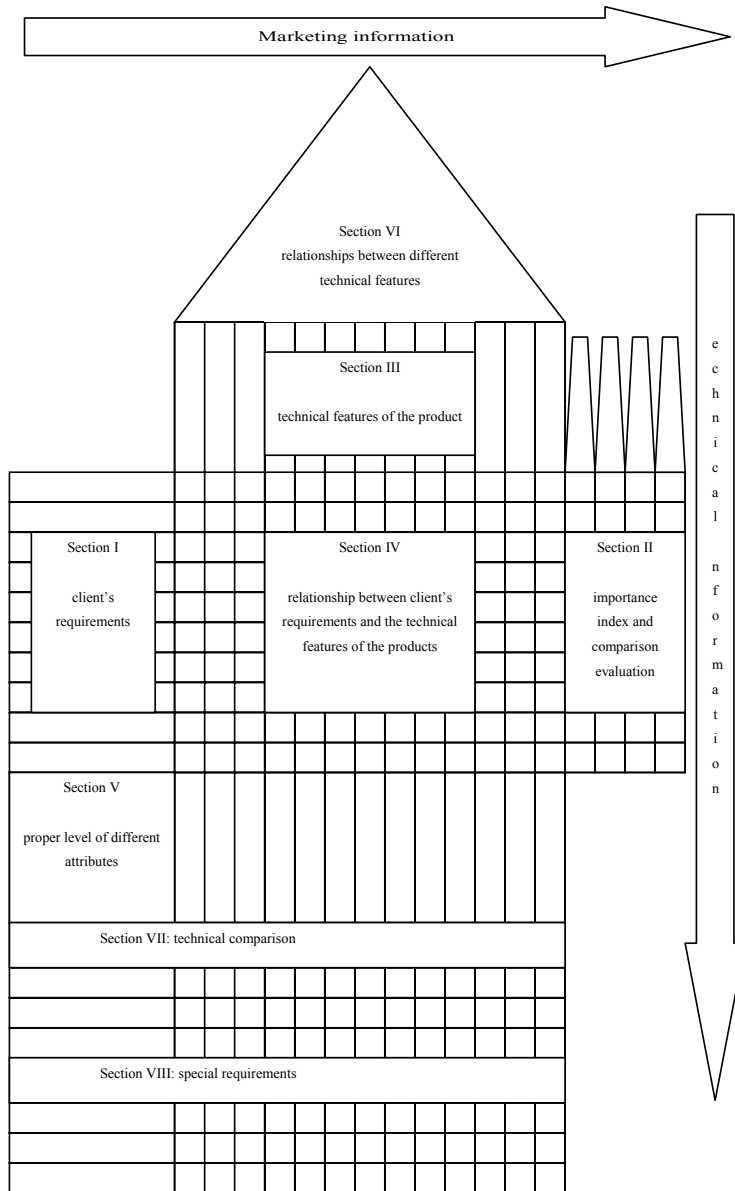
The technical features of the product section is where it is possible to express the client's needs in terms of strictly technical features. It is vital that this stage of the research is carried out by the people directly connected with the technical side of the product's creation, *i.e.* designers, technologists, *etc.*

Describing the relationship between client's requirements and the technical features of the products is a 'result stage', where the relationship between sections I, II and III is determined. The correlation between them can have a weak, medium or a strong value, which lets the researchers infer which technical features have a weak, medium, or a strong influence on the level of client's satisfaction.

The section of proper level of different attributes is a space where one puts in the optimal technical values generally determined in a measurable way, *e.g.* through simple figures, percentages, measurable units. If it is difficult to determine which unit of measurement to use, a word description of the optimal values will suffice.

The relationships between different technical features section is where the newly created correlations are described. They can be positive (if a positive change of one feature has an automatically positive influence on a different one), neutral (when there is no correlation at all) or negative (when a positive change of one feature has a negative effect on a different one).

Figure 1. House of Quality – QFD matrix structure



Source: Obora, 2000, p. 115.

Technical comparison refers to the interpretation of the ratio of the difference between the technical features deemed optimal and the technical features of the product produced so far (the comparison is also made for the competitors' products). At this stage it is essential to pay additional attention to which features surpass, match, or are under the optimal values.

Special requirements section is where one can include all the additional information regarding specific technological traits, *e.g.* safety regulations, environmental requirements *etc.*

Please do note that this form of House of Quality is not its final iteration and it is possible to add more sections to build next levels of the matrix (Obora, 2000, pp. 117-119).

4.2. Identifying clients' needs with Kano model

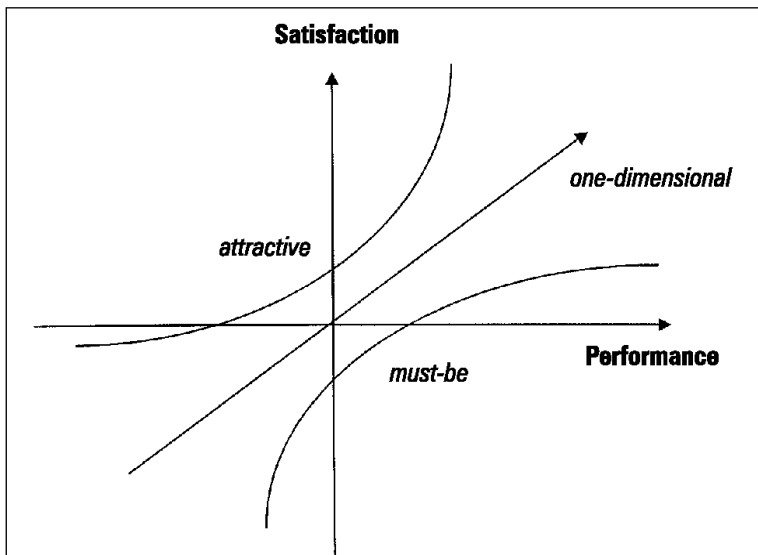
While indentifying the needs of the final customer for a given product, it is important to maximise the satisfaction of the customer. To properly approach this task it is important to be aware of three types of needs, *i.e.*:

Overt needs – whether or not these are met directly increases or decreases customer's satisfaction. They are the most easily identifiable ones, usually simply asking the client's opinion is enough.

Expectancy needs – these are the basic, obvious features of the product; because they are obvious to the customer, he or she will never actually mention them unless for some reason a product is lacking in these areas. These needs are the most necessary aspects that account for the biggest loss of product's value should they be lacking.

Unexpected needs – these are the most difficult to describe, since they are beyond average customer expectations. If these needs are not met, the customer's satisfaction is not negatively influenced, however, should these features be present, the product is met with positive surprise and a considerable increase in client's satisfaction (Wójcik, Jaśkowski, Żerulik, 2011, pp. 140-142).

Figure 2. Model Kano



Source: Shen, Tan, Xie, 1998.

To properly identify these three types of needs one should use Kano model. This tool is especially useful because what now is categorized as an unexpected need could soon become

an expectancy need. Kano model allows for dynamic observation of clients' expectations, which is of utmost importance in a competitive business environment. It is also significant to remember that Kano model can be scaled to specific client groups of target market for a given product of service. This is why proper categorization of target customers is a key aspect to fully understanding their needs.

4.3. Voice of the Customer application

Because of how crucial Voice of the Customer is for QFD, the basis of this technique was described in quite a detailed way in the paper 'The Voice of the Customer', by A. Griffin and J.R. Hauser, so that it can be freely adopted by different companies to varied products and needs, for every situation requiring high quality customer feedback. This is why Voice of the Customer can be successfully employed in Quality Assurance (QA) processes of designing a completely new product, or a service that fulfils the same role as its predecessor, but for a lower cost (Biliński, Ceraficki, Nowakowska, 1972, p. 15). Voice of the Customer's use in QFD allows for in-depth client need analysis for the purpose of building House of Quality to gain both, marketing and technical data.

Voice of the Customer is defined by a scientifically developed algorithm. The procedure of this method can be described in five stages:

- composing the experimental group,
- conducting interviews,
- reorganizing the results,
- interpreting the results,
- making the improvement.

Composing the experimental group can be quite tricky, as it requires determining an appropriate group of interviewees – the members cannot belong to too high or low extremes of the target group. If they do, the data could be too detailed and, in consequence, useless, or it could be too homogenous because of too similar responses from the customers. The best solution is to survey the customer group connected as closely as possible with a given service or product – thanks to this, the data will be most reliable for the VoC. It is advisable that the interviewed clients come from different places, use the product in varying frequencies, are of different genders *etc.*

At the interviewing stage it is essential to use a qualified moderator for the discussion. The mod should have sufficient knowledge regarding the product and the market, and should be an expert in his field (Ulwick, 2002, pp. 94-95). His responsibility is to filter the info from the interviews and to create a scale to value the data, tying it to a concrete value that is meaningful for the research. The reason for such selection is to distinguish between actually useful data and data that might give an impression of being reliable but is actually faulty *e.g.* a problem that has its source in different aspects than deemed by the customers (*e.g.* an inability to properly use the product rather than something inherently wrong with the product), or suggestions that are completely irrelevant for the majority of the clients (Pyon, Woo, Park, 2010, p. 1057). A good moderator should also ensure that the clients take into consideration every aspect of their product or service experience. The interview usually begins with asking the respondents to give a couple of phrases or ideas that come to his or her mind when asked a question about the product. Then the moderator's task is to guide the client to forming a coherent opinion that can serve as some-

thing to extract data from. Such opinions tell the researchers how the customers want the product or service to work, what they want it to look like, how they want to use it. The moderator needs to work to precise the exact meaning of words generally appearing in client's responses, such as "easy" and "handy", which are ambivalent in their nature and can mean different things to different interviewees. Well formed conclusions let the developers define specific features like size, time, frequency *etc.*, what will prove useful in later research.

Reorganizing the results comes down to properly classifying previously acquired data and describing exact specifications in regards to the service or product in development. All the actions performed while using a given product should be clearly defined at this point; this enables the researchers to form a quite accurate estimation of the product's actual value.

After neatly organizing the data, the results should be evaluated by the interviewees with the use of a numeric scale. The aim of this stage is: to tie each result with a meaningful piece of information that is relevant to client's satisfaction and to define how important it really is. Afterwards, all the conclusions are analysed using mathematical formulas to find the best and most optimal improvements for the product. At this point, the best solution for any company is to pick the upgrade that will fill the needs of the clients that have not been previously met. It is advisable to use the "best deal algorithm" (1) to choose the upgrade. But first, we tie each result with a numeric value, *e.g.* on a scale from 1 to 10, where 1 is for the lowest customer value and 10 stands for the highest. The formula is:

$$\text{Meaning} + (\text{meaning} - \text{satisfaction}) = \text{the best deal} \quad (1)$$

After the researchers put the numbers in, they will be able to accurately define the value of a given improvement of a product or service. The higher the number the better the chance of success and satisfying the clients' needs.

Making the improvement is the last stage of VoC method. It results in discovering new, innovative areas to use a given product or service, defining possible best deals, the direction on market development, target groups and being the most fierce competitor. At this stage the research should identify new possible solutions that have not even been considered before; consequently, new, different groups of customers can become interested in a given service or product, or the same target groups might shift their definitions of expectancy, unexpected or overt needs and become even more satisfied with the product or service (Wójcik, Jaśkowski, Żerulik, 2011, pp. 142-147).

This concludes the presentation of Voice of the Customer method and shows exactly how much can be achieved with such research guidelines: using it either as a part of QFD or as a standalone method of finding new areas to meet client satisfaction, introduce product innovations or decrease production costs.

5. Conclusion

Quality management creates new opportunities for companies to refine their services or products and, as a consequence, make them more competitive. In modern business environment, almost every company has access to proven and solid methods like TQM, Kaizen or Six Sigma. However, it is essential that every competitor knows how to decide which tool will be the most useful for what his or her business needs to achieve.

Quality Function Deployment can serve as a powerful tool in designing physical products as well as services or virtual goods such as computer software. Results achieved with detailed analyses of clients' needs and expectations, *i.e.* Concurrent Engineering (CE), have a noticeable influence on businesses' acceptance of this method (Obora, 2007, p. 129).

It is worth noting, however, that methods such as Voice of the Customer or Kano model are slightly less popular than other quality management approaches in Polish business environment, which is reflected in lack of Polish literature concerning this area of management studies. Nevertheless, they compliment Quality Function Deployment in a terrific way and definitely deserve a lot of in-depth analysis. Employing professional quality assessment instruments allows for reaching many important goals for both the entrepreneurs and final customers, *i.e.* increasing the customer satisfaction, thus multiplying the profit for the businesses.

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Chapter 8

Impact of Business Intelligence Technology on Business Productivity

Jarosław Nowak

1. Introduction

In the twenty-first century, new technologies have become an integral part of economic reality. The increasing computerization and an increase in the rate of flow of information has led to the emergence of a model of the economy based on knowledge and information. In the literature become a frequent terms such as the fourth factor of production information, information as a raw material (Pomykalski, 2001, p. 169). The growing importance and increasing use internet has meant that the amount of information generated also began to grow rapidly. Therefore, there is a problem with the processing and data storage¹. Here we come with the help of modern technologies namely business intelligence. The information that until recently were not significant, and no one of them is not thought today ceased to be treated as blank messages. Information has become the determinant of the new approach to the management of the organization. Economy has developed a new model Business Intelligence based organization (Olszak, 2012, pp. 9-10). The aim of this paper is to present the impact of applying the most modern tools on business productivity. The paper presents the issues of decision support, which have a direct impact on the productivity of the company. The article is a review of the areas of the enterprise in which the technology is applicable Business Intelligence and sources of obtaining the key from the point of view of productivity information. The paper describes the tool which uses BI technology and presents one of the key measures of productivity which is the wages productivity understood as the ratio of production in selling prices and labor costs, which it is possible to analyze through the use of this technology. The last part of the development includes a set of conclusions and the prospects of development of this technology.

¹ According to analysts at International Data Corporation, the amount of information that has been gathered over the past two years is greater than the amount accumulated throughout its history, and over the next decade will increase fifty times.

2. Areas of application the Business Intelligence

What exactly is Business Intelligence? Jerzy Surma from Warsaw School of Economics gives the definition Gartner Group, which defines BI as "... a user-oriented process of collecting, exploration, interpretation and analysis of data, which leads to streamline and rationalize the decision-making process. These systems support the management staff in making business decisions in order to create growth in the value of the company" (Surma, 2009, p. 13). Today we are dealing in most computerization of elementary business processes, despite the decision-making managers and managers often rely on intuition. The most common reason for this are the errors in the data, the difficulties in their relationship which leads to the formation of the so-called. several versions of the "truth". Is the use of decision support systems, business solves this problem? The answer is not as obvious as it might seem. These are areas in which BI is doing great but there are also those for whom the use of this technology is very heavy. Back in the 70 twentieth century Herbert Simon has identified three such areas:

- Monitoring – standard management of business processes and subordinates.
- Area well-structured problems or routine and programmable for which you can apply specific operating procedures.
- Area of poorly structured problems for which it is very difficult to find the algorithm.

In the first two areas of business decision support technologies are currently widely used. In the third we only have to deal with attempts to support and use of these tools. (Simon, 1977, p. 21). However, they are constantly tested and the results of this study appear to be promising. Currently used process approach when making business decisions, and this arrangement we have the following structure uses Business Intelligence (Surma, 2009, p. 51):

Table 1. Areas of application Business Intelligence in process term

Primary processes	Auxiliary processes	Management processes
<ul style="list-style-type: none"> • Sale process • Logistics • Production 	<ul style="list-style-type: none"> • Supplier management • Management of human resources • Knowledge management 	<ul style="list-style-type: none"> • Finance

Source: own work.

In the individual areas are created analysis and analytical models such as customer profitability analysis, price optimization model in the sales area. Research rotation of goods in time, the analysis of orders to suppliers and optimizing the selection of routes in order to minimize costs in the logistics area. Are created rankings suppliers. In the area of finance are analyzed the profitability of the company, sales of individual sites and products.

3. Sources of information for business decision support systems

The primary source of data are transactional systems and with them are passed information about sales or orders from customers. Depending on what information we are interested in the end result, and as "low" level of detail we want to analyze the data transferred can affect even the price, quantity and profit margin for individual products to be sold. Loading data warehouse requires,

of course, familiar with the structure of the database transaction system and mapping field. This involves determining what data and what cells in the base transaction to appear in the data warehouse and where. Created diagrams and links lead to automate this process called ETL (extract, transform, load). Basic data are increasingly supplemented by information transferred from other data warehouse, data files and resources through the Internet, where through a combination of appropriate services data are transmitted automatically (Surma, 2009, pp. 27-30). We can say that today, the website is “mine of information”. Web data mining is a completely separate aspect of BI. In the process, we can distinguish several ways of discovering information.

- exploration of content – text search data network resources through the use of text analysis algorithms capable of detecting the relationship between words and sentences;
- exploration structure – look at the relationship between the structures of hyperlinks between documents;
- exploration of use – analysis of information on the use of the service on the basis of the register operations and events (Żurek-Owczarek, 2011, pp. 158-159).

Recent studies, however, date back further. In 2010, in Cracow were conducted innovative eyetracking research involving the tracking eye movement while using the website. They have enabled, among others, to determine which elements, for how long and in what order to attract our attention. Designed path of vision and heat maps are currently used by marketing companies as well as company designing web sites (Kaplan, Norton, 2009, pp. 27-35).

4. Two types of information

BI technology provides us with two types of information management at the tactical and operational and strategic management at the strategic level. This information is far different from each other and tend to be designed for employees at different levels in the company. The first more analytical affects internal processes within the company but analyzes the information to the lowest level. She is usually directed to lower-level managers, or directors. Here BI offers us such as analyzing the reaction of demand to price changes, test the profitability of sales by customer and product groups in a short period of time, month, week, day. At the strategic level information is provided synthetic usually directed to decision-makers in the scale of the company board, the president. It is usually extended to the external environment, and presents a longer time horizon. Novelty is the comparison of the so-called. industry benchmarks. This allows deeper analysis and to determine the market position of the company in relation to the competition.

5. BI Tools

The basic tools of BI OLAP (online analytical processing). They enable the creation of multi-dimensional analysis. Within them are carried out subsequent operations such as:

- determine the scope of the analysis – that is, what facts and dimensions will be analyzed,
- drill-down – refinement of existing information such as analyzing sales in the year, we go to study how does the sales in each quarter of next months and even days,
- collapse – the inverse operation to drill,
- action on the facts – arithmetic functions using the minimum, maximum, create charts, sort of division into groups (Surma, 2009, pp. 38-45)

Other tools include dashboards. They are a response to the expectations of the managers of the first level, where the most important current information in order to achieve operational objectives such as how many people took advantage of the currently proposed promotion and how it affects the sale of products. Currently, access to such cockpit is made possible by devices smartphone or tablet from virtually anywhere, provided access to the Internet. This allows virtually instant response to various weaknesses in the business processes of the company. Business Intelligence systems also use predictive modeling. These are advanced analysis using advanced mathematical models to forecast results and business processes further with tools for the needs of adopted BI technology is developed by R. Kaplan and D. Norton's balanced scorecard concept. It translates the mission and vision of the company to a specific numerical measures in areas such as:

- finance,
- customer,
- process,
- infrastructure an growth.

The concept is aimed at supporting the implementation of the corporate strategy in the long term. By combining the concepts of Business Intelligence technology can, for example linking the objectives of the annual budgets and indicators of projected values, examining the degree of implementation of the strategy of the remuneration system and get feedback which allows to update, correct strategy and learning organization (Kaplan, Norton, 2009, pp. 27-35). An important tool for BI is also data mining, or exploration, discovery information. Discovered previously unknown relationships and diagrams are usually presented in the form of logical rules and decision trees. They may have high economic value and can be used to support decision making, financial and marketing in the enterprise data mining is sometimes called "the search for money in the databases". As an example, in the literature the most common is a reference to the customer's shopping cart. Every transaction and every purchased product is stored in a database. The purpose of the analysis of the basket is such "discovery" which pairs of products are bought mostly by customers (Zakrzewicz, 2003, pp. 2-3).

6. The productivity of enterprises

Should determine the effectiveness of one sentence, you would say that it is the quotient obtained effects for investment. In terms of content, such reasoning is perfectly correct, but nowadays completely sufficient. Since the 90s of the last century when, appeared to work M. Hammer and JA Champiego "Re-engineering the corporation. A Manifesto for Business Revolution" (Jokiel, 2009, p. 12), in management began to dominate process approach and the development of modern information technologies, including Business Intelligence, has enabled the measurement of the efficiency of individual processes. Currently the company to gain a competitive advantage and create indicators examine the efficiency of all possible aspects of the business. Browsing publications in the field of efficiency measurement, we can come across hundreds of indicators. Some more general, possible to apply and analyze a larger number of companies other created for the specific nature of the industry or a specialized company. As it turns out, the effectiveness of a dual nature. This is related to the fact that once the specific expenditures, we strive to maximize the effects and another time, in advance define the effect of trying to minimize expenditures. Quite often we meet with the approach to efficiency through the prism of efficiency (Nowosielski, 2008, pp. 39-46). The specificity of this approach is presented below:

Table 2. Typology of processes Stanisław Nowosielski according to the criterion of efficiency and effectiveness

Process	Ineffective	Effective
Productive	The objective is not achieved but the effects are greater than expenditures	The target is achieved and the effects are greater than expenditures
Unproductive	The objective is not met and the results are lower than expenditures	The objective is achieved but the results are lower than expenditures

Source: own work.

One of the key measures of efficiency wages is productivity defined as the ratio of production to sales prices and labor costs. By using the latest technology to monitor this ratio becomes relatively simple and takes little time. The combination of efficiency ratio along with the typology Nowosielski an interesting starting point for the analysis of the productivity of the entire company. Company X monitors the rate of productivity, assuming a relatively fixed expenses which are wages and planned results, which include revenues from sales. In accordance with the principles of rationality, resource management is a productivity formula, consists in estimating the effects of the relatively fixed, certain outlays.

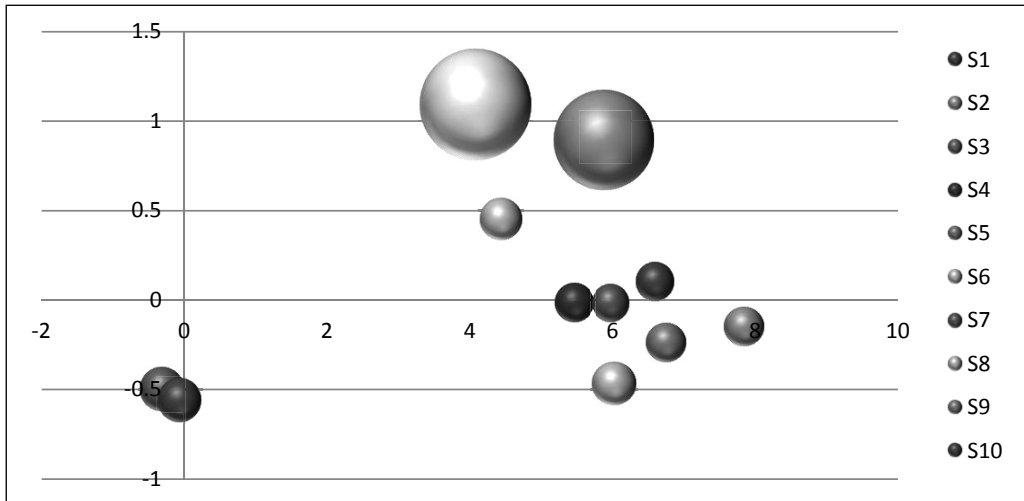
Figure 1. Productivity wages in a multi-company X

Nazwa pozycji	Plan	Kwi 2014	Wykonanie %	Wykonanie
tf Efektywność Firmy X	5	4,96	99,20 %	-0,04
tf Efektywność Sklep 1 Przychody/Wynagrodzenia	6,50	6,60	101,54 %	0,10
W-1	8 113,72 zł	8 113,72 zł	100,00 %	0 zł
P-1	52 739,18 zł	53 537,25 zł	101,51 %	798,07 zł
+ tf Efektywność Sklep 2 Przychody/Wynagrodzenia	8	7,85	98,13 %	-0,15
+ tf Efektywność Sklep 3 Przychody/Wynagrodzenia	1,20	0,70	58,33 %	-0,50
+ tf Efektywność Sklep 4 Przychody/Wynagrodzenia	5,5	5,48	99,64 %	-0,02
+ tf Efektywność Sklep 5 Przychody/Wynagrodzenia	5	5,91	118,20 %	0,91
+ tf Efektywność Sklep 6 Przychody/Wynagrodzenia	4	4,45	111,25 %	0,45
+ tf Efektywność Sklep 7 Przychody/Wynagrodzenia	6	5,98	99,67 %	-0,02
+ tf Efektywność Sklep 8 Przychody/Wynagrodzenia	6,5	6,03	92,77 %	-0,47
+ tf Efektywność Sklep 9 Przychody/Wynagrodzenia	7	6,76	96,57 %	-0,24
+ tf Efektywność Sklep 10 Przychody/Wynagrodzenia	1,5	0,94	62,67 %	-0,56
+ tf Efektywność Sklep 11 Przychody/Wynagrodzenia	5	5,89	117,80 %	0,89
+ tf Efektywność Sklep 12 Przychody/Wynagrodzenia	3	4,09	136,33 %	1,09

Source: own work using STREAMSOFT Business Intelligence system, courtesy Asoft Pro Ltd.

The above table shows a measure of the effectiveness of the company's stores X. As you can see, despite the fact that the effectiveness of expenditures on wages is relatively high in the company are stores that are ineffective. The following summary of the results of the efficiency with effectiveness prepared on the basis of the Nowosielski typology.

Figure 2. Summary of Company X stores the Nowosielski typology



Source: own work.

As you can see in the above diagram, firstly, not everyone from the shops is effective. There are also shops which are the most effective but the expenditure on the salaries they had not reflected in earnings as they were lower than assumed in the plan. It would also be in such a situation, think about whether the targets are set at an appropriate level because the term it too high causes the unit shall be considered ineffective.

7. Benefits of BI

Generally speaking, through the use of enterprise BI systems increases the speed, efficiency and accuracy of decisions. Thanks to gaining competitive advantage. More specific benefits of implementing the Business Intelligence is an increase in the accuracy of the performance of business operations. This is related to the fact that very often the system “forces” users to conduct by certain patterns and procedures. As a result, we benefit in other planes (Howson, 2008, pp. 20-23).

- increase the speed of the flow of information – maximizing the potential of information increases the competitive advantage the company;
- providing fast balanced information about the places, processes in which rising costs but also areas in which rising income;
- monitoring the impact of the changes and provide a very quick response to improperly decisions;
- the study customer behavior and cognition of its profitability. This allows the customer differentiation and division into “good and bad” (Surma, 2009, p. 97).

8. Customer Intelligence and Big Data concept

The latest trends in the development of BI is Customer intelligence what means analytical processing of customer data. The corresponding data mining allows selection of the target group, the choice of communication channel as well as the time and place of transfer of the message to the client. Here we are entering the area of personalization marketing message. Content and form of the correct media profile are derived from the recipient and this in turn is developed based on the information. The transmitted information is not always precise and accurate in connection with this case, they are divided on accurate data and information stored in contact with the client, sometimes referred to as registration data or principles such as: name, surname, address, national identity and data passive (inaccurate) which are not provided by the client deliberately recorded during monitoring but his behavior (Surma, 2009, p. 97). They allow, however, analyze information such as shopping preferences based on credit card use or interests based on the sequence of visits websites and even create maps of social contacts based on the analysis of telephone calls. We can say that we are on the threshold of a revolution where all our movements and actions are stored in a huge database (Big Date) and then used for marketing purposes. Big data is currently the most popular trend in the development of BI. We cannot talk here only about the relationship of large amounts of data. The idea of big data is presented on the basis of the quadruple V is:

- Volume – large amount of data,
- Variety – large variety of data,
- Velocity – high rate of appearance of new data and real-time analysis,
- Value – significant value to the business.

BI analyzes mainly data from transaction systems or More specifically had information about items sold on the receipt or invoice. New technologies and the emergence of online stores have given the possibility of analysis of a much larger and more diverse amounts of data. Currently analyzed include, subtransaction – or watching a customer of products A, B, C, D before selecting a product, or that's how we got to the store page. Big data allows you to track any data on the interaction with the customer (Choiński, 2005). Here there is a moral issue, and the paradox between the care of the interests of the client and his privacy. However, already being quite bold designs registration trial data related to all forms of life of a single person. And so the concept of Gordon Bell registration would be subject to the following events:

- written documents (e-mails, articles, notes, lists, blogs),
- viewed web pages, newspapers, studies, books,
- viewed photos, paintings, posters,
- listened to music,
- viewed videos,
- all own files,
- recordings of telephone conversations,
- purchases made,
- visited places,
- results of medical examinations, as well as ongoing monitoring of heart rate, body temperature, *etc.*

It seems that according to the concept of a scenario of full surveillance is technologically possible but do you really desired (Surma, 2009, pp. 95-98)?

9. Conclusion

The development of modern technologies, including the development of the Internet has created new opportunities for business decision support systems. Education is a new form of business conducted so. E-business has contributed to the development of the whole sector ICT in the BI technology. Currently, when the costs of implementing new technologies are constantly growing and seem to be a heavy burden, companies are moving in the direction of increasingly popular cloud computing. External companies take on the care of the technical infrastructure and security and we are left with only the use of the resource data. Recent trends in the development of BI put us in the face of a situation when going to the mall will be greeted us our favorite song on the big screens will see the offer of clothes in our size and favorite color, and the screen smartphone will be offering tours, we're looking for a week.

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Chapter 9

Enhancing Project and Enterprise Agility to Respond to Change

Jan Jekielek

1. Introduction

Agile Project Management takes the ideas from Agile software development and applies them to project management. Agile methodologies generally promote a project management process encouraging stakeholder involvement, feedback, metrics and effective controls.

Agile leaders lead teams, non-agile ones detail tasks into *e.g.* Microsoft Project and then manage and tick off task completions. The task oriented-approach is concrete, definable, and completion seems finite. Not so with leading teams that seem fuzzy, messy, undefinable, and incomplete (Highsmith, 2009). This is why in case of the corporate push for agility projects and organizations still tend to keep managing tasks.

Agile Project Management with its inherently extensive IT has been used primarily to manage changes on smaller manufacturing projects.

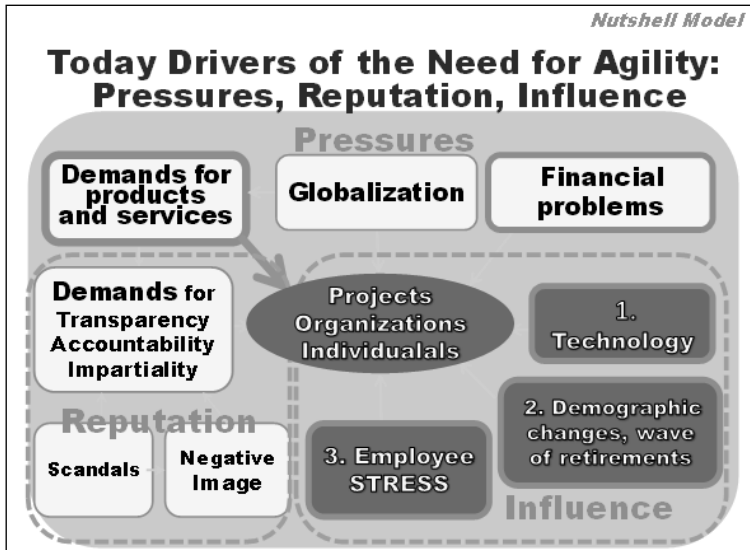
Needs for agility on all projects today are driven by the increasing multisource pressures on enterprises, projects and individuals as identified earlier (Jekielek, 2012) and depicted on Figure 1. Traditional market requirements for products and services are now clearly supplemented by requirements for reputation where customers demand transparency, accountability and impartiality not only from organizations and projects but also individuals they deal with.

Reputation is the result of demands for transparency, accountability and impartiality.

Areas of influence include projects and organizations where the individuals can have their 'internal' choices as well as 'external' areas regarding Technology (new tools, choice and application), and Demographic changes that include retirements.

Regarding Employee stress it is important to realize that it is produced by the individual as a response to triggering stress internal and external stressors. Work-stressed employees typically are victims of mismanagement *i.e.* useless and counterproductive actions of their management. Even if this is the case, there are techniques allowing for alleviating that by the use of positive pressures as a part of Structured Streamlining that belongs to enhancing project and enterprise agility to respond to change resulting in personal and often organizational improvement (Jekielek, 2012).

Figure 1. Today Drivers of the Need for Agility: Pressures, Reputation and Influence



Source: this paper.

Figure 1 depicts a simplified model of pressures on organizations. It has been used by the author at workshops and presentations to underline differences between private, public and civic organizations. Organizations and their pressure factors are all under administrative and political pressures with intensity dependent upon their nature.

2. Practice of Structured Streamlining

Structured streamlining is not an action, it is abandoning those actions that are not absolutely necessary to execute projects, programs and processes. It is generally applicable to most activities. It can be just a simple mental exercise left to individual interpretation as exemplified below:

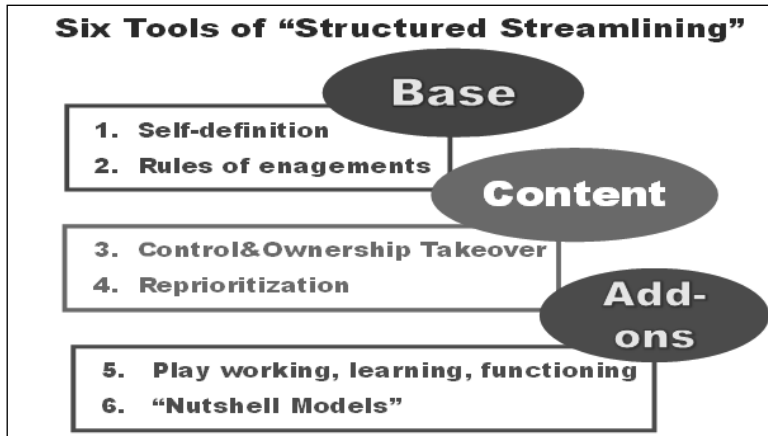
“Imagine that you don’t have any imposed duties you must fulfill. You are in full control and take ownership of what you do at any time based on your choice helped by a list of priorities that you establish and keep updating in your mind. In time you will skillfully keep reshuffling priorities and remember them. Having control and abandoning dead weight allows you now to explore as much context as you can discover and harmonize all necessary actions that remain including filling all gaps you can find out to end up with better integration to complete the task.

Gradually you will do faster much more with less. Your skills in discovering full context, abandoning all that is counterproductive and useless and filling the gaps allow you to run faster and/or take more load.

You keep momentum of moving forward avoiding obstacles without stopping; you negotiate changes that you decided must happen. If you cannot avoid an obstacle you *bulldoze through*. Even better, if you can jump over or use obstacles as stepping stones and leap further. If you are unsuccessful and crash, you get up and proceed a different way”.

Structured Streamlining is essentially a set mental exercises delivering powerful results.

Figure 2. Tools of Structured Streamlining



Source: Jekielek, 2013.

Base Tools “Self-definition” and “Rules of Engagement” determine a non-negotiable but updatable base in the form of a practical set of values and rules.

Main Content Tools “Taking Control” and “Re-prioritizing” give empowerment, speed and maneuverability.

Add-on Tool “Play while Learning. Working, Functioning”, is an effective internal motivation booster that adds lightness and natural teambuilding.

3. Add-on Tool “Nutshell Models” (legacy for Structured Streamlining)

Nutshell Models, presented first time formally in 2005 (Jekielek, 2005), are simplified presentations of complex, vague or uncertain matters. They are designed to maximize comprehension by finding and using essential facts in a simplified manner that is easy for the average person to understand.

They have been used extensively by the author since 2003 in teaching engineering, business, human resources and sports (skiing and snowboarding). They have been present in numerous conference papers, work reports, and in conducting a variety of workshops and seminars.

Nutshell Models comprise three elements: “Essential Facts”, “Curiosity Factors” and “Magic Solutions”.

Essential Facts is a simplified essence of the project, program, process or task. Curiosity Factors are things that enable participants to prompt internal questions (typically, “can I do it?”) that should be well situated within their perceived ability to succeed.

Magic Solutions are simple “aha!” solutions that allow for “instant” success. They are enablers of curiosity and lasting internal motivation to learn more.

Note: This tool could be used carefully, advisably as an option since it requires not only analytical but also well-developed synthesizing abilities (Jekielek, 2005).

4. Benefits and Side Effects (reinforced further by the Agile approach as described)

Benefits of practicing Structural Streamlining are a significant increase in productivity and self-motivation, and more independence, influence and control.

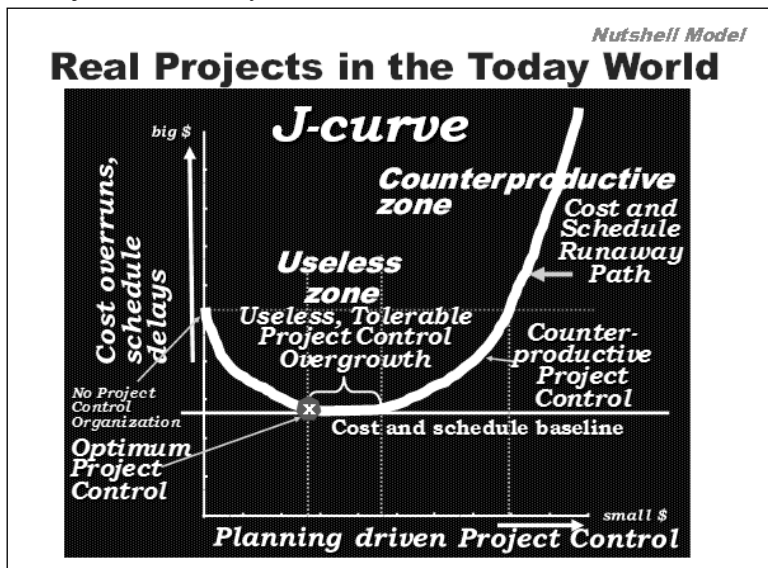
Positive side effects of using Structural Streamlining are surprising lowering of stress and simultaneous increase in self-discipline.

Negative side effects include pitfalls of the “cultural change” especially abandoning old ways challenges and frustration of others who tend to perceive the implementers’ relaxed approach as poor teamwork or lack of care.

5. Real Projects in the Today World

Many today projects, especially public mega-projects end up with large cost and schedule overruns. The author’s involvement in a 3x cost, 2x schedule overrun project led to the development of the “J” curve presented on Figure 3.

Figure 3. Real Projects in the Today World: The J-Curve



Source: this paper based on Jekielek, 2002.

A Figure 3 J-curve represents overall project costs (big\$) as a function of planning driven project control costs (small\$). The cost and schedule baseline depicts conditions of the cost and schedule found in the project Execution Plan.

The point of an optimum project control (marked with ‘x’) indicates that the project control is limited to the minimum required to remain at the baseline. Any further growth of project control is useless but tolerable as long as there are no overall cost overruns/schedule delays caused

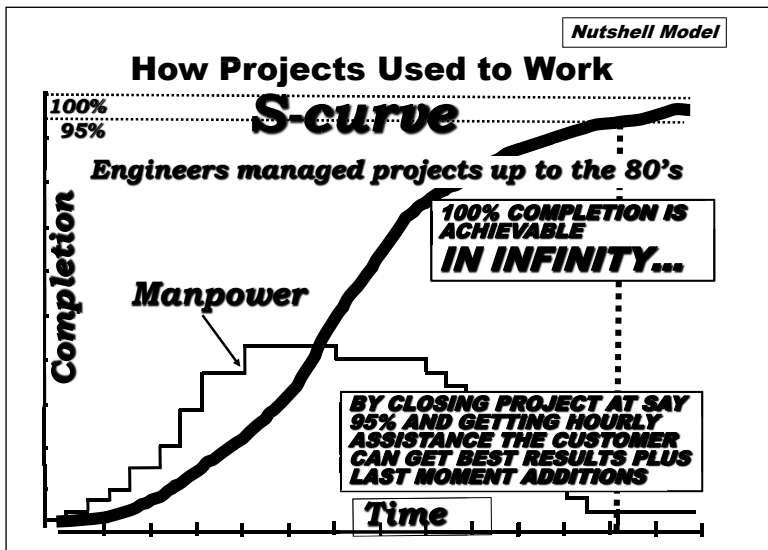
by it; beyond that it becomes counterproductive increasing cost without adding any value. Any further project control effort increase results in project cost/schedule overruns that may follow a runaway path.

Since project planning drives project control, over-planning (typically excessive fragmentation of project tasks and locating them in unrealistic distant future) automatically creates conditions of the overgrowth of project control. Project over-planning and the resulting project control overgrowth are often caused by the management’s search for total central control encouraged further by the development of more and more elaborate and powerful computerized control tools (Schön, 1971).

6. How Projects Used to Work

Up to the 80’s Engineers managed projects. Project and every discipline progress and Manpower (cost component) were plotted on the S-curve as shown on Figure 4. The author participated in several projects done on content, cost and schedule closing his discipline project work at some 95% and negotiating support to the customer on an hourly basis that would allow to finish the scope and even exceed it by adding last moment customer additions.

Figure 4. How Projects Used to Work: S-Curve



Source: this paper, based on Jekielek, 2002.

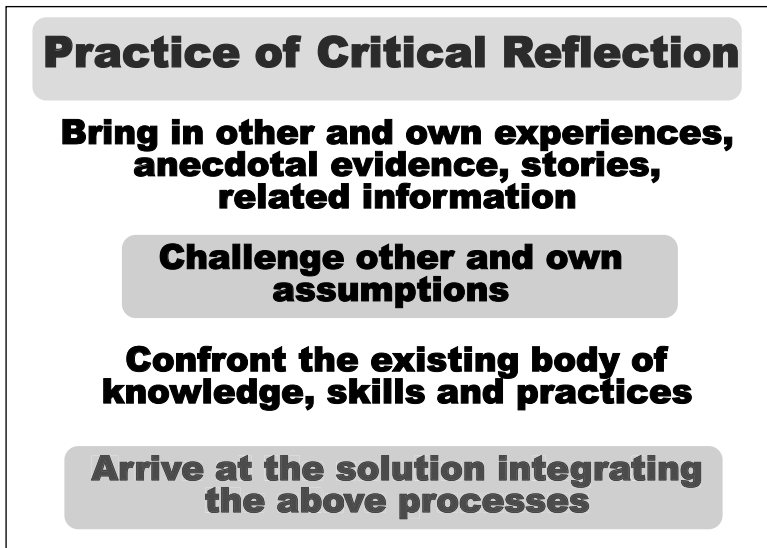
7. Defining Agility advocated in this paper

Figure 5. Defining Agility



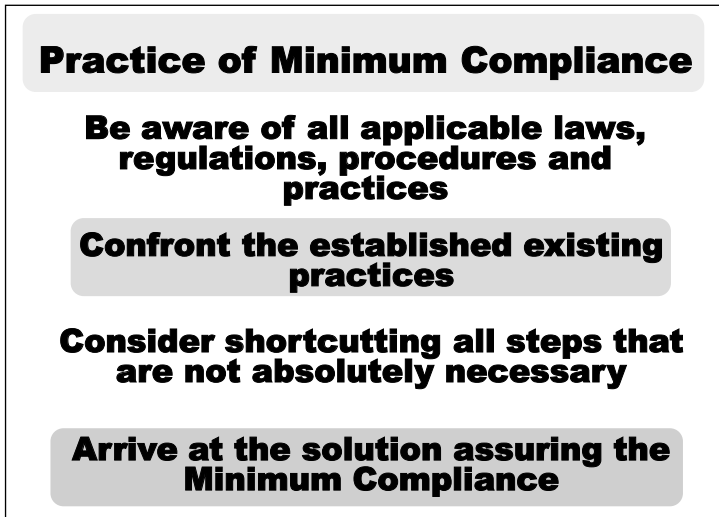
Source: this paper.

Figure 6. Defining Critical Reflection



Source: this paper and in connection with a variety of Critical Reflection sources.

Figure 7. Defining Minimum Compliance



Source: this paper.

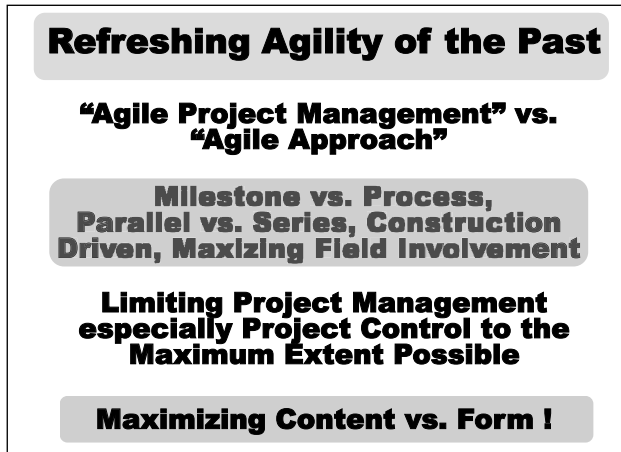
Definition of Agility above includes two additions to the existing practices of Nutshell Models and Structured Streamlining: Reflective Practice and Minimum Compliance. Both additions are based on the needs to confront assumptions, existing body of knowledge and skills, and established existing practices. Those needs came about in course of successful execution and bidding on several contract projects by the author. Some specific features of Agility advocated in this paper are described below and relate directly to the current and recent projects executed by the author.

8. Agile Project Management and features of Agility advocated in this paper

Agile Project Management practice slowly spreads its reach to larger projects. It is based on the extensive use of IT tools and is not discussed in this paper. This article adds another individual-centered agility enhancement approach applicable universally to individuals, projects and organizations.

A comparison of the presently applicable “J-curve” to the past following “S-curve” projects indicates that less management and control-heavy projects of the past may have been more agile than the present ones. That leads to the discussion presented on Figure 8.

Figure 8. Refreshing Agility of the Past



Source: this paper.

Reviewing Figure 8, milestone controlled projects (past) require much less control than the process controlled ones (current). The same applies to the parallel type execution vs. series type one.

Construction driven projects don’t wait for final approved documentation that is habitually late. Following the Maximizing Field Involvement principle, design personnel can be “parachuted” to the site to expedite construction work without delays. The Maximizing Field Involvement principle applies to the customer personnel active involvement on site.

From the author’s experience, the most important is limiting project management especially project control to the “maximum extent possible” to keep the latter one in the useful zone of the J-curve depicted on Figure 3. Beyond the point ‘x’ project control becomes useless and further counterproductive. Going beyond the useful zone has its source in first over-planning and later over-scheduling and over-control of projects. Those phenomena were not happening prior to the use of elaborate IT tools that might create an illusion of perfection in the real imperfect world. Construction-driven approach as presented above typically delivers projects completed best on content, cost and time in contrast with each-project-stage-perfection-driven approach typically ending with compromised content and major cost and schedule overruns.

10. Implementation

The Author advocates introduction of the agile approach “an invisible way”. Such approach bypasses fierce opposition natural to all changes of culture (Schön, 1971).

So far advocated earlier “truly voluntary approach” would not be accepted especially on larger projects or in larger enterprises. Two well proven ways to implement are shown on Figure 9.

Note that implementation does not mean implementing everything as prescribed here. For example, typically overblown project control tools or excessive project management typically represented by a multiplicity of unnecessary meetings are not likely to be changed but an agile individual or an agile group can operate better way in the non-agile environment by using what

they can from the “agile approach toolbox”. The success of agile approach will invariably show in the increased productivity, responsiveness and dedication. Agile individuals and groups visibly “come alive” on projects and in the enterprise.

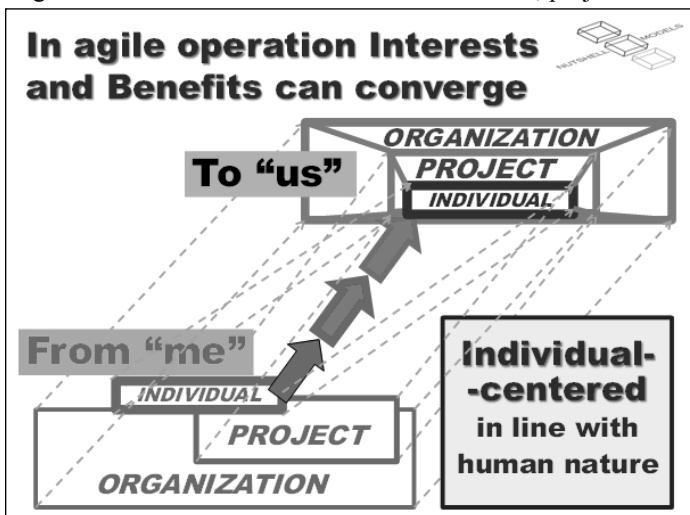
Figure 9. Implementing Agility



Source: this paper.

Implementation of Agility reinforces further the earlier experienced benefits of using Nutshell Models and Structured Streamlining with the most important one of the even more pronounced possibility of convergence of interests and benefits of an individual, project and organization as depicted on Figure 10.

Figure 10. Convergence of Interests and Benefits of an individual, project and organization



Source: this paper.

9. Conclusion

Agile approach improves projects and enterprises by enhancing their responsiveness to change and is based on truly empowered individuals exercising agile approach.

The current state of project execution has been heavy with the extensive and sometime excessive use of the IT tools.

The approach described in this paper reaches to “natural agility” of the projects in the past and shows how they can be utilized today and have potential influence on further development of those tools and especially on the extent of their application on the project.

Based on years of diversified experience the author advocates maximizing the content of projects and minimizing their form read project management and specifically planning driven project control.

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Chapter 10

Scents and Elements of Aroma Marketing in Building of an Appropriate Brand Image

Beata Tarczydło

1. Introduction

In the current market conditions, entrepreneurs more and more often tend to apply tools which impact the right hemisphere of the human brain and particularly the human senses. Increasing number of research is being conducted on understanding the ways of shaping the customer's sub-consciousness as it is claimed that as much as 95 percent of human processes and behaviour is performed subconsciously. Therefore, the development of neuromarketing¹ (marketing activities aimed at human nervous system) or sensory marketing² (activities addressed at human senses) and its specific areas seems to be strongly justified. Thus, the scent marketing has been selected as the subject of considerations in this paper³.

2. Definition of aroma and aroma marketing and their role in shaping the brand image

It is assumed that a scent is a sensory experience of smell perceived by a human being. Scents⁴ are unique just like fingerprints. For thousands of years humans have used the power of scents for their different purposes: protection, camouflage, beauty, and distinguishment. Thanks to the brain and the sense of smell each place has its specific scent; each memory has its characteristic aromatic accent.

¹ More on this subject in: Carmichael M., Romanowska D. (2004), Neuromarketing, *Newsweek*, 4 July, pp. 53-57 and Trębecki J. (2011), Neuromarketing – czy kupujemy podświadomie?, *Forum*, No. 1, pp. 20-23.

² More on this subject in: Hulten B., Broweus N., van Dijk M. (2011), *Marketing sensoryczny*, PWE, Warszawa; Kotowska A. (2011), Marketing na 5 (zmysłów), *Marketing w Praktyce*, No. 7, pp. 48-49; Pabian A. (2011), Marketing sensoryczny, *Marketing i Rynek*, No. 1, pp. 2-6.

³ In the available sources of information the terms scent marketing and aroma marketing are used interchangeably.

⁴ Based on www.kopernik.org.pl/wystawy/zapach-niewidzialny-kod/ [20.05.2014].

Aroma marketing or scent marketing forms a part of sensor marketing, along with the marketing activities addressed at senses: sight, taste, hearing, touch, and a flare for business.

Brand image⁵ is a set of opinions, judgements and images held by stakeholders; something like a symbolic brand superstructure; tangible convictions allowing for enhancement of an individual's self-image; or finally intangible factors/images significantly impacting the human behaviour in the market.

According to Grupa Kapitałowa IMS⁶, aroma marketing signifies: (1) exerting influence on the customer behaviour in the place of sales by using individually selected compositions of aromas; (2) the art of using scent in the marketing campaign and accessing the customer's emotions; (3) a significant element supporting modern marketing strategies and a part of the marketing mix; (4) an exceptionally effective business tool; (5) a powerful weapon in the fight for a customer, as one cannot resist the magic of scents – we may close eyes and block the ears but we cannot stop breathing.

Targeted activities using fragrance compositions may be regarded as a tool aimed at influencing emotions. Aromatising and neutralising scents is performed not only to refresh the air but also to create a proper background for presentation of the company offer, to improve its perception, or to create a unique brand image.

A well selected fragrance composition forms a specific type of medium which instinctively influences human decisions, including the ones which concern purchase. Therefore, aroma marketing is compared by some to subliminal advertising⁷. This approach is contested by Lorenz van der Stam⁸, managing director of TMM Polska Sp. z o.o. In his opinion, subliminal perception refers to stimuli which last too short to be registered consciously. Scent marketing does not use this type of perception. Notwithstanding everything, customers are aware that they can smell the aroma, and that is why it becomes one of the components of marketing communication. Additionally, Lorenz van der Stam states that aroma marketing is currently one of the most important tools in building competitive advantage of the points of sale. Its primary task is to create an atmosphere that will stimulate the consumer's activity, which may be suitably used also in the creation of the brand image, in shaping the mood in the place of sale or during special events (promotions, events).

B. Hulten, N. Broweus, M. van Dijk (2011, p. 17) in the sensory marketing see opportunities offered by various sensor strategies and sensory impressions to a company wishing to enhance brand consciousness and create its image related to the customer identity, lifestyle, and personality.

Summing up, it is justified to state that at the time when each brand should have its “mythology”, function as a lifestyle, constitute a specific set of functional and emotional values which communicate open and hidden content, and also influence emotions, a fragrance composition gains particular importance as a means of brand recognition and – while selecting an adequate perfume range – enhance its unique image.

⁵ More on this subject in: Tarczydło B. (2013), *Metodyka kształtowania wizerunku marki*, *Rozprawy. Monografie*, No. 298, Kraków, Wydawnictwa AGH, pp. 16-20.

⁶ Based on www.ims.fm/oferta/aromamarketing/czym-jest-aromamarketing [20.05.2014].

⁷ Compare with www.aromacorp.pl/marketing-sensoryczny/jak-to-dziala.html [20.05.2014].

⁸ Based on www.galeriehandlowe.pl/go.live.php/PL-H1074/komentarze-b2b/SMzk3/lorenz-van-der-stam-tmm-polska-za-kilka-lat-aromamarketing-stanie-sie-oczywista-forma-promocji.html [20.05.2014].

3. Scent branding and the procedure of its design

Scent branding constitutes a specifically composed corporate scent which supports the process of emotional brand attachment. It is a specific form of a scent brand identifier. Creation of the scent branding requires many actions and in practice its design constitutes a multistage process of individual creation of a special composition of fragrances influencing the stakeholders' olfactory sense.

The process of design of the corporate scent calls for a thorough analysis of the existing corporate image, the vision for the future, and a volume of information on the target group. Creation of a scent logo on the basis of collected information is an exceptionally responsible task, since in the future it will determine the corporate or the brand image. Therefore, it requires the involvement of professionals⁹.

The process of scent branding should incorporate the need to distinguish the brand from the competitive brands, so – if possible – it is necessary to conduct a diagnosis and analysis procedure on the aroma marketing of at least the primary competitors.

The results shall also be shaped by the available budget. The costs of scent branding and implementation of a specific aroma marketing strategy depend on various parameters, such as fragrance composition, area which will be aromatised, and the circulation of air in the premises.

During the research on the customer expectations, one should establish if the whole area will be subject to aromatising or if so called aroma islands will be created – individual locations, most often the ones where the customer makes the purchase decisions. The costs increase when a unique fragrance composition is created for the customer. Implementation of aroma marketing depends also on such factors as the number of locations served, the specific features of the place where the aromatising devices will be located, and the selected method of aromatising, *i.e.* by ventilation, aerosol or cold air diffusion¹⁰.

Scent logo should be introduced in all of the places of interaction with the customer: in the corporate premises, retail outlets, salons, during fairs and trade events, product promotions, and even on the promotional and other articles (advertising products and leaflets, testers, letterhead, business cards, *etc.*).

Maintaining cohesion in the use of the scent logo is an exceptionally strong brand distinguishing factor and effectively contributes to creation of its unique image. This is why the entrepreneurs dealing with brand management are interested in professional scent marketing services.

4. Aroma marketing services

The aroma marketing services may include: (1) creation of a scent logo/corporate aroma; (2) distributing bioactive fragrance compositions indoors (*the method of scent space*), consider-

⁹ For example AromaCorp uses the best of experts – it cooperates with three most renowned companies in the perfume sector from Germany, England and the cradle of perfume industry – France. The most exclusive fragrance creations are designed by one of the most extinguished world perfume makers who cooperate on a constant basis with such brands as Joop, Dior, Jill Sander, Escada, Gianfranco Ferre. Based on www.aromacorp.pl/o-aromacorp/aromacorp.html [20.05.2014].

¹⁰ Based on www.galeriehandlowe.pl/go.live.php/PL-H1074/komentarze-b2b/SMzk3/lorenz-van-der-stam-tmm-polska-za-kilka-lat-aromamarketing-stanie-sie-oczywista-forma-promocji.html [20.05.2014].

ing the given industry specificity, and consequently special composition for: art galleries, travel agencies, fitness clubs, medical and dental practices, beauty parlours, hotels, restaurants, service points, conference rooms, fuel stations, and many other; (3) influencing the customer behaviour in the point of sale (*scent pos*), reaching out to the customer's consciousness and sub-consciousness, creating emotions; (4) atomising fragrance compositions related to the brand of the product during events, promotional activities, fairs (*scent event*), influencing the customer's sense of wellbeing, creating atmosphere and therefore facilitating friendly communication which is of vital importance in business relations; (5) using the scent in an advertising campaign (*scent advertisement*), e.g. in the form of products made by applying the *scent print* technology. Examples include posters, brochures, invitations, business cards, restaurant menus, in particular aroma touch and aroma scratch; scented advertising articles, such as pads, playing cards, cinema tickets, gift cards, bookmarks, coupons, stickers; and scented packaging which strengthens the stimulus operation conditioning spontaneous purchase.

AromaCorp¹¹ is a national leader in development and implementation of innovative technologies and solutions in the area of aroma marketing, aromatising, and neutralising smells. Due to its cooperation with partner companies it offers a wide range of scent marketing solutions. The company informs of its experience of several years in selecting both the systems and the scents appropriate for the location or the character of the product. It stresses its professional approach to building of a corporate marketing image for companies and products by means of aroma marketing. Its activities cover the whole of the Polish market ensuring the possibility to reach the customer quickly and efficiently, to guarantee continued supply, reliable and expert service, flexible and innovative operation, and professional approach.

Several years of operation of AromaCorp have allowed it to build the assets in the form of a few tens of devices for use in various areas of business and over a hundred of fragrance compositions available off-the-shelf. The analysed organisation, in cooperation with partner companies, designed scent logos for such customers as Hotel WESTIN, Łódź Lublinek Airport and the Re-Reserved brand. Furthermore, AromaCorp cooperates on an exclusive basis in Poland with foreign companies which created corporate scents for global brands such as Mercedes Benz, Samsung, Lexus, Coca-Cola, Nestle, or BMW.

TMM Polska Sp. z o.o.¹² has been functioning in the Polish market since 1992 but it deals with the scent marketing for a period of several years. The company operates several hundred of locations belonging to several tens of clients throughout Poland: retail chains, restaurants, hotels, medical practices, and even the Warsaw Airport. In the company president's opinion, the fragrance composition appropriately related with the product may highlight its unique features, and also conveys a specific communication to the consumers. The offer of TMM Polska comprises over 300 different scents. The company declares its capacity to assign the aroma to every brand and every location. The fragrance notes are designed to fit the preferences of the selected target group, potential client's features or the character of the brand. The portfolio contains appetising, perfumed or standard compositions, in particular natural aromas of fruits, vegetables or herbs which perform ideally in grocery markets; compositions imitating popular perfumes, well received in stores with ladies wear; aromas of various types of coffee for coffee shops or

¹¹ Based on www.aromacorp.pl/o-aromacorp/aromacorp.html [20.05.2014].

¹² Based on www.galeriehandlowe.pl/go.live.php/PL-H1074/komentarze-b2b/SMzk3/lorenz-van-der-stam-tmm-polska-za-kilka-lat-aromamarketing-stanie-sie-oczywista-forma-promocji.html [20.05.2014].

restaurants, etc. The analysed company is open for any, even the most exceptional client's wish; it can formulate even a completely unpopular and repellent odour needed for a controversial undertaking.

The outlined aroma marketing services and their known providers induce the queries: to what degree the relevant fragrance compositions enable shaping a unique brand image, and what is their impact on human behaviour.

5. Scents and human senses and behaviour

In the light of the available sources of information, aromas have a significant influence on the human senses and behaviour, the state of mind, and even health. Scent reaches beyond rational perception, it is impossible to ignore it, it is perceived independently of the individual's will. Moreover, due to the structure and characteristic features of the brain, it has the strongest impact on the state of mind, mood, and emotions.

It is related to the fact that the sense of smell is linked with the limbic system (the emotional centre of the brain)¹³ which manages memories, feelings, both at the conscious and the unconscious level. Additionally, spraying of bioactive substances has a direct influence on linking pleasant experiences and memories from the past with new situations, and even products or brands.

A pleasant smell activates spontaneous emotions and feelings. It can be said that the sense of smell is a "gate to the soul". No other sense reacts faster than olfaction and triggers equally strong feelings. What is more, olfaction is a direct sense because an individual usually can smell something first and can see it only later.

Using the smell receptors¹⁴, a human being perceives fragrance micro particles which stimulate some 20 million of nervous cells. The smell is subsequently translated into an electrical impulse which triggers a spontaneous reaction in the brain. It is the brain which reads the electrical impulse and secretes an appropriate portion of hormones influencing the glands and the internal organs. In this way feelings are formed and management of emotions becomes possible. The examples of this phenomenon are: changes in the blood pressure, faster or slower heart rate, or the sense of animation or calm.

Taking into consideration a marketing approach to company management which is apparently oriented at stakeholders and offering them an appropriate set of values, a consideration for fragrances connoted with the brand and contributing to its unique image turns out to be significant.

Fragrances¹⁵, including the scent of flowers, are often used to create the feeling of beauty – it is not surprising then that they raise particular interest of the representatives of the cosmetics industry and the sector related with improvement of appearance. The scents which animate, stimulate and activate, so called active, are proposed for businesses related with sport. The fragrances of nature, calming and harmonising are used in aroma marketing for enterprises connected with health. In retail, significant attention is attached to the aromas of fruit which support sales. Citrus

¹³ Limbic system – a system of cortex and sub-cortex structures of the brain supporting a variety of emotional behaviours and some emotional states of mind, such as satisfaction, pleasure or fear. Originally it was linked solely with the olfaction. Based on http://pl.wikipedia.org/wiki/Uk%C5%82ad_limbiczny [20.05.2014].

¹⁴ Based on: *Sekretna moc aromatów*, www.zapachfirmy.pl/sila-zapachow [20.05.2014].

¹⁵ Information developed on the basis of www.aromatola.pl/index.php?option=com_content&view=article&id=46&Itemid=53 [20.05.2014].

fruit improve concentration, therefore they are used in office environment. And finally, the scents triggering positive mood, so called exclusive, are applied in spa/relax premises. The fragrances of groceries stimulate appetite and are welcome in catering facilities. An interesting group is formed by so called holiday aromas, used seasonally to create a specific climate and mood.

A properly selected scent: (1) influences the clients' behaviour; (2) shapes their purchase decisions; (3) induces the clients to stay longer in the sales premises and additionally makes them inclined to return there; (4) contributes to creation of a positive atmosphere and image of the facilities; (5) enhances the sense of wellbeing, both of the clients and the employees; (6) and can even improve the performance at work¹⁶.

The fragrance mix released during events¹⁷ or promotional actions helps to create a proper atmosphere and the mood of the participants, and facilitates friendly communication indispensable in business contacts. It has an advantage over advertising in that by utilising appropriate tools it can fill in the whole space connoted with the product/business, and as such strengthens the specific and unique brand image.

Summing up, influencing, by means of scent, human senses and behaviour, consists in: (1) strengthening via a special fragrance code of a unique brand image with which the targeted group should identify itself due to positive influence on their sense of smell, (2) generating an additional value perceived to a large degree on the subliminal level which becomes translated from practical experience into increased satisfaction and, consequently, loyalty towards the offerer.

6. Review of studies and research

In the current market conditions, the studies¹⁸ available to general public show that the period of time the client remains in the shop increases by approx. 8% as compared to the time before aromatising. The research on the client satisfaction in aromatised facilities proves that clients notice a difference versus the non-aromatised premises and appreciate the pleasant atmosphere. Opinions received during direct contacts with clients are no less important. The staff at the shops, restaurants or hotels frequently state that the clients keep asking about the atomised fragrance compositions or they just say "what a nice smell" immediately upon entering the premises.

A study conducted by the New York Times Marketing Studies Department showed that when a client has an opportunity to select between two similar products, 81% of the consumers choose the one which they can both see and feel its scent¹⁹.

Finally, 75% of purchase decisions are taken at the place of sales and 95% of decisions are influenced by subconscious processes.

In the opinion of the Grupa Kapitałowa IMS²⁰, supporting a product promotion, promotional stands, and fair stands with a properly selected fragrance constitutes a very important element of the sensory marketing, and by utilising aromas during promotional campaigns one can boost their effectiveness even by over ten percent. Moreover, in his research conducted also in Poland

¹⁶ More on the subject www.ims.fm/oferta/aromamarketing/aromatyzowanie-miejsc-sprzedazy/ [20.05.2014].

¹⁷ Compare with www.ims.fm/oferta/aromamarketing/eventy/ [20.05.2014].

¹⁸ Based on www.galeriehandlowe.pl/go.live.php/PL-H1074/komentarze-b2b/SMzk3/lorenz-van-der-stam-tmm-polska-za-kilka-lat-aromamarketing-stanie-sie-oczywista-forma-promocji.html [20.05.2014].

¹⁹ More on the subject www.aromacorp.pl/o-aromacorp/aromacorp.html [20.05.2014].

²⁰ Based on www.ims.fm/oferta/reklama-w-miejscu-sprzedazy/promocja-produktu-poprzez-zapach/ [20.05.2014].

Martin Lindstorm confirmed that the olfaction has the strongest influence on shaping the feelings and it turned out that over 75% of human emotions are triggered by scent.

Research on aroma marketing shows that a properly selected scent in a shop or other sales facilities not only contributes to creation of a positive atmosphere for the consumer but also when it is used in relation to an individual product it helps in its differentiation on the shelf and in long term enhancement of connotations and memorising of the product by the user.

Finally, research by Anji Stohr²¹ from the University of Paderborn, shows the following effects of aroma marketing: the period of time spent by the client at the shop is longer by approx. 15.9%; a pleasant scent energises the clients by approx. 14.8%; the shop revenues increase by approx. 6%.

It is therefore justified to state that the results of studies and research confirm positive results of activities in the area of scent marketing.

7. The effectiveness of aroma marketing

Well designed activities in the scope of scent marketing generate quantified sales results, influence the atmosphere in the premises and the perception of the brand and the stakeholders' loyalty. It is also connected with the effectiveness understood as a degree of attainment of established goals.

A properly selected aroma has an impact on the period of time the client spends in a shop (statistically, the longer time the more purchases can be made); it influences what the client purchases; affects potential willingness to make another visit; constitutes/generates additional value, e.g. it relaxes, refreshes, stimulates for work; it may trigger memories and therefore specific emotions, raise appetite, and make the individual realise his or her needs. A properly composed fragrance contributes to shaping the atmosphere at the place of purchase, improves the state of mind not only of the clients, but also the personnel, thus increasing the comfort of work and, consequently, the performance.

Professional activities in the scope of scent marketing significantly contribute to building of a unique brand image for a product and/or the business.

A delicate wave of a pleasant fragrance in the place of contact between the potential purchaser and the seller's offer generates a number of benefits²²: (1) it reduces unpleasant smells and improves the quality of air; (2) it increases the attention of the clients and visitors; (3) it creates an optimal climate in the premises; (4) it guarantees completely new perceptions related with the shopping for the clients; (5) it generates a positive range of client behaviour; (6) it extends the period of time the client spends in the shop, since it is hard to resist a beautiful scent; (7) it increases the desire to purchase objects which results in an increase of revenues at the same time; (8) it triggers the sense of wellbeing and confidence; (9) it motivates employees and creates a facilitating atmosphere at work; (10) it energises and improves creativity; (11) it creates competitive advantage.

Examples of specific activities and their effects are presented in Table 1.

²¹ Based on *Stwórz sobie przewagę nad konkurencją*, www.zapachfirmy.pl/sila-zapachow [20.05.2014].

²² *Ibidem*.

Table 1. Selected aroma marketing activities and their effects²³

Aroma marketing activities	Effects
aroma of ripe pineapple or fresh coconut	<ul style="list-style-type: none"> • connotations with and thoughts about palm trees, beach, sun, and the sea, and consequently about holidays or rest time
aroma of bread, baked rolls	<ul style="list-style-type: none"> • the feeling of hunger; • men become gentle under the influence of the aroma of bread, they tend to stay longer in the shop and are more inclined to buy something
aroma of freshly brewed coffee and baked rolls	<ul style="list-style-type: none"> • an excellent smell of breakfast can wake up even the biggest sleeper on a Sunday morning, and the aroma of fresh rolls makes him or her feel hungry; it shows the awakening and energising capacity of aromas
the smell of mint, seaweed	<ul style="list-style-type: none"> • in spa and biological regeneration centres; • feeling of relaxation, calm, and even cooling (refreshing cold wave)
cinnamon, honey and vanilla	<ul style="list-style-type: none"> • the feeling of warmth; • connotations with holiday season; • family atmosphere
pleasant and relaxing atmosphere (relevant scents) in medical facilities	<ul style="list-style-type: none"> • lowering the level of stress and reducing the feeling of uncertainty; • elimination of standard smell of pharmaceutical products, medical equipment, sweat, <i>etc.</i>
special fragrances for conferences and trainings	<ul style="list-style-type: none"> • improved concentration; • higher level of openness to external stimuli; • reduction of stress level; • higher activity of participants; • enhanced concentration during presentations for a longer period of time
unique fragrance in a hotel (corporate scent)	<ul style="list-style-type: none"> • the feeling of exclusiveness; • unique atmosphere; • the feeling of wellbeing of the guests; • positive feelings; • stronger feeling of safety and raised self-confidence; • willingness to use the services again
the scent of a chain of shops, <i>e.g.</i> with clothing	<ul style="list-style-type: none"> • the perception of nice atmosphere²³; • increased motivation to make purchases; • new unforgettable experience; • pleasure derived from shopping; • higher profit for the shop owner

²³ See more on creation of atmosphere in a shop in Sullivan M., Adcock D. (2003), *Marketing w handlu detalicznym*, Kraków, Oficyna Ekonomiczna Oddział Polskich Wydawnictw Profesjonalnych, pp. 194-207.

atmosphere in office environment	<ul style="list-style-type: none"> • worn out and malfunctioning air conditioning equipment contributes to lower quality of work and also reduces the level of motivation and creativity; • appropriate fragrance composition in an office reduces low productivity and stress and enhances motivation for work; • improves concentration; • work becomes pleasure
neutralising the smell of glue, paint or packaging in furniture shops	<ul style="list-style-type: none"> • facilitates focussing on selecting a product; • stronger satisfaction from shopping; • the feeling of a fresh scent of luxury; • the feeling of home-related warmth
leather aroma in auto salons	<ul style="list-style-type: none"> • creates the feeling of self-confidence which facilitates purchase; • unique atmosphere; • the feeling of exclusivity which corresponds well to e.g. presentation of a new model

Source: own elaboration based on: www.zapachfirmy.pl/mozliwosci-wykorzystania; Hulten, Broweus, van Dijk (2011); www.marketingzapachowy.info/artykuly/Tajemnice_marketingu_zapachowego_w_SPA_10.html; spec.pl/praca-i-finanse/reklama-i-marketing/na-czym-polega-marketing-sensoryczny-jak-z-niego-korzystac [20.05.2014].

The Table 1 presents opportunities for specific activities in the scope of aroma marketing and their results.

8. Conclusion

In the light of the analysis above, it is justified to state that in the current market conditions appropriate scents and well designed techniques of aroma marketing contribute to shaping of the desired brand image and play an important role in influencing the purchase behaviour and decisions of the stakeholders. It is due to the fact that it is scent which has an enormous influence on the human state of mind, and stirs emotions, desires, motivation, and creativity.

In the era of the marketing of values, the “scent satisfaction” of the clients significantly impacts relations management, generating value and results accomplished by the company²⁴. Moreover, the level of satisfaction from the “surrounding” aromas constitutes a specific hidden dimension which directs human behaviour and even feelings.

The level of client satisfaction²⁵ depends on the one hand on objective features of the product and the supporting marketing activities, in particular in the area of aroma marketing, and on the other hand on the past experience and requirements to be satisfied by the assessed category (brand image).

It is worth stressing that the client’s confidence in the company and the brand results from the positive experience from cooperation, facilitates advantageous perception of the product and

²⁴ See more on innovative marketing activities in Kotler Ph., Kartajaya H., Setiawan I. (2010), *Marketing 3.0. Dobry produkt? Zadowolony klient? Spelniony czlowiek!*, Warszawa, MT Biznes.

²⁵ More in McDonnell J. (2007), Music, Scent and Time Preferences for Waiting Lines, *International Journal of Bank Marketing*, Vol. 25, No. 4, pp. 227-228.

is positively correlated with the feeling of satisfaction. This is why brand owners should consider implementation of an aroma management strategy connected with the brand which will allow for distinguishing it from other competitive brands and generate value for its promoters, mostly by operating at the subliminal level.

Summing up, aroma marketing appears to be an effective method to highlight the uniqueness of an enterprise, its offer, and in particular the brand with which it is identified. It is a specific type of tool appealing to emotions. The experience shows that a properly selected scent may strengthen and enhance emotions, and contribute to the feeling of comfort, uniqueness, act in a stimulating or relaxing way, induce to make a purchase and boost loyalty.

Numerous studies show the immense potential of aroma marketing. Depreciation of the role of scent in the planned marketing activities would therefore constitute a token of ignorance.

An appropriate²⁶, high quality scent identified with the brand, adequate for the place, time, and most of all the stakeholders' expectations has an immense impact on olfaction and generating desired human emotions, and in the longer term it contributes to shaping of a unique brand image.

On one hand, fragrance seems to be a drop in the ocean of image supporting activities, and on the other hand, since it impacts human mood in as much as 75%, its significance for attainment of the established goals must not be disregarded.

It seems worth recommending that contemporary entrepreneurs should pay stronger attention to applying scents in the course of marketing activities. Further on, it appears justified to state that the aroma marketing strategy should constitute a component of systematic image supporting activities of the contemporary business operator. Therefore, for example, retailers who expand their distribution network should think about the aromatisation strategy as early as at the stage of store design.

The phenomenon which proves the pertinence of the presented approach is the ever expanding offer of professional aroma marketing services.

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²⁶ Based on www.ims.fm/oferta/aromamarketing/eventy/ [20.05.2014].

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Chapter 11

The Specificity of Talent Management Process

Mirosław Woźniak

1. Introduction

Acquisition, retention, development and motivation of individuals is significant part of responsibility of human resources functions in all kinds of organizations. Important part of execution of these functions is related to highly talented individuals who are able to interpret signals from the environment faster, learn easier, understand and communicate more clearly and precisely than others and are present in every society and workplace. According to Borkowska (2005a, p. 12), the recognized talents usually represent only 2-10% of the company population but their importance in achieving company goals is crucial.

The aim of the paper is to identify, order and primarily assess different types of ideas which are used in practice under the common name of talent management. The paper includes an overview of definitions from the area of talent management with reference to their theoretical foundations. The concepts presented in the international and Polish professional literature were surveyed with a special emphasis put on structural mechanisms supporting the development of talented employees in organizations.

While most approaches mix conventional Human Resources Management (HRM) with Talent Management (TM), this work argues that the development of every person in the organization is a fundamental function of HRM. However, a policy which is designed for large groups of people has to operate on averages and this is the main weakness when dealing with highly gifted persons. This weakness could be improved by adding to the standard HRM policy a properly implemented TM program in order to take advantage of the above average abilities of some employees. The main reason of mixing HRM and TM could be because of the inherent popularity of the TM topic – some research put conventional human resource management in the package of TM because this new package – and new label – looks more attractive. Actually, this kind of work creates a misunderstanding. It falsely suggests that highly talented people don't need a specialized environment conducive to their development. However, in actual fact they do.

2. Definitions of talent

From the etymological perspective the word talent has been known for thousands of years. It comes from the Greek word *talanton* (τάλαντο) whose meaning was related to a specific measure of weight – the weight that one man was able to lift (Chelpa, 2005, p. 26). This unit of weight was used by ancient people such as the Assyrians, Babylonians, Greeks and Palestinians (<http://encyklopedia.pwn.pl/>). Then, as a representation of the value of one talent of silver, it started to be understood as a monetary unit. Probably the first connection between talent and personal abilities can be found in the Bible where the word talent is used in the parable of the talents (Matthew 25: 14-30). In later centuries the meaning of the term talent evolved and was understood as (Tansley, 2011, p. 267):

- an inclination or a disposition,
- treasure, wealth, mental endowment and natural ability,
- natural ability or aptitudes and faculties of various kinds,
- an embodiment of ability.

Throughout the ages the word ‘talent’ acquired new meanings. It changed to mean special ability or aptitude, with those seen as talented able to demonstrate outstanding accomplishments in mental and physical domains. The motivation here was certainly to distinguish talent from ‘mere’ skill (Tansley, 2011, p. 267). After a long evolution process, contemporary understanding is strongly related to the abilities of individuals, for example in the Longman Dictionary of Contemporary English: a natural ability to do something well (<http://www.ldoceonline.com/dictionary/talent>) or in Słownik Języka Polskiego (Dictionary of Polish Language): an outstanding aptitude for something or a man endowed with outstanding creative skills (<http://sjp.pwn.pl/szukaj/talent>).

In the social sciences ‘talent’ occurred in the beginning of the 20th century. In 1926 the American psychologist Leta Stetter Hollingworth published in her book titled *Gifted Children* one of the first interpretations of the talent concept. She concluded that talent could be understood as a kind of natural gift, a kind of particular intelligence given to the individual. From that perspective talent is interpreted more as an ability than stable state and, as a consequence, it requires attention and development.

Taking into account the social function of the individual, according to Tannenbaum (1986), talents possessed by individuals could be divided as follow:

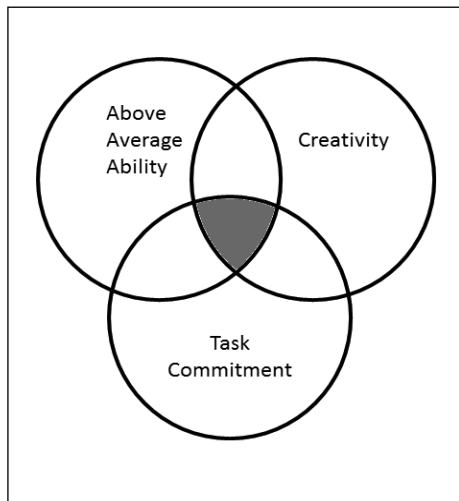
- *scarcity talents* – rare and necessary for the efficient functioning of society, good examples of such talents are entrepreneurship and leadership,
- *quota talents* – relatively frequent, very narrow, specific and specialized, crucial for life of the society,
- *surplus talents* – rare but unnecessary for society but sometimes very helpful – for example artistic talents,
- *anomalous talents* – frequent and unfavorable for the society sometimes even disturbing the functioning of the group.

On the basis of this classification it can be proven that a talent’s consistency is not limited only to intellectual or cognitive aspects of an individual’s existence (Chelpa, 2005, p. 29). Since a group of company employees or organization members are also kinds of societies, this approach should be taken into account but not used as the main tool for identification and management of talents in an organization.

Another interpretation which is very frequently cited in the literature and also used in practice contains the model of giftedness by Renzzulli (Fig. 1). According to this model a talent should be understood as:

- a person with above-average general capabilities (higher intellectual potential) and specialist skills (in a specific field), and
- a creative personality with an underlying sensibility and high emotionality, original thinking, non-conventional approach, addressing new problems, taking risks, tolerating uncertainty and accepting change, as well as
- an employee committed to the job, which implies internal discipline and diligence, fascination with their work, persistence in striving to achieve targets, belief in one’s capabilities and an inclination to make sacrifices (Sękowski, 2004, p. 35).

Figure 1. What makes giftedness



Source: Renzzulli, 1998, <http://www.gifted.uconn.edu/>.

This definition of talent forces us to interpret it as unique and rarely present in one individual person. An individual may well possess one or two of the attributes, but each of the three attributes represented in the picture have to be present at the same time for that person to be considered talented. This definition refers only to a very limited number of persons and from a practical point of view seems to be too narrow to use in management. In fact, in the real life of enterprises, the approach to the definition of talent is significantly different.

Employers understand talent and recognize highly talented individuals on the basis of their efficiency and value added to the execution of the organization’s goals. Research shows that talented workers are most frequently “people achieving above-average results or high performers” (nearly 60% of indications). Slightly less frequently, talents are seen as people with above average skills in a certain field (ca. 45%). This perspective emphasizes the value of the characteristics brought into the organization by the employees (Miś, 2011, p. 136). What we see on this basis is that managers in organizations understand talents more as people who have highly developed skills and experiences that meet company needs and expectations. This understanding is more

close to the term ‘high-potentials’ than to the purely psychological definitions of talent mentioned above. The employees high potential is measured by the results he or she obtains and his prospects for future development – based on existing potential (Woińska, Szmids, 2005, p. 71).

Taking into account the definitions collected from the literature listed above, with respect to other approaches, this paper focuses on the definition which according to Miś (2011, p. 136) is the closest to the understanding of talents by managers in organizations. This definition understands talents as the highly motivated employees who use their highly developed intelligence and rich experience to accomplish their goals while working in an environment created by the company. A factor that is very important is that talented people can strongly influence other employees by the example which they set. This approach recognizes the employee as highly talented if he or she is described by the following attributes (Maślanka, Skudlik, 2005, p. 170):

- achieves excellent results,
- adapts to changes as new possibilities,
- has internal motivation which is not dependent on the company,
- sets a positive example (role model) for others,
- contributes significant value to company operations.

This approach to the classification of talents is partly confirmed in the practically implemented model in ING.

To summarize the primary analysis of ‘talent’ definitions, it has to be mentioned that definitions of talents could be very various and understood differently by organizations and managers. But it should also be taken into account that a common understanding of the definition of talent is not necessary among separate organizations. Actually, what *is* necessary is the framing of the definition inside the organization and the creation of a common understanding of this term among organization members. The right definition commonly understood by members of the process is a necessary base for an effective process of TM.

3. Definitions of talent management

To define the term ‘talent management’ we should first take into account that talents are almost always present in organizations. If not present, or if there is too few of them, they can be acquired or developed within the organization. This could be the simplest definition of TM. Peter Cappelli says that TM is simply a matter of anticipating the need for human capital and then setting out a plan to meet it (Cappelli, 2008, p. 1). To be more precise, TM is the kind of management process which provides acquisition, retention, motivation and development of gifted employees correlated to a company’s needs. The term surfaced and became popular after publications of McKinsey’s research in 1997 and the book *The War for Talent* printed later in 2001.

There are of course several ways of understanding the talent management area. One of the more general definitions says that TM is a set of actions concerning highly gifted people, undertaken in order to develop and improve them, and ultimately to achieve the organization’s goals (Listwan, 2005, p. 21). Another more practical and detailed approach defines the tasks which are required in the process: TM involves seeking out talents within the company or acquiring them from outside, as well as looking after them and giving them more attention than other employees receive. Moreover, they should be given the opportunity for development, training and career planning, as well as ensured suitable remuneration, so as to make them more resistant to tempta-

tions from other employers and to make them stay in the company (Maliszewska, 2005, p. 79; Miś, 2011, p. 136).

According to Lewis and Heckman (2006, pp. 139-154) there are three streams of thought regarding TM. The first of them represents those who only change the label of traditional HRM into TM. A good example of this approach is given by Heinen and O'Neill: "Talent management encompasses a set of interrelated workforce-management activities concerned with identifying, attracting, integrating, developing, motivating, and retaining people. Every organization has a talent-management system – whether it is by default or design. It is the people side of the business design" (Heinen, O'Neil, 2004, p. 68). This approach seems to add fresh legs to the old truth that every person in the organization has some abilities. In many opinions this is an area of standard activity of human resources management which should not be mixed with the TM process, which is a sub-process of HRM, and is strictly focused only on highly talented employees. The second stream of thought emphasizes the development of talent pools focusing on projecting employee/staffing needs and managing the progression of employees through positions. This approach again seems to be more close to the standard HRM role. The illustration of this approach could be the definition given by Stainton (2005, p. 40): "Talent management is viewed as a diverse tool that creates the opportunity to increase and strengthen organizational capability through individual development, performance enhancement and succession planning". The third and final stream is focused on the development of high potentials. "It emphasizes the role of performers – the best players with top grades" (Lewis, Heckman, 2006, pp. 139-154) or 'key talent': people with talent that the organisation values" (Brittain, 2007, p. 46). The first two approaches stress very important functions of conventional HRM provided by the company for all of its employees. TM operates in the same area, but is strictly dedicated to a very limited group of highly gifted people. In military terms, it is creating a special forces team from a company of regular soldiers.

The primary analysis of the term TM shows that the range of the subject is understood in various ways by different authors. It is not necessary to argue that a proper defining establishes a stable base. Since there is a lot of attention paid to this area, it is crucial to find some method of choosing between the given possibilities in order to find the definition which best suits each company. Some recommendations found in the literature are presented in the next chapter with comments formed on the basis of my observations and experience in management.

4. Talent management process

TM has situational character "it is usually original, with the company's character strongly emphasized" (Miś, 2011, p. 140). According to Borkowska (2005b, p. 12) there is not only one proper TM system. Diversity management implies a need to differentiate TM systems related to different groups of employees, for example junior employees, technical specialists or managers. Differentiated aptitude could be necessary in view of company size or activity profile.

According to Kopeć (2012, p. 58) the main goal of TM is a way of treating employees recognized as talents which creates the highest value for company stakeholders and sustainable market advantage.

The execution of this goal should include the following activities:

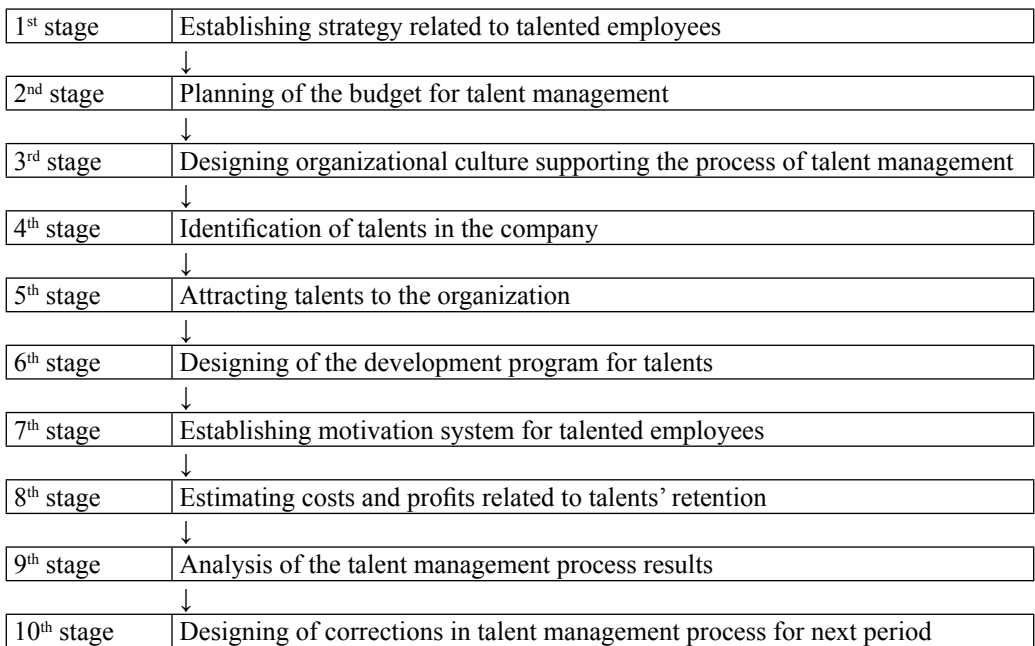
- systematic analysis of employee results,
- identification of over-average performance,

- identification of employees with above-average abilities,
- monitoring of talents' needs and work satisfaction,
- motivating employees to discover their above-average abilities,
- creating a learning environment for talents development,
- motivating employees to develop abilities,
- creating of a positive employer brand for talents,
- evaluation of talents' management tools efficiency,
- return on investment in talents' development.

These techniques are also broadly commented on in the literature – it is not the aim of this paper to explain them in detail.

To deliver profitable outcomes the process of TM should be provided in a planned way. Kopeć (2012, p. 60) recommends the following stages and sequence:

Figure 1. Stages of talent management process



Source: Kopeć, 2012, p. 60.

Again, it has to be mentioned that in the literature, there are several other proposals for the process which are only slightly different, so deeper analyze of that topic are not necessary herein. Taking the main goal of TM mentioned above as a priority and assuming that the choice of approach to TM is situational, the next chapter of this paper contains recommendations which can help in designing a TM system for a given company.

5. Recommendation for choosing talent management approach

Both the functions of TM and the process stages are universal regardless of the company situation. In contrast, the organization of the process, budget for investments in talents and the scale of actions is dependent on the company situation. To choose the right combination, it is necessary to evaluate the context in which the company is functioning. The evaluation should take into account assets which the company has at its disposal as well as the market environment.

On the basis of three kinds of approaches explained widely in the 2nd part related to Lewis and Heckman's (2006, pp. 139-154) findings, it could be assumed that the choice has to be made from the following possibilities:

1st focus: on development of every employee based on potential

2nd focus: on individual development of talents

3rd focus: on development of substitutes for key positions

According to L. Berger's findings (Berger, Berger, 2004, p. 4) successful companies either consciously or intuitively focus on three outcomes:

1. The identification, selection, development, and retention of a very small group of individuals who have demonstrated excellent accomplishments, an inspiration for others, and who embody the core competencies and values of the organization.
2. The identification and development of high-quality replacements for a small number of positions designated as key to current and future organization success.
3. The classification of and investment in each employee based on his/her actual and/or potential for adding value to the organization.

Choosing the approach is the main part of setting the TM strategy which is usually a part of the HR strategy and strongly depends on general company strategy. The focus remains on which option the company puts the strongest stress on because, in fact, on the basis of observations, all of these should be provided.

The above considerations allow us to present a set of recommendations which should be taken into account when choosing the focus of the strategy of TM. The recommendations have been formulated on the basis of examples taken from the literature and practical observations. It has to be underlined that these recommendations need additional confirmation in further research.

The first focus (development of every employee based on potential) should be adopted in every HRM policy – the evaluation of an employee's potential and performance as well as sustainable development of his/her skills is a standard part of HRM. For TM it gives visibility of employees potential, visibility of highly gifted and high performers, visibility of possible substitutes for key positions and creation of a positive employer brand. This activity should be provided despite the situation and budget. The limitations should only impact the intensity of actions.

The second focus should be limited by the budget and the situation inside the company and status on the market. Depending on the situation, taking into account the budget, a specific number of really highly talented persons should be selected and then individual development plans should be designed for each of them. Activities included in the second focus are solely TM. The importance of the second focus is higher when a company uses rare technologies, needs very unique skills and the learning process is very difficult and costly. The importance of the second focus decreases when the talent pool in the company is wide, the company has good substitutes for key positions, or skills needed by the company are frequently met on the market. The second focus seems to be very difficult to provide in proper way and very costly as well. It has to

be mentioned that when conducted in the wrong way, it is strongly demotivating. Summing up, it should be provided when necessary and when a budget and other resources are available to conduct it in the right way.

It is possible to provide focus 3 when the first two focuses are provided properly. On the basis of the first focus, it is possible to find candidates to substitute persons included in the talent pool formulated in the second focus. If the company possesses resources for providing this activity it could reduce the cost of substitutions when persons from the second focus decide to leave the company. This cost of substitution should be understood not only as a direct costs but also as the loss of potential profits.

6. Conclusion

Analysis of the literature related to the topic, as well as practical examples, leads to the conclusion that TM is a crucial part of HRM. It loses its deep meaning if separated from HRM strategy and proper execution of this strategy. In a knowledge-based economy this part of HRM will be intensively developed. All organizations should develop their own approach to talent and then establish a proper TM policy based on the actual needs and the situation. This policy should be the mix of components related to the whole team, highly gifted individuals, high performers, and key executors. Only the right combination will be effective in building market advantage based on human resources.

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Chapter 12

Determinants of Managerial Capability in Circumstances of Uncertainty and Risk

Małgorzata Adamska-Chudzińska

1. Introduction

Recognition of factors which convince manager for infallible dealing with difficult situations is an important aspect which mostly explains what causes a fact that one manager can maintain ability of his/her actions even in extreme situations, whereas the other feels hopeless in a situation with minimal changes in surrounding. This knowledge may be used to form conditions of actions which can be useful for maintenance of manager's ability in psychologically difficult situations of instability and risk.

Because taking action in conditions of the uncertainty and the risk is upsetting the balance between the state of the professional competence of the manager and expected results. Problems associated with changeability, novelty, greater complexity, no data, of conditions, and the like they are triggering the psychological discomfort and are disturbing the effective completion of the management functions. In situations of the uncertainty and the risk, as particularly efficiencies of action disadvantageous to the maintenance the plausibility of the effective management is dropping appropriately to the level of difficulty. The way of dealing with in these situations is deciding about possibilities of taking the control over hampering factors and about restoring the current professional competence.

Accepting this theory which states that human values and his/her surrounding characteristics strictly determine each other and effects of its mutual correlation affect the results of actions, then it is necessary to look at reliability of manager within two strictly connected theories: general theory of systems and psychological concept of human behaviors regulation. Both of these, in a complex way, characterize correctness of explanation manager's ability for infallible operations. General theory of systems allows the analysis of manager's behavior in relation with both himself, as well as with other elements of surrounding in which he/she performs managers' functions. Psychological concept of regulations includes, in this general context, a knowledge about behavior and mechanisms which regulate it. This is why on the basis of these theories, one can point out two basic factors which determine infallible functioning in situations of unstable activity and with professional risk.

The main aim encompasses determination of circumstances that condition reliability and efficient realization of managerial functions in situations or uncertainty and risk. The will be an assumption taken that consideration of psycho-social circumstances of managerial activity enables efficient management even in new and modified conditions.

2. Systemic context of participation in difficult management situations as the basic indicator of the manager's reliability

Systemic aspect of reliability points out that it cannot be viewed separately from a broader context of professional relations and functions which are fulfilled in organizations. Each organization makes a particular system which is made of complexity of dependences between elements which create it. Concept of systemic approach begins in Aristotle's judgment that "the whole is more than the sum of its parts". Understanding of functioning of one part requires analysis in a whole complexity of relations which create a general system. L. Von Bertalanffy (Von Bertalanffy, 1984; Katz, Kahn, 1979, p. 55), the author of general theory of systems, points out that systemic approach offers wider perspective for looking on reality. It signifies knowing of not only parts of the whole but also existing relations between them from the point of objective (function) of the whole. Author assumes that these factors fulfill three conditions:

- behavior of each of them affects the whole,
- behavior of each of them and their influences on the whole, are mutually dependent,
- all of these create subgroups (subsystems) which affect a behavior of the whole but none of them affect independently.

Elements of system cannot be treated statically but in an aspect of functional connections and their actual state. Because the whole is analyzed from the point of view of possibilities of realization of main target then also elements which create it must be characterized in the aspect of their changeability which occur during realization of tasks connected with its accomplishment. In this system of mutual dependences, manager is an element marked out because of awareness, of both targets which are in front of organization, as well as own tasks which are strictly connected with it. In this way psychology enriches interpretation of general theory of systems. It puts manager in the role of coordinator of other elements involved into operating situation. It is important to notice an influence within this system of all elements of organization and its whole system of mutual relations between elements (Armstrong, 2007, p. 289). Fulfillment of professional role by manager, affects relations between performers of other roles, as well as in functioning of whole organization, simultaneously it remains under influence of its interaction.

Manager's reliability which describes his/her level of effectiveness in managing in a particular organization, is connected with systemic context of his/her actions. It cannot be judged in separation from network of relations in organization in which manager realizes his/her activity. He is both part of organization, as well as a whole within itself and, in the same time, is subordinated and autonomic, "equal" and distinguished because of his unique characteristics and tasks. Manager's ability and its possibility for maintenance in unstable and risk situations, must be perceived in a complex context of effective functioning of whole organization and in the same time in those which determine these – effects of cooperation of separate components of organization. Specific nature of dependences which occur between manager and organization system and its components, is presented in that components which make a system and in some sense "expect"

from each other fulfillment of superficial necessities formed in an effect of non repetitive mutual influences. In this expectation these can be disappointed or not, may be failure or successful.

Systemic depiction of reliability of action points that it is not about not making mistakes, but most of all – on crossing schematic and routine actions. Not only manager's mistake may hamper or disturb correct fulfillment of tasks by other elements of system. It also causes "fossilization" of acting methods (despite the fact that it may be accompanied by correctness), it stops taking new tasks which result from unchanged context of situation in organization.

Within the above context, the first condition on keeping manager's ability in unstable and risk situations is manager's ability to see own activity in work in a context of complex of interactions between elements of organization and its system as a whole, as well as preparation of manager to fight with limitations of own actions. Fulfillment of this condition is connected with appearance of the following states in manager:

- awareness of functional complexity in organization,
- understanding of broader context of own tasks, own influence and dependence from other elements of organization,
- feeling of responsibility for effects of own actions and organization: taking a responsibility for effectiveness of organization, to such extent as it is defined by its position in organization,
- feeling of professional ability: taking an effort of efficient operations both in typical situations, as well as difficult ones connected with instability and risk.

Value of systemic look of reliability of manager, is included within affecting of different levels of actions at broader relations in organization system. Elementary level according to with a particular scheme of actions is becoming, in this case, inserted into complex level of personal shaping of relations between elements of the whole organization system. Understanding of functional connections between these elements and awareness of own abilities is a condition of taking creative actions which regulate managing ability or organization's situation as a whole.

3. Regulatory character of participation in difficult management situations as the crucial indicator of the reliability of the manager

Psychological regulation of human behavior (Tomaszewski, Kozielicki, et al. 1982; Rajczak, 1988; Wojciszke, 2006, pp. 65-66) in a situation of operating, relies on presentation of changes which will enable a regaining of conditions which support its correct activity. Regulatory factors have an extremely complex character because of complex nature of behavior of human in situation as a system of relations between elements of its surrounding. Regulatory behavior of manager in difficult situations includes both reaction of stimuli from surrounding, as well as individual actions directed on making particular change. From one side manager reacts on difficulties, sees a problem, on the other hand manager undertakes a deliberate actions which able solving this problem (task). Task is connected, in this case, with starting regulation processes. These elements are decisive when it comes to process of supportive actions and quick restoring of disturbed managing ability. Regulation processes are about taking control over factors which disturb or threaten effectiveness of actions for organization. In context of presented remarks, second factor of maintenance manager's effectiveness in situations of higher instability and risk, is manager's ability to define (create) regulatory operations and its effective fulfillment. These

characteristics are determined by level of development in regulatory mechanism of a particular manager.

Degree of these mechanisms depends on abilities of manager to reflect differences between optimal and actual state of self sufficiency in work, or wanted (normal) and current state of organization activity. This is why this regulatory process may go in two directions which include:

- control of own abilities, which is about influence on own states and characteristics (self interference),
- control of requirements in operating situation, which is about taking supportive efforts and corrective and prevention actions (of making a change in an organization system).

Control of own abilities to perform, especially inside states is crucial because of dropping – with time of acting, as well as occurrence of unexpected events – human capability. Basic form of losing effectiveness of manager is about lack of psychological and physical strengths. Long fulfillment of complex actions or unfavorable for functioning organization system of events, create a decrease of functions and abilities level of manager's knowledge, for example: decrease of memory capacity, smaller point of attention, decrease of sensory-sensitivity. Loss of vital strengths is visible in decreasing of skills and general feeling of subjective tiredness and discouragements.

Assurance of high level in control of own possibilities can be achieved by gaining and using by manager his/her previous experiences of interference into own states, or by trainings and keeping on a stable level, despite occurrence of disturbing factors, many states of changing nature (Bartkowiak, 2003). Ability to control own possibilities may be presented in, for example: higher concentration of attention, splitting its scope on two elements, as well as deliberate forgetting of used data in order not to disturb acquiring new information.

On the other hand, control which is about protecting manager's effectiveness manager from loosing, may occur in a form of direct actions. These include, for example selecting information for crucial and redundant, grouping information according to defined criteria. On the whole, these type of actions are aimed not to allow crossing over optimum level of manager's simulation, which secures effective managements. Keeping good psychological condition needs not only taking care of high level of functioning and cognitive abilities and self control of emotional states, but also developing of merit skills, analysis and use of current professional skills. Not without significance is also a strong motivation to act in unstable conditions and preparation for taking risk. Crucial role of maintenance manager's optimum effectiveness and ability to interfere in oneself, is also about good physical condition. Caring for health, rational and sensible rest, relax, hobby, development of fast relaxation skills, "turning off" during work in order to mobilize strengths, these are also examples of actions which influence high level of physical strengths and effective organization management.

Generally speaking manager's activity which is about controlling and not interfering into own inner states depends on one's ability to recreate lost energy, specific mobilization of psychophysical strengths, self control of emotional states and abilities to neutralize useless factors.

Control over situation demands of work is much more difficult than affecting the state of own manager's abilities. It is caused by higher complexity of organization system which shapes its situation and some stiffness of programmed strategic goals. Control of requirements of situation is necessary because of possibility of sudden, unexpected changes in organization activity and because of natural decrease of psychophysical ability of manager. Both changes in organization system, as well as decrease in effectiveness in work of manager may lead to greater feeling of in-

security and awareness of risk and as a consequence may cause growth of formulated towards him expectations. For maintenance of effectiveness in acting and keeping progressive functioning of organization, it is necessary to regulate a present situation. It may be conducted in a direct or indirect matter.

Direct regulation may be about ignoring previous forms of realization of manager's functions which are not beneficial because of circumstances and simultaneous reaction for current signals, by shaping new task or creation of new hierarchy of operations. In this case regulation is about such reshaping of hampering by insecurity growth and unpredictability of situation in order to enable further effective management. Correction of conditions or improvement of work organization may cause turning back to previous manager's capability, thanks to which manager is able to take rational decisions and successful actions.

Indirect regulation is focused on taking preventive actions and supportive operations against eventual disturbance of balance between effectiveness of manager and expectations formulated by him/her. It depends mainly on reorganization of particular situation which may include change in a course of action or methods of its realization in order not to cause the loss of effectiveness of acting or in order to optimize technical inspections of equipments, improvement in acting plans and use of third persons help in moment of particular growth of professional activity.

Both direct, as well as indirect regulation of difficult situation in management are about reshaping this situation which will enable a possibility for decreasing insecurity and unpredictability, and manager's activity will be able to flow without disturbances. It is possible because of precise choice of diagnostic and corrective actions, prognosis and preventive which change a degree of professional expectations.

Regulation processes of lowered effectiveness of manager or growing expectations of organization environment which are a result of manager's reliability in psychologically difficult situations of instability and professional risk, will occur in two levels:

- basic level, which include uncomplicated actions of interference in one own states and characteristics or in states of situation which allow in short period of time and with small effort to regain manager's effectiveness,
- complex level, which is made of complicated corrective actions and prognosis operations which are about actual and future states of manager and his surrounding and which need creative thinking and courage for making non standard decisions.

Appreciation for complexity and diversity of particular variants of regulatory actions, it should be noticed that in particular form it is always a result of interpretation of current organization situation, actual level of manager's effectiveness and the thing which combines those two pillars – strategies purpose to which is subordinated whole system of organization. Crucial variants of regulations which secure maintenance of manager's effectiveness in difficult situations of instability and risk one may include (Ratajczak, 1988, pp. 265-266):

- taking preventive actions in decreasing of psychophysical ability of manager or growth in expectations of broadly understood system of organization,
- use of alternative strategies (for example resigning from simultaneous conducting of many tasks in order to do this in sequences).

Huge complexity of regulation process of difficult situations in management, causes that manager who shows a high level in development of regulatory mechanisms, is endangered by significant exploitation and use of own possibilities capital. However, only when he/she is able to fight with high instability and unpredictability, to cross over the possibilities of the most innovative

equipments and own boundaries, by finding accurate solutions of situations which at the beginning seemed to be unsolved. Simultaneously, this is the same manager who can create significant losses in situations typical and when the level of mechanisms development will be negligible. Understanding of this phenomena is possible because of recognition, already presented correctness of general theory of systems and psychological concept of behavior regulation in humans. These explain the matter of manager's operations, his/her effectiveness as manager because of awareness of own role in organization structure and an ability for preventive actions in situations with higher level of difficulty.

4. Conclusion

Manager's ability for systemic realization of goals and his objective ability which is presented in taking regulatory actions, are crucial factors which determine high effectiveness of manager in situation of instability and professional risk. Taking deliberations on these factors it should be pointed out that these are complementary. Ability for regulations of actions, which enables reliability of manager in solving difficult situations in organization, is possible only with conscious spotting of changes which occur in a particular situation and putting those together in complex relations in environment of organization. Awareness of broader context of functioning of connections within organization, and ability to notice necessities which are crucial (new expectations formulated by various elements of organization system), set free these especially important for reliability states, which means feeling of responsibility and ability. Manager who is fully aware of how his results affect work of employees and functioning of the whole organization, correctly recognizes new image of task which he/she fulfills. Feeling of responsibility is significant to start regulatory mechanisms, and which decides upon methods of operating. Understanding of broader context of actions also creates a feeling of adequacy of own actions. It determines the decision making process for specific interference in own states or modification of situation, which disturbs manager's effectiveness. Because of this feeling of ability there is a power of motivation to "give everything from oneself" and starting reserves of own possibilities. High level of regulatory mechanism of behavior gives a possibility for fast prevention of mistakes and neutralization of factors which disturb operations.

Unique character of behavior regulations of manager is about this psychological regulation in a conscious way and which is simultaneously revealed in situations of cooperation, *i.e.* social situations in organizations. Manager's functions and realized tasks are viewed by manager as an integral part of organization expectations (systemic) and this creates in manager a feeling of responsibility as a superior mechanism for behavior regulation which leads to modification of current work actions. As a consequence it is possible to take control over factors which distract attention within a system: manager-managing and further effective operations for organization.

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Chapter 13

Employee Assistance Programmes, as a Part of a Modern Business Management

Beata Olszewska-Łabędź

1. Introduction

A great amount of research indicates unfavorable, both individual and organizational, as well as economic consequences of stress at work. Separate effect of stress at work is the deterioration of the psychological and physical employee's well-being. Numerous studies have shown that people exposed to chronic stress at work can have depression, problems with anxiety, anger and hostility, burnout, insomnia, and other ailments and diseases, of which the most frequently mentioned are cardiovascular disease, diseases of digestive, musculoskeletal and respiratory systems, as well as many other related to stress. However, the costs of stress do not apply only to employees. They are also borne by the employer in the form of increased absenteeism, employee turnover, low labor productivity, increased accident propensity and deviant behavior, or early retirement due to health reasons. Many studies have shown beneficial effects of programmes supporting employees with various aspects of the organization, for instance labor productivity, the cost of fringe benefits (especially those related to health care) and risk management.

The article discusses highly popular in the West benefits in the form of employee assistance programmes (Employee Assistance Programmes – EAPs). In this text the reader will find out what are EAPs, what types of programmes we can distinguish and what are key elements that should be included in. The story of the development of the EAPs in the United States is also delivered, ranging from programmes aimed at the treatment of alcohol dependence, to complex interventions covering a variety of employee-related issues. The article shows the benefits the company derives from the implementation of programmes supporting workers and also the actions and initiatives that can be undertaken within the EAPs.

2. Employee Assistance Programmes – an overview

Employee assistance programmes (EAPs) are intended to help workers who are under stress (sometimes also their families) with problems related to this stress and problems that have a negative impact on their health and work. This support, being held with the utmost discretion is mani-

fested by the access to free expert advice in the field of mental health, mainly psychologists, psychotherapists and social workers .

In practice, the activities of the programmes supporting workers are huge. Berridge and Cooper (2000) list as many as 42 possible problems that may be covered by the EAPs. These include illness, disability, divorce, addiction to alcohol and drugs, violence at work, discrimination, family problems, problems of young workers (Forbes, 2012, p. 45). Benefits offered under the EAPs can be used not only by the employee, but also by his family and partner.

Employee assistance programmes take different forms. Specialist consultations may be conducted in person, as well as through hotlines or web platform. Services may be provided by an external company or by organization itself that can permanently employ a psychologist, a lawyer or a doctor. The abovementioned Berridge and Cooper distinguished four basic types of employee assistance programmes due to the way the services are organized (Attridge, 2010, pp. 1-5):

1. On-site – the employer arbitrarily determine what kind of help is important, and the entire staff are eligible to benefit from the help of “internal “ specialists. Implementation of the services is therefore subject to some control of the employer.
2. Outside – the organization sets its own health and antistress policy, but sign the contracts of service with external providers, which are more independent from employers.
3. Consortium – a few companies concur to buy service package for their employees from external suppliers.
4. Affiliation – in the organization of the consortium, a group of organizations concur to buy some services for employees, but the method of delivery and implementation of these services is determined and coordinated by independent experts.

3. History and development of Employee Assistance Programmes

EAPs have got a long tradition in the United States. The origins of these programmes are associated with attempts to cope with the problem of alcohol abuse among employees. In the late eighteenth and early nineteenth century, these activities were mainly confined to ban employees from drinking alcohol in the workplace (Berridge, Cooper, 2000, p. 12). The first real attempt to help people confronting alcohol problems began in the nineteenth century. Employees of the police and fire departments overusing intoxicating liquors were encouraged to write commitment of abstinence, participate in support groups and temporary stay in the center for people addicted to alcohol. Such behavior was associated with the dominant “family” and paternalistic model of the organization.

As U.S. companies become larger and thus more “depersonalized”, they have begun to respond to alcohol problems of workers in one of two ways: employees were fired or forced into early retirement. In this context, in the 40s of the twentieth century the “informal” assistance programmes were beginning to form in the companies. Employees healed from their addictions (usually within groups of Alcoholics Anonymous) offered to help a friend struggling with the same problem. Efforts to take care of a wider number of employees has with time led to formalization of these activities, especially in larger companies (Aleksander et al., 2008, pp. 283-293). One of the first companies that had implemented such programmes were: Eastman Kodak, Allis Chal-

mers and Kennecott Copper Company. These activities were often kept secret due to the fear of affect the company image.

In the 50s organizations such as Consolidated Edison, Standard Oil of New Jersey, American Cyanamid gradually expanded their programmes so that they included the employees suffering from mental disorders. It marked the beginning to the evolution of these initiatives from actions aimed at fighting alcoholism to comprehensive assistance programmes. Starting from the 70s support programmes were gradually expanded and began to cover many personal and family problems of workers (Roman, 1981). With the development of mental health centers interventions were gradually transferred “outside”. Staff engaged in programmes increasingly were created with specialists: psychologists, therapists, social workers, and no longer of person struggling in the past with similar experiences. More and more agencies and organizations began to provide the services sought by employers under the EAPs. In the 80s inside the enterprises the movement aimed to eliminate the problem of drugs from the workplace was initiated. One of the consequences was the introduction of mandatory testing for the presence of psychoactive substances, and mandatory participation in support programmes. A zero-tolerance policy associated with the movement has led with time to the situation in which consultants and specialists operating within the EAPs, who so far had to mainly save and restore the health, began to participate also in the dismissal and the transfer of employees. Tasks of EAPs were further expanded with the growing awareness of the problem of violence in the workplace. It has begun to offer consultations, training violence prevention and crisis intervention to the employees (Presnall, 1981, p. 14).

Currently we are observing a tendency to combine programmes to support employees with programmes of work-life balance. As a result, they are beginning to include a number of issues related to the workers daily life, such as parenting, childcare or elderly care, pregnancy and legal problems.

For obvious reasons, employee assistance programmes significantly differ among particular organizations. Some of them provide a wide range of services, while others offer relatively little. However, there is a range of “key” services which, according to experts should be provided by each of this type of program.

In 1997, the Employee Assistance Professionals Association published a list of such key services. These include (Roman, 1981, pp. 244-272):

1. Consultation, training and assistance to company management in dealing with employees going through personal problems, improving working conditions and the results obtained by the employees, as well as informing employees and their family members about the possibility of using EAPs.
2. Regular identification of employees problems that may affect their work.
3. Use of constructive confrontation, motivation techniques and short-term intervention to solve problems that affect the performance of professional duties.
4. Pointing employees for treatment and consultations, as well as monitoring and tracking their progress.
5. Helping employers in the conclusion of contracts and in creating and maintaining relations with service providers.
6. Helping employers to ensure appropriate financing of health care services.
7. Studying the impact of EAPs for the organization and the individual results achieved by an employee.

4. Benefits and costs of EAPs

Many studies have demonstrated the beneficial effect of employee assistance programmes on various aspects of the organization. Attridge and colleagues (2010) proposed a model that summarizes the results of these analyzes. In their opinion, the value of EAPs reveals in three main areas: productivity, costs of additional benefits (especially those related to health care) and risk management in the organization. Each new area “raise a structure” over the previous, thereby increasing the positive impact of the program for the company.

EAPs increase employee commitment on the job, reduce turnover and lower rates of absenteeism, also limit presenteeism (Steele, 1989, pp. 511-532). This in turn leads to better efficiency and results obtained by the company, and thereby measurable financial benefits. Hargrave and colleagues (2008) has calculated that every \$1 spent on employee assistance programmes give a return of 5.17 to 6.47 USD.

Early detection and prevention of health problems through the development of EAPs allows employers to save the cost of such additional benefits as health care, life insurance and personal accidents insurance.

Employee assistance programmes, engaging at an early stage in the staff problems, prevent them from escalating and progression into the problems of the entire enterprise. Examples of such phenomena, that can spread to the entire organization, are harassment, violence, discrimination or substance abuse. Consultation and financial advice protect the company against behaviors that in the long term and on a larger scale could be problematic. There are examples like the massive loans, early company shares selling, withdrawal of funds from the occupational pension scheme. Employee assistance programmes also bring positive changes in organizational culture, improve employee morality and are attractive element of the recruitment process, ensuring a supply of new talents.

5. Case Study: An employee assistance programme in the corporation Huawei

Huawei is a leading global manufacturer of telecommunications equipment employing over 140,000 workers.

In May 2011, under the support of employees, the company started in parts of their plants initiative called “Stress Relief” aimed at reducing the level of stress at work. The goal was to teach employees to assess the level of stress and identify its sources. Through discussions and sharing experience staff learnt methods of defusing tensions. In December the same year the company carried out a number of self-report studies aimed at assessing the level of stress, which involved more than 60,000 employees. There were also materials promoting the idea of “4x1” (making friendship, participating in activities, developing hobbies and reading good books) distributed among employees.

In 2011-2012, as part of the EAPs Huawei conducted among its executives a number of training programs focusing on mental health issues. These included the following topics:

- identification and assistance in psychological crises,
- performance of tasks that increase mental powers,
- energy management – efficiency in work and life,
- management employees of generation Y.

The staff support programmes (SSP), which is the old, tested American EAPs, has turned meanwhile into a modern, professional service that sparing management and staff supervision in assisting employees with various problems: psychological, family, personal, and life in general. Thanks to specialists trained in the SSP model employee with a problem can frankly talk to someone about problems and, more importantly, can obtain competent instruction where to turn to for advice. Some cases require help of specialist of a psychologist, psychiatrist, lawyer or other adviser. Consultant SSP maintains a professional secrecy works discreetly and tactfully. An employee finds in him the guardian and ally, and plant management – specialist that helps to restore neglecting work person to full mental and psychological alertness, enthusiasm for work, responsibility and ability to perform the required tasks.

SSP consultants usually work alone, but inform the appropriate authorities of the employer about what happens to employees directed to them. In this text we will not discuss all aspects of functioning of the staff support programmes in various organization and different specific situations appearing in the workplace. However, it is possible to calculate several key issues, which are necessary conditions for the formation and good functioning of such services.

1. The key to initiate activities of SSP is the bright and open attitude of the management and proper preparation of all personnel supervising and coordinating the work.
2. Managers and representatives of direct supervision should be suitably trained.
3. It is also important to train psychologists and intercompany trainers, therapists, social workers and other person interested in cooperation with companies within the role of consultants SSP.
4. Consultants skills include: establishing a good contact, build trust and a good recognition of local specialist and self-help institutions that respond to the needs of those who are directed to them.
5. Training for consultants should be lead by these organizations and institutions that are familiar with foreign staff support programmes or those already operating in Poland.

In addition the staff support programmes are not only achievement of the West. They are very well developing in Latvia, where the patron of this trend is specially appointed tripartite committee comprising of representatives of the labor ministry, the federation of trade unions and nationwide employers association.

In such a large country like Poland we should stimulate local initiatives towards the creation of efficient, discreet and least costly systems of supporting employees of one or more companies in the place (<http://www.huawei.com/en/about-huawei/corporate-citizen-ship/caring-for-employees/index.html>). The most important thing now is to break the resistance of managers resulting from a misunderstanding of the emotional and psychological needs of employees and sometimes false shame and reluctance to engage in “private matters” of employees. The point is that thanks to professional staff support programmes, managers can easily focus on work, its results or economic effects, and the personal problems of the crew they can entrust to properly prepared consultants.

In conclusion, let us add that the benefits of implementation the well-functioning SSP include seemingly distant from each other cases. However, they are of great importance to the functioning of the modern workplace.

- Firstly, the bad working employees are quickly confronted with the need to regain full professional efficiency.
- Farther on, thanks to the rapid and peaceful intervention, the employee can quickly and effectively get professional help, to which he may not yet ripe for.

- The fact that the motivating factor is the employer, makes it much more difficult for suffering or stressed person to refuse to take advantage of the offered assistance (which sometimes takes years, for example, when an attempt is made by family or personal friends).
- The company fairly quickly regain fully efficient employee, thus reduces the number oftardiness, absences, and other violations of labor discipline.
- It reduces the migration of workers and the adoption of new (what, as we know, is now becoming more and more expensive, because it requires sometimes complex and long-term training).
- It reduces the number of consultations and sick leave as well as hospital stays, which is an indirect result of coping with stress early enough, minor conflicts, or addictions at an early stage, without waiting for the heavy impacts or catastrophic accidents during and outside of work.
- Families of employees, to whom the psychological support and counseling is provided, benefit indirectly by being able to avoid more severe consequences and complications of various stress or psychological dramas.
- Good functioning of the SSP helps to improve the atmosphere in the workplace and the general climate of calm and responsible relationships.
- Being interested in personal problems of the staff, the employer contributes to build bond with employees, making their loyalty and identification with corporate goals translated into better quality of relationships in the workplace.
- And finally, all of the abovementioned benefits can be converted into a measurable numbers of economic benefits, which are perhaps not in the foreground, but certainly not worthy of omission gain that comes from the creation of staff support programmes in every workplace employing not robots, but living people, consisting of not only the body but also the mind and soul.

6. Conclusion

Employee assistance programmes belong to commonly offered benefits in the West, primarily due to their advantageous effects on employees' motivation and productivity. Over the past few years, these programmes has come a long way from focusing on one specific issue like the abuse of alcohol among employees, to fully comprehensive programmes covering various aspects of life of the hired person. Behind the EAPs lays the assumption that helping workers cope with their problems, prevent the decline of their effectiveness and we enable them to focus all their energy on work. According to the data for the 2012 up to 74% of U.S. employers offer their staff opportunities to participate in the EAPs (Alexander Forbes, 2012). In our country, unfortunately, these initiatives are still rare despite the fact that stress, emotional, financial and health problems are common among polish workers. Maybe it is worth to actively help polish employers cope with these difficulties.

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Chapter 14

Information Security Risk Management

Jadwiga Ślawska

1. Introduction

Companies operating in the modern world focus on maximizing their profits or their market share. They carry out that objective through, among other things, marketing innovative products and/or services, creating previously non-existent needs of consumers, searching for and acquiring resource materials, reorganizing their organizations, and developing and implementing novel technologies (Olkiewicz, 2005). While running all the planned activities, organizations take many decisions, which affect their future (Kaczmarek, 1999). Those decisions should be well suited to the changing circumstances as determined by the complex and changeable environment. When making choices, management executives apply a set of methods and techniques to support their decisions (Griffin, 2004). However, even when using supporting tools, the organizations including their decision-makers are not fully protected against risks resulting from the implementation of the decisions taken because, according to what W. Tarczyński (Tarczyński, Mojsiewicz, 2001) says: *operating under the conditions of risk is an inherent attribute of any economy.*

Information can be a factor to limit the risk linked with the implemented solutions. In the modern world, information has become fundamentally important for business activities. There are many crucial issues that depend on how quick information is acquired, processed, and applied; among other things, those issues comprise security of states, position of the organization in the market, or the functioning of a citizen in the society. Along with the technological progress, electronic data carriers continuously develop. This brings a greater supply of information than is needed; besides, the quality of such information is not always high. Sometimes, information chaos is generated. A phenomenon of information security threat has come into show and it is linked with one of the information attributes, namely with economic dimension. In terms of information, economic dimension is represented by the cost of obtaining information and the profits expected from utilizing this information. On the other hand, this attribute is also expressed by the price the organization is ready to pay for the acquisition and use of someone else's data (and by doing so, the organization exposes its competitors to losses resulting from the loss of their sensitive data) (Kłos, Kłos, 2007, pp. 32-36). W.S. Vickrey and J.A. Mirrlees, who shared the 1996 Nobel Prize for Economics, emphasized the asymmetry of information. Not every market participant has access to the same data, but every entity attempts to utilize, in a strategic manner (Tarczyński,

Mojsiewicz, 2001), information advantage for their purposes and, thereby, to reduce the risk of failure.

2. Risk-related terms

Many authors (Tarczyński, Mojsiewicz, 2001; Nahotko, 1997; Kaczmarek, 2008; Lipka, 2002) point out there is no single definition of risk. The reason thereof is that individual authors differently interpret this concept; moreover, the issue is complex. Sometimes, when brought together, those definitions are contradictory, because their authors have stressed dissimilar aspects. For the purposes of this study, an interpretation by T.T. Kaczmarek (1999) is assumed. It reads: *Risk is defined as a possibility of failure, in particular, a possibility that some events occur beyond the control of an acting subject who is unable to accurately predict them or prevent them; and when useful results thereof are reduced and/or expenditures for them are increased, those events cause the entire action to become, entirely or partially, inefficient, unprofitable or uneconomic.*

The term **uncertainty** is cited as often as the term **risk**. W. Tarczyński says that (Tarczyński, Mojsiewicz, 2001): *uncertainty – in contrast to risk – refers to difficult to measure changes or it is impossible at all to estimate the probability of their occurrence.* However, those terms are often used interchangeably. A detailed comparison between risk and uncertainty is presented in Table 1.

Table 1. Similarities and differences between risk and uncertainty

Distinguishing feature	Risk	Uncertainty
Measurable category	Yes	No
Possible to determine the probability of appearance	Statistically or subjectively	Only subjectively
Considered in short periods	Yes	Yes
Considered in long periods	Yes	Yes
Objective character	Yes	No

Source: the author's own study based on Lipka, 2002; Nahotko, 1997.

Therefore, the choices to be made by entrepreneurs in the context of risk and uncertainty could be grouped as follows (Olkiewicz, 2005; Nahotko, 1997):

- 1. Decisions taken under the conditions of certainty** – all the potential results of activities to be selected are known. It is obvious what happens in a given variant of the future for the information exists and makes it possible to largely predict the future.
- 2. Decisions taken under the conditions of uncertainty** – the potential results of the selected activities are known, but no probability of occurrence can be assigned to them. It is obvious what happens in the future; however, on the basis of incomplete information, it is impossible to estimate the chances that a given solution takes place.
- 3. Decisions taken under the conditions of risk** – the potential results of the selected activities are known and the probability of occurrence can be assigned to them. The information about the future is incomplete; however, based on the data available, as well as on the experiences about similar situations, there is a possibility to determine which variant is most likely to happen.

In practice, most decisions are taken under the conditions of risk or uncertainty. However, the company has not necessarily to choose an accidental version of the future. Managers who skilfully manage risk can reduce it to an acceptable level. Pursuant to PN-ISO/IEC 27001:2007 standard, **risk management** stands for *coordinated activities to direct and control an organization with regard to risk*. The objective of risk management is, on the one hand, to maximize financial performance of the organization, and, on the other hand, the best protection against the adverse effects of taking risk (Tarczyński, Mojsiewicz, 2001).

3. Information security

Verified information is an essential factor in making rational decisions, and, at the same time, in limiting risks associated with the consequences thereof. Verified information is of crucial importance and it is indispensable to run any business.

Pursuant to PN-EN ISO 9000: 2006 standard, information stands for *meaningful data*. Piech (2004) calls it a basic unit of information and Kowalska-Napora (2010) says that *the concept of information should be understood as a transmission (...) of the message of any nature, structured as a medium carrier to enrich our knowledge*. Not all data are important and have the same quality; however, valuable data should be protected.

Pursuant to PN-ISO/IEC 27001:2007 standard, **information security** is *the preservation of confidentiality, integrity, and availability of information; in addition, other properties such as authenticity, accountability, non-repudiation, and reliability can also be involved*.

Pursuant to PN-ISO/IEC 27001:2007 standard, **confidentiality** is *the property that the information is not made available or disclosed to unauthorized individuals, entities, or processes*. It is in the interest of any organization to protect the secrets of the company and to permit only authorized individuals to access them (Ustawa, 2003). This resource category most often includes personal data of employees, technical and technological documentation, inventions, trade agreements, data about contractors, lists of customers, *etc*. In order to prevent unauthorized or improper use of the company's sensitive information, it is indispensable to protect it. It is the obligation of the management staff to determine the limits of confidentiality and professional secrecy for all the employees (Pipkin, 2002; Niemiec, 2006).

Pursuant to PN-ISO/IEC 27001:2007 standard, **integrity** is *the property of safeguarding the accuracy and completeness of assets*. This attribute also applies to data processing methods. Reliability, topicality and stability are factors to describe the accuracy of information. Reliability results from the precision of a method used to record real data and the degree of its objectivity. Information should be exhaustive, but not misleading. Topicality is ensured when the information describes the reality on the basis of current knowledge, and stability is a degree of resistance to interference (Wajda, 2003). Disrupted integrity refers to questionable data that are produced through unauthorized changes in the documents (incompetence of employees), or to damages caused by computer viruses or by deliberate actions of hackers. Moreover, disrupted integrity occurs when the completeness of data processing is uncertain. Any violation of the integrity of data can lead to material losses in organization (Niemiec, 2006).

Pursuant to PN-ISO/IEC 27001:2007 standard, **availability** is *the property of being accessible and usable upon demand by an authorized entity*. The usage of information and associated assets ensures the efficiency of the organization. A database should be characterized by the avail-

ability in order to provide access to any information in the system. Employees at the same level of authorization must be provided with the same data. This prevents chaos in the documents and among activities taken. Elements of the system must be designed so as to improve its reliability, to allow the finding of information of various priorities, and to minimize the wait time to get the data. Furthermore, availability means legal aspects of the agreements as regards the quality of services provided (Wajda, 2003; Niemiec, 2006).

The remaining attributes apply to the security of ICT systems. **Authenticity** is a guarantee that the identity of an entity or a resource is as declared. Authenticity is linked with checking whether someone or something is who he claims to be. **Accountability** is an assurance that the activities of an entity can be clearly assigned to this particular entity. Accountability depends on the degree of identification and authentication of identity and it determines the non-repudiation. **Non-repudiation** is a quality causing that an entity cannot deny he/she is the author or that he provided information. **Reliability**, in turn, is a quality to indicate a consistent, intentional behaviours and effects (PN-I-13335-1:1999; Szomański, 2007; Szpineter, 2007).

4. Risk of losing information

Current business operations require that the processed knowledge is continuously easy accessible and available for one to use wherever or however one wishes; thus, entities are more and more dependent on information systems and services, *i.e.* on information technology (IT). This technique offers the hitherto unknown opportunities, but, also, it generates threats and makes the organization vulnerable to security risks. If risks outweigh benefits, the company may suffer severe financial losses (Barbaszewski, 2007, pp. 41-51).

Each threat is potentially dangerous, but the loss of information can occur only when there is vulnerability in the organization.

Pursuant to PN-I-13335-1:1999 standard, **vulnerability** is a *weakness in an asset or group of assets that can be exploited by one or more threats*. This means that a threat without vulnerability has no effect. For example, where a computer is not connected to the Internet, there is no possibility of network attacks; thus, there is no vulnerability to such a threat. However, it is hard to imagine that a company might operate without being connected, at the very least, to e-mails. The most common vulnerabilities include unprotected connections, wrongly chosen passwords, untrained users, lack of proper access control, *etc.* (Bral, 2008).

The postulate to eliminate vulnerability is practically unreal; so, it is more effective to implement safety measures to protect documents and information resources of the company. Prior to implementing those safety measures, a risk analysis should be performed.

5. Information security risk proceeding

The PN-ISO/IEC 27001:2007 standard and the discussions on it (Wójcik, 2006, pp. 33-39; Szomański, 2009) describe a sequence of actions necessary to estimate the risk of losing information:

1. **Define the risk assessment approach of the organization.** At this stage, a risk assessment methodology should be suggested and it should take into account the nature of the business activities run by the company, legal and regulatory requirements. The suggested methodology

will make it possible to determine the information security. The selected methodology should ensure the comparability and reproducibility of estimation results. The next step is to develop criteria of risk acceptance, and on this basis to identify the acceptable levels of risk.

2. **Identify the risks.** In the second step, the assets and the owners thereof should be specified. In the sense of the ISO standard, the term “owner” means a person or an entity charged with the managerial responsibility to supervise the production, to maintain and utilize assets and to ensure their security. Such a person or an entity does not need to have actual ownership of the assets. As soon as the assets are defined, threats to those assets should be identified and vulnerabilities recognized that could be used by those threats. Finally, there are determined the effects of lost confidentiality, integrity, and availability with reference to the assets.
3. **Analyse and evaluate the risks.** The next step includes the assessment of probable damages and business losses in the organization incurred through the lost information security components. Then, it is important to estimate the real probability of security breach on the basis of relevant threats and vulnerabilities as well as the consequences associated with the assets and implemented security procedures. Based on the analyses performed, actual levels of risk are identified and assessed from the point of view of its acceptability, *i.e.* whether the risk is acceptable or not and, thus, it requires further treatment.
4. **Identify and evaluate options for the treatment of risks.** Here, the possible actions include: risk avoidance, risk transfer to another entity (such as an insurer, provider, *etc.*), recognition and acceptance of the risk in a conscious and objective way (provided such a risk meets the criterion of risk acceptance), and the usage of adequate security.

Managers and owners of the assets of the company should perform the process of assessing the risk. They decide whether or not threats shall be accepted or security measures implemented. Those who take decisions on the level of information security should have an adequate knowledge of the organization and be experienced; they are also advised to use their intuition. It's pointless to increase the protection above the necessary maximum level determined, because it results in a reduced access to resource data, and, simultaneously, it generates an increase in the costs associated with the usage and operation of such protection measures, and such an increase is disproportionate to the achieved benefits (Niemiec, 2006).

6. Conclusion

Reliable, comprehensive protective measures are required to ensure business continuity of an organization and to reduce information security risk to an acceptable level. For this purpose, an Information Security Management System (ISMS) was developed pursuant to PN-ISO/IEC 27001:2007 standard. However, prior to making a decision on implementing it in the organization, many analyses and investigations should be performed and their results will make it possible to grade data resources, to identify sensitive information and to determine the limits of accessing those information. Next, it is necessary to analyze the risks and to assume a risk level of losing information. The final step should include development of security measures to avoid loss of information. Through this recognition process, the managing staff should realize that the organization is able to effectively secure information bases and, thus, to reduce the risks linked with the management of information security.

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Chapter 15

Insurance as a Tool for Limiting Corporate Operational Risk

Ryszard Pukała

1. Introduction

The ongoing globalization processes, liberalization of rules that govern business activities, access to financial markets and changes in management and competition conditions have necessitated changes in the approach to managing entities and organizations. Although a modern enterprise independently selects certain strategies and activities, it constitutes an element of integral social development as well. Therefore, within each of them, according to economic development needs, constant transformations aimed at optimizing operations take place. Changes occurring in modern enterprises not only depend on endogenous factors, but are also forced by exogenous conditions. An enterprise of today should therefore be flexible, able to react to internal and external changes and events immediately, have a very clearly defined development strategy and resources. It should also adroitly react to threats it is potentially exposed to while conducting business activities. It is particularly important in the face of sharpened competition, increased innovativeness of operations and an ever broader use of state-of-the-art financial instruments that allow the optimization of operations but at the same time are burdened by considerable risk. Therefore, all these factors require a high degree of flexibility among enterprises to control the risk related to their operational activities.

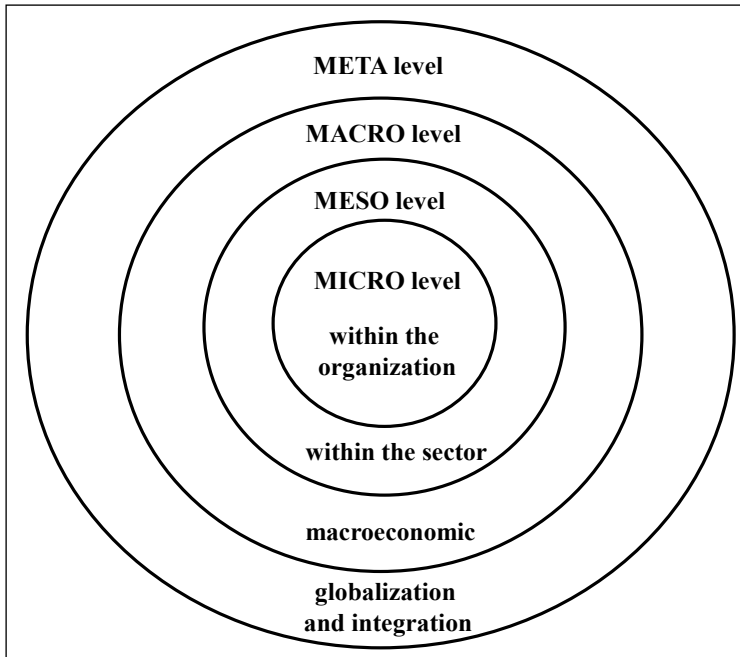
The aim of this study is to present possible uses of insurances as a tool that allows limiting operational risks of an enterprise. Particular attention has been paid to the possible comprehensive approach to providing insurance protection to an enterprise within the framework of an operational set, which can beyond doubt constitute a tool for facilitating company's operational activities and allowing an efficient use of resources in stock.

2. Operational risk of an enterprise

Operational activities of each enterprise are exposed to a broad range of risks that can destabilize its existence. It is connected with the character of operations, strategic objectives, hierarchy of values, internal structure and the degree of external dependence of an enterprise. It is hard to

expressly define a universal classification of risks a business entity is exposed to. Risks are caused by a multi-layer, direct or indirect, impact of numerous factors on its operations. We need to stress here that each entity functions in a closer or more distant relation to the business environment, which influences the magnitude of risk related to operations – see Figure 1.

Figure 1. Layers of risk related to enterprise operations within a business environment



Source: own research.

On the one hand, such approach takes into account the company's specificity and on the other hand, its susceptibility to external factors. All these aspects have impact on the functioning of an entity, which is particularly important under changing market conditions. We need to emphasize though, that entities functioning in an unstable business environment cannot only passively await changes and react to them afterwards, since each entity's operations are naturally related to taking risks. Obviously, in the case of operational risk of an enterprise we will concentrate on the group of external factors related to (Kosieradzka, Lis, 2000, p. 28):

- management processes,
- tangible assets (materials and energy),
- human resources,
- operating resources,
- production processes.

All abovementioned factors allow us to define an operational risk as a disruption of company's operations caused by external factors (Marshall, 2001, p. 25). This definition is coherent with the formal definition of operational risk, introduced by the Basel Committee on Banking Supervision, according to which an operational risk is the risk of losses caused by improper or unreliable

internal processes, human error or external factors (Basel Committee, on Banking Supervision, 2001). Both definitions are aimed at financial institutions but due to their universality they can be applied to any kind of enterprise. In this case, such a broad definition of an operational risk allows us to apply a comprehensive approach to risks related to company's operations.

From the point of view of an enterprise, identification and parameterization of operational risk is of fundamental significance. One of the methods that can be helpful in this process is reference to enterprise's productivity, expressed as a ratio of the amount of created and sold production in a given period under scrutiny to the amount of used or exhausted input resources, according to a general formula (Kosieradzka, 2012, p. 20) presented below (1):

$$P = \frac{\sum_{i=1}^T Q_{ti}^O}{\sum_{r=1}^R Q_{ri}^I} \quad (1)$$

where:

Q_{ti}^O – the amount of products of a t type, produced and delivered to recipients in the i period;

Q_{ri}^I – the amount of input resources of an r type, used (exhausted) in the i period;

$r = 1, 2, \dots, R$ – types of resources exhausted (used) by an enterprise;

$t = 1, 2, \dots, T$ – the amount of product types produced by the enterprise's system;

Productivity determines the capacity to use resources, which in turn constitutes the basis for the development of an enterprise. It is also a measure that characterizes a company's operations well, especially the efficiency of using all resources at its disposal. Corporate productivity observation and analysis is therefore a tool for efficient management. It allows assessing company's results and it can be used as a tool for identifying enterprise's weaknesses. On this basis it is possible to formulate productivity improvement programmes, development trajectories and forecasts as well as strategic plans of an enterprise (Pietkowska-Laska, 2012, p. 82).

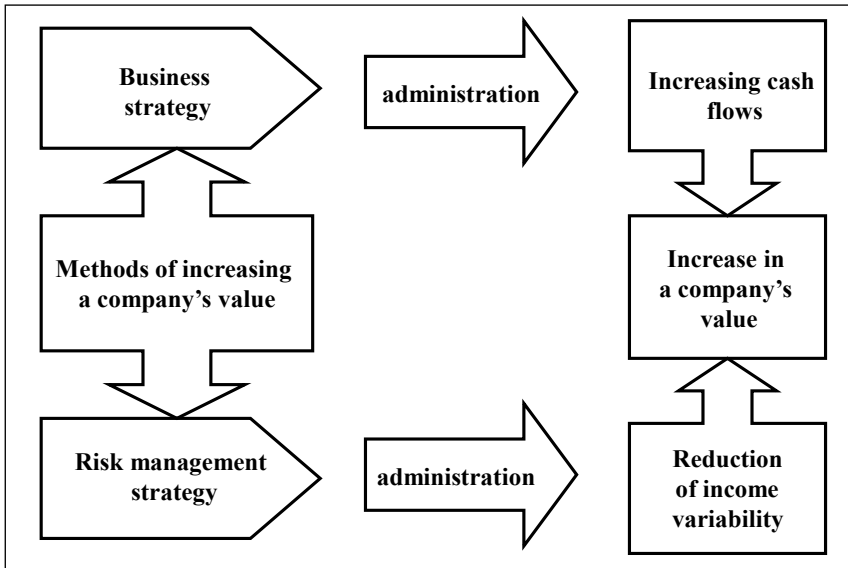
In conducting operations, each enterprise undertakes a spectrum of activities aimed at increasing its value. They are also aimed at reducing the corporate income variability and increasing cash flows. However, this process is very complicated, since along with the increased cash flows the operational risk increases as well and in the case of its materialization it can bring about effects that contradict the assumptions. Therefore, it is optimal for an enterprise to make administrative decisions that at the same time cover corporate management and risk management – Figure 2.

The increased value of an enterprise is influenced by decisions made in all areas of its activity, that is operations, investment and finance. When it comes to operational activities, these are factors related to sales revenues, operational costs and sales profitability rate. As part of investment, it is all about investment pace and structure, that is, investments in fixed and current assets. Finally, the financial activity is related to the selection of financing sources and shaping their structure, on which the cost of acquired capital depends. The change in the value of each of these factors triggers specific growths or declines in the enterprise's value (Janik, Paździor, 2011, p. 241).

Therefore, managing an enterprise's value is a link between a company's strategy and its financial results in the context of operational risk management strategy. So we cannot talk about efficient value increase excluding one of these categories. Only an appropriate correlation of operational strategy and risk management strategy constitutes a rational solution for the optimal

development of an enterprise. We also need to emphasize that the mechanism of corporate value management raises awareness of financial effects of all actions taken within the company among its workers.

Figure 2. Actions leading to the increased value of an enterprise



Source: Thlon, 2012, p. 49.

3. Operational risk management

The key challenge for contemporary corporate managers is making optimal decisions in reaction to sudden changes having impact on an entity. Rapid identification and analysis of chances and risks for company's operations is an indispensable element of optimizing administrative decisions made at various levels of an enterprise. It also relates to risk-burdened actions. We need to stress here that contemporary approach to risk management is a multi-layer one, characterized by high dynamics of reaction to potential operational risks. The way of perceiving operational risk in the context of optimizing its operations and making administrative decisions is undergoing changes, owing to the fact that a risk:

- is an independent product that can become a subject of a commercial transaction,
- can be a subject of transfer,
- influences the market value of an enterprise,
- is an element of a comprehensive corporate management,
- by means of an ever stricter parameterization, it provides an opportunity to use formalized decision support methods.

Beyond doubt, due to high degree of variability, this risk management area should be highly parameterized and adjusted to specific operational conditions of an enterprise and risk manage-

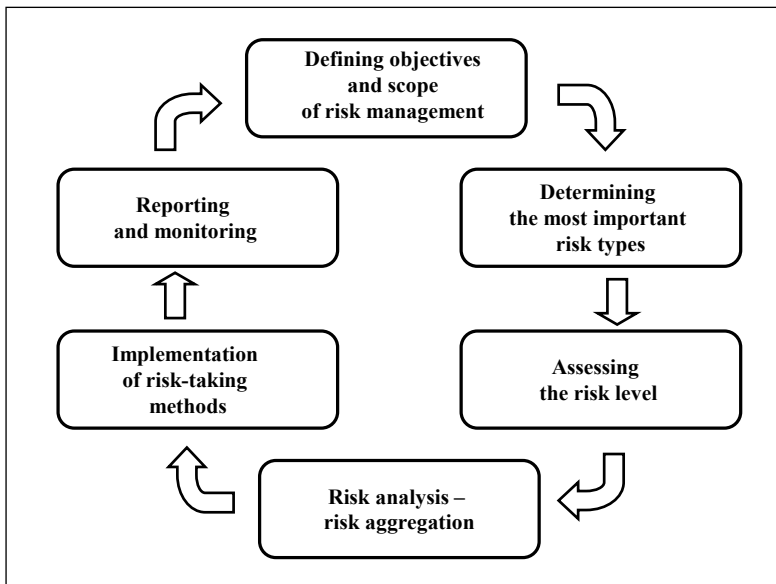
ment methods applied. It also derives from actions aimed at increasing efficiency and productivity of enterprises when it comes to improving production quality and at the same time reducing operational costs. From this point of view we can assume that corporate risk management is an administrative area aiming at (Rudnicki, www.rudnicki.com.pl):

- providing security and financial stability to a company,
- protecting assets, operational capacity and company's repute from risks able to destroy or break them down,
- increasing organizational culture, effectiveness and awareness among managers and workers of a company,
- increasing company's controlled risk-taking capacities – that is enhancing its competitiveness.

The above relates to all areas of corporate operations, both in the context of internal organizational and process regulations and the broadly understood cooperation with stakeholders. It is obvious, that from the point of view of corporate operational risk the actions taken are aimed only at operational areas. However, they are of a key significance for each company when it comes to organizing the company's structure and implemented control mechanisms.

The operational risk management process is highly complicated and somewhat ambiguous. It is caused by high degree of diversity of companies operating on the market and the application of different administrative mechanisms. Therefore, working out a coherent operational risk management concept that would additionally be universal is not possible. However, we can determine a framework, working as a starting scheme and forming a basis for individual solutions applied at a given enterprise. The example of such scheme has been presented in Figure 3.

Figure 3. Corporate operational risk management scheme



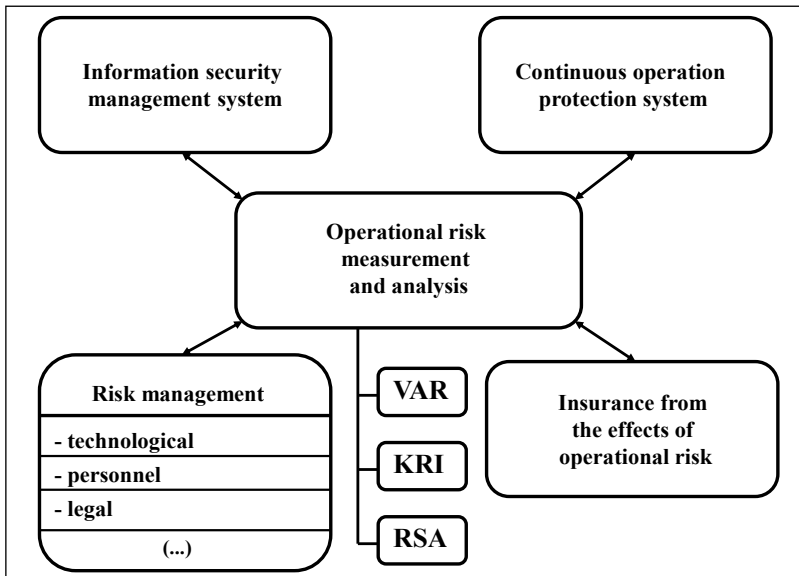
Source: own research based on Thlon, 2012, p. 46.

In accordance with the abovementioned scheme, operational risk management is a continuous process that evolves with the change of corporate management strategy and of the risk level. Such approach allows a rapid reaction to changes but also an introduction of new, often innovative, solutions that can contribute to a broader risk control and assessment and implementation of solutions that would lead to risk limitation.

4. Operational risk analysis and measurement

A multi-aspect character of risks related to corporate operations leads to a situation where potential losses can seriously disrupt the functioning of a company. Therefore, risk analysis and measurement are important elements linked to the operational risk management process, since these are key factors that influence further processes related to applying a proper approach to risk – Figure 4.

Figure 4. A comprehensive operational risk management system within an enterprise



Source: Bajszczyk, 2009, slide 41.

Risk analysis is a basic element of corporate risk management. In the process of risk analysis we can obtain information that is necessary to make decisions in the following areas:

- a strategy of dealing with risk,
- efficient selection of risk-reducing measures,
- assessment of rationale for risk transfer, acceptance or avoidance.

Information obtained during risk analysis also indicates development directions of corporate security and control systems. Therefore, looking at the risk analysis process at this angle, we can assert that it serves the purpose of optimizing losses related to operational risk.

An operational risk measurement can be conducted with the use of the following approaches (Thlon, 2013, p. 73):

- *top-down*, which allows the determination of probability and volume of potential losses from the macroeconomic point of view and identification of risks that could prevent the implementation of the company's strategy,
- *bottom-up*, which is based primarily on an identification of risk sources from the microeconomic point of view, referring to correlations between actions, human resources, technologies and procedures applied at an enterprise.

On the other hand, risk analysis consists in collecting data and information necessary to conduct a risk assessment, especially the analysis of risk areas, circumstances, frequency, severity of effects, ability to steer them, *etc.* Thus, we need to quantify risk in this very context, applying the following methods:

- qualitative, which includes external experts estimating risk parameters by applying descriptive methods, heuristic techniques, subjective probability, risk maps and such tools and techniques as questionnaires, forms, interviews,
- quantitative, which consists in estimating operational risk based on complicated parametric methods that allow a quota (quantitative) estimation of the risk level.

In practice, we can come across numerous tools that are used by qualitative and quantitative risk analysis methods. Their common objective is to carry out a comprehensive corporate risk analysis to limit the risk and consequently, to optimize the company's operations. In this context we need to emphasize that when it comes to controlling the risk level we can single out two key approaches:

- passive, consisting in avoiding or limiting risk,
- active, consisting in limiting negative risk effects, among others by transferring it, which entails the most efficient instrument in this field, *i.e.* insurance.

It is insurance itself, which due to its competitiveness to other risk management methods, is the most frequently used operational risk limiting instrument. From the practical point of view, we can name the following criteria speaking for its application (Pukała, 2013, p. 296):

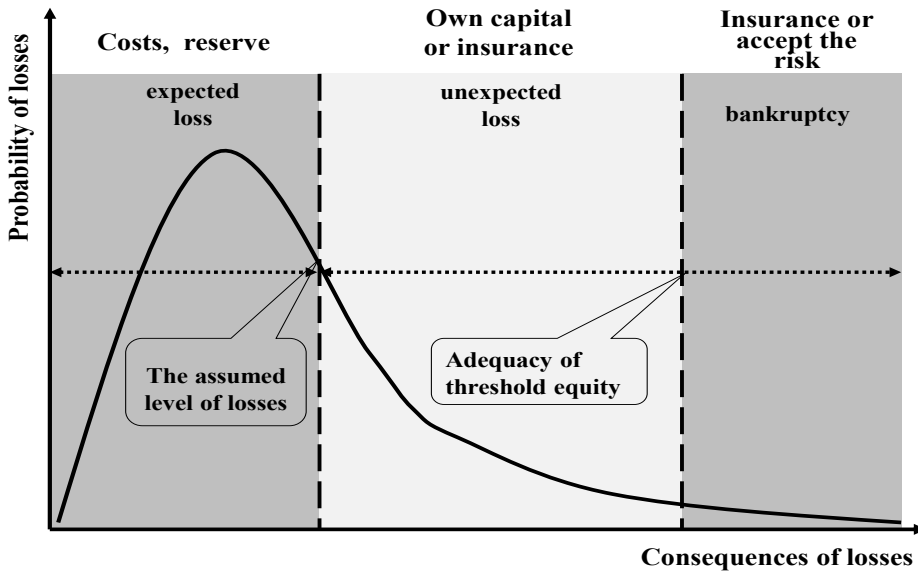
1. Efficiency – insurance is one of the methods aimed at financial compensation for a loss that occurred as a result of risk materialization. Certainly, the scope and guarantee of compensation for losses will determine the efficiency in this field, as a result of the scope and viability of insurance protection.
2. Cost – insurance is a tool aimed at providing protection related to operational risk transfer that is highly attractive in financial terms.
3. Additional benefits – apart from a risk transfer method, insurances can provide additional benefits to an enterprise, as seen at two levels:
 - additional (non-compensatory) insurer's benefits that can be expedient in conducting business activities (*e.g.* assistance);
 - benefits deriving from having an insurance policy, other than the right for compensation or benefit (having the feeling of security, enterprise managers are more inclined to make non-standard business decisions).

All abovementioned factors speak in favour of the use of insurance in the field of limiting a company's operational risk.

5. Insurance from the operational risk

The risk related to operational activities and possible related losses are an inherent part of each enterprise's life. Thus, accumulation of risk takes place within every entity. Obviously, the level of risk acceptability is an element of prudential policy applied at an enterprise. It also derives from the volume of capital and reserves at the company's disposal that can be used as a risk limiting instrument – Figure 5.


Figure 5. Allocation of capital for covering losses resulting from corporate operational risk



Source: own research based on Bajszczak, 2009, slide 56.

As we can see in the picture above, risk retention is a method capable of being applied in limited time. Past the acceptable risk level, risk retention becomes similar to gambling, which means that in the case of certain risks the entity cannot affect, the existence of an enterprise can be threatened. In this case, transferring at least some risks onto another entity may be a solution that provides security to a company. We need to stress here that full risk retention or full risk transfer are seldom applied in practice. Usually, a combination of various methods of risk financing is used. In the case of very large enterprises, corporations or capital groups, which on the one hand have a large financial basis and on the other hand, they are burdened with a very large operational risk, very specific risk management methods can be applied, for example those aimed at “retaining” risk within insurance entities dependent or belonging to a group – Table 1.

Table 1. Methods of risk financing according to the level of risk retention or transfer

		Insurance protection	Non-insurance cartels and actions aimed at retention
Full transfer  Full retention	Complete or partial transfer techniques	<ul style="list-style-type: none"> • guaranteed price insurance, • insurance based on historical loss experience, • insurance schemes applying retrospective assessment, 	
	Transfer/retention techniques	<ul style="list-style-type: none"> • paid loss retro type plans, • minimum benefit plans (stop loss) • administrative services only, 	<ul style="list-style-type: none"> • ownership/cooperative insurance companies, • self-insurance cartels, • group self-insurance companies, • risk pooling via tax authorities, • risk retention groups,
	Retention or near-retention techniques	<ul style="list-style-type: none"> • comprehensive risk insurance schemes 	<ul style="list-style-type: none"> • subsidiary insurance companies

Source: Marcinkowska, 2011, p. 56.

In the case of smaller enterprises, tools related to retention and insurance or non-insurance risk transfer to external entities are usually used as a sole choice.

We need to stress that by using an insurance instrument enterprises transfer the risk of expenditure related to counteracting the effects of losses, thus gaining more operational stability in this way. It is important for all types of enterprises, since owing to insurance they can concentrate on the execution of their main objectives. By transferring risk by means of insurance they do not need to worry that operational activities they undertake will not be executed due to materialization of insured risk (e.g. fire, theft, claims for civil liability and so on). Moreover, by eliminating the need to tie-up capital to cover potential losses, insurance allows a broader scope of investing, a more confident execution of innovative investment undertakings, implementation of innovative solutions, optimization of operations, *i.e.* a more comprehensive development. Having the feeling of financial security resulting from concluded insurance contracts, company management board is also more willing to make risky decisions, which can bring about additional financial profits or strengthen the company's competitive advantage. The feeling of security can be additionally reinforced by professionalism of actions and a good financial standing of an insurer.

We need to emphasize here that insurances constitute an important method of risk transfer especially for small enterprises, since they protect them from unforeseen expenditures that can occur as a result of various fortuitous events. These entities do not usually have any accumulated funds in the form of various reserves that could be allocated to compensate for losses in the amount their larger competitors are capable of allocating. By insuring themselves, they gain confidence, which allows them to plan the future activity in a better way. For larger companies

insurances are significant from the point of view of responsibility for their proper operations. Lack of insurance, e.g. property, civil liability or financial risks in a large company can have far more complex effects than in a small one.

Making use of insurance tools has one more very important value. Development of a company requires a constant inflow of financial resources allocated to its operational activities and further development. Disrupted flows of company's own funds can be reduced or even completely eliminated via using various types of insurances. Own funds are often insufficient to finance executed undertakings and it is often necessary to make use of external funding. Gaining such funding is easier and often cheaper for a company whose operational risk has been insured.

A decision to retain or transfer the risk depends on a number of strategic decisions related to company management, the most important of which are the following:

- legal, economic and social limitations,
- level of risk control applied,
- value and quality of an insurance service,
- tax burdens,
- alternative methods of limiting and transferring risk.

Therefore, a decision concerning the selection of a specific type of insurance derives from the demand for protection and specificity of operations. Insurance companies offer a broad range of diverse products or packages that can be tailored to individual needs of a company – see Table 2.

Table 2. Selected insurance schemes aimed at companies

Insurance	Scope of insurance protection
Comprehensive insurance of company's property	Provides comprehensive insurance protection for company's property in the scope of fortuitous events that can lead to the loss of assets and third party commitments. Currently, the most popular insurance is an <i>all risk</i> one, within the framework of which the subject of insurance can include buildings, structures, machines, devices, equipment, working capital, adaptation outlays, low-value property items, cash, private property of workers and movable property of third parties.
Bankers Blanket Bond	Insurance aimed at banks, provides coverage of losses that arise as a result of misappropriation performed by a bank worker. Additionally, the policy can protect a bank as well in the case of losing assets (cash, securities, precious metals and stones, <i>etc.</i>), acceptance of a falsified document, promissory note or counterfeit money as well as property damage or loss. The BBB contract is seen as the most comprehensive and difficult ones, both due to the specific coverage and special procedures needed to conclude it.
Business Interruption Insurance	The scope of insurance covers losses resulting from temporary suspension of activities caused by a fortuitous event, which in consequence leads to a turnover decline and cost increase, both of which disorganize a proper functioning of a company.

Professional Indemnity Insurance	The insurance covers third party claims (mostly clients) related to workers' errors and mistakes that occurred during the provision of a service to a contracting entity. Usually, the insurance also covers a loss, damage or theft of client data or documents as well as money belonging to clients.
Directors & Officers Liability Insurance	The insurance covers third party claims (<i>e.g.</i> shareholders, workers, state authorities) related to managerial staff's errors, improper management of operational activities or suspension of business activities, which can lead to losses.
Computer Crime Policy	The insurance covers risks related to electronic collection, storage, processing and transfer of information, the loss of which could lead to company's losses.
General Liability Insurance	The scope of insurance protection covers claims of third parties that have been disadvantaged as a result of business activities of a company.
Employment Practices Liability Insurance	A form of civil liability insurance protecting from effects of illegal acts performed by an employer (<i>e.g.</i> illegal dismissal, discrimination, sexual harassment, lobbying, <i>etc.</i>).

Source: own research.

The abovementioned insurance schemes are assigned to operational events related to companies' operations and can constitute a basis for creating a sort of an insurance package covering a company's operational risk. We need to remember though, that examples of insurance products presented above show us that there is no single product or a group of products that would comprehensively protect a company's property, its future profits and potential client or contractor claims in a way that is suitable for every enterprise. This fact results from the specificity of business activities conducted by each enterprise. Therefore, it contributes to a risk related to the lack of protection from potential operational risks despite the purchase of an insurance policy by a company. Due to a number of exemptions effected by insurance companies as regards the insurance protection offered, the insurance can only be one of the elements of corporate risk management process. It should not replace activities carried out at an enterprise that are aimed at reducing the operational risk a company is exposed to.

6. References

Analyzing the issue of corporate operational risk management and making use of insurances to limit this risk, we need to focus on the following aspects:

- in many enterprises operational risk and insurances management is treated marginally and does not result in actually dealing with this problem,
- many enterprises neither carry out operational risk management processes at all, nor are they prepared for any events that disorganize their operations,
- the introduction of operational risk management mechanisms places more emphasis on issues of priority for the company's development among the managerial staff,

- in the case of having operational risk management tools at the company's disposal, the response time of managerial staff in crisis situations is much shorter, which allows limiting potential losses,
- application of risk and insurances management procedures leads to a better use of resources in stock and enhances workers, contractors and society's trust in a company,
- many entities insufficiently use insurance as a risk transfer tool, which limits the possibilities for optimizing operations and stabilizing operational activity.

Therefore, while undertaking actions aimed at the development of a company and gaining competitive advantage, it is necessary to implement and make use of available operational risk and insurance management tools.

7. Conclusion

Technological progress, innovativeness of activities, an ever-present globalization process, new circumstances under which the companies operate, all this makes them stand up to new challenges. In this scope the companies make use of a broad spectrum of management and operational solutions aimed at strengthening the company's potential. In this context, we need to confirm the importance of operational risk management tools and the use of insurance tools to optimize this process. They can play a crucial role in managing the company's operational activities and in executing changes faced by entities. This process is a tool that leads to the success of companies. Insurances bring about vast possibilities of transferring operational risk. They contribute to increasing turnover and hence, the volume of revenues, at the same time significantly decreasing numerous costs related to the operational activities. In consequence, a company becomes more profitable, which leads to the reduction of its operational risk. Insurance companies play a vital role in this process, as they can contribute to the optimization of a company's operations as part of insurance protection they offer, by enhancing confidence and security of economic turnover, which stabilizes the operations of business entities. Comprehensive actions undertaken in this scope undoubtedly contribute to the enhanced security of operations under changing market conditions.

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Chapter 16

Managing Quality Risks in Indian Higher Technical Institutions via KM Interventions

Kanhiya Lal Chawla, Pankaj Kumar Gupta, Arunima Sirohi

1. Introduction

The Indian Higher Education system (IHE) is one of the largest systems in the World. Higher Education in India has gone massive expansion in post-independent with a national agenda to establish several Universities, Technical Institutes, Research Institutions and Professional/Non-professional colleges all over the country to generate and disseminate knowledge. IHE has been traditionally funded from the government agencies. Liberalization has created massive expansion in the higher education sector in India. However, there is huge drainage of foreign exchange in terms of student going abroad that indicates the quality level of the IHE institutions. *We develop a notion that major quality risk to these institutions stems from poor knowledge management.*

Knowledge management is a relatively newer concept that arose approximate two decades ago commonly defined to include in organizations' information and knowledge in a holistic sense. There is a growing realization across organizations that access to quality education and knowledge is a pre-requisite to remain competitive. Globalization is defining new frontiers for the industry and academics equally. Similar to commercial organizations, academic institutions of higher education have to adjust themselves and develop strategies to respond rapidly to the changes in markets, technologies, and increasing demand of stakeholders.

As a unique case of knowledge production, higher educational institutions typically deal with knowledge offering but probably lack in using the advantages of knowledge management (KM). It is observed that KM in higher education is restricted to research and the knowledge creation.

Specifically, the practice of KM initially derived from theory and practice in the business sector which provides a framework to illuminate and address organizational obstacles around issues of information use and access (Davenport, 1997; Friedman, Hoffman, 2001). Though introducing the concept of KM into the educational arena from the business sector has been a slow and often underutilized process. This is partially due to the fact that KM is a multi-layered and system-oriented process that requires organizations to rethink what they do and how they do it (Brown, Duguid, 2000; Senge, 1990). Additionally, educational institutions are traditionally hierarchical with silo-like functions, making cross-functional initiatives difficult to implement (Friedman, Hoffman, 2001; Petridis, McClelland, Nodine, 2004).

Knowledge alone is the source of sustainable competitive advantage and economic growth (Drucker, 1993). KM is the new source of wealth—an asset category to be invested as carefully as capital itself (Beazley *et al.*, 2002), source of power (Toffler, 1995) and an area of interest in academia and organizational practice (Raje, Shah, 2008).

Knowledge management is achieving organizational goals through the strategy-driven motivation and facilitation of knowledge-workers to develop, enhance and use their capability to interpret data and information (Beijerse, 1999). KM concerns itself with the processes and structures that organizations use to create, store, share and disseminate knowledge (Rowley, 2001). Natranjan and Shekhar (2000) argues that knowledge management entails not only managing the knowledge assets, but also the processes that act on them and can help in building competitive advantage (Garvin, 1993).

The greatest challenge in implementing any knowledge management programme is the implementation failure itself. Associated threats may be underscored as drifting initiatives, unclear scope, and loss or misuse of generated knowledge. Opportunities and rewards from knowledge management programmes are relatively easier to capture and disseminate in terms of improved productivity, augmented profitability, improved processes and systems *etc.* Gupta and Daniel (2001), knowledge is a company's greatest competitive advantage and it will be the currency of the new economy and intellectual capital must be treated properly and shared appropriately with others in the organization. Successful companies of future will be those that do the best job of capturing, storing and leveraging what their employees know and how fast they can know something new. This requires building knowledge culture (Shermon, 2002).

In IHEs, the system of identification of knowledge and expertise that is the main premise of KM (Sammour *et al.*, 2008) is missing. Also approach to choosing a right quality strategy is sub-optimal (Pircher, Zenk, Risku, 2007). Higher educational institutions can be trainers (Argosy University, 2008) which require the five common characteristics of any teacher training programs: (1) incentives and support for teacher training; (2) teacher-directed training; (3) adequate access to technology; (4) community partnerships; and (5) on-going informal support and training opportunities (Bowman Alden, 1989). KM transformation requires a thinking on target state (Taratt, 2001) and implementation is considered successful if, after completing all the necessary implementation measures, the desired application level takes place (Bauermann, 1988). Researches show that for educational institutions there are still more efforts to be implemented as KM has associated limitations and drawbacks. According to Hovland (2003), and Huysman (2004) for institutions there is a strong need to re-appropriate KM as popularized by business sector. Further Hammer, Leonard and Davenport (2004) say that as KM exists in the business sector its ability to create is far reaching for the organization change. Tirpak (2005) observed that organizations find knowledge management a key ingredient to their R&D functions, while effective knowledge management may lead to higher productivity in the university research centres. IHE suffers from lack of focused planning at Institutional level, variable quality of HE in different institutions across the country and inflexibility of academic structure that inhibits innovation (Powar, 2000). In light of these researches, we are motivated to examine the quality of IHE and KM adoption levels. Our paper, therefore, attempts to identify the possible KM¹ interventions that can improve the quality of IHE².

¹ Knowledge Management.

² Indian Higher Education.

2. Current scenario of IHE

Indian Higher Education (IHE) system is the third largest in the world with more than 18 Million enrolments. The higher education in India has witnessed many fold increase in its institutional capacity since independence. During 1950 to 2008, the number of universities raised from 20 to about 431, colleges from 500 to 20,677 and the faculties from 15,000 to nearly 5.05 lakhs (UGC Report, 2008). Knowledge needs of India are enormous, however, unfortunately, the parameters of higher education in India are driven by the political whims that lay emphasis on (a) number of universities, (b) student enrollment and (c) state/region-wise penetrations. This brings the IHE near to obsolescence in comparison with global standards. The quality risks are therefore huge in terms of size and impact. The list of undesirable in IHE includes politics, violence and exploitation both at faculty and student level.

Globalization has also posed serious challenges to the IHE system. Many of the international trade agreement require free trade, lesser controls and large privatization. In India, this system flopped due to partial adoption. Neither, the IHE institutions were purely privatized nor the free state controls were implemented. The lift of the state controls meant withdrawal of grants that consequently impacted the quality of the existing institutions that carried a national weight age. Newly emerged pure private institutions have become money machine with almost no focus on the quality of education. The only concern is on enrolments and minimization of operational cost that *inter alia* includes the remuneration to the faculty. In absence of infrastructure, the knowledge management practices are almost absent and the output – the graduates produced are unable to capture value in the competitive market due to poor levels of skills and quality. We argue that present scenario of IHE poses a serious risk to the country that essentially requires a complete overhaul of the system in wake of globalization that demand talent, competence, drive, initiative and innovation at several levels.

3. Quality risks of IHE

Quality is inevitable; irrefutable-a person recognizes quality instinctively (Hare, Green, 1993). Global competitiveness is important and the Indian products of the higher education in institutions are competent scholastically and also in terms of their value system and richness of their personality. However, these products in or other way requires polishing from global level institutions. Development of quality in IHE requires of building and sustaining higher education system that achieves an optimum balance between market forces and public policy and the system should be able to impart education that inculcates creativity and lifelong learning skills necessary to manage a changing and uncertain future. It must stimulate the knowledge creation and dissemination through research and innovation and stress this as a primary goal role of higher education.

The apex body of IHE – University Grants Commission (UGC) recognizes the difference between quality and excellence and it is well accepted that excellence may not be enhanced without quality education in the vast institutions of higher learning particularly universities and colleges. If the quality of the university and college education is neglected, it will have limited potential for growth of excellence in terms of creativity and innovativeness. After the setting up of Central Advisory Board of Education (CABE) in 1943 and formation of All India Council of Technical Education (AICTE) in 1945, quality has improved significantly but is not able to manage the challenges of the world economic scenario.

Failure to recognize that quality is not a destination but a continuous journey has resulted in gradual downgrading of IHEs (Tab. 1 and 2).

Table 1. Times ranking of universities (2013-14)

Rank	Name of the institution	Country
1	California Institute of Technology (Caltech)	United States
2	Harvard University	United States
2	University of Oxford	United Kingdom
226-250	Punjab University	India

Source: <http://www.timeshighereducation.co.uk/world-university-rankings/2013-14/world-ranking>.

Table 2. QS university rankings (2013)

Rank	Name of the Indian institution
222	Indian Institute of Technology Delhi (IITD)
233	Indian Institute of Technology Bombay (IITB)
295	Indian Institute of Technology Kanpur (IITK)
313	Indian Institute of Technology Madras (IITM)
346	Indian Institute of Technology Kharagpur (IITKGP)
401-410	Indian Institute of Technology Roorkee (IITR)
441-450	University of Delhi

Source: <http://www.topuniversities.com/university-rankings/world-university-rankings>.

None of the top institutions of the country could find place in the top 100 lists. This indicates a huge quality gap. Of the own rating on quality conducted by UGC, large number is below A+ level (Tab. 3).

Table 3. Quality ratings of Indian universities

Indicators	Number
Total Number of Universities	369
Number of Universities under UGC Purview	317
Number of Universities eligible to receive UGC Grants	164
Universities with infrastructure deficiencies and not eligible to receive UGC grants though in its purview	153
Universities accredited by NAAC of which Rated as:	128
A++, A+, A (Group 1)	32%
B++, B+, B (Group 2)	52%
C++, C+, C (Group 3)	16%

Source: UGC Report on Higher Education, 2009.

Interestingly, the parameters for assessment are most basic viz. (a) age of the University (b) number of departments in the university, (c) number of teachers in each department of the university, (d) proportion of the filled up teaching positions, (e) proportion of teachers with PhD

as highest qualification – which is indicative of the quality of teaching staff and has a bearing on the research potential of the universities and (f) number of books and journals in the library.

Furthermore quality gaps within the universities are huge as evident from the India vision 2020 which they need to foster between the various segments. Quality gap is defined as the difference between the benchmark value and the average value of all universities on abovementioned parameters. Table 4 reflects the huge under investment in India on higher education.

Table 4. Determinants of quality and gaps in each of the universities

Parameters	Average of All Universities	Benchmarks (as in A Grade Universities)	Quality Gap
Number of Departments Per University Age of the University in years (as in 2004)	29	34	5
Number of filled up faculty position per university	4	51	7
Number of Faculty members with PhD	158	432	274
Number of Teachers per Department per University	8	10	2
Number of Books in Library	288,913	352,886	63973

Source: UGC Report on Higher Education, 2009.

It can be seen that both in absolute and relative terms the quality of IHE is poor and does not meet the basic global standards.

We are therefore motivated to explore the knowledge management interventions that can improve the quality of higher education in selected Indian technical institutions. The essence is to examine KM practices in sample institutions and related governmental policies through survey methods and provide suggestive framework so that KM efforts can best deliver and improve the quality of Indian technical institutions.

4. Methodology

We have conducted a primary research through questionnaires administered to 400 respondents administered to central universities and institute of higher education situated in the national capital region of Delhi. Ten knowledge management constructs have identified from secondary sources involving interactions with academicians and literature reviews. The questions in the questionnaire relate to – (a) Knowledge management intervention in industry, (b) Knowledge management intervention in academics, (c) Knowledge management intervention in student affairs, (d) Knowledge management intervention in institutional R&D, (e) Impact of knowledge management. We have used descriptive and ANNOVA to conduct the analysis and present the results.

5. Results and discussion

The results of the survey of respondents and personal interviews on the Knowledge Management and quality of Indian Higher education System are presented as follows. Of the total sample set, 24% respondents confirmed that Indian higher education system needs reformatting with 25% said that courses should be available with the global recognition. Further, another 28% agreed that the relevance of the programme for attaining global standards among government, private and international organization is relevant and also felt that the relevance of KM programme towards quality assurance in Indian higher education sector is with significant and impressive developments (Tab. 5).

Table 5. Opinion results for Indian Higher Education System

Statements	Yes	No	Can't Say
	No. of respondents		
Does an Indian Higher education system needs reformatting	106	80	15
Do you think that the need for the courses/programs to be incorporated as per KM implications	111	65	25
In your opinion courses should be available with the global recognition	126	65	10
Does implications of KM would improve the work excellence	107	70	23
Do you think that the relevance of the programme for attaining global standards among government	82	105	13
In your view is the relevance of the programme towards quality assurance in Indian higher education sector	53	115	33

Source: own work.

We also find large difference in the opinion of respondents in relation to the place of work and the designation (Tab. 6). This implies that some universities are far better than others and recruitment policy does make a difference.

Table 6. ANNOVA for KM and Indian Higher Education System

Respondents Classifiers >Parameters	F-Ratios						
	Age	Gender	Degree	Specialization	Experience	Place	Designation
Reformatting Need	.453	1.720	.800	2.275	.639	31.089	1.610
KM Implications	.910	.057	3.158	5.292	2.162	26.308	8.576
Recognition	.649	.050	2.110	2.418	.544	31.917	2.334
Excellence	.813	1.006	.909	.815	.452	7.479	1.615
Relevance	.293	.619	2.282	5.897	3.017	36.466	6.487
Quality	.320	.943	2.644	4.592	1.787	38.592	3.389

Source: own work.

Thus, it can be inferred that KM has been perceived like a revolution of the higher education in Indian scenario. In the opinion of 21% respondents, higher education have to adjust themselves and develop strategies to respond rapidly to the changes in markets, technologies and increasing demand of stakeholders and (30%) agreed that there is need for the expansion in the capacity of existing education institutions with this (22%) also added that our education system also suffers from multiple disparities. Further (18%) respondents said that all colleges should come under the fold of quality assessment to improve the standard of higher education in the country and (15%) added that there are deficiencies in the physical and academic infrastructure of the institutions(government, private aided and unaided). With this, few of the respondents also partially agreed about the collaboration, sharing and application of knowledge which is not well understood and appreciated in instiutions (Tab. 7).

Table 7. Quality in education system

Statements	Yes	No	Can't Say
Do you think that higher education have to adjust themselves and develop strategies to respond rapidly to the changes in markets, technologies, and increasing de,and of stakeholders	96	89	16
In your opinion does collaboration, sharing and application of knowledge is not well-understood and appreciated in institutions	77	105	19
Is there any need for expansion in the capacity of existing education institutions	135	59	7
Does our education system suffer from multiple disparities	99	75	27
Does all colleges should come under the fold of quality assessment to improve the standard of highre education in the country	83	73	45

Source: own work.

Thus, it can be inferred that majority of respondents support for KM to improve quality of education and raising standards through learning environment (Tab. 8).

Table 8. Ratings on quality in education system

Statements	Very important	Quite important	Somewhat important	Not very important	Not important at all
Relevance to context, to needs (both 'needs now' and 'needs later') and to humanity	66	65	15	24	30
Efficiency in setting standards, in meeting and in setting standards	113	132	50	79	66
Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities	80	113	90	89	68
Learners who are healthy, safe, protective and gender sensitive provide adequate resources and facilities	26	12	1	1	0

Source: own work.

Table 9. ANNOVA results on quality in education system

Respondents Classifiers >Parameters	F-Ratios						
	Age	Gender	Degree	Specialization	Experience	Place	Designation
Strategies	.334	.612	2.419	2.066	1.217	35.736	2.065
Collaboration	.278	1.792	3.712	10.428	1.362	46.990	6.887
Expansion	.378	3.642	2.414	6.293	2.073	39.854	1.416
Disparities	.628	1.837	5.467	5.482	1.444	32.400	6.399
Assessment	.666	.631	1.721	1.484	.549	33.435	1.192
Deficiencies	.364	1.113	.758	1.227	.543	26.712	1.067
Relevance	1.721	1.796	2.338	2.669	2.259	28.055	3.747
Standards	.667	.655	1.038	1.465	.799	2.659	2.496
Environment	1.001	.032	1.550	1.372	2.642	8.516	3.280

Source: own work.

Results indicate that opinions on quality in education system indicates that opinions on various quality measures in education system differ significantly across respondents groups classified for place of work and designation (Tab. 9).

Table 10 shows the counts on training and knowledge programmes attended by the respondents in the three-selected sample periods.

Table 10. Counts on training/Knowledge programmes

Name of the Programme	Percentage of respondents {No. of Programmes Attended}		
	Recently (within 1 Year)	Last 3 Years	3 Years Before
Refresher/Orientation programme	55.6{1}	27.7(1)	36.2(1)
	35.0{2}	16.8(2)	23.1(2)
	1.0{4}	0.8(3)	2.8(3)
	8.2{5}	8.2(4)	23.1(5)
Faculty Development Programme (External/Internal)	0.3(1)	1.5(1)	55.5(1)
	38.3(2)	15.3(2)	4.4(2)
	36.9(3)	21.5(3)	4.4(3)
	11.7(4)	18.4(4)	17.7(4)
	12.6(5)	1.5(5)	
Seminars/Workshops/Conferences	39.5(1)	1.5(1)	14.5(1)
	13.1(2)	22.7(2)	18.1(2)
	6.9(3)	12.1(3)	3.6(3)
	34.0(4)	12.1(4)	14.5(4)
	0.6(5)	12.8(5)	1.8(5)
Industry interaction	0.6(1)	19.2(1)	0.7(1)
	8.2(2)	1.5(2)	7.3(2)
	10.9(3)	0.7(3)	5.84(3)
	5.47(4)	13.0(4)	24.1(4)
	0.6(5)		
Others (pl. specify)	2.0(1)	2.6(1)	100(1)
	4.7(2)	5.3(2)	

Source:own work.

55% respondents attended refresher/orientation programmes within one year, 35% in last two years. Number of respondents (27%) who attended FDP's within one year out of which 16% were such who attended the faculty development programme in last three years, respondents attending seminars/workshops/conferences within one year were 36% and in last three years the number varied from 23%. further, the respondents who had some industry interation recently in one year duration were 38% and in last three years it had a significant shift of 36%. We find that industry interactions and exposure through seminars and conferences in low that can probably explain the reasons for poor quality of education comapred to global levels.We further find that people who attended different knowledge programmes in sample durations differed significantly in terms of opinions on KM interventions. This implies that KM interventions can altogether change the thinking and working of the academicians and probaly an step towards quality improvement.

6. KM interventions for quality improvement

Knowledge development needs of the overall structure and infrastructure of the institutions and universities should be assessed at the institute level during each academic year and moreo-

ver, academic calendars should be planned keeping the needs in view at broader level. In the era of knowledge management, faculties should be encouraged to use the practices of knowledge management for larger benefit of the society. For that purpose, KM culture needs to be developed and it can start at the starting of the session. Faculties may be trained in the ways of lecture capture, which can later be used as e-resources by the higher education systems.

Knowledge Management may start communities of practice (Lave, Wenger, 1991) which can be joined by individuals who may communicate regularly for knowledge sharing and discussion on issues of mutual interest, by providing suitable infrastructure through networking by internet or intranet. This will help in exchange of knowledge created at different places leading to better knowledge storage, distribution and application. In view of the fast technological changes and innovations, academia must be apprised of so that students can be prepared for that. KM may provide a platform for Industry-Academia interaction. Research knowledge acquisition for professional development can be well attained through KM interventions. Compared to global institutions, IHEs are not using state of the art technology for knowledge delivery that requires special attention. An IT based knowledge management can cast an overall impact over on the vital areas of the Indian Higher Education System viz. Institutional Planning, Curriculum Development Process, R&D activities of the HE institutions *etc.* and thus provide a quantum leap in the “Quality of Service (QoS)”. In order to promote knowledge sharing activity in knowledge-based institutions, it is essential to create an environment, which is people-oriented, rather than technological oriented. While technology plays a crucial role in minimizing the barriers and increases the propensity to share knowledge, knowledge sharing is still a people-process. Knowledge Management interventions can thus improve the levels of creativity and innovation that can lift these institutions to the global centers of excellence and manage the quality risks stemming from globalization.

7. Conclusion

We conclude that the accessibility of higher education is the most critical issue that needs to be addressed in the given the economic and social disparities with cultural and linguistic diversities in India at the local, regional, national and international levels from transdisciplinary, inter-disciplinary and discipline-specific perspectives. Research studies indicate that Indian universities lack human resources in terms of quality and quantity of teachers and physical and other infrastructure facilities. National Knowledge Commission (NKC) has been set up by the Indian government to examine the various knowledge management practices in IHEs. We propose that quality of education needs a redefinition particularly with reference to higher education. We find that there is a large disparity across institutions though the common view that KM interventions can improve the quality and ranking of the institution prevails. An essential imperative is that apex regulator UGC should define benchmarks of quality and excellence at par with global standards. The recently introduced Academic Performance Index (API) System for recruitment and promotion of academic staff has severe biases and imperfections that need to be addressed. Also in line with the India’s key policy for economic development through 2017 stated by the 12th Five-Year Plan we suggests that the country’s higher education institutions should be granted autonomy over curriculum, staffing, and programs offered and should be largely decontrolled in terms of revenue earning and expenditures.

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PART II

DEVELOPMENT OF KNOWLEDGE AND COMPETENCES IN MANAGING ORGANIZATIONS



Chapter 17

Organizational Learning Factors

Paweł Łukasik

1. Introduction

Organizational Learning is the concept having its beginning in the sixties. First definition proposed by R.M. Cyert and J.G. March (1963) describes organizational learning as an adaptation process which lies in the change of the analyzing tools of the organization (Endlich, 2001, pp. 42-43). Similarly J.G. March and Olsen (1976) treat organizational learning as the adaptation process of the organization's behavior (1976, pp. 42-43). According to H.A. Simon (1969) organizational learning means continuous inquiry in organizational problems and solving them by employees (1969, pp. 42-43). Similarly C. Argyris and D.A. Schön (1997) found that organizational learning is the process in which organization's members detect errors or dysfunctions in the operations of the organization and resolve them. This recognition of the organizational learning put the emphasis on adaptation to change in the organization environment or organizational problem solving (Argyris, Schön, 1997, pp. 42-43). But organizational learning as the name, should provide people with knowledge. This is reflected in farther definitions of the organizational learning. Duncan and Weiss (1978) found that organizational learning is the process within organization whereby organizations create knowledge containing cause and effect relationships (Duncan, Weiss, 1978, pp. 42-43). This knowledge is captured in the specific way. As revealed B. Levitt and J. March (1988) knowledge (understood as conclusions from the past of the organization) is encoded in routine behaviors (Reese, 2006, p. 23). The most of authors describe organizational learning as process, only D.R. Schwandt and A.M. Grundlach (1992) show organizational learning as the system consisting of actions, actors, symbols and processes, which transforms information in the knowledge which is useful for the organization (Goldman, 2002, p. 25). B. Mikula (2006) gives the most complex definition connecting previous concepts with the problem of the adaptive capacity of the organization. He describes organizational learning as process which elements are knowledge and information. This process causes changes of the knowledge resources and may cause changes of the organizational behaviors. This process also can lead to enhancement of the adaptive capacity of the organization, leading organization to the condition of the high reactivity and the proactivity (Mikula, 2006, p. 48). Above definitions point to crucial role which organizational learning plays in the development of the organization. Therefore the most of companies do very much to improve organizational learning process. But there are many factors

supporting or impeding the implementation of the organizational learning process. This study presents main organizational learning factors divided into internal factors and external factors.

2. Organizational learning factors – research review

Organizational learning factors mean all external and internal conditions which have influence on organizational learning quality and scope. External conditions are associated with economical changes – cyclical crises and the transformation of the industrial economy to the knowledge economy. The cyclical crises are the part of the business cycle. It is well-known phenomenon in the economy. But it creates specific, short-term conditions for companies, which can stimulate actions having influence for long-term development of the organization. However, permanent changes in the world economy, which have place in the beginning of the twenty first century, are crucial for organizational learning development. These two external factors will be described in details in the farther part of this article.

The most of research concentrates on internal factors. From on hand it is obvious, from the other hand shows that exists some knowledge gap connected with the research of the external conditions of the organizational learning. Authors analyze in the research of organizational learning conditions, both groups of factors and separate conditions such as organizational culture. The groups of factors were analyzed by E. Stańczyk-Hugiet (2007, p. 170) or B. Mikuła (2010, pp. 94-95). E. Stańczyk-Hugiet researched internal factors supporting organizational learning in micro, small, medium and large companies. Table one contains ratings of occurrence individual factors (number one means the lack of the given factor, number five means frequent occurrence of the researched factor). E. Stańczyk-Hugiet revealed that managers' assessment of the leading necessary of the learning organization concept depends on organization size. Similarly, managers of companies, which operates in modern sectors of the economy asses higher the need of the organizational learning (Stańczyk-Hugiet, 2007, p. 170). In turn, B. Mikuła researched factors hindering organizational learning. He revealed the following barriers of the organizational learning (Mikuła, 2010, pp. 94-95):

- difficult access to information,
- aversion to the old habits' rejection,
- lack of acceptance for dissimilarity of the opinions based on the knowledge,
- rooting strategy used by management (increasing benefits for him/herself, manipulation of the information, maintenance of power at any costs),
- organizational structure centralization.

Table 1. Internal factors supporting organizational learning

Internal factors supporting organizational learning	Categorized answers			
	Micro-	Small	Medium	Large
Employees disposition toward learning on own mistakes	2	3	3	3
Continuous, planned employees training	2	2	3	4
Flexible procedures of the work	2	4	4	3
Leading of the trainings by managers	2	2	2	2

Creating condition for full exploitation of the human potential in the organization	2	3	2	3
Delegation	1	1	2	3
Risk-taking	2	3	3	3
Encouraging to experimentation	2	3	3	3
Routine revisions of the procedures	2	2	3	3
Encouraging to the challenge of the work efficiency	1	2	2	2
Encouraging employees to suggesting of the problems solutions	1	2	2	2
Making decisions based on empirical data	2	2	3	3
Cooperation between management and employees	4	4	3	2
Interdepartmental cooperation	1	1	2	2

Źródło: Stańczyk-Hugiet, 2007, p. 170.

In the farther part of the article I analyse separate organizational learning factors such as economical (organizational) crises, knowledge economy and knowledge workers emergence, organizational culture, time orientation of the organization, conflicts in organization. All factors are divided into external and internal conditions of the organizational learning.

3. Individual learning factors

3.1. External factors

Firstly, it should be noted that economical crisis is external factor, but it is direct purpose of the organization's crisis, which is internal factor. I implied in this paper that a crisis in organization is external factor, because it is very often due to economical downturn. Crisis is divided into three phases: before crisis, during crisis and after crisis. A. Zabłocka-Kluczka (2009, pp. 921-922) compared these phases and she concluded that time after crisis the best for organizational learning. It is because people after crisis remember causes of crisis and want changes. In comparison with crisis phase, management recovers the control of the situation. Managers become convinced during crises that even insignificant factors can threaten organization's existence. People in organizations are directed by norm and collectively shared assumptions. Crises reveal limitations of the old rules and people become convinced that, they have to change these rules. In the crisis period, even external stake holders pay more attention to company's situation. It results in more transparency of company's situation. However, in the period of crisis it's coming to, that natural regulatory mechanisms of the organization become blocked. It can be observed as the blurring of the natural boundaries within organization or decentralization of the power. It all results in problem with the information processing. Information interpreting becomes especially difficult in the information processing during crisis. People tend to have a limited ability to experimentation in the time of serious problems in the company. The tendency to search for the guilty is the next factor impeding organizational learning. It favors the hiding of mistakes and reluctance to seeking real causes of problems (Zabłocka-Kluczka, pp. 921-922). In conclusion, managers should use positive effects of crisis, like awareness of the need for changes among

workers, to overcome the most of difficulties, which they have to face during organizational learning implementation.

In contrast to periodic crisis, there are many continuous changes in the economy, which effects are permanent. This is for example, economic convergence or transition process. From the end of twentieth century we can observe the transition process from industrial economy to knowledge economy. The globalization process is getting stronger and knowledge become the main way of getting competitive advantage (Mikuła, 2007, pp. 11-12). Knowledge economy can be described through characteristics such as (Mikuła, 2007, p. 22):

- globalization process occurring even in countries, which were isolated from the other countries,
- increasing amount of the network connections between organizations,
- increasing turbulence of the companies environment, which is the effect of the low level impulses, which spreads over the networks of organizations,
- increasing role of the services sector,
- dynamic development of e-business and development of the software which can be substitute of the human work,
- short product life cycle connected with increasing role of the knowledge,
- high expenses for R&D and trainings in companies and education and research in the public sector of the economy,
- increasing share of the intangible assets in the structure of the company's value,
- the change of the societies life styles: people have global interests, social networks are developed, people and companies develop social networks in the Internet, community-ness is getting more important, similarly as comfort life.

The knowledge economy is connected with changes in human resources of organizations. A. Pietruszka-Ortyl analyzed management literature concerning this process. She compared: connection's character between worker and organization, motivators, manner of the work, system of awards, the main way of the human resource development, organizational culture elements, corporate environment in industrial economy and knowledge economy (see: Tab. 2). According to A. Pietruszka-Ortyl the globalization of the labour market is a very important factor. Employers are independent of some specific occupational group, because they can hire people from every country in the world. Short knowledge life cycle concerns human abilities too. Therefore people improve their competences independently of organization and they often change the work place. From the same consideration, human resources of specialists are giving up from carrier path appointing (Pietruszka-Ortyl, 2009, pp. 348-350).

The main role of manager has changed in recent years. In the classic approach, a manager is carrying management functions out. In the knowledge economy, he is responsible for the use of the knowledge. Mentoring and coaching skills became especially important (Morawski, 2011, p. 236).

Table 2. The development of the new economy human capital

	Industry economy	Knowledge economy
Conne- tion's character between worker and organization	Long-term employment – career path planning, high dependence of company, permanent membership of an organization	Temporary employment – contract, self-employment, adaptation to the organization, situational membership of an organization
Motivators	Psychological contract, work to the entire life – security of employment, fixed salary	Intellectual engagement, work is creative inspiration, what demands more financial incentives
Manner of the work	Regular, continuous functions and processes	Next and sequential projects
System of benefits	Fixed system of benefits, Internal, vertical promotions	Variable system of benefits Nonhierarchical promotions outside organization
The main way of the human resource development	Training Training as a part of organizational competence building Workers' competences specific for company	Learning Human capital building by learning within and outside organization Knowledge which can be used in different projects
Corporate culture elements	More control of employees, bureaucracy, formalization Created by organization	A significant autonomy for workers, adhocracy, innovation seeking, Created by individuals or groups
corporate environment	Certainty of the single employee	Collective ambiguity

Source: Pietruszka-Ortyl, 2009, p. 349.

There is one element of the new economy human capital, which plays very important role. There are knowledge workers. The term of knowledge workers was popularized by P. Drucker (Awad, Ghaziri, 2007, p. 438). It means well educated worker with special skills who can use knowledge at complicated, difficult work (Morawski, 2006, p. 275). Because of specific characteristics of this group of workers, management must use specific rules to manage knowledge workers. M. Morawski proposed several principles of knowledge workers management (2006, p. 298):

- career path creating and intellectual capital measurement,
- management by values directed for entrepreneurship, creativity, autonomy and non-hierarchical relationships between workers,
- development management directed for continuity, accessible and versatile education, widely use of the knowledge and experience sharing, seeking for the opportunities to get new skills,
- management by motivation directed for creativity and innovation,
- management by participation, including access to information, dialog and co-decision,
- management by effects taking also into account the behavior (continuous improvement, partnership management style, permanent access to the feedback).

M. Morawski also created the zones of comfort concept, including (2009, p. 67):

- work based on roles, projects and teams,
- development and motivation possibilities,
- modern equipment,
- relationships with managers based on partnership, mentoring and expert knowledge.

All above rules are connected with organizational learning, which is the main process carried out through knowledge workers and also for knowledge workers. Similarly to knowledge economy development it is the main driver of the organizational learning.

In the next section of the study, I will describe internal factors of the organizational learning.

3.2. Internal factors

I chose four factors to internal conditions of the organizational learning: organizational culture, organizational conflict, temporal orientation of the organization, and organization size. According to E. Schein (1996, p. 11) “a culture is a set of basic tacit assumptions about how the world is and ought to be that a group of people share and that determines their perceptions, thoughts, feelings, and to some degree, their overt behaviour. Culture manifests itself at three levels: the level of deep tacit assumptions, that are the essence of the culture, the level of espoused values the often reflect what a group wishes ideally to be and the way it wants to present itself publicly and the day-to-day behaviour that represents a complex compromise among the espoused values, the deeper assumptions and immediate requirements of the situation” (Schein, 1996, p. 11). E. Schein stresses that research basic elements of culture needs long time observations of the peoples’ behaviour (1996, p. 11). Edgar Schein’s definition of organizational culture is not one but even the most known concept of organizational culture. I want to present a few elaborations which describes corporate culture characteristics supporting organizational learning.

Table 3 contains classification of characteristics, which are typical for corporate culture supporting organizational learning. P.K. Ahmed, A.Y.E. Loh i M. Zairi divided organizational culture characteristics into two groups: these connected with external adaptability and those connected with internal consistency. Culture described in Table 3 supports knowledge sharing, open communication between managers and subordinates and seeking new ways of problem solving. Creating innovative products or solutions depends so called “organizational slack”. It means that organization must have a redundancy of resources such as time, knowledge, information, cash or infrastructure (Ahmed, Loh, Zairi, 1999, pp. 433-434).

Researchers use different typologies of organizational culture to study the relationship between organizational culture and organizational learning. For instance H.D. Fard, A.A.A. Rostamy, H. Taghiloo (2009, p. 54, 57) used the concept of Hellrig and Slocum, which have singled out four types of the organizational culture: a bureaucracy culture, a competitive culture, a participative culture and a learning culture. The bureaucracy culture is characterized as organization with high level of the centralization and formality, in which observing procedures are very important. The competitive culture is characterized as flexible organization with low internal integration, low loyalty and strong orientation towards results. The participative culture is characterized as organization with low flexibility and strong internal integration. Workers in such organization are engaged and loyal to the company and teams are preferred from of the work organization. The learning culture is characterized as organization directed for changes and knowledge creation. In organizations with learning culture, it is emphasis on information gathering, taking com-

petitive advantage, innovativeness and creativity. How it results from conducted examinations through H.D. Fard, A.A.A. Rostamy, H. Taghiloos it is positive correlation between participative or learning culture characteristics and organizational learning (2009, p. 54, 57).

In contrary to above studies, which are concentrated on organizational culture as whole, E. Schein used in his studies the concept of organizational subcultures. He revealed that in every organization exists three communities: operators, engineers and managers. Each from this groups has its learning style and this is a reason for problems with organizational learning.

Table 3. Characteristics of the organizational culture supporting organizational learning

External adaptability	Internal consistency
1. Safe environment	1. Organizational slack
1.1. Freedom to try things and fail 1.2. Acceptance of mistakes 1.3. Allow discussion of dump ideas 1.4. No punishment for mistakes	1.1. Built-in resource slack 1.2. Funds and budgets 1.3. Time 1.4. Opportunities 1.5. Tools 1.6. Infrastructure, <i>e.g.</i> rooms, equipment <i>etc.</i>
2. Risk-taking	2. Reward
2.1. Freedom to experiment 2.2. Challenge the status quo 2.3. Expectation that innovation is part of your job	2.1. Ideas are valued 2.2. Top management attention and support 2.3. Respect for beginning ideas 2.4. Celebration of accomplishments, <i>e.g.</i> awards 2.5. Suggestions are implemented 2.6. Encouragement
3. Future orientation	3. Training
3.1. Forget the past 3.2. Willingness not to focus on the short term 3.3. Drive to improve 3.4. Positive attitudes towards change 3.5. Positive attitudes towards the environment	3.1. Continuous training 3.2. Encourage lateral thinking 3.3. Encourage skills development
4. Openness	4. Leadership
4.1. Open communication and share communication 4.2. Listen better 4.3. Open access 4.4. Accept criticism 4.5. Encourage lateral thinking 4.6. Bright people, strong egos 4.7. Accept criticism 4.8. Intellectual honesty 4.9. Expect and accept conflict	4.1. Senior management commitment 4.2. Walk the talk 4.3. Declaration in mission/vision 4.4. Symbolism and action for learning and continuous improvement 4.5. Build and disseminates stories and myths

5. Autonomy	5. Common goals
<ul style="list-style-type: none"> 5.1. Decision-making responsibility at lower levels 5.2. Decentralized procedures 5.3. Freedom to act 5.4. Expectation of action 5.5. Belief that individual can have an impact 5.6. Delegation 5.7. Quick, flexible decision-making that minimizes bureaucracy 	<ul style="list-style-type: none"> 5.1. Sense of pride 5.2. Team work 5.3. Willingness to share the credit 5.4. Flexibility in jobs, budgets, areas 5.5. Sense of ownership 5.6. Eliminate mixed messages 5.7. Manage interdependencies 5.8. Shared vision and common direction 5.9. Build consensus 5.10. Mutual respect and trust 5.11. Concern for the whole organization
6. External orientation	6. Belief in action
<ul style="list-style-type: none"> 6.1. Adopt customer's perspective 6.2. Build relationships with all external interfaces (supplier, distributors) 	<ul style="list-style-type: none"> 6.1. Do not to be obsessed with precision 6.2. Emphasis of results 6.3. Meet your commitments 6.4. Anxiety about timeliness 6.5. Value getting this done 6.6. Hard work is expected and appreciated 6.7. Empower people 6.8. Emphasis on quality 6.9. Eagerness to get things done 6.10. Cut through bureaucracy

Source: Ahmed, Loh, Zairi, 1999, pp. 433-434.

Learning in operators' culture (operators can be for example pilots in the cockpit of air plane or teachers at school) is based on communication, trust and teamwork. People belonging to engineers' subculture are often convinced that every problem has its abstractive solution and they should design systems in which human action is unnecessary. This causes problems during leading new technologies when it turns out that workers do not have necessary knowledge. Next managers perceive human relationships in the perspective of productivity. Then operators are needed but their influence on operations and labor costs should be minimized. Workers from different subcultures are especially conflicted when organization has to learn in innovative and generative way. Then problems arise with information processing. For example in the certain factory engineers demanded higher funds for technical improvement, but managers wanted to cut costs. Finally company remained at the old, ineffective technologies. In the situation of the conflict, managers should not to decide which group has right, but all groups should work on the common understanding of the problem and solution, which is clear for all and easy to leading. It can be used a group training in this purpose (Schein, 1996, pp. 9-19).

M.P. Follet claimed that conflicts are natural part of every organization. Different organizational roles, experience and knowledge support the learning process if conflicts are resolved by integration (Child, Heavens, 2001, p. 318). Thus conflict can be organizational learning factor because (Rothman, Friedman, 2001, p. 584):

- in itself is the process in which organizational learning is taking place,
- concern purposes, values, which are important for people,
- contributes to innovativeness and creativeness,
- stimulates self-awareness of employees.

The other important organizational learning factor is temporal orientation of the organization. It consists of six elements: time orientation of the organization, time pressure, happenings synchronism and lack of time, taking chance, periodicity in organizational learning and organization's live, organization's history. The time orientation of the organization refers to decision-making style. The managers working for organizations oriented for future try to anticipate future and therefore speed up organizational learning process. The time pressure can too evenly stimulate as well as inhibit organizational learning process. It depends on perception of the time pressure. Ones people perceive time pressure as threat but second as challenge. Now it is the lack of research on influence of the time pressure on organizational learning. Happenings synchronism results in lack of time and lower ability to cope with time pressure from organization environment. Sometimes, a company has to take the chance for rapid development, for example introduce new product to market. It requires time management, which provides additional resources of time used in unexpected situations. Companies similarly as humans come over life cycle from birth, growth, maturity to death and similarly as young people, young and small companies learn easier and more quickly. Finally, each company has its history, which is the source of the knowledge, which can be used in organizational learning process. If this historical knowledge is current, it supports organizational learning. But if knowledge existing in company history is outdated, because of change in company's environment, it can inhibit organizational learning process (Weber, Antal, 2001, pp. 355-358).

Finally, I want to present results of my research. I surveyed 207 organizations from the south Poland (Łukasik, 2013, pp. 168-217). The external and doctoral students were my respondents. I formulated hypothesis that organizational learning depends on organization size. The organization size was measured with the use of the rank scale. Thus I used the rank scale to measure degree of the use of the organizational learning methods too. I surveyed so organizational learning methods like trainings, team building, knowledge sharing, innovative solutions leading, informing about change. I calculated Spearman Correlation Rank Coefficient (R) to research relationship stated in hypothesis. I got outcome ($R = 0,17$; $p < 0,05$) what means that relationship between organization size and organization learning is weak (Sobczak, 2010, p 118) but also significant (Nawojczyk, 2010, p. 184).

4. Conclusion

The concept of the organizational learning has changed from the sixties to the present day. Now scientists put the pressure on knowledge transfer and creation and organizational behavior change. These processes depend on different conditions. Research conducted by E. Stańczyk-Hugiet and B. Mikuła revealed important stimulators and barriers of the organizational learning process. Especially B. Mikuła revealed that organizational pathologies, like rooting strategy used by managers can impede organizational learning process. The detailed analysis of the organizational learning factors provides us with many interesting conclusions. For example a crisis which seems to be the period of company destruction can be used as opportunity to change humans'

behaviors and collective assumptions shared by company workers. But the root causes of the success of the organizational learning concept are changes in economy and human resources of organizations. Especially the knowledge workers are the most important group in every organization, which is responsible for organizational learning process implementation and also uses the knowledge resulting in this process. I think that the organizational culture is the most important organizational learning factor, because it can be shaped by managers and can become the core competence of the organization. But even the organizational conflict or company history can influence the organizational learning. I also confirmed the hypothesis that organizational learning depends on the organization size.

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Chapter 18

Knowledge as a Source of Entrepreneurial Venture and Key Success Factor of Small Business

Božidar Leković, Slobodan Marić

*Most of what you heard about **entrepreneurship** is wrong. It's not magic, it's not a mystery, and has nothing to do with genes. It is a discipline, like any other discipline, **and it can be learned.***

Peter Drucker

1. Introduction

Although the roles, characteristics and activities of owners, entrepreneurs and managers clear-cut when it comes to the entrepreneurial venture and its development in a small company then these functions are, in most cases, are concentrated in one person. It is this knowledge and a variety of other objective circumstances that carry the mentioned phases in the development of business represents a very complex and demanding unit for individuals who hold a business venture. Also, do not mosomes say that all small business owners and entrepreneurs at the same time or that all entrepreneurs start their own business venture as a small business. Although these categories are often replaced with another, just as there is some overlap between them, but also enough differences that require separate analysis of each individual. Entrepreneurship is a process of identifying market needs and risk assessment, in attempts to satisfy them. The key needs of entrepreneurs in the above process is a vision in order to take advantage of opportunities and achieve the same capitalization. It is this dimension is a key difference between these two processes, as well as a third point of support in the management of small businesses, such as the Wickham (2004) pointed out in their illustration dimensions of entrepreneurial ventures and small business management.

2. Knowledge, entrepreneurial abilities and ventures

Entrepreneurial activities depend on different sets of parameters compared to existing business activities. Existing models assume the existence of two distinct business processes – founded and supported the arguments of scientists in the field of entrepreneurship mainly Austrian School including Schumpeter (1934), Kirzner (1997) and other economists who have recognized the role of entrepreneurship in economic development such as Leibenstein (1968), Baumol (2002) and Acs (2004). Basically both sets of conditions is in the model of social, cultural and political context or as Leibenstein (1968) called the “socio-cultural and political constraints”. These fundamental factors may include national culture and universal values (Smith, Petersen, Schwartz, 2002), national wealth in terms of the ability of the government to directly support the entrepreneurial environment, and the existence of a specific political and economic system. Furthermore, these conditions may be related to population growth (Hunt, Levie, 2004) and economic growth (Lundstrom, Stevenson, 2005). It also represents the relationship of entrepreneurship and economic growth through two distinct business processes based on different conditions. It is an undeniable fact that the first economists to entrepreneurs linked with economic growth was Schumpeter, who was acquitted of the prevailing approach to comparative statistics and recognize the economy as a self-transforming system with the entrepreneur as agent of changes (Schumpeter, 1934). Schumpeter entrepreneurs presented as innovators who create the conditions for profit by creating a temporary monopoly by organizational and technological innovation. With their activities constantly disturb the existing equilibrium that favored the existing business actors, forcing them to react to emerging threats. This process of “creative destruction” (Schumpeter, 1947) is manifested in the improvement of productivity and hence higher economic growth. This approach is improved and developed further by Leibenstein (1968), Baumol (2002) and Acs (2004) who, as the last in a series developed by the new growth theory with explicit role Schumpeter’s entrepreneurs as transformers of knowledge into economic knowledge and a significant participant of economic growth. As we said Schumpeter’s entrepreneur violates state economic equilibrium through the process of innovation as an alternative observation entrepreneurship and economic growth came from another part of the Austrian economists such as Ludwig von Mises (1949), Hayek (1978) and Kirzner (1997), which emphasize the role of the entrepreneur as the inventor of favorable market conditions stating “any real and living economy every participant is always an entrepreneur” (Mises, 1949; Kirzner, 1997). From this it further follows that the basic question is not who are entrepreneurs, but what they do, under which conditions, and with what consequences (Murphy et al., in 1991; Baumol, in 1996; Shane, Venkataraman, 2000).

Many come to the conclusion that Schumpeter’s and Kirzner’s approaches are more complementary than contradictory (Baumol, 2003; Shane, 2003), while the entrepreneurs of both approaches in each case, participants in economic growth.

One of the present dilemma in the field of entrepreneurship, which has no firm basis exists in the form of the question of whether entrepreneurs are born or created or whether the knowledge and skills of entrepreneurial behavior can be learned. This is not only peculiar to the public than is present in the scientific community in the dilemma of whether entrepreneurial knowledge and skills can be taught and learned. For the successful implementation of an entrepreneurial venture is not enough to entrepreneurial knowledge, it must be upgraded with knowledge in management. Since the education in the field of management objectified and confirmed, and is indispensable for achieving entrepreneurial success, there remains the dilemma of entrepreneurship education, its structure and contents of a particular method of implementation.

Despite the presence of numerous facts about the dilemma of whether or not to teach entrepreneurship, there is great interest in entrepreneurship education in recent years, since it is often discussed profiles and degree programs in higher education in universities, especially in developed countries.

“A typical example of the previous statements we have in the UK, where Gibb (1993) states that different kinds of programs geared to the development of the concept of “enterprise”, financed by both the private and public sectors of developed 80s years of the last century. After the economic downturn in the early 1990s, the idea of development of the concept of “enterprise” by students, both at the middle and high-level, is redefined (Gibb, 2000). There was an evaluation of the concept of “enterprise” in the concept of “entrepreneurship”. Quoted the author points out that in most of the previous decade, a significant part of what is promoted within the entrepreneurial education and training when it comes to the area of Great Britain, was referred to as the concept of “enterprise” and focuses on the development of business skills and traits of the individual”.

According to these facts, and for the successful design of answer to the previous question is considered an important definition of the outcome of the process of education in the field of entrepreneurship, and what knowledge and skills provide prospective participants in that program. This requires the separation of management and entrepreneurship concepts to the very process of acquiring knowledge and skills could not separate and defined. The analysis of the available literature entrepreneurship is defined as the functional management skills and abilities necessary for the establishment and management of small business development and the management of small businesses presented with the personal abilities of the individual or individuals to conduct business. Entrepreneurial behavior is stated as the development of learning skills that would enable learning to become tailored to the individual and the workplace, and what would be resumed after the education and training programs with the participation of enterprises in the process.

Many studies dealing with education in the field of entrepreneurship suggest the existence of differences between entrepreneurship education and training, depending on the degree of economic to the development of the country of which depends, in the final dungeon of the impact of training in starting a business venture on entrepreneurial awareness, attitudes, efforts and activities. With this connection, it is necessary to bring three groups of systemic economic conditions presented in the GEM theoretical model of entrepreneurship and the level of economic development of the country and the classification of the WEF Global Competitiveness Index, which greatly changes the relative importance of individual groups privrednosistemskih conditions and their impact on entrepreneurial activities are stated by Porter and Schwab (2008) in this report. According to the previously mentioned authors, this would mean that the countries with the lowest level of economic development whose economic activity is predominantly focused on the exploitation of natural resources, it is necessary to direct the main focus on improving the basic conditions for economic development such as government stability, infrastructure, basic education and health care. “The facts clearly show that entrepreneurship education has its first traces of highly developed countries (WEF, GCR, innovation – driven countries), where the first estimates of the effects of entrepreneurial courses described by Shigeru of Kobe University in Japan in 1938 (Slolomon et al., 2002) and Myles at the Harvard Business School in 1947” (Katz, 2003). “In highly developed countries, it is common opinion that entrepreneurship can not be taught, and that education and training are not required to start a business”. The above examples of Bill Gates and Steve Jobs, who left college after a few years, driven by interest in new stories . This

is an obvious example of which is not typical entrepreneurs, especially when it comes to enterprise products and services based on knowledge. So many of the governments of high-income countries underline commitment to entrepreneurship education identified as a key priority (Sorgman, Parcinson, 2008). "In these richer countries entrepreneurship education is seen as something which is the default, and attention is focused on the evaluation of existing programs, the dissemination of best practices, identifying constraints and providing recommendations. From this we can conclude that entrepreneurship education experienced the stage of maturity in high-income countries and is spreading only possible outside the countries where these play a role in changing the nature of entrepreneurial activity of entrepreneurship as a necessity to entrepreneurship based on increasing innovation capabilities and international competitiveness of these countries".

In high-income countries where the present awareness of the need for entrepreneurship education primarily confirmed many programs spread throughout the universities in the fields of business administration recently predominantly relocated from the ambient environment and is in the current offers informal educational institutions. However, interest in the field of entrepreneurship education, both by scientists and by entrepreneurs, not diminish. This all results in the literature topic of entrepreneurship education and training is continuously gaining in importance, and also research in this area is growing. These trends are not only present in the academic literature, but the growth has spread to the print and professional publications such as consultancy reports. Not surprisingly, the results of studies that are presented in the report indicate that entrepreneurship can be learned, or if you do not learn, then at least develop a minimum level through entrepreneurship education.

Relevance and necessity entrepreneurship education confirmed by the results of research within the American Studies University Professors, which showed high agreement when it comes to entrepreneurship and learning ability (Bellevue, 1982). Also the results of research, with the right, based on their study of 408 students of entrepreneurship in Ontario has a general belief that most entrepreneurial traits and skills can be learned, but the ability to learn more easily than features (Kantor, 1988). Preliminary results pokalpaju with the results of many similar studies that indicate that learning entrepreneurial skills leads to the formation and success of the new enterprise. Major difficulties within entrepreneurial education appear to identifying two basic components such as art and science. These components in the field of business management are adequately mastered and successfully implemented in the educational process of the conventional educational methods. While the art of the entrepreneurial education, many authors associated with the possibility of transferring and encourage creative and innovative characteristics of individuals that must be taught within the appropriate pedagogical environment. Also, many authors recognize the fact of the presence of natural talent within entrepreneurial behavior, while those individuals who do not own their lack can make up a larger amount of work to accomplish the same results. Furthermore, since the nature of entrepreneurship can not be domesticated in each person and may request wake-up or enlarge, business education should not only contain a variety of business disciplines, but also the basics of entrepreneurship. For them, the difference between art and science when it comes to entrepreneurship is still great. They describe science as something that is selective, analytical, sequential and constant, while the art say it's creative, provocative, insightful and without restrictions. While they do not identify themselves to the basics of the art of entrepreneurship or completely can not learn, they indicate that this area is largely ignored by those involved in the creation of business and entrepreneurship programs. Yet within the professional and scientific community there is commitment that universities have the greatest impact

on the development of entrepreneurship education as they can through the staging of appropriate programs affect the development of entrepreneurial qualities at all levels.

In addition to the education and training attributed great importance to the method and the efficiency of resource allocation in entrepreneurial ventures, there are no studies in the form of research projects with research results that confirm the existence of an adequate connection between the scope and structure of entrepreneurial activities in entrepreneurship education and training. This particular finding was an incentive for the design of a segment of the research framework of the GEM project that will examine the relationships and connections previously mentioned phenomena and that the two mechanisms: First, the impact of previous activity on the ability of people to recognize and detect entrepreneurial economic opportunities. And secondly, to encourage entrepreneurial training individuals with the necessary technical skills and competencies to launch new ventures (Levi, Autio, 2008).

The basic entrepreneurial resource is knowledge, that the business process is experiencing a transformation as any other resource but this time in the economic knowledge, which is reflected in the identification of business opportunities in the market, while the power of perception thereof is determined by the amount of the original knowledge of entrepreneurs. The process of acquiring knowledge of entrepreneur and his educational process, looking at the scope and structure, is a key factor of entrepreneurial ventures and positive outcomes. What we can conclude that the specific entrepreneurship education depend directly on the quality and efficiency of purely entrepreneurial education and training programs, which are often displaced from the normal education system since it requires a large commitment and expertise in order to achieve adequate and effective outcomes.

Levi and Autio (2008) cite the “Schumpeter (1947), which explains the difference between entrepreneurs and inventors by entrepreneur makes things completed, Lazear (2004) – to make things look as previously mentioned, it requires a special set of skills and a who is recognized for his versatile nature. Entrepreneurs need of knowledge, not only of their own technical areas, but also by having a broad set of skills in the field of business management and leadership in order to be able to assess and mobilize resources to start and grow new ventures”.

Taking into account the views of Levie (2006), Bertrand (1995), Aronsson (2004), this profile pundits entrepreneur makes a significant demand for education and training immediately after the new entrepreneurs, and since most of the programs of education generally, mainly when it comes to higher education, tend to focus on individual technical areas and the construction professionals in the field, so highly specialized educational programs are inadequate for ensuring broad-based and practical oriented training for training entrepreneurial skills.

3. Data and methodology

3.1. Sample

The basic set of studies are small enterprises in Vojvodina, which according to the Law on Accounting and Auditing (Official Gazette of RS, No. 46/06 and 111/09) are classified as such. According to available data, the Agency for Business Registers, the group of small enterprises classified a total of 2603 in the territory of AP Vojvodina. The sample on which to perform research for the study will feature a proportional stratified sample. Size of the sample proportion in relation to the basic set is 0:10, which is absolutely satisfying if you take the number of vari-

ables represented in the survey. Stratification will be done on the basis of region, to a basic set of spatial aspects were adequately represented. By the method of random selection from a list of small businesses created by the Business Registers Agency, the Government of the Republic of Serbia, formed the sample of 260 small businesses with distribution across regions.

3.2. Collecting Data

The main method that will be used to collect data in the planned research is e-survej, which will be based on the principle of electronic communication (G-Drive) with respondents (in this case the owners/entrepreneurs/managers of small companies selected in the sample) to collect answers to questions from questionnaire taking into account all the advantages and disadvantages of this method.

3.3. Methodology

The sample size allows the use of parametric statistical methods, and the characteristics of dependent characteristics of the whole C2 – Success criteria/performance meets all the essential prerequisites for the selected statistical techniques, and meet the prerequisite of normal distribution of the dependent variable. A positive assessment of normality of distribution of selected characteristics and detection and removal of non typical points increases the reliability of the application of selected statistical procedures.

For examination of a statistically significant difference between the groups under the observation of a number of samples observed to be used categorical variables t – test for independent samples in the case of two groups, and the factor analysis of variance (one-way ANOVA) for the case of two or more groups of the observed variables. Since the ANOVA indicated that there were differences but not where the difference is significant, it is necessary to carry out subsequent comparisons in order to obtain more precise information.

3.4. Hypotesis

Set the following assumptions in the form of research hypotheses H1 is a logical continuation of the expressed intention of the research within the general hypothesis. Since it was confirmed assumption about the dependence of business success/impact of small businesses on the level of implementation of management practices , following which it is logical to ask ourselves are key prerequisites for the implementation of control systems and application management activities in small enterprises. Largely on the basis of the ruling opinions major indirect factor of entrepreneurial success and direct when it comes to management practices is the entrepreneurial knowledge and skills. Dominant segment of entrepreneurial skills and knowledge is the knowledge of the management and conduct of independent entrepreneurial venture in the form of the use of available resources in order to realize the business opportunities in the market, which is one of the definitions of management. So overall entrepreneurial skills and capabilities are determined by the knowledge that the entrepreneur has as a basic aspect of the analysis within the next hypothesis H1 as follows:

H1: There is a significant difference between small businesses at the level of implementation of formal management practices in relation to the level of knowledge/Education OEM on the management and running of small business enterprise;

A1: There is no significant difference between small businesses at the level of implementation of formal management practices in relation to the level of knowledge/education OEM on the management and running of small business enterprise;

I1: Application of formal management practices in small enterprises is conditioned by the level of knowledge/education OEM on the management and running of small business ventures.

4. Results and discussion

Depending on the nature of the observed variables of research, whether in terms of categorical or continuous variable, different types and amount of information as a result of descriptive analysis. The above-mentioned nature of the variables is the result of research intentions, not a given, so that certain phenomena could lead to relationships and connections, and examine the purpose of the goals of research. The sample size from the aspect of the number of observations and the scope and structure of the defined variables in the questionnaire provide a much broader and deeper analysis within the observed area of research, which certainly goes beyond the research scope of this paper but provides space and facilities for an additional step, which can occur during primary tests with the aim of qualitative reasoning and improve performance.

Variables under the whole C3a. Managing knowledge is by nature categorical variables examined education level valasnika/entrepreneurs/managers in the sample, then the area of education, work experience, education and business connections that are currently underway and done, the awareness of the need for knowledge about management and the method of acquiring knowledge. From the perspective of these variables will attempt to determine differences between groups of small enterprises in the sample on the basis of the available categories within each variable in terms of actual success/performance as well as the contribution of individual variables examined the success.

Table 1. C3a.01 Level of education OEM?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Primary	1	0.4	0.4	0.4
	3 Secondary	75	2.8	28.8	29.2
	4 Graduate	167	64.2	64.2	93.5
	5 Postgraduate	15	5.8	5.8	99.2
	6 PhD studies	2	0.8	0.8	100
	Total	260	100	100	

Source: author's calculation.

From the results presented in the previous descriptive statistics display a variable degree of education C3a.01 respective owners/entrepreneurs/managers can be seen that the sample with a primary education participated 1 (0.4%) cases, intermediate in 75 (28.8%) cases, faculty with 167 (64.2%) cases, postgraduate with 15 (5.8%) and PhD level 2 (0.8) case. Recognizing the im-

portance of knowledge and general education for entrepreneurial ventures selected statistical methods will be examined success in this regard.

Table 2. C3a.02 Area of education (profession)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Economy, management business	100	38.5	38.5	38.5
	2 Law	12	4.6	4.6	43.1
	3 Technological	107	41.2	41.2	84.2
	4 Other	41	15.8	15.8	100
	Total	260	100	100	

Source: author's calculation.

With regard to the field of education (expertise) owners/entrepreneurs/managers in the sample economics, management and business accounting for 100 (38.5%) cases, law with 12 (4.6%) cases, technical – technological fields with 107 (41.2%) and the other with 41 (15.8%) cases. From these results, the area of economics and management have equal participation from the technical – technological education which will be interesting to examine in terms of propensity to management practice and the potential difference in the success.

The scope and structure of the application of formal management practices depending on the level of education of the owner/entrepreneur/manager is evident from the results presented in the following table that separated the two management activities that result from the achieved level of education OEM.

Table 3. ANOVA. C3a.01 Level od education OEM?

		Sum of Squares	df	Mean Square	F	Sig.
C3b.04 With all the planning documents (long-term, short-term goals – determinations) were introduced to all employees.	Between Groups	16.747	2	8.374	4.067	0.018
	Within Groups	529.141	257	2.059		
	Total	545.888	259			
C3b.19 n your company, to support management is using information system.	Between Groups	7.903	2	3.952	4.207	0.016
	Within Groups	241.401	257	0.939		
	Total	249.304	259			

Source: author's calculation.

When variables C3b.04 With all the planning documents (long-term, short-term goals – determinations) were introduced to all employees., A statistically significant difference at $p < 0.05$ between the three levels of education OEM in terms of the application of the scope and structure of management activities with $F(2, 529.141) = 4.067, p = 0.018$. The real difference between the means of the groups at little significance expressed by the use of eta squared is 12:03. Subsequent comparison with the value of Tukey HSD test indicates a statistically significant difference between the groups only five graduate level education and group 3 intermediate level of education for the observed variable.

When variables C3b.19 in your company to support management information system use., A statistically significant difference at the level of $p < 0.05$ between the three levels of education OPM in terms of the application of the scope and structure of management activities with $F(2, 241.401) = 4.207, p = 0.016$. The real difference between the means of the groups at little significance expressed by the use of eta squared is 12:03. Subsequent comparison with the value of Tukey HSD test indicates a statistically significant difference only between groups 4 university-level education, and group 3 intermediate level of education for the observed variable.

Table 4. Multiple comparisons separated variables

Tukey HSD							
Dependent Variable	(I) C3a.01 Level of education OEM?	(J) C3a.01 Level of education OEM?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
C3b.04 With all the planning documents (long-term, short-term goals – determinations) were introduced to all employees.	3 Srednje	4 Fakultet	-0.388	0.199	0.126	-0.86	0.08
		5 Poslediplomske studije	-1.015*	0.385	0.024	-1.92	-0.11
	4 Fakultet	3 Srednje	0.388	0.199	0.126	-0.08	0.86
		5 Poslediplomske studije	-0.627	0.365	0.201	-1.49	0.23
	5 Poslediplomske studije	3 Srednje	1.015*	0.385	0.024	0.11	1.92
		4 Fakultet	0.627	0.365	0.201	-0.23	1.49
C3b.19 In your company, to support management is using information system.	3 Srednje	4 Fakultet	-0.387*	0.134	0.012	-0.7	-0.07
		5 Poslediplomske studije	-0.195	0.260	0.734	-0.81	0.42
	4 Fakultet	3 Srednje	0.387*	0.134	0.012	0.07	0.70
		5 Poslediplomske studije	0.192	0.247	0.717	-0.39	0.77
	5 Poslediplomske studije	3 Srednje	0.195	0.260	0.734	-0.42	0.81
		4 Fakultet	-0.192	0.247	0.717	-0.77	0.39

* The mean difference is significant at the 0.05 level.

Source: author’s calculation.

Based on the analyzed results of the previous variables, we can conclude that the level of education contributes to, differences in the application of management practices that are manifested

in two independent variables control the activities for which we can say that belong to the group key when it comes to managing and operating small businesses. These results confirm the hypothesis H1.

5. Conclusion

Technical and business knowledge and experience are important factors in the successful establishment and management of small businesses. Entrepreneurs may be well equipped technically and have sufficient legal capacity but it may happen that at a certain stage of development can not overcome the problems arising due to a lack of specific expertise. The need for training programs and business – educational institutions is particularly pronounced in the transition countries have moved towards a market economy because it is in their nascent entrepreneurship and entrepreneurs lack the basic business knowledge. Areas of knowledge that are needed to beginners are: preparation of business plans, decision making, negotiation, cost and price theory, market performance, cash flow management, organization and management of the business. Entrepreneurship education and training is one of the most widely covered topics in entrepreneurship, which primarily represents a significant encouragement for entrepreneurial activity is the attitude of some who agreed authors in this field and an attitude that often highlights and analysis can be found in the current literature on this topic. The module lists positions identified Honig (2004), De Tienne and Chandler (2004), Peterman and Kennedy (2003), where it is emphasized that entrepreneurship education and training need to support entrepreneurship through three different mechanisms: First, what is a fundamental and necessary provide the practical skills needed to start and grow new businesses. Furthermore, by improving the cognitive ability of individuals to manage in complex circumstances in order to identify and evaluate business opportunities in the form of the establishment and growth of new enterprises, but also the cultural influence on students' attitudes and habits of behavior. Since entrepreneurship assumes a combination of necessary facilities, some of which may represent a vital flaw in the provision of inputs that just means training can overcome.

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Chapter 19

Core Competences and Managerial Competences in Developing the Sustainable Competitive Advantage

Grażyna Śmigielska

1. Introduction

Along with the growing role of knowledge in the contemporary economy the term “competences” is becoming more and more popular. In the management literature one can find discussions on employees competences, managerial competences, personal competencies as well as organizational competences. The aim of the chapter is to find out what are the roots of these terms, what do they really mean now and if there is any relationship between them. It could be placed in the third area of research on knowledge economy distinguished by W.W. Powell and K. Snellman (2004) which focuses on the process of organization learning and knowledge management. The problems of the role of knowledge which is the base of competences in Human Resources Management (HR) as well as the concept of core competences in the Resource Based Theory (RBT) of sustainable competitive advantage (SCA) are first presented. Then the term “competence” is discussed. Finally the learning process which facilitates transferring personal competences into organizational routines is showed. The conclusion *inter alia* covers the identification of relationship between personal competences and core competences.

2. The role of knowledge in contemporary economy

Contemporary economy is often called knowledge-based economy, which is a widely used metaphor rather than clear concept (Smith, 2000, p. 2). In some papers the origin of this term is traced back to the mid 90s when in the US the economic boom took place. It was assigned to the development of the Information & Communication Technologies (ICT) which grew productivity in all sectors. At that time economic changes were called “new economy”.

Yet due to the fact that ICT play important role in knowledge economy its origin is sometimes traced to the late 50s when the new technologies emerged and expanded together with the proliferation of personal computers. W.W. Powell and K. Snellman (2004) distinguished three areas

of research. The oldest, dating back to the early 1960s, focuses on the rise of new science-based industries and their role in the social and economic change. Here, even the new growth theory in economics could be included due to the fact that it stresses the importance of knowledge in economic growth. The second aims at identifying the industries which are especially knowledge-intensive. Some research has also been done to find out if the new kinds of jobs and novel form of work organizations have emerged in recent years. The third area of research is more narrow and managerial in orientation. It focuses on the process of organization learning, knowledge management and innovations inside firms.

In the 90s knowledge has become considered as an important factor of economic growth and OECD has started to design projects on knowledge based economies. In 1996 knowledge based economies were defined by OECD as “those which are directly based on production, distribution and use of knowledge and information” (OECD, 1996). Two year later the same institution in DIT Competitiveness White Paper (1998) proposed the new definition: “...one in which the generation and exploitation of knowledge has come to play the predominant part in the creation of wealth. It is not simply about pushing back the frontiers of knowledge” (Brinkley, 2013, p. 4). The term “knowledge economy” started to be used to describe this emerging economic structure (ESCR, 2005). Although the pace may differ it is said that all OECD economies are moving towards a knowledge-based economy (OECD, 1999). It means that in all countries knowledge is now becoming more and more important production factor, sidelining both capital and labor.

In spite of the fact the characteristics of knowledge based economy have been criticized as not giving the clear picture they have become the basics for developing Knowledge Economy Index (KEI) Rankings. The four general areas are evaluated:

1. Economic Incentive and Institutional Regime (EIR).
2. Innovation and Technological Adoption.
3. Education and Training.
4. Information and Communication Technologies (ICT) Infrastructure.

The knowledge based economy is macroeconomics concept but it influences directly the way business operates. In the report *New Measures in the New Economy* it is said that “economic success is increasingly based on upon the effective utilization of intangible assets such as knowledge, skills and innovative potential as the key resource for competitive advantage” (<http://www1.oecd.org/sti/ind/1947910.pdf>). So the transition from industrial economy (old economy) to the knowledge based economy (new economy) has been reflected in the change of the way the organizations are managed, referring to:

- changes in organizational structures (Stabryła, 2009);
- management of the intellectual capital and knowledge in organizations (Mikuła et al., 2007);
- development of Resource Based Theory of Competitive Advantage towards including knowledge as a core competence (Stankiewicz, 2002; Godziszewski, 2001). They all are interdependent.

As a managerial concept it includes the most effective use and exploitation of all types of knowledge in all manner of economic activity. It has been noticed that codified knowledge (as opposed to tacit, person-incorporated skills) is in some ways more significant as a component of economically relevant knowledge bases. The important “...characteristics of recent economic growth has been the secularly rising reliance on codified knowledge as a basic for the organization and conduct of economic activities...” (Lundvall, Foray 1996, p. 14).

One of the most important factors of company growth are innovations based on knowledge (technological, economic, social, ecological, *etc.*) assimilated collectively and individually (Żabiński, 2011, pp. 375-376). This knowledge is considered to be the most important resource of economic entities not only organizations but also consumers and economic and social regulators/politicians. L. Żabiński (2011, p. 377) indicated some challenges faced by the entities operating in knowledge based economy:

- readiness for self-education and to use experience;
- creating new (and renewable) knowledge resources and their diffusion in organizations;
- efficient management of knowledge resources;
- optimal composition factors/competition and cooperation bases in strategic management process;
- reaching long-term goals of the enterprise, owing to satisfying its shareholders, in particular consumers.

Some of these challenges refer to the people some of them to the organization as a whole. Together with the problems of tacit and codified knowledge they have become the impetus to rise the discussion on competences which are based on knowledge and their role in knowledge based economy. The question is: if the core competences of organization as a whole interact with the personal competencies and if yes, in which way.

3. Competences in the strategic management theory of gaining the competitive advantage and the theory of personal management

In the Concise Oxford Dictionary edited in 1988 (p. 191) competence is defined as: (1) Sufficiency of means for living; (2) Easy circumstances; (3) Ability (to do, for a task), or legal capacity, right to take cognizance. Very similar definition is provided by the Longman Dictionary of Business English (p. 128); one can find here also the definition of the word “competent” which describes the person having the skill, knowledge and ability to do something: like *He is a competent manager*. In the Polish “Leksykon Zarządzania” (p. 209) the term “kompetencje” directly translated from English “competences” is embedded in the personal management and means rights and responsibilities of employees to do specified tasks in organization. Competence is a wider notion than qualifications and comprises overall durable human properties, composing a casual effect relationship with high or more average work effect of a universal dimension attained by man (Tyrańska, 2012, p. 128).

Competence as a fully human attribute, could be reduced to competencies – series of discrete activities that people possess the necessary skills, knowledge and understanding to engage in effectively (<http://infed.org/mobi/what-iscompetence-and-competency/>). The implication here is that behavior can be objectively and mechanistically measured. This is a highly questionable assumption due to the fact that there is always some uncertainty about what is being measured. Yet the attempts are made also in this field. Employees should have competencies which are defined as having the knowledge and experiences which allow them to fulfill their duties and take right decisions (Michalski, 2011, p. 126). Managerial competencies could be seen as the ability, which effectively raises the characteristic behavior of the manager, whose results can be achieved above average performance for the manager position (Krajčovičová, Čambál, 2012, pp. 74-75).

Generally four components of competency: skill, knowledge, personal attributes and behavior, and eight competencies of successful managers. These competencies include: results focus, making change, planning, team development, risk management, decision making, communication and customer service focus. These competencies should evolve as the environment changes.

Competences are also the important concept in the theory of developing the competitive advantage in the competence stream in Resource Based Theory. The term core competences was popularized by C.K. Prahalad i G. Hamel. In the article “The Core Competences of the Corporation”, published in Harvard Business Review in 1990 they defined the term core competences and showed a lot of practical examples of their implementation in the management.

According to C.K. Prahalad and G. Hamel (1990) core competences are “collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies”. They are not only related to the technology but also to the organization of work and the processes of value delivery; they include: communication, involvement and deep commitment to working across the organizational boundaries. They show the organization the directions in which it should diversify to grow successfully. Core competences are based on knowledge so they do not diminish as the other resources when they are used but contradictory they are growing as they are enhanced as they are applied and shared (Prahalad, Hamel, 1990, p. 82). On the other hand they must be protected and nurtured. The theory of core competences focus on crucial role of knowledge in choosing the strategy of the organization, and by the same token in sustaining its competitive advantage by improving resource effectiveness. It establishes the link between resource based theory and the process of organizational learning.

4. Learning organization – transforming personal competences into organizational competences

The concept of organizational learning was first introduced in the social science literature by Cyert & March more than fifty year ago (Cyert, March, 1963). Since that many definitions have been formulated (Boreham, 2006, p. 4). The two mostly cited are “an organization which facilitates the learning of all its members and continually transforms itself” and “organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (Garvin, 1994, p. 20).

The essence of organizational learning is to develop the new knowledge and making remarks which could influence the organization behavior, what improves its operations (Slater, Narver, 1995). Probst and Buchel (1997, p. 167) defined organizational learning as “the ability of institution as a whole to discover errors and to correct them, and to change the organization’s knowledge base and values so as to generate new problem-solving skills and new capacity for actions”.

To be successful in the process of knowledge management learning organization should have organizational form which abandons hierarchy and fixed procedures for flatter organizational charts and should involve of all grades of employee in continuous improvement. As far as culture is considered learning organization is characterized by abolition of bureaucracy. It should create the organization climate for collaborative working and harnessing the knowledge and expertise of all members of the organization in a dive towards better performance. In the knowledge base economy it should stimulate the innovativeness of the company. Pedler et al. (1991) indicated the need to expand the spectrum of required competences due to the expansion of the workers

roles. Workers not only should do their job but also should be active in developing organizational knowledge, so their personal competencies should be wider.

Organizational knowledge is related to the human capital, with the employees their knowledge, expertise, and their abilities to work for the company (Makowiec, 2012, p. 91). A company does not possess it only leases it from the employee during their employment. When they leave their skills, expertise and informal links are lost. The question is how to convert organizational knowledge into routines which could contribute to sustain the competitive advantage of the organization. The answer is in the process of organizational learning. The process of organizational learning includes:

1. Single loop learning (Argyris, 1977), which is the most basic its form which focuses on solving ongoing problems. It does not imply changing existing organizational framework as far as goals, value, resources, strategy, *etc.*, are concerned. According to the C.K. Prahalad and R. Bettis (1986) it is related to the Resource Based Theory of developing the competitive advantage. They think that it is possible to manage the organization according to the basic rule of management logic which is to implement the idea of business and development of the capabilities. So adaptive learning focuses on the possibilities of changes which are available in the traditional set of the organizations' activities. It aims mainly at elimination of irregularities and perfecting the activities.
2. Generative learning – which is the result of so called *double-loop learning* – takes place when the basic rules of organization are challenged. It requires development of the new system of perception of the world based on understanding the systems and relations linking the key elements. So active learning focuses rather on dynamic changes than on the linear relationship cause-effect.
3. Deutero – learning (Argis, Schön, 1978) – which could be described as learning to learn. According to it Schön refers to the organizational capacity to set and solve problems and to design and redesign policies, structures and techniques in the face of constantly changing assumption about self and the environment. The second and third level of learning processes are assumed to be critical for the survival and organizational successes.

As the learning process occurs the knowledge generated should become organizational routines; routines which are available for the employees desiring them. The routines become the organizational assets. They are regular and predictable characteristics which coordinate the activities of different people (Nelson, Winter, 1982, p. 15). Coordination aims at rising efficiency of resources and as a consequence whole organization. What's more these routines could also be used in the other place where the similar resources are coordinated and in this way they contribute to sustain the company's advantage (Winter, 1995, p. 149). The routines used to develop the new product and new markets fare core competencies. They are knowledge assets and they should be constantly perfected. This process requires the knowledge management which is also the set of routines how to change the tacit knowledge into routines (more in: Zollo, Winter, 1998).

To accomplish such a process of organizational learning the employees must possess competences. N. Boreham (2006) presents two models of such a competence. First model called the bolt-on model consists of two parallel lists of skills:

1. Allows to perform expanded technical role; it includes such skills as: process monitoring, faults diagnosis, ordering and fitting the new part, *etc.* across the wider range of technical systems.

2. Allows participation in organization enquiries; which includes such skills as identification of a problem in work organization, engagement in dialogue about it, seeking a consensus solution to the problem, supporting the development of share ideas, managing disagreement and conflict, providing peer leadership, *etc.*

Due to the fact that this model does not take into account structural and cultural changes the extended model of competence (the co-construction model) has been presented. In this model of learning organization the individual and learning organization are constantly recreating each other and individuals:

- Perceive their work as contributing to the common good;
- Meet the company's overall business targets;
- Work collaboratively and share information.

On the other hand, organization should provide rules and resources in the areas of structure *e.g.* team meetings, key performance indicators and culture *e.g.* norms for exchanging information. Successful performance in the work place is the result of the co-construction of working practices – typically by the organizational enquiries in which individuals engage with the organization's rules and resources and enacting these working practices both through individual and collective performance.

5. Conclusion

Talented employees and bright managers having tacit knowledge are very important for modern organizations but what really makes them work and guarantees sustainable development are routines (codified knowledge). The most important are the routines which are core competences – based on knowledge – collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies. These knowledge is possessed by the organization and does not disappear even when the people who develop it leave. To accomplish such a process of organizational learning the employees must possess competences not only to perform expanded technical role but also to participate in organization enquiries and identify themselves with the company and its strategy.

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Chapter 20

Intellectual Capital Aimed at Creating Value and Competitive Advantage of Enterprises

Stefan Alimpić

1. Introduction

At the time of faster, more dramatic, complex and unpredictable changes, process of globalization and the knowledge-based economy bring new opportunities and challenges in business. Markets are becoming more global with new competitors, the product life cycle shortens, customers are more demanding and complexity of the technology increases. Contemporary economic flows are based more on the use of intellectual capital, *i.e.*, new ideas, information, knowledge and skills, and less on material sources. From this we can conclude that the information, ideas and knowledge are becoming a competitive basis, *i.e.*, generators of growth and development. Thus, economy which is based more on the production, distribution and use of knowledge, considerably affects the process of innovation and access to innovation. More specifically, in terms of globalization, increased mobility, rapid flow of information, people and goods, the disappearance of borders of all types and open markets, economic, but also every other success of one society depends on its ability to establish a competitive advantage in the knowledge-based economy. A knowledge society is a society in which economic, social, cultural and other processes and all human activities in a crucial extent depend on the knowledge and skills based on knowledge. The development of this new society is based on emerging technologies and application of technical achievements in different spheres of social life. A knowledge society is a society of mobility and the most competitive society in the history of mankind (Drucker, 2006). Therefore, the knowledge economy and knowledge society are the future of every society and economy in the world.

The complexity of operations on such a global market sets enormous challenges for enterprises and individuals in the process of creating and maintaining competitiveness, which is why they need help. Given that the economy has a far greater impact on society than on the creation of profit and jobs, it is necessary to create a knowledge-based society, *i.e.*, appropriate support systems in emerging and developing of enterprises based on knowledge and innovation. Hence, there is a need for proper knowledge management and its transformation into intellectual capital. Intellectual capital is a key factor in producing the competitive advantages of the enterprises, because a competitive advantage based on intellectual capital allows creation of higher value-added

for products and services. Therefore it can be said that for today's enterprise is less important what is the value of its physical assets, and much more important what is the ability of its employees to create value. The justification for this claim lies in the fact that the creators of value (people and their intellect – especially *tacit knowledge*) today in the knowledge economy are becoming a strategic resource of enterprise (Krstić, 2007, p. 316). This is the basic reason why knowledge management and its transformation into intellectual capital necessarily need to have a dominant role in directing the modern enterprises. Specifically, only those enterprises that will continuously generate productive effects by the use of the knowledge they hold, will be able to keep up with the time and requirements of the environment, and thus to continuously improve their business performance and competitiveness. That is why *the subject of this paper* analyzes of the concept, role and importance of intellectual capital to create value and competitiveness of enterprises in the knowledge age.

The main goal of this work is to show on example of enterprises from Serbia whether they recognize the importance of intellectual capital and if so, do they properly manage it, *i.e.*, whether they (thanks to its use in their business) have successfully created value and have improved their competitive position in the global market.

The basic hypothesis of this paper is that if the enterprises that participated in the survey want to achieve greater success in their business, then they need to create competitive advantage and value, which are based on intellectual capital.

From the basic hypothesis the following *specific hypotheses* are derived:

- if the observed enterprises want to create the competitive advantage and value (which are based on intellectual capital), then they should first affirm the intellectual capital in their business, and then also to work on its effectively use and
- in order to effectively use the intellectual capital which is at their disposal, observed enterprises should implement systematic approach of intellectual capital management.

All of these hypotheses will be either proved or disproved through the research results.

The basic method of research, i.e., employed technique for data collection, for the purposes of this paper was an anonymous survey, which was completed by respondents (employees in enterprises) through internet. This technique was chosen because it is the cheapest one and it represents an easy and simple way to reach a large number of data, which can easily and accurately be compared and which are necessary for a better understanding of the subject of the study as well as the object of the research (Jobber, Fahy, 2006). The survey was conducted in May 2014.

The study was conducted on a *simple, random sample* which included 15 enterprises from Serbia and from various activities (Tab. 1). The sample is representative, because it includes both those companies that achieved significant success in their business due to the use of intellectual capital, as well as those companies which have achieved this success to a small extent.

Table 1. Observed enterprises

Enterprise name	Activity
Akting d.o.o.	Consultancy activities
BMS Chemie d.o.o.	Representation of foreign companies – Wholesale of chemical products
CENTUM d.o.o.	Trade
CINI d.o.o.	Manufacturing of HVAC equipment

CLN Serbia d.o.o.	Processing of steel sheets
DP. 21. Oktobar d.o.o.	Production and sales of auto parts
EKOTEH Djurović d.o.o.	Paper packaging
Optix d.o.o.	The production, marketing and servicing of optical and optoelectronic devices
Promotor Irva d.o.o.	Development and production of auto parts
Rapp Zastava d.o.o.	Manufacture of machinery for metalworking
SZR SEM	Treatment and coating of metals
SUNCE Marinković d.o.o.	Production and installation of PVC, aluminum and aluminum / wood joinery
Tehnorad export-import d.o.o.	Production of binding elements
TPV-Šumadija d.o.o.	Production of auto parts
VECO d.o.o.	Shipping services

All collected data were stored in the SPSS (Statistical Package for the Social Science for Windows, version 19.0) database. Analysis and processing of statistical data was done by using this software. Specifically, when we talk about statistical methodology, in this paper is applied *descriptive statistics, i.e., relative frequency analysis*. It enabled us to express lots of “raw” data in a statistically acceptable manner.

2. The importance of intellectual capital for enterprises

For better understanding the importance of intellectual capital for enterprises, in the continuation of the paper first will be defined the concept and constituent elements of intellectual capital, and then its role in business of enterprises.

2.1. The concept and constituent elements of intellectual capital

The concept of intellectual capital appeared in the early eighties in some studies, but a revolution in the study of this concept was caused by Thomas A. Stewart. Stewart, as one of today’s leading researchers in this field, intellectual capital defines as: “The sum of knowledge of all men in the company, but the knowledge that contribute to competitive advantage in the market” (Stewart, 1997, p. 9).

Based on Stewart’s definitions, many other authors in the previous century have also expressed their views about intellectual capital. They all agree that intellectual capital is relatively new, complex economic category, which represents all factors which have not been explicitly expressed in traditional financial statements, but which create additional value to the organization and significantly have an effect on long-term profitability and competitiveness of enterprises (Sundać, Švast, 2009).

What is essential about the intellectual capital is the following (Haljilji, 2012):

- intellectual capital includes intangible resources,
- it today creates nearly 80% of economic value,
- on it the competitive advantage is based and
- the creation of value and the enterprise value are the result of the power of intellectual capital.

When we talk about the constituent elements of intellectual capital, the three basic elements are (Edvinsson, Malone, 1997):

- *human capital* – which includes: competence of employees (basically knowledge, experience and skills), that employees use to create additional value for their enterprise,
- *structural (organizational) capital* – is generated by transformation of human capital and includes: intellectual property and organizational processes and
- *consumer (relational) capital* – which includes: internal and external relations with all stakeholders, and also the image, brand and positioning of the enterprise in the market.

2.2. The role of intellectual capital in organization

It is a known fact that enterprise obtains benefits, if creates relative and maintain the competitive advantage, in the form of lower costs and products differentiation (Porter, 1979). However, taking into account today's modern business conditions, it is very difficult for enterprises to survive in the global market by applying only these two strategies for gaining competitive advantage. Therefore, it is necessary for enterprises to engage in a new era of business, *i.e.*, in the knowledge era, where knowledge becomes the dominant factor of production and replaces land, workforce and capital and where intangible resources (intellectual capital) generate more than half of the total value of an enterprise and thus they affect competitive advantage of enterprise. Specifically, as noted in the initial part of the work, intellectual capital is now a key factor in producing the competitive advantage of enterprises, because competitive advantage based on intellectual capital allows the creation of greater value-added for products and services (Krstić, 2009). Therefore, it can be said that in contemporary business conditions only those enterprises that will have the ability to properly implement the intellectual capital management in their business, will be able to achieve success in the market (Čabrilo, 2009). Hence, intellectual capital management and its role in the creation of competitive advantage and value is a key issue for every enterprise.

From the above it can be concluded that for success in business, a systemic, holistic approach to the intellectual capital management is required. This approach is complex and consists of several phases. Those phases, which will be described more precisely through the research results, are (Vukadinović, Krstić, 2013):

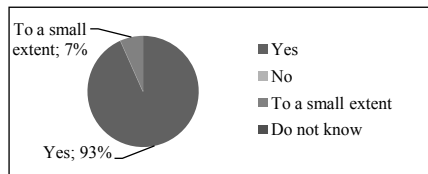
1. *Defining the vision, mission and goals which are based on intellectual capital.*
2. *Raising awareness of the importance of intellectual capital through literature, lectures, discussions and workshops* – implies “top-down approach”.
3. *Categorization of intellectual capital in the enterprise and its visualization* – the process itself is composed of several sub-phases:
 - identification of the constituent elements of intellectual capital and their contents;
 - analysis of the current condition of intellectual capital in the enterprise;
 - determination of the goals and condition, which are to be achieved;
 - identification and inclusion of all the key intellectual resources in the development strategy of the enterprise and
 - creating the display of the constituent elements of intellectual capital in the enterprise (in the form of designs or graphics).

4. *Determining the way of managing key intellectual resources in the enterprise, in accordance with its business – implies “down-top approach”.*
5. *Establishing a system for measuring the performance of intellectual capital.*
6. *Introduction of innovation in the reporting system.*
7. *Motivation of employees.*

3. Research results

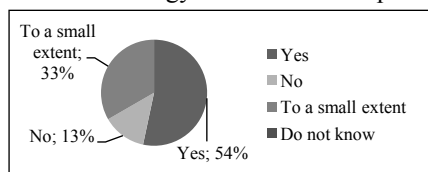
Firstly we should emphasize the fact that all of surveyed enterprises, except for one, recognize the intellectual capital as the key issue of contemporary business, *i.e.*, as a prerequisite for value creation and realization of competitive advantage (Fig. 1). This data is very encouraging considering the topic of this research.

Figure 1. Intellectual capital as a prerequisite for creation of value and competitive advantage



When we talk about the program of intellectual capital management and its application in the surveyed enterprises, according to the survey results 54% of enterprises have a formal strategy for managing the intellectual capital, 13% do not have it, while 33% have it, but to a small extent (Fig. 2). Also, all surveyed enterprises consider the intellectual capital management as support in their work.

Figure 2. The existence of an official strategy of intellectual capital management in enterprises

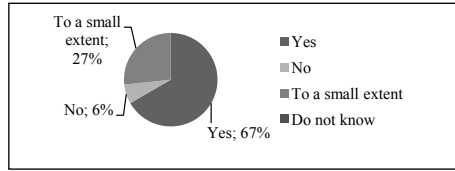


Based on the foregoing, it can be concluded that all the surveyed enterprises affirm intellectual capital in their operations and they strive to use it effectively in their operations to a greater or lesser extent. In this way, the first specific hypothesis in the paper is proved.

The following results are related to the phases in the intellectual capital management.

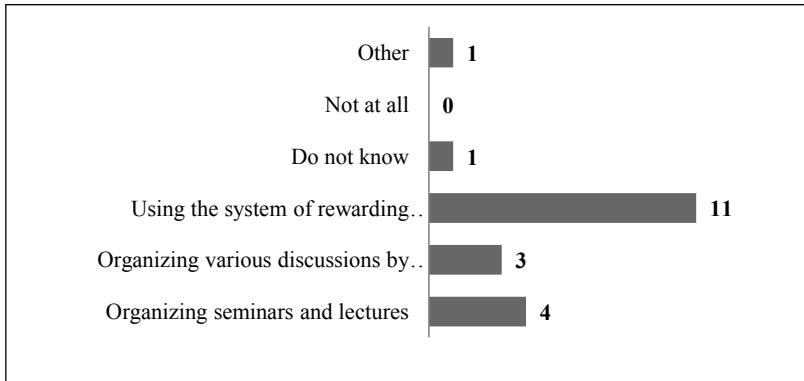
When we talk about *the first phase*, 67% of surveyed enterprises said that they had defined their vision, mission and goals which are based on intellectual capital. On the other hand, 27% of the enterprises had done this to a small extent, while only one enterprise had not done this (Fig. 3).

Figure 3. Whether defined vision, mission and objectives are based on intellectual capital?



52% of surveyed enterprises raise awareness about the importance of intellectual capital at all organization levels by using the system of rewarding employees for their creativity and innovation, 19% by organizing seminars and lectures, while 14% of them through organization of various discussions by principle of brainstorming. Other results are also shown on Figure 4. From this it can be concluded that this *second phase*, is very important for all observed enterprises, because in that way a win-win situation is achieved.

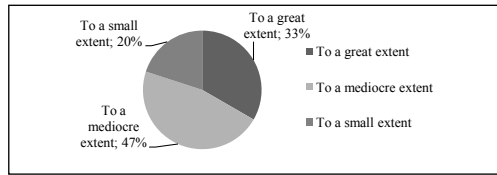
Figure 4. Way of raising awareness of the importance of intellectual capital in enterprises



Third phase: On the question whether the constituent elements of intellectual capital of surveyed enterprises are in accordance with generally accepted division of intellectual capital, 80% of surveyed enterprises said yes, while for other enterprises, this was the case but to a small extent. By this it is indicated that all enterprises can define their constituent elements of intellectual capital. The element of intellectual capital which is essential for most of the surveyed enterprises (87%) is human capital, while for the rest of observed enterprises a major role in business has structural capital.

Another interesting result is the fact that 80% of enterprises can assess the current condition of the representation of intellectual capital in their operations, while 20% of them can do this to a small extent. More on the representation of intellectual capital in the observed enterprises can be seen from the following figure.

Figure 5. Representation of intellectual capital in enterprises



Talking about the goals which observed enterprises want to realize through intellectual capital management, most of them believe that the most important ones are improving performances of enterprise and realization of competitive advantage (both on domestic, and so on foreign markets).

When asked which element and sub-element of intellectual capital is crucial for every enterprises and should be part of their development strategies, almost all enterprises have responded that it is human capital, and within it primarily knowledge and experience, and then skills, expertise, innovation, creativity and loyalty of employees. The residue consists of those enterprises which emphasize the other two elements of intellectual capital in their operations, or which try to include all the elements of intellectual capital in their development strategies.

Another encouraging result considering the topic of this study, and which concerns to *the fourth phase*, is the fact that all enterprises know how to manage their intellectual capital. Specifically, each enterprise has their own individual way of managing it, which is defined according to their goals, needs, the type of work they do, the environment, *etc.*

When we talk about *the fifth phase*, 40% of surveyed enterprises said that they established an adequate system for measuring the performance of intellectual capital, while 60% of the surveyed enterprises did this, but to a small extent. This is precisely one of the phases in the intellectual capital management on which the surveyed enterprises should pay more attention in future business.

On the other hand, according to *the sixth phase*, 60% of surveyed enterprises said that they introduced innovation in the reporting system, *i.e.*, they informed their employees as well as external environment about their business. The rest did this, but to a small extent.

Talking about motivation of employees, as *the last phase*, we can say that 93% of surveyed enterprises constantly motivate their employees, while only one enterprise does that, but to a small extent. The way on which most of the observed enterprises motivate their employees is through monetary rewards and incentives.

Based on the foregoing, it can be concluded that the observed companies are aware of the importance of intellectual capital for creating the competitive advantage and value and that they are trying to achieve this through effective intellectual capital management, *i.e.*, by using the systematic approach of managing intellectual capital. In this way, the second specific hypothesis in the paper is proved.

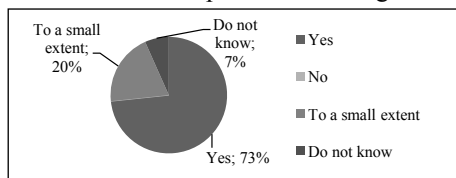
Speaking about the benefits of adequate intellectual capital management, each of the surveyed enterprises has already achieved some of them. Among them certainly stand out the benefits like more motivated employees in enterprises and more efficient business processes. More detailed results can be seen from the following figure.

Figure 6. Achieved benefits from intellectual capital management in enterprises



However, when it comes to the benefits that the use of intellectual capital in enterprises can bring, we primarily think of the benefits related to creation of value and competitive advantage. Thus, as was the aim of this study, subjects were asked to assess whether they have created value and competitive advantage for their enterprises, by using the adequate way of intellectual capital management. 73% of surveyed enterprises on that question said yes, 20% of them had done this, but to a small extent, while only one enterprise does not know whether it had reached this or not (Fig. 7). In this way, the basic hypothesis in the paper is also proved.

Figure 7. Successfully created value and competitive advantage among enterprises



4. Conclusion

Today we live in a turbulent environment, where frequent changes are not a rarity. At the end of the 20th century and early 21st century there has been a series of technological, political and social changes that caused changes of organizational structure, organizational culture, business

environment, information systems and objectives of enterprises. However, the most significant changes have occurred in the acceptance of knowledge as a key economic resource.

The development of knowledge, respectively its transformation into intellectual capital, today represents a condition of economic, technological and of each other progress. That increase of the share of knowledge in the newly created value is the main feature of the new economy, *i.e.*, knowledge economy. Precisely, unlike traditional economy, where competitive advantage has been based on cheap labor, raw materials and energy, the new economy now is basing its competitiveness on the intellectual capital. Therefore, it can be said that in the terms of globalization and turbulent environment, sustainable competitive advantage, which is based on intellectual capital, is the goal of every enterprises. It allows the creation of higher value-added for products and services, thus providing continuous growth and development of modern enterprises.

However, in order to create the competitive advantage, which is based on intellectual capital, each enterprise first has to affirm the intellectual capital in its business, and then to work on its efficient use. In order to do this and succeed, the enterprise ought to have a systematic, holistic approach to the intellectual capital management which is a complex and consists of several phases. Through adequate management, *i.e.*, passing through all the phases in the process of intellectual capital management, the enterprise will be able to obtain certain benefits, which will (as specified) eventually lead to the realization of the ultimate goal (creation of value and competitive advantage). Therefore, it can be said that there is no stronger competitive force in today's economy than the one based on intellectual capital.

In order to see what the situation is regarding the use of intellectual capital in Serbia, in this paper a survey was conducted, which included 15 enterprises from various activities. Survey results have indicated that the observed enterprises have affirmed intellectual capital in their business and that they strive to use it effectively in their operations to a greater or lesser extent. Also, through the survey results it has been showed that the observed enterprises are aware of the importance of intellectual capital for creating the competitive advantage and value and that they are trying to achieve this through effective intellectual capital management, *i.e.*, by using the systematic approach of managing intellectual capital. Through intellectual capital management in their business, observed enterprises have managed to achieve certain benefits, but above all to create their own value and competitive advantage, and that to a large extent. Precisely, 73% of surveyed enterprises have succeeded in that, which is a very encouraging fact.

However, although the sample is representative, and although all obtained survey results are encouraging to a greater or lesser extent, looking at the bigger picture the use of intellectual capital in Serbia is not at a high level, *i.e.*, at the level like in the rest of Europe and the world. It is therefore necessary that all enterprises in Serbia invest in intellectual capital to a greater extent and also to work on its rational use. In other words, the Serbian enterprises must turn the focus of management toward managing of resources which are based on knowledge. The reason for this lies in the fact that every enterprise in Serbia has the knowledge, skills, values and specific characteristics, which in terms of adequate management can be transformed into the value on the market, thus creating a competitive advantage.

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Chapter 21

Usefulness of Different Intellectual Capital Models for Media Industry. Missing Elements in Terms of Media Characteristics

Michalina Szczepańska

1. Introduction

At the end of the twentieth century the world economy has entered a postindustrial era, and the first phase of its development is called knowledge-based economy, in which a knowledge management has become the dominant concept of organization management (Mikuła, 2012, p. 13). It followed such concepts as strategic management (till 90s of the twentieth century), marketing management (between 1930 and 1970), functional management (1880-1930) and management through experience and intuition (1820-1880) (Wawrzyniak, 1999, p. 33).

In this new economy, also known as the new normality or economy of turbulence, which are associated with increased risk and uncertainty, increases and rises as well as falls and recession have began to be irregular and unpredictable, consumers behave in an uncertain way, and investors are characterized by cautiousness (Kotler, Caslione, 2013, pp. 22-23). In the situation of still developing mutual relationships and dependencies, running a business becomes more and more risky due to factors such as technological advance, information revolution, breakthrough technologies and innovations, emerging economies, hipercompetition, the environment, the rise of the customer's strength (Kotler, Caslione, 2013, pp. 33-55).

2. Establishing an intellectual capital concept

These changing economic conditions led to the changes in enterprises. Companies had to include in their management system new resources *i.e.* knowledge or intellectual capital components (Mikuła, Pietruszka-Ortyl, Potocki, 2007, p. 26). Currently the company's condition depends on how it collects, generates, processes and uses information (Jarugowa, Fijałkowska, 2002, p. 13). Knowledge is an essential resource for the organization, employees are treated as an investment instead of a cost, organizational culture is based on trust, the strategy focuses on cooperation, motivation is the result of internal satisfaction, customer relations stay interac-

tive thanks to collaboration, using cutting-edge technology is essential, and the market value of the company is the effect of all of its intangible assets (Szałkowski, 2005, pp. 26-27).

Issues of intangible resources management is considered in a number of management concepts dealing with knowledge, human capital and know-how, for example in the human resources management. However, intangible resources are usually partial and unordered there and the concept of intellectual capital is just an attempt to gather all the intangible assets, which can be found in the company. Groundbreaking for the emergence of this concept was so called report of Konrad Group of 1987, where the already existing indicators determining the value and condition of the company, such as liquidity, profitability, debt (which can be seen in the financial statements) with no attention to aspects of the intangible assets, were heavily criticized. The intangible part, for instance, human's potential, culture *etc.* was not seen in financial statements and annual reports then (Sokołowska, 2005, pp. 51-53). Four years later, the first position of intellectual capital director was created. Here the pioneer was a Swedish insurance company Skandia and the first man to hold this position was Leif Edvinsson (Skuzza, 2003, p. 198).

So far researchers and business practitioners failed to reach agreement on a single definition of intellectual capital. A. Pietruszka-Ortyl collected a series of definitions and described intellectual capital in a following way "the sum of knowledge that people building an organization have, which enables transformation of its resources on measurable financial value of the company. The concept includes relationships between the various elements of intellectual capital, but also knowledge flow between them, *i.e.* the generating, acquiring and transforming this knowledge" (Mikuła, Pietruszka-Ortyl, Potocki, 2007, p. 79).

There has also been no single set of rules for identifying, measuring and full use of intellectual capital has been developed. Different models were designed for individual companies, industries and countries (Sveiby, 2001, www.sveiby.com). Media industry, although dealing with many challenges brought by new economy, has not built such a model, yet.

3. Media in the new economy

Among the most important problems for media industry one is a technological revolution, which completely changed the distribution of content. The internet has allowed for the free exchange of files between users and creation of new forms of media. In turn, digitization has forced the transformation of traditional materials into digital form. As a result of this, they are present on the internet, and the media have gained and access to new sources of profits. At the same time, these technological changes have let a number of new players appear in the media market – new channels, newspapers, internet portals. They all compete with each other for time of their consumers. This time, however, has not extended through years. Increased competition has naturally driven down prices and therefore also margins. New technologies enable media usage in a growing number of devices, and consequently broaden reach to the users. At the same time, they help the users to watch the programme without advertisements, which from the media perspective means losing incomes from advertisers. Quite paradoxically even its own audience (due to technological changes) has become media's competitor. Youtube, myspace or Facebook also provide the content – created by its users – it is more current and spontaneous than this created by professionals (Kueng, 2010, pp. 114-124).

Moreover, two opposing trends appeared on the market. On one hand the media model based on hits is getting more popular. On the second hand, all what is not mainstream and not mass

is selling better. The first trend is described as following: several best-selling works – television programs, books *etc.* generate a large portion of the profits, which results in strong dependence on them. Because of this, companies pay authors huge royalties and stimulate demand by spending a lot of money on promotion. The second is the way to more and more specialized content, *i.e.* targeted at ever narrower groups of audience. Therefore, the main challenges, media have to face, are finding new directions of their strategy, possessing the skills relevant to these new areas, creating new products with new content (which requires new competencies) and higher flexibility (Kueng, 2010, pp. 114-124).

For each of the types of traditional media – newspaper, television and radio, a detailed set of challenges will be slightly different. Newspapers confront with internet reducing their revenue from advertising, because it can place adverts cheaper or for free. In addition, competition for the time and attention of audience is strong and internet is able to deliver pluralism, in contrast to a single newspaper. Readership is falling, and growing sales of electronic versions of newspapers do not compensate this decline. Moreover, readers have a decreasing marginal willingness to pay and free press is becoming increasingly popular (free newspapers earn money only from advertising). A threat to a further decline in readership is functional illiteracy or low level of reading comprehension skills (Kowalski, 2013, pp. 133-134).

Nevertheless, media researchers are convinced that the industry has excellent prospects for growth as information and communication is almost the core of the modern development paradigm. As shown, they must find new sources of income and a way to function in this changed world, because the former sources and ways slowly appear to be out of date (Kowalski, 2013, p. 289).

4. References Characteristics of media companies

The media industry is different from these that already use intellectual capital models. First of all, the media product is of a very specific nature. It can be a tool of social influence and even manipulation (Nierenberg, 2011, p. 41). It is also a “perishable” good – after a very short time news become outdated (Lavine, Wackman, 1998, p. 7). There is a paid and a free version of a product (Szczepańska, 2012, ogrodnauk.pl). The production cycle is about production and circulation of content and hence elements, which must be new, interesting and compelling. In other industries the production is rather about repeating (Kowalski, 2013, pp. 22-23). In addition, the media have often irreplaceable character. They become a ritual from which consumers are not able to resign and find a suitable substitute (Kowalski, 2013, pp. 15-17). Information in rather all businesses is needed for the proper disposal of human or financial resources. In media industry information exists in a double sense, because it is also the exact product (Nierenberg, 2011, p. 90). Moreover, audience *e.i.* target group is incomparably bigger than in other industries. The TV set is in almost every home, so media producers has an ability to reach almost the entire population of the country in contrary to, for example, orange juice producer, who is restricted by population that likes juices and particularly orange ones (Szczepańska, 2012, ogrodnauk.pl). What is more, creativity is for the media industry of much greater importance than for others. The act of creating is the foundation of this sector and the reason for its existence (Kueng, 2010, p. 189). That is why media employ highly creative people (Nierenberg, 2011, pp. 67-68). Another thing is that media companies not only provide consumers with certain goods and services, but also have an ability to focus their attention and thanks to this sell it as a rare good to advertisers. Their nature is then dualistic (Picard, 1989, p. 89).

5. Models of intellectual capital

Swedish Skandia, a company operating in insurance industry, had its own intellectual capital model created – called Navigator. It was designed to measure intellectual capital with the help of a set of indicators (more than 100) and this is the valuation part of the process. The second part is navigation and means management of all of intellectual capital components. The market value of a company, according to Skandia, consists of financial capital and intellectual capital. Skandia Navigator focuses on five main areas of a company: finance, customers, processes, people and development (Edvinsson, Malone, 2001, pp. 56-57) and each of them has its own quantifiers. In the financial area, for instance, some of the indicators are: total assets, assets per employee, profit per employee, income arising from the operation of new units, the rate of lost customers to the sector average. The client area is quantified by: annual sales to one customer, the total number of customer visits to the company, the average length of relationship with him, the number of days devoted to visit him *etc.* The process area is described by: administrative errors, processing time, the number of personal computers and laptops per employee, performance of the network per employee and many others indicators. To human area belong: the retention of employees, time spent on training, the average age of employees. As development indicators function: spending on research and development, the share of training hours in total number of work hours. The above indicators may express its value in dollars or decimal values (Edvinsson, Malone, 2001, pp. 103-115).

Intangible Assets Monitor is a model developed by Karl Erik Sveiby, who modified it for number of times to make it suitable for companies operating in various industries, including IT, legal, consulting and training ones. The market value of the company, according to Sveiby, consists of net asset value and the value of intangible assets. The external structure, internal structure and individual's competence belong to the latter. To each of these components a number of indicators is assigned. They are grouped by: growth/renewal, efficiency and stability/risk (Sveiby, 1998a, www.sveiby.com). Individual competence is peoples' capacity to act in various situations and includes skill, education, experience, values and social skills. Internal structure consists of a wide range of patents, concepts, models, and computer and administrative systems. External structure, as Sveiby defines it, consists of relationships with customers and suppliers, brand names, trademarks and reputation (Sveiby, 1998a, www.sveiby.com). The researcher defined intellectual capital of Celemi, a company from education and training industry, with 25 indicators. They are, among many others, – organization enhancing customers (share of revenues from customers that improve Celemi's organization, brings the R&D or projects that can be leveraged), revenues from new products, rookie ratio (number of employees with less than two years seniority), professional competence growth (growth over last year in the total number of years of professional competence), people satisfaction index (Sveiby, 1998b, www.sveiby.com). The company presents current value of all the indicators and their change over time. As Sveiby states it, his purpose with the Intangible Assets Monitor was not to present a full picture of the intangible assets, but to be practical and to “open a few windows” so managers can start experimenting (Sveiby, 1998a, www.sveiby.com). The learning motive is the most important here as measuring can be used to uncover costs, explore value creation opportunities otherwise hidden in the traditional accounts (Sveiby, 2004, sveiby.com).

Quite different is a guideline prepared by Danish authorities. It was created with the help of researchers, companies, industry organizations, consultants and civil servants. Its aim is to give

the opportunity to work more systematically and comprehensively with initiatives within knowledge management. As the authors state, the guideline can also be a basis for communicating about knowledge management. The intellectual capital statement is based on four elements there: knowledge narrative (where product/services, use value and knowledge resources are briefly described), management challenges (like for example improvement of personal skills), initiatives that should be taken to fulfill it (here: conducting employee performance reviews, implementing management training *etc.*) and indicators (in this case: absence, employee satisfaction with course or training initiatives, staff turnover, number of employees with competency development plans *etc.*) (Danish Ministry of Science, Technology and Innovation, 2003, pnbukh.com).

6. Why media need another model

Due to the very limited content of this paper only three models of intellectual capital from at least tens of functioning in the literature, could be presented. They were arbitrarily selected. Navigator was designed for a specific company, the aforementioned Swedish Skandia. However in later publications its authors have added a number of indicators useful for other industries. Intangible Assets Monitor was modified several times by the same author and suited to the diverse needs of different businesses. In turn, the Danish model was established from the very beginning as a tool for maximum versatility, adequate for any company.

After analyzing not only the models shown here, but also a number of others, present in the extensive literature, the following conclusions may be drawn.

On the one hand, the models miss indicators showing the challenges that last decades brought and which were mainly caused by technology revolution. On the other hand, models contain a lot of indicators describing IT (as detailed data on age, condition, capabilities of equipment *etc.*). These issues do not determine the efficiency of the media company to such an extent as bank or insurance companies, where computer system for customer service, online access to an bank account or efficiency of online money transfers play key roles.

In parallel, a set of indicators defining creativity, as the basis for media industry, could not be found in above models. Undoubtedly, one of the most important questions for media will be how to quantify creativity. It will, however, mean something else for the different media types. In the case of press, one of its elements will be the exclusivity of topics, so the fact that they were nowhere published before. The reason is, that client will not be willing to pay for a newspaper, in which he finds information that may be read for free on the internet. In turn, exclusiveness as the total uniqueness is not necessarily highly wanted in TV companies. They very often buy ready formats of TV shows, which already proved to be successes in another countries. Such example can be “Dancing With the Stars” – TV show created for BBC in United Kingdom, and bought in Poland first by TVN and then by Polsat (Szczepańska, 2014, not published yet).

Indicators related to the customer and the relationship with him, quite familiar with different models of intellectual capital, do not reflect the dual nature of these clients, so one of the main media characteristic. Worth capturing is not only the dependence on a small group of customers (for media – advertisers), what can be seen in many models, but their effect on the content published by these media. If the financial success of the company depends on *e.g.* three large advertisers, a risk, that they will have an impact on the work of journalists, raises. Journalist may not be able to prepare a material putting an advertiser is a negative light. Therefore a journalistic

credibility, solidity and fairness are in danger. That is why it seems sensible to compare, for example, the number of advertising orders to the number of materials about this specific advertiser, that have been published and their overtones.

Due to already discussed changes in the market, it sounds important to identify the various types of income sources – not just those of clients – advertisers. Crucial for the company's development is finding more sources of income – so as to compensate for the loss of revenue from advertising. Additional income may come from sponsors of debates/discussions and conferences organized by the company, what is already a common practice in media industry. The optimal situation when coping with the increasing outflow of customers to the internet would be to learn them to pay for internet content. Then publishing/issuing at the same time in the traditional channel and the internet will solve the problem of free and paid content. None of the models addresses these issues.

From a purely structural point of view, Navigator seems to be too advanced and detailed tool for the very beginning of introducing intellectual capital concept to the media. Additionally, companies employing very creative workers are far less formalized – with less complicated or nearly no structures, processes, *etc.*, and so sudden gathering of so big amount of information from all of company's departments and then generating a report could be deterrent. Moreover, Polish media have been relatively recently passed from the hands of visionaries who founded them into the hands professional managers. Because of this, they are still managed and organized in a less formal way than equally big companies in another industries. Probably it would be easier for them to start with a guideline like the Danish one rather than a detailed scheme. In this case, however, they will have to deal with just guidelines, not a model with some proposed set of indicators and these may be hard to define by not experienced in intellectual capital matter.

7. Conclusion

Accelerating technological change and the turbulent market environment raises the interest in the field of media management (Kowalski, 2013, pp. 8-9). This field seems to be more and more important due to the scale and size of the media phenomenon in today world (Nierenberg, 2011, p. 12). This subject has not been deeply studied in Poland, so far. Also intellectual capital concept remains unexplored for media industry. It is difficult, however, to choose one from already existing intellectual capital models, since each of them lacks elements characteristic of the industry. A suitable model could, therefore, be created through modifying shown ones or building quite new one.

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Chapter 22

Open Innovation

Małgorzata Dolińska

1. Introduction

Aims of this paper are: (1) to characterize an open innovation model and compare it to closed innovation and external innovation models; (2) to propose the open and networked innovation process idea. In the closed innovation model, internal R&D activities feed the company's production pipeline and products are brought to market by the company itself. In the external innovation model, the company utilizes external sources of knowledge or innovations such as universities, customers, suppliers and competitors. Open innovators employ a systematic strategy for motivating the creation and utilization of external knowledge. They also use purposive outward knowledge flows to reach new markets and maximize returns on internal innovations. Open and networked innovation idea is a result of utilization the open innovation model by companies and their collaborators during their collective knowledge management (KM) in innovation processes within the framework of networks, and also their cooperation during diffusion of innovations in innovation markets.

2. Evolution from closed to open innovation

Chesbrough asserted that firms can should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology (Chesbrough, 2003, p. 23). Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, respectively (Chesbrough et al., 2006, p. 18). Open innovation is an emerging innovation management model comprised of two dimensions: (i) unbound open innovation, which is the practice of establishing relationships with external organizations or individuals with the purpose of accessing their technical and scientific competences for improving internal innovation performance and (ii) outbound open innovation, which is the practice of establishing relationships with external organizations with the purpose of commercially exploiting technological knowledge (Chiaroni et al., 2010, p. 222). Two important characteristics of the open Innovation theory are that it gives considerable attention to the purposive outbound flows of intel-

lectual property and underlines the need to motivate the creation of relevant knowledge outside the company (Henttonen et al., 2012, p. 136).

In-bound open innovation is an outside-in process and involves opening up the innovation process to knowledge exploration. Here, external knowledge exploration refers to the acquisition of knowledge from external sources. In contrast, outbound open innovation is an inside-out process and include opening up the innovation process to knowledge exploitation. External knowledge exploitation relates to the commercialization of technological knowledge (Lichtenthaler, 2011, p. 76).

Open innovation model is based on the recognition that innovation partly depends on firm-specific knowledge resources and strongly depends on determinants that are often specialized on one field of knowledge and rarely have all the required resources internally (Petruzzelli et al., 2011, p. 293). Openness to external sources of knowledge allows firms to draw in ideas from outsiders to deepen the pool of technological opportunities available to them (Laursen, Salter, 2006, p. 146). To this aim, firms can create alliances, joint ventures, inter-firms networks, R&D consortia or partnerships (Bossink, 2002, p. 293). Open and networked innovations are developed on the base of collective knowledge management and its commercialization by collaborators in innovation processes.

The evolution from closed to open Innovation involves connected among themselves main dimensions of the innovative firm's development, that is their cooperation with collaborators during collective knowledge management in innovation processes within inter-organizational networks, and also improving competitive position in innovation markets.

The creation of collaborative networks plays an important role in the innovation development processes and leads up to synergic effects during their accomplishment. By means of collaborations, firms can successfully innovate by sharing complementary resources, competencies and skills.

The difference between external and open innovation is in line with the recent study (Pasio, Luoma et al., 2010) on intellectual property management in inter-organizational relationships, networks. Based on their extensive empirical study and the knowledge management theory of Baden-Fuller (2004) the authors recognized two categories of inter-firm relationships: 'knowledge co-creation relationships for knowledge exploration' and 'knowledge transaction relationships for knowledge exploitation'. The former focuses on joint knowledge creation and resembles open innovation, the latter focuses on the efficient utilization of existing knowledge and can be associated with the external innovation model. Evolution from closed to open innovation is connected with development of interorganizational networks and accomplishment of innovation processes within the framework of them.

In fact, innovative companies are fostering their competitiveness and their innovation potential by promoting different collaborative approaches within networks of outsiders (Battistella et al., 2013; Battistella, Nonino, 2012).

3. Open and networked innovation

Empirical evidence clearly shows that firms implementing open innovations require the establishment of extensive networks of interorganizational relationships with a number of external specialists, in particular universities and R&D institutions, suppliers and users (Chiaroni et al.,

2010, p. 225; Henttonen et al., 2012, pp. 136-137). Beyond the studies that use the specific term open innovation, there are many influential studies in the general field of interorganizational innovation that enhance understanding of open innovation model (Lichtenthaler, 2011, p. 77).

Companies have increasingly shifted from innovation initiatives that are centered on internal resources of knowledge (closed innovation) to those are centered on external networks – said another way, a shift from firm-centric innovation to network-centric innovation (Nambisan, Sawhney, 2011, p. 40). In light of the severe challenges many firms face in managing open innovation, recent work has pointed to a process-based understanding of open innovation (Lichtenthaler, Lichtenthaler, 2009; Lichtenthaler, 2011). As a consequence, the ‘ideal’ model of processes for innovation have experienced a linear evolution from a traditionally closed system towards more or less exclusively open and strategically networked systems of complementary resources (Harrison et al., 2008, p. 745). Open and networked innovation is becoming increasingly important for organizations as they attempt to rapidly changing environment by joint acquiring, creating and integrating interdependent and complex bundles of knowledge within innovation networks (inside and outside of its collaborators, also innovative companies. Inbound and outbound innovation activities of collaborators are integrated in networked innovation processes.

Innovations are complex processes which require knowledge flow, exchange between firms and other actors within networks. The innovation process consists of the following activities: development of a new solution concept, innovation elaboration, its application, promotion and selling in the innovation market, its diffusion, and also improvement at all times. It is a process of knowledge management and mutual learning of companies and their collaborators within the framework of innovation network (Dolińska, 2010, p. 14).

In this paper innovation networks can be understood as an organization in which two or more independent firms aim at jointly researching, developing or dispersing innovations. In such cooperative collaboration, the partner firms find support during one or more activities of the innovation process, which may increase their innovation performance (Dilk et al., 2008, p. 693) and make possible access to competitive resources of external knowledge, innovative skills, competences and also innovation markets. In today’s innovation markets, competition no longer takes place between individual competitors; rather, it takes place between the additional knowledge value-delivery networks created by innovative competitors (Dolińska, 2012). The innovation network is a bundle of innovation processes which are accomplished by its firm-partners. This network integrates open innovation models of its collaborators which cooperate and compete among themselves during collective execution of networked innovation processes.

Small and medium-sized enterprises need to sustain innovation, learning and development, because it is essential for their long-term business successes and competitiveness in markets. Due to their limited size and resources, they have to seek relevant and emerging knowledge, new technologies from outside to use them internally, in accordance with the idea of external or open innovation models and then they begin to cooperate with outside innovators during execution of innovation process within the network.

Firms no longer innovate in isolation but through a complex set of information interactions and knowledge based relations with external collaborators (suppliers and consumers of knowledge). Therefore, collaboration among specialists (from R&D, production and/or service, marketing units) within inter-firm knowledge networks and with other innovators from external innovation networks is an important aspect of open innovation process execution.

We can distinguish two forms of knowledge network: (1) contact networks, through which firms source knowledge, innovative solutions; and (2) alliance networks, through which firms collaborate to innovate. Networks in the form of alliances usually concern formalized collaboration and joint ventures, and other ‘contracted’ relationships resulting in frequent and repeated interaction in accordance with open innovation concept. Firms gain competitive advantage from alliances by accessing the knowledge of its alliance partners and collective development, and using it in innovations. This means that the competitive advantage firms are potentially able to gain is dependent upon the resource profiles of their partners (Huggins, Johnston, 2010, p. 459).

Diverse forms of external innovation networks are possible, for example: national, regional innovation systems, technology and science parks, clusters, formal cooperation of companies with other firms (suppliers, consumers of knowledge and/or innovations, funds for innovations, services in the area of innovation development, commercialization and diffusion), also with R&D entities, high schools, innovation transfer institutions, and informal cooperation based on personal relationships *i.e.* associations of innovators, clubs of entrepreneurs (Dolińska, 2013, pp. 313-314).

External knowledge retention refers to maintaining knowledge outside a firm’s organizational boundaries over time using interorganizational relationships as an extension of the internal knowledge bases (Lichtenthaler, 2011, p. 76). Assimilation, diffusion and development of external knowledge depends on the company’s capacities of (i) co-creating knowledge based relationships with participants of innovation networks and (ii) knowledge absorption.

Innovation arises from complex interactions and knowledge based relationships between individuals, firms-partners of the network organization and participants of their markets during the implementation of open innovation processes. These relationships integrate (also complementary) knowledge resources of the innovative company and its collaborators during their mutual learning, and enable them to transfer knowledge among themselves, develop it collectively and use efficiently within the framework of the innovation network. Executors of open and networked innovation processes learn among themselves during mutual creation of knowledge and its using in innovations.

Effectively managing externally acquired knowledge requires the development of complementary internal networks, *i.e.* organizational systems focused on accessing and integrating the acquired knowledge into the firm’s activities of innovation processes. Evidence shows that this internal reorganization might concern: organizational structures, *e.g.* the establishment of independent open innovation business units, or task forces and dedicated cross-functional teams, rewarding and incentive systems, which should include more open-oriented goals and metrics (Chiaroni et al., 2010, p. 225) on collaboration with external innovation networks.

Networks are an essential component of markets because they channel and direct flows of knowledge from position to position along activities of open innovation processes. The structure and composition of the network are changed over time in accordance with evolution of innovation markets in a knowledge-based environment.

Table 1 presents characteristics of closed, external and open innovation models, and also the role of networks in the analyzed models.

Table 1. Characteristics of closed, external, open innovation models and the role of networks in them

Innovation model	Characteristics of the relevant model	The role of networks in the relevant model
Closed innovation	<ul style="list-style-type: none"> • only internal R&D • commercialization of own results of R&D • development of own knowledge • entering innovation market by the company itself • improvement of abilities of own innovators • independent execution of activities of innovation process inside the company 	<ul style="list-style-type: none"> • collaboration of internal R&D and production/or service and marketing units within inside networks
External innovation	<ul style="list-style-type: none"> • conducting market research, • acquisition of knowledge, new technology and innovative solutions from external sources • use external knowledge in own innovative activities 	<ul style="list-style-type: none"> • utilization of external sources of information, knowledge and innovations such as R&D entities, universities, customers, suppliers, and competitors • cooperation with collaborators from external networks during execution of innovation process activities
Open innovation	<ul style="list-style-type: none"> • motivating creation and contribution of external knowledge in innovations • inbound and outbound flows of intellectual property • learning absorptive capacity • access to competitive resources of external knowledge, innovative skills and competences • integration of own and external knowledge, technology, innovative competencies • conducting market research • using external technology and/or innovative solutions in own innovations • cooperation with outside collaborators during execution of innovation process activities and entering innovation markets 	<ul style="list-style-type: none"> • creation of external knowledge and innovations within networks • collective knowledge maintaining and transfer with partners in external networks • interorganizational cooperation and learning during collective execution of innovation processes within joint internal and external networks • collective learning, joint knowledge management and mutual innovative capabilities development during accomplishment of innovation processes within innovation networks • integration of internal and external activities of innovation processes within the framework of innovation networks • creation of synergic effect of cooperation within innovation networks • development and using of mutual, shared knowledge resources with partners in innovation processes • entering innovation markets and diffusion of innovations with outside partners

Source: own work.

In order to play a role in the innovation process, networks are often required to evolve to include new members and configurations to meet changing needs, so there is an increasing focus on the dynamic nature of networks and their changeability, heightening the importance of the need for the on-going reconfiguration (Huggins, 2009; Huggins, Johnston, 2010, pp. 459-460) of their participants – executors of innovation development processes, and looking out new possibilities for their collaborators in innovation markets.

Firms tap the potential of external sourcing strategies and learning partnerships to acquire new knowledge and reduce uncertainty in R&D (Harryson et al., 2008, p. 748). More and more companies are recognizing the potential of using their communities of costumers, employees, partners and stakeholders as a source of information, knowledge and innovation (Battistella, Nonino, 2012, p. 558).

The influence of open and networked innovations on firms may also change over time if the content of knowledge flowing through those networks changes. It is connected with evolution of interorganizational knowledge based cooperation among firm-partners of the network and shaping flexible its structure over time. Flexibility allows the network to react quickly to changes in the innovation market, create and use more effectively knowledge and also new technologies in innovations.

4. Conclusion

Contemporary companies can not learn by solely and build their innovative capabilities relying only on own knowledge resources. They ought to draw on outside, also foreign sources of knowledge and learn from partners/competitors during open innovation processes execution within the area of networks. Application of the proposed open and networked innovation concept enable the innovative company to be more competitive in innovation markets.

The creation of collaborative networks plays an important role during interorganizational innovation development, its implementation and diffusion. By means of collaborations, firms can successfully innovate by sharing complementary resources of knowledge and innovative competencies.

The most important goals that the innovative companies would like to realize by taking part in open and networked innovation processes include: flexible access to and gain of current technologies, innovative solutions, new knowledge, results of R&D, intensified entrance to new markets, safeguarding from outside competition in the innovation market, learning other innovative competencies, reducing R&D time and costs, increasing efficiency of innovation process accomplishment, pooling complementary skills, and making flexible use of them during innovation development and application. Openness to external sources of knowledge allows firms to draw in ideas from outsiders to deepen the pool of new knowledge and technological opportunities available to them employees. Inter-organizational knowledge sharing, its transfer and technology acquisition enable contemporary companies to improve their innovative capabilities, skills, and strengthen their competitiveness in innovation markets.

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Chapter 23

Educational Significance of Emotional Intelligence in Development of Tourism

Marian Bursztyn

1. Introduction

Analysis of contents published on the topic of pedagogics points that this discipline is taken up and practiced in various manners. Its primary aim is to take up such activities, which head – through education – towards support of a ward in achieving his full humanity (Tarnowski, 1991). This differentiated approach towards practicing pedagogics is influenced by such factors as: past experience (historical continuance with elements of modernity), experience of presence regarding a question about the essence of education, cognitive inspirations and patterns derived from relative sciences with strong scientific status and similar developmental dynamics, first of all from psychology and sociology.

The scope of psychological field embraces the process of cognition determined as a human ability to receive information and process it in order to effectively control its actions. And the scope of sociology embraces inclusion of a unit in human relationships, comprised in a social dynamics of an internal personal relation. A human as a person exists on two levels at the same time, influencing the created interpersonal situations. A significant role in this scope is played by emotional intelligence, which constitutes for a person a set of abilities (dispositions) for effective functioning in a social, professional and first of all personal dimension. It may be concluded that it is multidimensional and comprised of numerous aspects. It regards all fields and actions of a human also on the level of realization of leisure activities, so they also refer to development of tourism.

The current study embraces an analysis of significant educational factors, which take into account those dispositions of a man that comprise of and constitute a significant meaning in the process of performing every day actions. These dispositions connected with social abilities, which embrace understanding of needs, feelings and problems of others, and the ability to put oneself in other people's shoes to properly interact with their emotional reactions, As a result, these dispositions hold significant meaning in the process of taking such activities, which influence the shape and development of the sector of tourism.

2. Complexity of the educational process

Education is a process realized within permanent social interactions. This process is comprehended as a type of human activity, consisting in generation of changes in human's personality. Both the course and aims of this process head towards the alteration of the human's personality. These changes should prepare a human for a social life. Educational activity is realized simultaneously in the broader and narrower scope. In the first case, the scope of realized aims covers those abilities of a person that refer to his mind, feelings, motivation and actions. In the narrower meaning, it is focused on personality aims, serving development of the desired features in social and moral respect (Łobocki, 2005, p. 32). T. Sakowicz emphasizes that education is to develop in a child the ability to assess values of the world, creative life, a need to participate and engage in important matters, and the ability of effective, empathic communication with others (Sakowicz, 2010, p. 85). Such a manner of understanding behavior is to additionally lead to develop attachment to ideals and chosen paths, which constitute a resultant of handed values and his own choices.

Accurate education is defined by W. Okoń, for whom the "process and results of education are shaped under influence of: (1) conscious and purposeful influence of people and organizations responsible for education (...); (2) a system of parallel education, especially of properly organized impact of means of mass influence; (3) efforts of a unit in shaping its own personality" (Okoń, 1981, p. 348). Because of that, education is a process, which is directed towards achieving a particular aim, and oriented in a way, to allow its unambiguous comprehension by a human, and covers the wholeness of its personality: the intellectual, moral, volitional, aesthetic and physical (Kupisiewicz, 2000, p. 32).

3. Concepts of emotional intelligence

The term emotional intelligence has appeared recently, which actually does not mean there were no attempts taken previously to construct subsequent or equal notions, which would pose an inspiration for a researcher in the field relations of intelligence with emotions and its influence on human functioning. The available literature of the subject suggests that detailed manners of comprehending this notion hold one trend of its understanding. Emotional intelligence may be determined as a disposition, which enables a human to use emotional processes for coping with life effectively through cooperation of mind and emotions on the level of their mutual relations (cf. Ledzińska, 2000; Mayer, Salovey, Caruso, 2000a).

Thanks to cooperation of mind and emotions, the intellectual processing of emotional conditions allows to understand the provided information to a fuller extent and it prevents negative influence of emotions, which distort and disorganize human action. A mutual interaction takes place, where emotions support intellect in rational thinking, which influences control and regulation of emotions. It seems that a view constructed in such a way properly reflects the essence of functioning of human emotional intelligence.

Literature of the subject points that precursor of the notion of "emotional intelligence", H. Gardner, who in his theory called "multiple intelligence" listed such types of intelligence as "linguistic, music, mathematic and logical, spatial and kinesthetic, and personal intelligence, conditioning accuracy of self-knowledge and the ability to understand other people" (Gardner, 1983). Within the area of the latter, he differentiated interpersonal and intrapersonal intelligence (cf. Gardner, 2002; Gard-

ner, Kornhaber, Wake, 2001). The first one may be understood as “an ability to understand people, behave towards them and to shape their attitudes” (Gardner et al., 2001, p. 160), which is included in the scope of social intelligence. The second one conditioned by the human ability to differentiate his own feelings, understand oneself, which corresponds with the notion of emotional intelligence.

In review works regarding emotional intelligence, including the subject scope of pedagogics and psychology, there have been two models of emotional intelligence established. The first type is determined as a mixed model, and it comprises of a concept of D. Goleman (1997), and the Bar-On’s idea (1997), and the second one presents a model of cognitive abilities of Mayer and Salovey (1999).

4. Models of emotional intelligence

Mayer and Salovey (1997)	Bar-On (1997)	Goleman (1997)
General definition of emotional intelligence		
Cognitive abilities enabling perception, understanding and usage of emotions in the processes of thinking.	A set of cognitive, non-cognitive abilities, competence and skills, which influence the possibilities of achieving success.	Abilities covering self-control, endurance, optimism and the ability to motivate oneself.
Basic emotional skills		
Perception and expression of emotions: <ul style="list-style-type: none"> • in oneself, • in others, • in the surrounding (e.g. art). 	Intrapersonal abilities: <ul style="list-style-type: none"> • self knowledge of emotions, • assertiveness, • independence, • a feeling of respect, • self-realization. 	Realization of one’s own emotions: <ul style="list-style-type: none"> • recognition, • monitoring.
Usage of emotions in thinking: <ul style="list-style-type: none"> • emotional support of thinking, • emotional support of memory and evaluation. 	Intrapersonal abilities: <ul style="list-style-type: none"> • empathy, • social responsibility, • maintenance of social relations. 	Managing emotions: <ul style="list-style-type: none"> • adequate expressions, • self-control, • introduction in good mood.
Understanding and analyzing emotions: <ul style="list-style-type: none"> • naming emotions and complex emotional states, • understanding of personal relations connected with changes of emotions 	Adaptation: <ul style="list-style-type: none"> • solving problems, • flexibility of adjustment, • confronting subjective evaluations with reality. 	Self-motivation: <ul style="list-style-type: none"> • triggering positive emotions in oneself, • control over impulses, • introduction into a state of ecstasy.

Reflexion regulation of emotions: <ul style="list-style-type: none"> • openness towards feelings, • controlling and regulating emotions in order to develop emotionally and intellectually. 	Regulation of stress: <ul style="list-style-type: none"> • tolerance towards stress, • control of impulses. 	Recognition of emotions in others: <ul style="list-style-type: none"> • empathy, • taking into account the needs of others.
	Regulation of mood: <ul style="list-style-type: none"> • optimism, • a feeling of happiness. 	Coping with interpersonal relationships: <ul style="list-style-type: none"> • managing emotions of other people, • establishing relations.

Source: Mayer, Salovey, Caruso, 2000, p. 40.

Majority of research regarding the field of our interest is oriented around the combined model. Emotional intelligence in this case is rooted in two components. The first one consists in intellectual abilities (*e.g.* empathy, ability to solve problems, self-control in situations that are highly emotional), and the second one includes features of personality or character (*e.g.* moods, temper).

4.1. Mayer's and Salovey's model

Mayer's and Salovey's model is supported by real abilities connected with cognitive processes referring to the emotional sphere, rejecting at the same time the personality features. They define emotional intelligence as "an ability of proper perceptions, evaluation and expression of emotions, an ability to access feeling, an ability to generate them, when they may support thinking, an ability to understand emotions and emotional knowledge, and an ability to regulate emotions in a manner to support the emotional development" (Mayer, Salovey, 1999, p. 34).

A definition formed in this way, determining the accepted model demonstrates four levels of abilities:

1. Perception and expression of emotions. Reception and expression of emotions poses a foundation for abilities from the scope of emotional intelligence. Perception of emotions in this model refers to abilities of identification of emotions of other people, and perception and reading on one's own emotions. A person that is emotionally intelligent can precisely recognize its emotions and express them on several levels (body posture, behavior, tone and timbre of voice, face expression). A person with such predispositions recognizes signals that flow from other people, detecting the slightest inaccuracies or attempts to distort emotions.
2. Emotional support of thinking. This ability allows to redirect attention and thinking towards emotions, pointing to that what is important and valuable. This function is able to independently generate emotions through changing the perspective on the present problem. As a consequence, it leads to activation of human creativity, thus facilitating its solution. Emotional thinking utilizes emotions to trigger some desired emotional states.
3. Understanding and analyzing emotions: A third component of this model is understanding and analysis of emotions and emotional knowledge. This ability is directly connected with a skill of identifying an emotional condition. An intelligent person is able to connect situations with

emotions, which arise while they take place, furthermore, he is capable of comprehending, analyzing and understanding even those emotions that are complex or interconnected.

4. Reflexive regulation of emotions: The last ability in the proposed model is reflexive regulation of emotions. This ability is necessary in continuous support of emotional and intellectual development. An intelligent person is open for emotion, he does not reject them or suppress them inside. At the same time, he is able to control them, not only in himself, but also in other people. As a result, he is able to manage emotions, deriving strength and motivation for effective actions.

A model of ability concept created by Salovey and Mayer possesses huge value, as emotional intelligence is an element of general intelligence, enriching knowledge on human abilities. As a result, a person, thanks to the emotional intelligence is able to control and regulate his emotions, hence it justifies effective actions and motivation in particular situations. The ability of managing emotional experiences of others, understood in this manner, is able to create good contact with people, but also to generate a specific network of support of a society, which they are currently in.

4.2. Daniel Goleman's model

The concept presented by D. Goleman is an attempt to find dependencies that existing between abilities and features allowing to function in everyday life in a free manner, and emotions that accompany them. His assumptions try to prove that emotions pose a significant element in human functioning, in his way towards success. His words become meaningful here: "success in life depends not only on intellect, but also on the ability to manage emotions" (Goleman, 1997, p. 1). In his model, D. Goleman, determined understanding ones' own emotions, ability to manage emotions, ability to motivate and empathy as a basis. Comprehension of one's own emotions serves self-discovery, and first of all self-understanding of one's own, based on the insight into one's own interior. Lack of this capability does not enable a man to control something, which he does not even realize. Managing one's own emotions depends on previous capability. An indication of this competence is an effective and quick comeback of human to emotional balance. This ability will allow a unit to submit emotions to the imposed aims that are accepted for realization. In this case, a significant role is played by emotional self-control. The last ability proposed in the D. Goleman's model is empathy. It is to be determined by those abilities, which enable recognition of emotions in others. This is a skill, without which human functioning in a society, where interpersonal contacts play a leading role, become impossible.

4.3. Rauven Bar-On's model

R. Bar-On's model, apart from abilities, demonstrates a series of personality features. Similarly to the D. Goleman's model, it may be treated as a combined one. The author defines emotional intelligence as "an array of non-cognitive abilities, competences and skills, which enable a man to cope effectively with environmental requirements and pressures" (Bar-On, 1997, p. 3). He divides emotional intelligence into intrapersonal competences (often called personal), adaptive competences (ability to solve problems, a feeling of realism), competences connected with coping with stress (often called social), competences connected with general mood) associated

with a feeling of happiness and optimism). Detailed components of the discussed abilities were listed above.

5. Multidimensionality of tourism

Definition of the notion of tourism comes from a French term *tour*, meaning a trip or a journey that ends at a starting point. The notion of tourism is used both in literature of the subject and in every day life, in at least two meanings. The first one embraces the process called pleasure (Łazarek, 1999, p. 25), and the second a statistical and economical field. This indicates a significant difference in the manner of perceiving tourism. Regarding the topic that is taken up, it is necessary to focus attentions on realization of personal needs and motifs, and filling a free time of a person. Statistical and economical aspect, regarding various mechanisms of flow of travelers around the world, which are not permanent, and regarding the change of tourist behaviors, it suggests a repeated, brand-new outlook into the definition of tourism. It arises from a view that in the economic scope, tourism is burdened with special dissonance between unlimitedness of human needs and limitedness of financial resources that serve to fulfill them (Szubert-Zarzeczny, 2002, p. 39).

According to Szubert-Zarzeczny, a phenomenon called tourism refers not only to the sphere of economy, but first of all to social activity of civilization and cultural sphere. Although it is a sector of economy, it influences development of human personality, therefore while referring to its non-economic needs, it also becomes connected with a cultural sphere of a given society (Szubert-Zarzeczny, 2002, p. 42). According to K. Przeclawski, (...) "tourism is at the same time a psychological, social, economic, spatial and cultural phenomenon" (Przeclawski, 1997, p. 31). Tourism as a spatial phenomenon influences spatial order, making it possible to develop or destroy it, through supporting degradation of the environment. In the psychosocial aspect, we may talk about contact and establishment of social bonds by people that take part in tourism, under influence of specific motifs, realizing one's needs and achieving aims connected with particular values. Tourism triggers particular emotions and feelings, and a person, bearing them in his memories, changes his behavior towards the other man or environment.

According to E. Mazur, tourism is not a notion that bears equal meaning with "recreation" and "leisurement" (Mazur, 2002, p. 15). "Recreation consists in all actions taken up in order to regenerate strength, and leisurement is human activity outside professional work". In this sense, leisurement and recreation correspond with free time, and tourism may be one form of spending this free time. As suggested by R. Łazarek, tourism, as a form of fulfilling human needs, is traditionally compared with (Łazarek, 1999, p. 25) primary needs in the Maslow's pyramid (Maslow, 1954, p. 37), especially with the highest need of self-realization (Gaworecki, 2003, p. 106). It is similarly concluded by D. Milewski, while writing that (...) "tourism is not connected with fulfillment of basic human needs, according to what it requires compliance with certain conditions" (Milewski, 2004, p. 49). (...) Therefore, tourism corresponds with personal needs connected with realization of a function of free time, which according to K.J. Helnarska is the most significant social condition of its development (2004, p. 104). Free time may be devoted to tourism or additional work, which while enabling purchase of another product, also elevates the need for leisurement.

Human motifs for tourism and tourist advantages, may be divided into those connected with leisurement, touring and specialist. Pointed sphere of tourist levels are necessary for the purpose of planning and predicting tourism (Płocka, 2006, p. 1).

6. Correlation of the process of education, emotional intelligence with development of a tourist sector

Scope of the teaching and educational process covers abilities and attitudes that are necessary for proper functioning in contemporary world. Aim of this process is to prepare every human to realize and manage his own life.

An immanent component of the course of education embraces emotions that accompany this process. Emotions cover data, which demonstrate the most important events, which takes place in our internal world, and influence relations in the social world. They determine relation of a human towards himself and other people, therefore they lead to the ability of exactly determining the experienced emotions. Thanks to emotions, a man possesses a proper mood. They direct our attention towards events that motivate a human to act. Finally, through proper emotions, they help in solving thinking processes. A significant aspect in relation between education and emotional intelligence and tourism is adequate comprehension of emotions, which reflect our abilities to take up tourist activity. It suggests that an indispensable role in this process is played by emotions management. Because they influence the intelligent manner of thinking, solving problems properly, therefore they generate behavior of a man. This process is a basis for human progress and development. Constant development within this scope impacts deepening of social relations and acquisition of experience directed towards realization of tourist behaviors. Education supported with emotional intelligence becomes a rational tool, leading to an increase in the level of conscious development of a man. It is indispensably demonstrated in development of the tourist sector, with a whole spectrum of natural and cultural qualities. Established relations and connections between education, emotional intelligence and tourism, with regard to broadly understood development, become an indispensable element of an educational process on all stages of education. A significant role in this respect is played by proper determination of educational aims, taking into account development of emotions, which are realized through broadly understood learning and education for tourism and recreation. Tourism is an activity that holds an increasingly significant economic and social meaning.

In literature of the subject, it is hard to point an unambiguous correlation of the process of education in the context of emotional intelligence regarding functioning of the sector of tourism. It is believed that construction of a clear level in this scope requires additional theoretical analysis, and first of all performance of broad methodological research. It seems significant that tourism is the most important sector of services, and first of all an educational, psychological, social and economical and cultural phenomenon. Education of a man in this scope should start from the youngest years. In the initial phase, the most direct example is the closest surrounding (parents, siblings), then actions connected with creation of tourist activity are taken up independently and with full awareness.

There are numerous educational functions that offer a wide array of classes realized often not in a direct manner, but indirectly through actions connected with preparing a man to realize educational and emotional acts, useful in realization of tourist actions.

From the point of view of human development, potential of the tourism sector plays a significant and an irreplaceable role in shaping recreational behaviors. Achievement of this aim is possible thanks to education, which allows to teach on the highest possible level.

We cannot imagine education, tourism, without a man, and we cannot say about tourism without a man, who unambiguously determines his attitude towards the presented notion. It suggests that tourism, as a phenomenon that is complicated and highly difficult to be clearly determined, requires tough decisions in practice.

The essence of education in tourism is shown in the ability to accept innovations and systematize experience, which influences unit's performance in the future. In this context, a teacher is a mediator of the handed knowledge, who is a subject of education. He build knowledge, to encourage the wards to seek a direction of actions, focused on aims of their activity. A systemic approach for this process allows not only to educate a person, but also to attract attention to those features, which from the point of view of the subject of educations are valuable and refer to social interactions culture, knowledge, honor, love and an series of values and features that shape behaviors, which define a man. Educational process is a social process, heading towards triggering particular changes, not only in the individual ward but also in the whole environment. An aim here is preparation to achieve optimal development of his personality.

Taking into account common and inseparable elements of the educational process and emotional intelligence, and the process of tourist education that combines those elements, a thesis needs to be pointed that determined adequate understanding of education as a wholeness of planned influences directed towards shaping and preparing a man for life in a society, and active and conscious participation of man in tourist actions.

7. Conclusion

Development of the tourism sector is indispensably connected with the educational process, where significant role is played by emotional intelligence, shaping its development and personality, and preparing towards life in a society. The established interpersonal interactions, taking place in a tourist situation activate behaviors that are inclined towards knowledge of both emotions and aesthetic, cultural or social values. Such a thesis enables proper reactions towards those tourist situations, which support tourist self-realization, which is inseparably connected with educational process.

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Chapter 24

Health Management as a Component of Modern Higher Education System

Nataliia Zavydivska, Olga Zavydivska

1. Introduction

Teaching students of the measures for the improvement of their own health through the entire system of higher education is particularly important, especially in the terms of dynamic changes at national and European labour markets. Nowadays Health Management is the actual direction of researches for the reason of versatility of education system in universities (Dubogay, Alosyhina, Lavrynyuk, 2011, p. 296). It requires the unification of content of academic disciplines which are pertaining to the formation of student's health preserving skills (Dubogay, Zavydivska, Khanikyans, 2012, p. 271).

Nowadays terms & conditions require new technologies of Health Management, which consider features of studies and future professional activities of students. In the modern sense this is a mastery of specialized knowledge, life and professionally important motor actions. The result of such mastery is the student's ability to «manage» their health, conducts diagnostic, preventive, rehabilitative and corrective measures (Prystupa, 2010, p. 447).

The goal of this article is to ground the effectiveness of implementation the innovative pedagogical health preserving technology (the basis of Health Management) in the educational process of higher educational establishments.

The article contains the consideration of the impact of pedagogical health preserving technology of study through the learning of morphological changes in performance of the student's body, tracking the dynamics of changes in their level of physical fitness and self-esteem analyze the degree of formation health preserving competence (knowledge in questions of Health Management).

2. Health Management as a basis of health preserving process

In our opinion, Health Management or management of health – is the human function that consists in planned and deliberate exposure to one's own body, to the processes that take place around us in order to preserve health.

During health preserving study students should learn about:

- The basic principles of healthy living and professional longevity;
- The main risk factors for human health, leading to its deterioration;
- The resources and reserves of the body;
- The health management capabilities;
- The methodology of improving the quality of life.

Also students must learn how:

- To perform the elemental analysis of the profile of their health;
- To use the information about profile of their health to improve the quality of health;
- To analyze and compare their own feelings and take prophylaxis of professional diseases;
- To form a philosophy of healthy living.

Health Management – is, in fact, the deciding of next tasks:

1. Formation of understanding the role of the physical component in the personal development system of and preparation of a person for professional activities, motivational and value attitude to the own health, setting to healthy lifestyles, physical improvement and self-education, the need for regular physical exercise and sport.
2. Formation of knowledge system about healthy lifestyles questions which are required in the process of life, school, work, family physical education.
3. Health promotion, promotion of proper formation and comprehensive development of the organism, disease prevention; provides a high level of physical condition, the ability to work throughout the study period.
4. Mastering of the practical skills system of the main types and forms of rational health preserving z activities, development and improvement of mental and physical capabilities, skills and personality traits.
5. Work on fund of professionally important knowledge, motor abilities and skills which will determine psychophysical readiness to the vital functions and select profession.
6. Gain experience of creative using the health preserving and health forming technologies to achieve personal and professional goals.

3. The essence of the innovative pedagogical health preserving technology of study

We have created innovative pedagogical health preserving technology of study which provides a solution listed above objectives through the implementation of organizational and pedagogical conditions, the essence of which consist (Zavydivska, 2013, p. 232):

- The increased attention to the philosophical and social problems of health preserving;
- The transition from the pursuit for higher athletic performance to education of students in questions of health preserving, from simply “maintaining of health” to “maintaining of health through all life”;
- The organization of health preserving based on valeological concept of physical preparedness;
- The creating a framework for the formation of methodological skills to carry out diagnostic, preventive, and corrective maintenance activities;
- The study of the physiological characteristics of own body;

- The transition from analysis to synthesis and optimization of own lifestyle;
- Flexible control system.

The innovative pedagogical health preserving technology of study is a 4-component structured scheme (Zavydivska, 2013, p. 250):

1. The first component reflects the level of memory, will, emotions, way of thinking and other universal human properties.
2. The second component is a person's health, appearance, physical condition, perfect motor skills, physical development and physical preparedness, weight, height; forming individual attitude to yourself, pleasure or displeasure of own body.
3. The third component reflects socially oriented traits: ethical principles and beliefs, life values, social settings and orientation on observance of basic principles of a healthy lifestyle.
4. The fourth component displays individual and unique characteristics: temperament, character, perception itself, demeanor and communication.

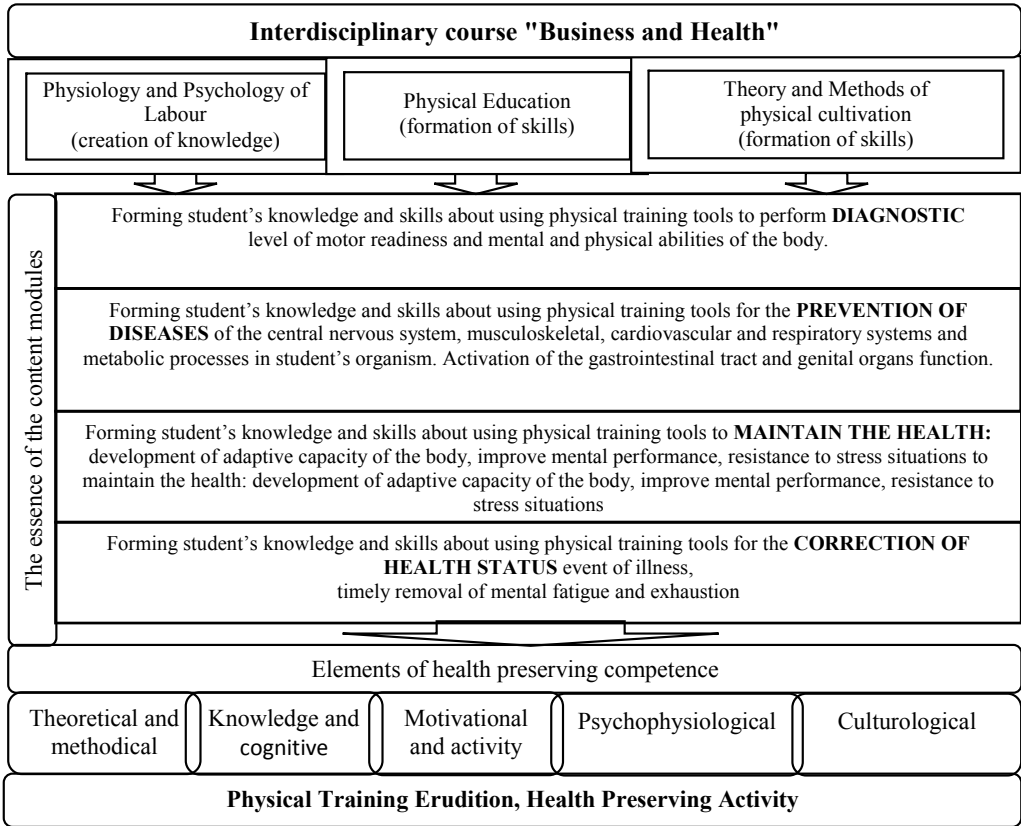
4. Features of content the interdisciplinary health preserving course “Business and Health”

Active teaching factor of content of the newly established teaching methods became the author health preserving interdisciplinary course “Business and Health” (Fig. 1).

The results of pedagogical experiment on introduction pedagogical health preserving technology of student's study.

The pedagogical experiment involved the implementation of health preserving technology of student's study and testing its effectiveness. Experimental served basis were Lviv, Cherkasy and Kharkiv Institutes of the Banking University of the National Bank of Ukraine (Kyiv).

Figure 1. Integrative and interdisciplinary essence of study course “Business and Health”



Source: own work.

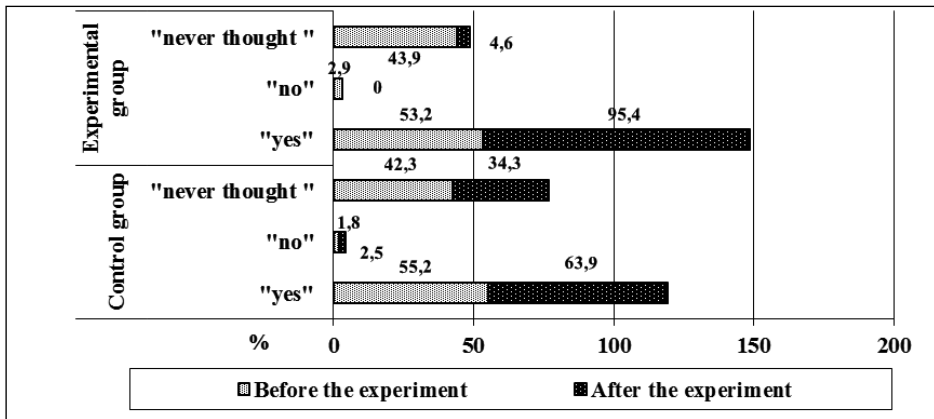
All students who participated in the experimental project were divided into two groups:

- Control (CG) – the educational process was in usual regime;
- Experimental (EG) – the educational process was accompanied by the introduction of the newly formed health preserving study technology.

At this stage in the pilot study were involved 370 people. Overall, participants of the experimental work were 1018 persons.

After two years of study at the beginning of the experiment 55.2% of the students in the CG and 53.2% in the EG believe that physical exercises make positive affect on health status; 42.3% of students in CG and 43.9% of students in EG have never thought about the impact of physical exercises on their health status; and 2.5% of students in CG don't believe in the usefulness of the physical exercises at all (Fig. 2).

Figure 2. Dynamics of changes in the responses of students regarding the usefulness of physical exercises (%)



Source: own work.

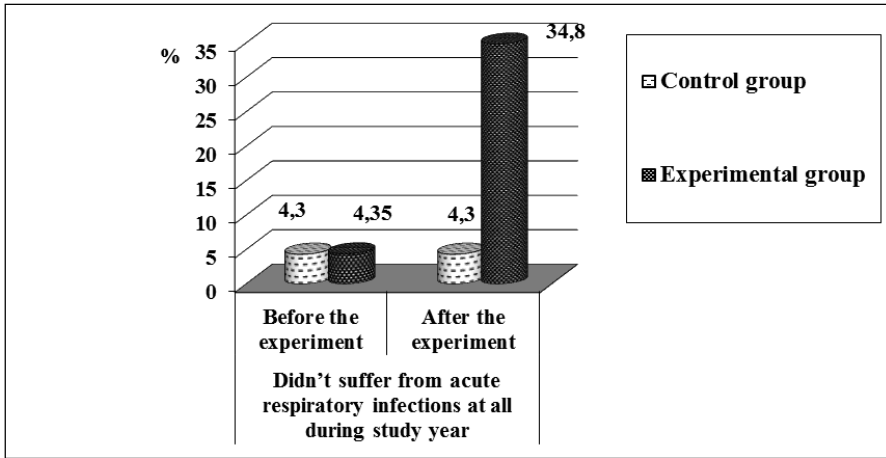
After a year during which in the experimental group study process occurred with the using of the newly created health preserving technology of study, the number of students who believe in the usefulness of physical exercises, increased by 42.2%; the number of students who have never thought about the impact of physical exercises on their health status remains 4.6% of individuals; and the number of students who don't believe in the usefulness of the physical exercises at all became 0%.

The proof of effectiveness of proposed pedagogical health preserving technology of student's study is the results of self-analysis of acute respiratory diseases by respondents. If we consider the incidence in the general context, we observed a positive trend of reducing disease in the EG. The number of students in this group who didn't suffer from acute respiratory infections at all increased from 4.3 to 34.8%, whereas in the CG, these data have not changed (Fig. 3).

Implement the health preserving activity can only the person with strong convictions and positive guidelines to maintaining of health, also with an extensive knowledge and skills about healthy lifestyle.

The level of student's knowledge about Health Management in some extent basis on the result of the analysis of responses to a question: "Do you agree with the fact that observance of rules of healthy lifestyle makes positive influences to the ability to maintain the mental loadings, successfully absorb professional knowledge and achieve the highest 'steps' professional growth?" The question made with the goal to separate the concept of "healthy lifestyle" and "health management" and link it directly to labour activity.

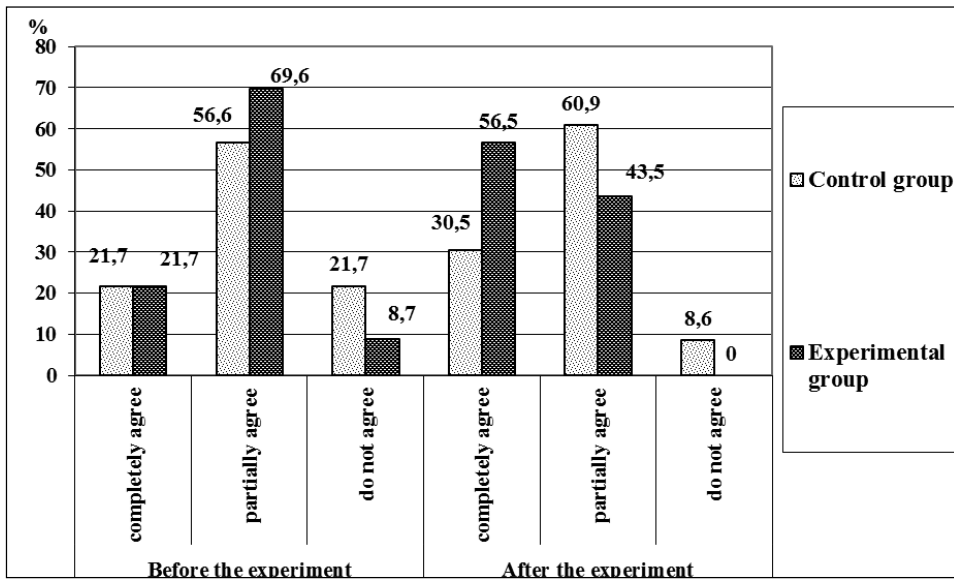
Figure 3. Changing the number of students who weren't ill during the study year for respiratory diseases (%)



Source: own work.

After studying for two years in the university, but before the experiment, both in the CG and EG the affirmative answers on this question gave only 21.7% of students in both groups. After applying the authors' methodology – the affirmative answers in EG – 56.5% of the students and in CG – only 30.5% (Fig. 4).

Figure 4. Student evaluation of the relationship between a healthy lifestyle and professional achievements (%)

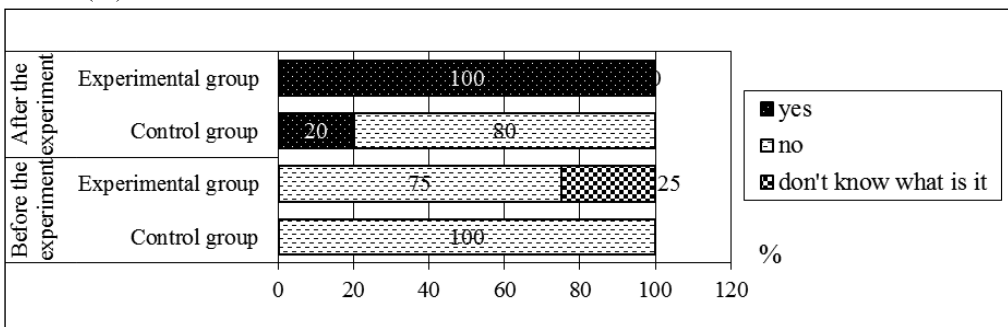


Source: own work.

For the formation the skills of health self-management the person needs certain knowledge. The degree of their formation shows the analysis of respondents' answers to a question: "Does the educational process in university promote to the formation of vital skills which are necessary for the independent health preserving measures in the future?" In the EG before the experiment the answer "no" said 91.3% of people, and after the experiment – the number of students has dropped to 4.3%, a confirming answer ("yes") was given by 95.7% of students.

The ability of students to choose a system of exercises, make an appropriate complex for lessons, mastering of knowledge about rehabilitation and preventive measures – the important social problems nowadays. About students' skills in this direction we can trace by analyzing the experiment's response to the question "Can you make the complex of exercises of medical direction and perform basic preventative and rehabilitation measures?" (Fig. 5).

Figure 5. Student evaluation of their skills in drafting health complexes exercises different directions (%)



Source: own work.

Exactly the opposite situation changed in EG, while in CG the number of those who can make a complex of gymnastics exercises and doing preventative and rehabilitation measures, increased only to 20%.

The experiment proved that the fundamental methods of teaching which were used in the EG, promotes the formation of basic postulates of Health Management, in particular – the preferences to making physical exercises. In the CG, the number of those who don't like physical exercises fell only from 21.8 to 17.4%, while in the EG fell from 26 to 0%.

Comparative analysis of responses to the questions suggests a trend of positive influence of the newly formed health preserving educational technology of study to the formation of appropriate knowledge and skills in students. Analysis of the survey data indicates growth and improvements in each issue of the students of the experimental group, unlike the control group students.

5. Conclusion

The introduction of pedagogical health preserving technology of study in educational process resulted in a statistically significant improvement in physical activity of students; improve the level of knowledge and skills; reduce absenteeism due to colds.

Statistical and probabilistic analysis of the data for the forming and control stages of pedagogical experiment confirms their representativeness and credibility, indicating the positive impact of pedagogical health preserving technology of study and supports the view that the health management should be the basis of the educational process in higher educational establishments.

Require further study the possibility of health management as a science that contribute to development of basic health systems, models, programs with content that provoke the students of different professional direction to the use of modern health technologies in everyday life.

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Chapter 25

Social Competences and Cross-Cultural Differences from a Perspective of Glottodidactics

Anna Piwowarczyk

1. Initial remarks – context of justifying a problem

Three trends of development of the modern world: globalization processes, an emergence and development of an information society and transformations of a scientific and technical civilization significantly influenced a new approach to education. A command of foreign languages plays a significant role in creating a society of knowledge. However, a command of a foreign language itself, as well as a knowledge of a culture are not enough to effectively communicate with representatives of a different culture. Well-developed social competences and a cultural intelligence are also essential in addition to a knowledge of a foreign language system and a culture of a country. A result of *Future work skills 2020* report is an important premise supporting an expediency of learning social competences. 10 most wanted competences were identified on the basis of a forecast prepared by the use of a *foresight* technique for global economy. Social intelligence takes second place among 10 future competences and is defined as “an ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interaction” (Davies, Fidler, Gorbis, 2011, p. 8). It will even be more important in the future as work in various groups and human configurations will be predominant.

A thesis is stated in this article that using specific methods aimed at developing social competences (including communicative one) during didactic classes improves a quality of foreign language teaching and better prepares learners for work in cross-cultural environment. A purpose of this article is a reflection on a place and role of social competences and cross-cultural issues in university education.

“Higher education constitutes an element of creating united ‘Europe of Knowledge’, especially in terms of flow of students and academic staffs” (Wróblewska, 2012, p. 14). A main task of institutions of higher education is to educate students in order to prepare them for professional career. An extension of the content of this fundamental, teaching function of a higher education institution is emphasized both by literature and a sphere of regulation shaping a concept of the European Higher Education Area. The latter highlights “an importance of creating respect and understanding for cross – or supra-cultural values, enhancing a principle of public respon-

sibility of higher education in the context of forming of a modern society of Europe, including strengthening of social cohesion of Europe and emphasizing a social dimension of qualifications of graduates” (Chmielecka, 2010, p. 141).

Significant in this area might be a reflection of K. Denek, who writes about a new vision of higher education, the so-called proactive university, which apart from an academic education takes on responsibility for a society of future by teaching students in the spirit of “tolerance and respect for another natural and cultural environment; equality, negotiation and coexistence; independence of thinking and acting, dialogue, cooperation and partnership, global responsibility” (Denek, 2011, p. 74). It is about educating enlightened citizens, who will promote social justice and tolerance within their own community and worldwide, generally speaking who will create the so-called culture of peace. Such elements are strongly highlighted by a mission and strategy of Cracow University of Economics. The mission of this University is *Rerum cognoscere causas et valorem*. The mission of Cracow University of Economics is fulfilled by, inter alia, “educating youth in the spirit of respect for the law, patriotism, democracy and responsibility for the fate of society and the state” (see: Initial Declaration of Development Strategy of Cracow University of Economics in years 2011-2020, accepted on the sitting of the Senate on 5 December 2011).

Internationalization of institutions of higher education and growing mobility of students are taking place in increasingly rapid pace in addition to internationalization of labor market. Cracow University of Economics might serve as a good example here. *LLP-Erasmus* programme carried out by International Programmes Office and Academic Career Centre in years 2007-2013 contributed to an increase of an indicator of internationalization of the university as in that period almost 3,000 CUE students took part in this programme. More than 1,000 students from partner universities from all over Europe participated in part-time studies at CUE. Therefore, preparing students for active functioning in multilingual and multicultural Europe by creating an open society, cooperating and respecting cultural diversity should be a purpose and a mission of higher education. As far as teaching foreign languages at university level is concerned, this might be achieved by modification of studies curricula including their enrichment with content regarding cross-cultural communication and new forms and methods of transmission. A reflection on this subject constitutes an essential purpose of this article.

2. Reasons to enrich a process of foreign language teaching with cross-cultural communication issues

Foreign language teaching is a process of social communication “equipping” a recipient with a new language system, but all at the same time enriching with a knowledge of a culture of a country of taught language; it is a process of forming communication competences, including intercultural competence. For communication is always set in a specific socio-cultural context. Foreign language teaching is understood as developing communication skills in a foreign language, and thus forming communicative competences in a new cultural context. A development of social competences is also essential, *i.e.* particular attitudes such as: openness, curiosity about others, which are a starting point for a development of an intercultural competence. Conditions of effective communication with representatives of another culture are therefore as follows:

- a knowledge of a foreign language,
- well-developed abilities to communicate,

- a knowledge of one's own culture and a culture of a foreign language, cultural sensitivity.

It is generally assumed that a command of a foreign language means a knowledge of words, grammar and phonetics *i.e.* an active mastery of a foreign language system. It is also what a majority of foreign language learners expect from language courses. A conclusion might be drawn from my own long-term experience in foreign language teaching, including implementation of curricula in various linguistic institutions, that sometimes authors of curricula concentrate on language issues neglecting cultural background of a taught language. A knowledge of essential products of culture such as: literature, art and music is part of a curriculum content of language courses, as well as philological studies. However, issues regarding relation between a language, culture, thinking and perception of reality, matters of national identity, cultural standards, lifestyles, customs, acceptable ways of behaviors and social relationships are ignored.

G. Hofstede defined culture as “a collective programming of a mind, which distinguishes members of a particular group or human category from another” (Hofstede, Hofstede, 2007, p. 17). It is a certain pattern of thinking, feeling and everyday behaviors including *e.g.* greeting each other. E.T. Hall defined culture in the following way: “what is characteristically man – in fact, what gives man his identity no matter where he is born – is his culture, the total communication framework: words, actions, postures, gestures, tones of voice, facial expressions, the way he handles time, space, and materials, and the way he works, plays, makes love, and defends himself. All these things and more are complete communication systems with meanings that can be read correctly only if one is familiar with the behavior in its historical, social, and cultural context” (Hall, 2001, p. 50). According to this author – culture is communication and communication is culture. In turn, J. Mikułowski-Pomorski perceives culture as an interpreted human action. “Culture determines principles and norms, groups and institutions, human life: everyday and festive, human communication with the world, artistic work, and in the end – identity” (Mikułowski-Pomorski, 2012, pp. 285-286).

The above reflection allows us to emphasize that culture of a foreign language are not only material products and symbols, but these are above all different values, lifestyles, a different way of communicating and behaving. In the light of the above-mentioned definitions foreign language teaching is a far more complex process than passing on a foreign language system and familiarizing learners with material symbols of a culture of a country of a given language.

It is more and more difficult for a modern man to communicate with another person with rapid development of science, technique and information technology. That is why students should be taught “being with others” in an academic education process. In 2006 the European Parliament and the Council of European Union defined eight key competences, which are supposed to provide a smooth functioning in dynamically changing reality of the European and global labor market. They include communication in foreign languages, general culture, social (interpersonal) and civic competences. Social competences were classified into these key skills, which indicates the need for their development in a process of academic education including foreign language teaching.

In turn, one of the requirements addressed by the ministers of Bergen to universities recommended to take into account these 3 elements: (i) (*knowing and understanding*), (ii) (*knowing how to act*) and (iii) (*knowing how to be*). This last element calls for a transmission of values as an integral part of getting to know and coexisting with others in a social environment and might be translated as “attitudes” (Chmielecka, 2010, p. 141). In the context of foreign language teaching it will be forming of an ability of staying with a foreigner, awareness of cross-cultural

differences, attitude of respect and understanding towards another culture, *i.e.* one of strategic aims of education which is the so-called “respect for difference” (Denek, 2011, p. 75).

It should be noted here that many foreigners intensively experience results of culture shock abroad. Culture shock is “an anxiety accompanying moving to an environment culturally different from person’s native surrounding” (Bartosik-Purgat, 2010, p. 202). Therefore, it is a kind of stress. G. Hofstede claims that reading his book by a reader is “having a contact with another culture and it might even constitute culture shock for some people” (Hofstede, 2000, p. 31). This shock is not only associated with a new language but during a meeting with representatives of a different culture it turns out that the others not only eat different dishes, celebrate different rituals, wear different clothes, have different national heroes and symbols, but also have different attitudes towards work, interpersonal relations, love, power, time, social roles of women and men. Generally speaking they have a different value system, which is difficult to understand and respect at once. Conscious and superficial manifestations of culture are only a tip of an iceberg, at which base a different value system is deeply rooted.

There is no direct research on a percentage of employees delegated to work abroad for a longer time who come back home prematurely. The problem undoubtedly exists and it is not only associated with a poor knowledge of a foreign language system. Probably all expatriates are familiar with a language of a country they were delegated to, because a good command of a given foreign language is the first condition for a longer stay abroad. It is rather that “there is a low awareness of cultural differences among many people. They are not aware of the existence of societies radically different in many areas of life. Therefore, they do not attach importance to broadening their knowledge of a culture and a country to which they are going” (Bartosik-Purgat, 2010, p. 191). According to J. Mole, the so-called soft factors (having cultural background) are often a source of misunderstandings in an international organization because they do not belong to the so-called quickly noticeable ones. He also says that “striking differences are the least dangerous ones because we notice them quickly and we can easily adapt to them” (Bartosik-Purgat, 2010, p. 84). It is also highlighted that “a source of some of practical interpersonal problems lies in the fact that we do not realize a communicative role of cultural differences, we disregard or ignore them” (Winkler, 2008, p. 108).

For these reasons, it is important to strongly articulate the existence of intangible cultural differences and develop competency of communication between cultures during classes. This means that institutions of higher education should update their curricula with content broadening an awareness of cultural differences and introducing new methods of working with students improving communicative competences. Then, language classes at an institution of higher education will also perform social (cultural) function of universities, which indicates cultural bonds of participants of education process at higher education institution. Not only a high number of employees prematurely coming back from abroad should be an additional argument, but also “damages caused by a lack of competence and sensitivity to cultural differences among employees delegated to foreign countries” (Hofstede, Hofstede, 2007, p. 339).

3. Social competences in language teaching

Social competences, including communicative ones, play an essential role in effective communication in addition to a foreign language system and knowledge of culture. There is a diver-

sity in defining a term “social competences”. They are described as: “social intelligence, social competence, communicative competence, relational competence, communication skills, interpersonal skills, social skills, communication efficiency” (Chrost, 2012, p. 50).

J. Borkowski defines social competences as “coherent and functional set (system) of knowledge, experience, personal equipment, abilities and social skills, which enable a man to take up and develop creative relations and connections with others, active participation in a life of various social groups, satisfactory performance of different social roles, and effective joint overcoming of arising problems” (Borkowski, 2003, p. 108).

Common European Framework of Reference for Languages perceives learners as “social units... having tasks to conduct (not only linguistic ones)... The use of a language, including learning, comprises actions taken by participants of social life, who – as individuals – possess and constantly develop their competences, both general and language communication skills” (Coste, North, Sheils, Trim, 2003, p. 20). One has to learn how to be with another person, come into contact with other people in order to learn a language. It not only constitutes a matter of knowledge of a language system but a broader challenge. Therefore, W. Wilczyńska’s question: “to what extent are difficulties of the so-called intercultural communication specific, and to what extent do they constitute an integral part of all interpersonal communication?” (Wilczyńska, 2005, p. 20) seems reasonable. It is worth emphasizing at this point that communication skills are in the first place in ranking of competences most wanted by employers, with 78 as a number of recommendations (Pocztowski, Miś, Pauli, 2013, p. 57).

Language classes should therefore be treated as a process of social communication, in which transfer of a knowledge of specific cultures, making people aware of cultural differences, development of an ability to communicate in a foreign language and improving social competences take place in addition to learning a new language system. It is about an internalization of such attitudes as: openness, tolerance, respect for otherness/ distinctness (another person, different behavior, foreign culture) by students.

One of the main principles of academic education in glottodidactic literature is a principle of individualization and socialization *i.e.* building a relationship of individual and collective interests (Okoń, 1998, p. 167). It emphasizes an importance of binding between school education – intellectual processes with socio-emotional processes. W. Okoń writes: “school has traditionally focused on treating a pupil as an individual isolated from other members of a community. Such isolation is supported by an entire system of motivating them to work, charging them with individual tasks, controlling and evaluating, as well as cooperating with their family. Does such school prepare young people for a participation in professional and social life? This life is characterized by increasingly high degree of organization, cooperation and collaboration of various links” (Okoń, 1998, p. 187). According to W. Okoń, socialization should help a young person with becoming a fully mature, fully competent member of society, for whom common good should be a growing motivation to act. The sake of an individual is as important to them as the sake of their immediate environment and a wider community.

In turn, K. Denek formulates this rule as “a principle of individualization and collaboration in education” (Denek, 2011, p. 39). This means a harmonious combination of interests of an individual and a team or treating students as individuals in terms of group teaching. Teamwork requires from students “understanding of a purpose and tasks of a group and a concern for its sake. It also demands developing habits of working in a group and subordinating individual plans and actions to it” (Denek, 2011, p. 39). Processes of socialization and development of social

skills can be, among others, intensified *e.g.* by including various activating and group work methods to a typology of methods of work (Pólturzycki 2002, p. 112). M. Chrost includes “working in groups, discussion, practical activities, role playing, modelling of behaviors” (Chrost, 2012, p. 150) to them.

An academic education system called Polish National Qualifications Framework, being in force since October 2012, refers to these assumptions and teaching concepts. Social skills are understood as “an ability of forming one’s own development, as well as autonomous and responsible participation in professional and social life, including an ethical context of one’s actions” (www.kwalifikacje.edu.pl) in a legal regulation of PNQF. Therefore, it is not only a knowledge, the so-called didactic encyclopaedism, that counts, but also attitudes, which are a result of internalized values, play an important role. In the case of foreign language teaching these should be *e.g.* an attitude of respect, openness, tolerance towards a foreign culture. Therefore, a task of a foreign language teacher is to lead a teaching process, by selecting teaching content, forms and methods of work, in such a way to pass on, directly and indirectly, which behaviors are good and which are bad when having a contact with another foreign culture. It is secondary socialization, which also takes place under the influence of an academic education.

4. Conclusion

To sum up, it should be emphasized that in conditions of globalization, including profound cultural changes of a multicultural society, modern foreign language teaching at a university level should, apart from teaching foreign language systems and a knowledge of culture, focus its attention on teaching social competences. This is in line with demands of multilateral and activating education, which was promoted by great educators, such as Descartes, J.A. Komeński, J. Pestalozzi, J. Dewey, J. Bruner or W. Okoń. Besides an obvious fact of learning a new foreign language system during language classes, developing cultural intelligence and shaping a dialogue attitude, ability to listen to others, awareness of one’s own culture and a culture of a country of a taught language also play an important role. Attitudes of respect for otherness and understanding of other views should be improved in an education process and an institution of higher education should also be a place of a social development and blooming of humanity of a young person.

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PART III

DETERMINANTS OF FINANCIAL PROCESSES – ECONOMIC AND MANAGERIAL PERSPECTIVES



Chapter 26

Capital Flows in the Contemporary Economy

Tomasz Rojek

1. Introduction

Contemporary markets, which are characterized by the freedom to act, fast development of state-of-the-art technology, huge-scale technical progress, development of transport and rapid dissemination of innovations, contributed to an unquestionable revolution in economic activity. The barriers concerning time and space have diminished, the consequence of which is a considerable reduction in the costs of transport, the flow of the factors of production, and lower costs of international transactions. The freedom to provide services, and the free flow of capital have brought easiness in establishing international contacts, conducting economic activity in any place, which, in turn, is the reason for which world economies are becoming more and more linked to each other. It is a process as a result of which domestic markets and production processes are becoming more and more connected through the exchange of goods and services, the flow of capitals and technologies. This process is globalization, constituting a higher, more advanced and complex stage of the internationalization of business activity, understood directly as expanding the activity of the domestic economy abroad, in consequence of which the integration of numerous markets and economies via capital flows takes place (compare: Zorska, 1998, pp. 14-22). An inseparable part of the process of globalizing national economies is the globalization of financial markets. The intensive growth of international exchange of goods and services entailed an increase in capital flows, which in consequence forced national institutions shaping financial systems to make deep changes and adjust domestic financial systems to function on the global market.

2. Changes and transformations of the contemporary economy

The contemporary market economy is based on two pillars: economic freedom and investment and ownership safety. When any of these pillars is weakened, the quality of the operation of the market is considerably weakened. Economic freedom itself includes freedom in the area of consumption, the choice of a job and the place of work, undertaking one's own business activity, disposing private property, concluding all kinds of agreements, whereas investment and own-

ership safety on the one hand refers to economic culture and ethics which have the key influence on the level of trust, honesty and reliability of business collaborators, and on the other hand this safety appeals to the conviction that power is limited within the scope referring to a possibility to challenge the functioning system of values (Szymański, 2004, pp. 39-40).

The cause of substantial changes in the functioning of the world economy is the phenomenon of globalization which converts this economy from a set of relatively autonomous national economies, which are interrelated by means of trade exchange and capital flow, into the integrated system of commodity, service and financial markets linked by an expanded network of connections. Globalization covers the following areas: finance, markets and competition, technologies and related research and knowledge, lifestyles and consumption models, the legal sphere (Bogdanienko (ed.), 2006, p. 12).

A characteristic feature of the phenomenon of globalization, and, what follows, also internationalization, is the compression of time and space, which is a vital element of competition among entrepreneurs. Goods produced in one country are easily available in another country thousands of kilometers away, just after they have appeared on the home market. Nowadays, more and more seldom can we come across the situation when the whole production process of an enterprise takes place in one country. While adopting to the changeable environment, enterprises look for new solutions, not only technological, but also logistic and production ones, to optimize costs and ensure long-term growth to an enterprise (Bogdanienko (ed.), 2006, pp. 14-15). Globalization exerts major influence on the economy of individual countries, first of all it stimulates technological progress, forces innovative attitudes, influences better and more effective use of capital and production capacity and, what follows, the accompanying growth of the productivity of work. The globalization process positively influences the activation of local resources in the countries, owing to it the economic growth is to a greater and greater extent determined by the growth of productivity, which, in turn, is the reason of the liberalization of international trade, fosters the improvement of professional qualifications by workers, and first of all it positively influences the creation of the global standards of goods. As any phenomenon, also globalization brings negative consequences, among which we should mention the escalation of the disproportions in the economic development between highly developed and developing countries, and medium-sized and small countries whose role in the international relations is marginalized.

The growing connections among economies, the development of the liberalization and integration of trade markets, deregulation of domestic flows, the reduction of the costs of communication and transport, to a great extent caused by new technological solutions, have significantly changed the conditions of conducting business activity. The global economy “forces” the globalization of enterprise activeness. It is manifested by the relocation of production to any place in the world. To meet the growing pressure, enterprises are looking for cheaper and more effective ways of using the factors of production. Constantly developing and cheapening communication, and greater and greater openness of the global economy are the cause for which the localization of the factors of production is becoming less and less important, and competitive advantages which can be achieved thanks to their use are becoming more and more significant. This explains decisions of enterprises to search for other places of production, sometimes even at the cost of resigning from conducting activity on the domestic market. An important determinant of choosing the place for conducting activity is the level of taxes binding in a given territory. Frequently, enterprises look for the regions where it is possible to use available factors of production most effectively, and, in addition, to avoid excessive tax burdens – they look for tax paradises.

Contemporary economy gives much broader possibilities of capital localization than it was possible in the industrial economy. More effective economies, owing to deindustrialization and technological progress, have obtained an ability to divide the production process, execute its fragmentation based on the isolation of individual processes from the enterprise core activity and its subcontracting outside (outsourcing), or relocate a part of production to another country or region (offshoring). The effect of the phenomena of fragmentation and delocalization of economic activity is constantly growing production and the trade of the products being the parts, elements and components of the manufacturing process. Nowadays, the delocalization phenomenon does not concern only the production process, more and more types of services are located in developing countries.

Therefore, globalization exerts significant impact on enterprises, it forces strategic changes, stimulates to search for new paths of development, to identify own assets against competition, and to use effectively not only the possessed resources but also opportunities occurring in the environment. Obviously, there are also negative consequences of globalization, affecting enterprise itself. Undoubtedly, they could include the intensification of the global competition and cheap workforce forcing, in addition to the search for the growth of effectiveness, bigger and bigger reduction in prices of the offered goods, sometimes below the costs of production, which leads to bankruptcy.

3. The essence and the forms of capital flows

Capital flows exert great influence on the economies of individual countries, and thus they perform an important role in the global world economy. The international flow of capital is understood as the relocation of funds in order to invest them or locate them abroad, thus leading to the accomplishment of the intended effect, which is most often profit (Michałowski, 2013, pp. 131-132). While developing the subjective issue, the literature of the subject discusses international flows of capital in two variants: the broad one and the narrow one. In the broad meaning, they are understood as all moves of capital through the border, recorded in the balance of payments, not always based on the motive of profit, and performed by households, commercial banks and enterprises, as well as by central banks which thanks to them try to achieve specific macroeconomic aims (Stachowiak, 2004, p. 184). In the narrow meaning, they are profit-oriented moves of capital undertaken by households, enterprises and commercial banks (without central banks).

The capital which is the object of the trade exchange can be classified by means of various criteria. Taking into account the period of the deposit and the mobility of a capital, we can distinguish:

- a short-term capital – used abroad within less than a one year period or characterized by large mobility, and that means that it can be moved to another country at any time,
- a long-term capital – a capital transferred for over a year or a capital whose form limits mobility.

Assuming that the criterion of the classification is an entity being the capital owner, they can be divided into the private and the official ones. Private capital flows include the capital moves whose issuers are private economic entities, such as: enterprises, banks and other financial institutions, natural persons, private organizations, *etc.* The flows in this group are usually dictated by the wish to achieve profit. The group of official capitals includes all state capitals and capitals

belonging to financial and non-financial international organizations. An example here can be all kinds of budgets of government branches, local and international budgets. Capital moves from these entities are mainly dictated by a necessity to implement macroeconomic or regional goals (e.g. the activation of the exports of a given country or region). The group of official capital sources also includes credits granted by such organizations as the World Bank, the European Bank for Reconstruction and Development, or some kinds of credits granted by the International Monetary Fund (Budnikowski, 2006, pp. 138-139).

From the subjective point of view, thus the one concerning what the subject of financing is or where the funds are located, we distinguish capital flows coming from:

- foreign bank deposits,
- commercial credits,
- financial credits,
- portfolio deposits,
- direct investment.

Basically, international capital flows run in three forms: as commercial credits, direct capital investment and portfolio investment.

Credit is making specific funds available to a borrower, which the borrower can use for particular purposes. Credits can be divided into commercial and financial ones. Commercial credit is granted by an exporter of goods to an importer or, in the opposite situation, by an importer of goods to an exporter. These credits are closely connected with a trading operation, which means that if two parties have not concluded a purchase – sale agreement, a commercial credit cannot be obtained. The characteristic feature of export credit is that the payment for the exported merchandise takes place before it is sent. Import credit is a situation when the payment for the merchandise takes place in advance or partly in the form of advance payment. An exporter grants a credit to an importer when the supply of the merchandise is higher than demand, whereas an importer of goods grants credit to an exporter when supply is lower than demand. Commercial credits, also called trade credits, are divided into three groups according to the criterion of time. These are: short-, medium- and long-term credits.

The other kind of credits, namely financial credits, consist in handing funds over to a borrower, without limitations as for the way they are used. These credits are most often granted by banks to other banks, however, there are sometimes financial credits between enterprises. Loans to foreign entities are related to a much bigger risk because the borrower is outside the jurisdiction of the lender's country. If the borrower belongs to the IMF (International Monetary Fund), there is no risk of the borrower's insolvency, otherwise it is quite real (Bożyk, 2008, p. 104).

Foreign direct investment (FDI) is one of the basic forms of capital flows in the world economy. It is characterized by large dynamics of development. It also has some specific features owing to which, on the one hand, they are desired both by the receiving and the home countries, and on the other hand they may also be a cause of anxiety (compare: Olesiński (ed.), 1998, pp. 13-16). The category of direct investment primarily includes financial flows on account of investment, supplying the initial capital of enterprises being established, reinvested profits on this investment and liabilities related to the debts of the enterprises of direct investing enterprises to foreign investors. Capital in the form of direct investment is commonly regarded the most beneficial and safe form of foreign investment in the country. Foreign direct investment most often serves the development of multinational links between capital-related firms, thus, between branches and parent companies or exclusively between branches.

The third form of capital flows in the world is portfolio investment. This term is understood as capital deposits in foreign securities, mainly shares and bonds, made by private people or enterprises. The motive of such investment is a wish to achieve higher risk than in case of domestic deposits (Guzek, 2006, p. 115). Purchase of shares is the most frequently occurring form of portfolio investment today. What contributes to it is the economic stability in the world and relatively small percentage of bankrupting enterprises in the overall number of business entities. Shares are issued by entities functioning in the form of a joint stock company and can be of domestic or foreign character. In addition to shares, portfolio investment also includes speculative purchase of State Treasury bonds issued only to balance the budget. Such issuance is characterized by the inflated level of interest rate to be able to attract foreign capital. During the estimation of income from this type of bonds, not only interest rates but also the fluctuations in the currency of a given country must be taken into account.

4. The determinants of capital flows

The growth of activeness of enterprises on the global international market and the associated development of export naturally caused the expansion of the activities of financial institutions. The dynamic development of firms had to be supported by adequate sources of financing and their supranational range determined the development and globalization of the local financial markets. The capital flow and technical progress on the financial markets drove further development of economies connecting them in one global network of dependencies.

The most important determinants of changes on the contemporary financial markets are:

- technical and technological progress, particularly the development of information technologies and the Internet,
- high standardization of information and faster information flow,
- the process of deregulation and liberalization on domestic financial markets,
- growing competition on the market of financial services,
- the process of integration of local financial markets,
- globalization of national economies, particularly in respect of the flow of capital, knowledge and people.

Considering the above conditionings as general motives of the international transfer of capital in the contemporary economy, we can mention the following ones (Balcerowicz, 1987, pp. 42-46):

- Political – are an expression of the willingness to bring foreign help in the form of donations, subsidies, repayable financial aid, or compensations for losses caused as a result of military operations via the payment of reparations by foreign countries.
- Humanitarian – are the reflection of foreign aid provided in the situation of the occurrence of natural disasters or as a result of military operations, “they include donations, long-term net loans not intended for military purposes and granted by state institutions or international organizations, and technical help” (Stachowiak, 2004, p. 161).
- Economic – caused by the maximization of profits of economic entities.
- Military – related both to political and economic movements. They are created by the transfer of specific goods (weapon, military equipment), services (*e.g.* training the army), as well as funds for the implementation of state ventures.

In the process of the globalization of financial markets, the key significance has also a possibility to use modern IT and telecommunications solutions to manage a great number of transactions concluded by financial institutions on all continents at the same time. Without such technological possibilities in banking, on the securities market and in other segments of the financial market, the globalization process would not be so significant.

The liberalization of domestic financial markets has eliminated the restrictions in the functioning of both domestic and foreign financial entities. The regulations concerning the scope of the services provided by banks and other financial institutions have been changed. New legal regulations have been created, enabling an increase in the activeness of non-banking financial institutions, and the limitations in non-residents' access to domestic financial markets have been diminished or eliminated. The most significant factor was the liberalization of capital flows. It primarily included the abolition of limitations preventing the free flow of capital among countries, and in particular:

- The abolition of limitations concerning foreign direct investment and the exchange of goods and services with non-residents.
- The transition of developed countries to regimes with liquid exchange rate, the creation of the Euro zone and other supranational integration initiative.
- Diminishing the taxation of trans-border transactions.

Without free capital flow in the international trading, the liberalization of domestic financial markets would be practically impossible. Financial institutions, not possessing full possibilities to conclude capital transactions, in fact would not be able to develop their activeness on various markets to a greater scale. Therefore, the basic reasons for the participation in international capital flows include (Szablewski (ed.), 2009, pp. 346-348):

- Economic profit – the differences in the profit rate among individual countries are an economic basis of flows to the world scale. The capital is taken away mainly from the countries in which the downward trend of the profit rate appears most strongly, the size of the market is limited, there are high remunerations, taxes and prices of raw materials. It is exported to the countries with a high profit rate.
- The strive to achieve higher interest rate on free capitals, profit rate on deposits, minimization of risk.
- Guarantee of the access to scarce sources of raw materials – alongside the development of production, bigger resources of raw materials are required at possibly low prices. Investments on various markets enable to ensure foreign supplies of raw materials necessary for fast-growing production.
- Finding new sales markets – in the conditions of free competition at a high level of rivalry among producers, a better position has the one which produces goods directly on the market of the biggest recipient. Then it can react fast to changes in demand and can shape it itself through adequate marketing tools.
- Omitting barriers by means of locating capital in the countries in which these barriers do not operate.
- Using the technological advantage – transfer to less technologically developed countries.
- Investment in the countries which are more stable politically and economically in order to reduce the risk of conducting economic activity.

- Reduction of production costs – this reason make foreign concerns invest in developing countries. In highly developed countries, the extended regulations concerning the protection of the environment and strong trade unions increase current costs of enterprises.

Globalization of international financial markets has brought about the growth of capital flows and increased a variety of both the entities participating in transactions on that market and the instruments they use. The changes which have occurred in the structure of domestic and international financial markets have brought about the weakening of the function of banks in the role of a financial intermediary and the growth of the significance of non-banking institutions and institutional investors (insurance companies, investment funds, pension funds) in attracting savings available on the market (Oręziak, 2004). The entities, striving for the achievement of additional profits, consciously take a risk. For this purpose, they transfer capitals very quickly, depending on how the situation on international financial markets shapes. The emergence of a new category of creditors is accompanied by the phenomenon of so-called securitization, namely a replacement of traditional form of liabilities – receivables with transferable securities. As a result of this, capital flows are running much faster and to a much greater scale than in the times when capital flew mostly in the form of bank credits (Lutkowski, 1998).

5. The consequences and prospects of the growth of capital flows

The process of the globalization of financial markets has enabled the free flow of capital, which, on the one hand, creates numerous opportunities for the foreign capital inflow. On the other hand, however, this freedom may cause a reverse trend, the outflow of capital from the country. It is the basic threat globalization brings, the threat a lot of countries cannot cope with. Strong links among financial markets also cause too big influence on the stability of exchange rates, the stability of prices, and a necessity of the real assessment of investment risk.

In the globalization of international financial markets we can find both positive and negative impacts on economy. Undoubtedly, the process of globalization has primarily brought about the growth of capital flows and increased a variety of entities participating in transactions on that market, as well as the instruments they use, which, in turn, has facilitated the access of developing countries to foreign savings. It should be also noted that the positive overtones of the globalization of financial markets were manifested in the reduction of the costs of loans and an increase in the possibilities to invest (the growth of possibilities for more beneficial investing of funds, and for raising funds by borrowers). Moreover, it is important that foreign financing sources are more and more dominated by equity investments which do not cause the growth of foreign debt. An opportunity to locate funds freely where they will give us most measurable benefits occurs. Investors operating on the international financial market have a possibility to diversify their investment, which gives them a possibility to achieve the desired balance between their profitability and the associated risk. When analyzing the benefits, we can say that the globalization of financial markets should also positively influence the quality of life in the countries which participate in this process (Oręziak, 2004).

The main factor inclining economic entities towards capital transfers outside the country in which they operate is similar as in case of the migration of capital within the state. The factor is the strive for the optimization of the portfolios of their deposits, and, what follows, to

the maximization of the profit achieved by them. We should pay attention to the fact that the profit is perceived as the value adjusted for markups on account of various types of risk occurring then. The entities making capital transfers abroad are exposed to a different type of risk than in case of domestic flows. Therefore, they will decide on such a move only if possible profits compensate possible losses they may suffer. Typical types of risk related to foreign transfers include: currency, political and credit risk. In spite of the fact that credit risk also accompanies capital transactions within the country, in this case it takes on more significance because of bigger general insecurity of foreign deposits (Lutkowski, 2007, p. 240). In the literature there is a view suggesting that free capital flow through borders is as needed as its movement in the country. It is believed that the migration of capital outside the country enables even more effective use of it. The movement of capital in the international area quite often ensures higher return rate, but it also carries a new risk. A condition necessary to achieve higher return on the invested capital is locating it on the market which reveals demand for capital, convergent with its purpose. The positive aspects exerted by the global capital flow are as follows:

1. By flowing from country to country, capital increases the production potential of the inflow area. It happens because the migrating capital brings new technical solutions and influences the qualifications of the workforce. It is one of the reasons for which underdeveloped countries want to attract capital.
2. Owing to the increase in the production potential above what a given country could achieve using exclusively its own resources in order to improve its chances for development, the capital flow also enables to the ones saving in the country exporting capital to obtain a higher income rate on investment in the form of interest or the payment of dividends. It may have impact on the rise in investments in respect of the amount and the value of the located capital.
3. Investing capital abroad opens new opportunities and enables broader diversification of the deposit portfolio, which positively influences its overall profitability and reduces the level of its risk. The improvement of the profitability is possible due to the business cycle which is different in time in individual countries. When there is recession in one country, in another one there may be economic growth.
4. The openness to capital flows exerts a positive influence on the level of competition in each sector of economy. The liberalization of capital flows has direct impact on the development and modernization, as well as the effectiveness of the financial sector itself.
5. The inflow of capital to the financial market provides necessary funds, owing to which it becomes more liquid, safer and more efficient.

To sum up, it should be noted that owing to bigger and bigger capital flows, the access of developing countries to foreign savings has become easier. It enables the reduction of the costs of loans and increases the possibilities to invest. It is also important that foreign sources of finance are to a greater and greater extent dominated by equity investments which do not result in the growth of foreign debt. The funds coming from abroad can supply internal savings on the condition that they will not be withdrawn quickly. However, nowadays, a large part of capital flows has a speculative character (it is detached from real processes), thus, it is characterized by the lack of stability. Foreign investors constantly observe the country which makes its growth conditional on the rising debt. When their assessment of a given market changes or the moods on international markets change, foreign capital can outflow rapidly and cause the outbreak of a currency crisis (Bilewicz, 2003).

6. Conclusion

The dynamic development of new technologies was of the key significance for the process of the globalization of financial markets. The reduction of the costs of data processing and sending has enabled to increase the scope of the operations of financial institutions. Improving the computer performance has enabled almost immediate valuation and creation of new financial instruments. Owing to that, the development of new products, markets and forms of financial intermediation has taken place. The speed of sending funds enables the change in the place of capital location and its relocation among markets. The cost of raising capital has gone down, and the forms of raising capital, alternative to the credit, have been created, especially from the issuance of securities on financial markets. What has become a characteristic feature of the global financial market is the liquidity and an intensified number of the transactions concluded between entities on the international markets. The consolidation of the financial market entities combined with liberalization has caused the acceleration of the globalization processes. The integration of financial markets enables better diversification of risk.

The globalization effects have significantly influenced the development and functioning of the whole financial system. They have increased the effectiveness of the operations of financial institutions, at the same time rising the probability of the occurrence of disturbances and negative phenomena. In the era of the global economy, the occurring co-dependencies and close connections among entities at the international level may bring worldwide problems. In case of the occurrence of a financial crisis, it touches not only individual economies, but the whole international system. The lack of transparency arising from the asymmetry of the access to information causes the risk of the formation of so-called "speculative bubbles" and herd behaviours of investors. Opening to the international exchange of developing economies attracts foreign capital. However, in case of the worsening economic situation, it may be withdrawn very quickly, thus causing the occurrence of currency crises. In consequence, it may turn into the crisis of the banking and financial system. Apart from unquestionable advantages, the liberalization of financial markets has also decreased the number of instruments and restrictions which control and discipline banking activity. In recent years, it has brought about excessive crediting of some sectors and exceeding permissible bank indicators. The credit boom, particularly granting a lot of credits in foreign currencies, related to considerable exchange risk, may bear fruit in a serious crisis.

All of the aforementioned conditionings related to the globalization of financial markets, and as a result of an increase in the capital transfers in the global economy are the reason for which there is no univocal opinion with regard to the assessment of the discussed changes. It is because they carry both positive and negative effects. However, what is important is the awareness of the inevitability of the presented processes, the necessity to monitor them and react flexibly to the effects arising from them.

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Chapter 27

Conceptions of the Centralized and Decentralizing Organization of State Internal Financial Control

Andriy M. Lyubenko

1. Introduction

Institutional organization of state financial control in a public sector can be presented in different forms. Internal financial control in the system of department branch of power can be carried out by the centralized and decentralizing order.

At the centralized method of organization of internal financial control of public finances an only organ, which carries out the functions of internal control and audit of ministries and departments, establishments and organizations, is created in the system of government. Such body is created within the framework of ministry of finance. Such conception is widespread in most countries of European Union.

The decentralizing method of organization of internal financial control foresees creation of subdivisions of internal audit in ministries, departments, establishments which use state facilities or own state property. Such approach is widespread except for the European countries also in the USA, Canada and Great Britain.

Conceptions of co-operation of external and internal financial control in Ukraine during the last 20 years formed under act of achievements in this sphere of foreign countries taking into account a domestic base.

If external control in action of external body of parliamentary control, which is in countries the higher body of control, are new in Ukraine, then a control constituent is second – internal financial state control of bodies of executive power has deep traditions of functioning yet in the days of the soviet system.

Combination in the modern terms of foreign approach and evolutionary transformations of domestic bodies of state financial control needs standardization of norms in form standards. Thus, it is necessary to consider alteration of the state internal financial checking which takes place after the conceptual fluidizers of the European countries making of the standardized approaches at the level of his organization and methodology in Ukraine systems.

2. Centralized and decentralizing organization of state internal financial control

Conception of state internal financial control was worked out by the European Commission at the end of 1990 and now used for guidance support of countries which aim to develop the modern systems of state financial control (http://ec.europa.eu/index_en.htm [22.05.2014]). The unicity of this conception is underlined by abbreviation which is used to that end – state internal financial control (SIFC), first used by Robert de Koning at the article, published on a forum SIGMA on questions a management in November, 1999 exactly for authentication of conception, offered by the European Commission, but not description of any other varieties of the state checking systems.

We consider SIFC is the constituent of all sphere of state finances, which spreads from formulation of the state budget, through a statement and implementation of budget to the treasury, fiscal management and management a debt, embracing a record-keeping, accounting, purchases, internal control SIFC affects the topics of development of internal control in a public sector, that is why his track, to our opinion to examine as a clear list of all-embracing rules, sent to transparency and efficiency in a state sector. By such rules which carry current character there are exactly control standards.

Ukraine, as well as other countries of postsoviet period, began to inculcate the international standards of control and audit, record-keeping and accounting in the national politicians and legislative process. For this purpose inculcated practical recommendations in relation to their application, which were based on realization of principle of responsibility of guidance and functionally independent audit in a state sector. However simultaneously these processes became destructive for existent domestic control structures, and adaptation of many institutes exactly at the level of organization, given methodology very difficult and difficultly. Therefore the real results of introduction of the European standarts as yet not in practice of control activity. To expect a change possibly, to our opinion if changes in a legislation and rules are adequately inculcated in practice of control and get better in course of time. Control standards become the inalienable constituent of such normative providing of high-quality implementation of the already realized European legislation, as norms of the only understanding of requirements for their correct implementation control bodies. It and task for most state specialists of supervisory bodies, which must lay hands on thorough modern knowledge in industry of control and audit, simultaneously using support sure of rightness to the vector of European development of direct guidance. It is important to underline that principle of responsibility which changes power at governmental level, political crisis situations must not conduce to the change in the structures of internal control and audit. The changes of governments must not influence and destroy the created structures of control, but the system of trust, honesty and professionalness the standards of state financial control can provide exactly, as high-quality basis him functional implementation by state structures.

From May, 2004 on initiative the European Commission on the basis of the got experience of introduction of the modern state internal checking systems Central subdivisions of harmonization of control and audit were created in the internal department checking system. Exactly on them a task to propagandize the new standards of control and support the institutes of SIFC during co-ordination of state efforts in direction of improvement of efficiency, economy and effectiveness in the sphere of state finances is laid.

The discussion of prospects of development of state internal financial control and state internal audit among professionals is impossible without the conclusions of failures of control function in the system of corporate management of state enterprises of ENRON, Worldcom, Barings, Parma-

lat and other, that had catastrophic consequences for state finances of many countries. All sources assert that “incompetence, avidity, weak distribution of plenary powers and duties, ignoring advices of internal audit, became main reasons of failures, internal control which was characterized by the conflict of interests” and others like that is distorted. Influence of these factors became destructive for employers and shareholders, on the whole for a public trust through machinations of state corporate administration. Standards of record-keeping in a state sector not in the last turn through the use of method of extra charge allow manipulation, that is why internal public accountants need thorough knowledge of high level of complication for the evaluation of accounting of state corporations and other establishments, departments. Therefore aspiration after all of these negative events to improve position of internal control and internal audit through the increase of their quality entailed new direction of development of scientific approaches on the basis of realization of norms of the Conceptual government the risks of COSO II and Sarbanes–Oxley Act (<https://www.sec.gov/about/laws/soa2002.pdf> [22.05.2014]). Such direction begins to develop and in domestic science. It is important, that a state sector in Ukraine mastered the consequences of such events, to adapt oneself and use various instruments, recommended and for private to the sector, to improve state corporate administration. And the most important question consists in that, how to identify responsibility of guidance. Most researchers underline that in a state sector (and such situation is characteristic for the entire countries of postcommunist countries) leaders of level of ministers and directors of governmental corporations, spend budgetary facilities, not especially having regard to the use of resources with the purpose of due, transparent, exemplary financial management. Leaders follow political ambitions, they are concentrated on short-term results and successes and less interested in the stable functioning of their departments or adequacy them base procedures (in accordance with the laid functions). Flowsheets are mostly absent in relation to such procedures, thus and to estimate quality of their implementation sufficiently difficultly. Taking into account the limited nature of state resources and growing requirement in transparency and responsibility, leaders must become more interested in that, to improve the results of policy in part of economy, efficiency, effectiveness. From this point of view a state sector differs from private to the sector of economy, thus accordingly it must be other measuring of activity of guidance. The new going is therefore needed near state administration and in particular realization of him basic function – control function, in fact it is important to be concentrated on success of implementation of state plenary powers for the consumer of state services. Such new approach must be based on certain rules – in standards which will have a common action for all performers of control function.

Principle of responsibility of leader is main principle which must be fixed in basis of the system of financial management, as Jule Moon marked, ex- director general of Service of internal audit of the European Commission during appearance at conference on May, 13-14, 2004 in Amsterdam. He named support of guidance the second inalienable principle an internal audit in relation to an analysis and understanding of weak parties of the checking systems, worked out by guidance. For terms, when guidance fully will realize quality of the checking systems and encourage inferiors to adhere to the rules, creating a good example, a requirement in an internal audit in theory can відпасти. However, to attain such idealizing situation, it is needed to have a difficult and clear set of rules and obligations which will well perceive and inculcate all accountable for every aspect of control. Thus, necessary standards of both control and description of technological processes of state enterprise, the observance of which will witness internal control and internal audit. Thus, to aspire to the corresponding state a management it follows, realizing conception of state internal financial control.

For this purpose it is necessary not only to prepare a legislation on the basis of conclusions and recommendations in relation to introduction of conception of SIFC, having regard to practice of Ukraine but also remove operating norms which will hinder to appearance of new determinations in accordance with conception. Traditionally domestic norms, which have considerable historical basis in practice of control, but протипричать to the new concepts and determinations, are on the defensive operating state leaders which do not give to adjust to the new terms in obedience to standards and rules.

Table of contents of standards and rules, in which organizational and methodical principles of conception of SIFC will be realized represents formed in European countries form of construction of SIFC, which united the best practices of his realization.

State internal control in the European countries represents realities, administrative agencies related to the evolution, by ponderability of status of Ministry of Finance in governments, by the presence of the State Treasury, with the existent structure of control and with that, the as far as centralized is certain financial measures.

From middle of 1990 years scientists were distinguish two substantially excellent constructions of internal control. The first and more widespread was characterized by the centralized functions of control, which was concentrated in different variations in control procedures. Establishments or structures of financial inspectors are specially formed under the direction of central body, such, as for example, Ministry of Finance, were authorized to carry out control plenary powers from verifications of expense of budgetary facilities. At the same time guidance depended upon services of the internal centralized control during the acceptance of financial decisions, it is thus possible to witness circumstance that principle of responsibility of leader was not developed properly.

A decentralizing internal audit played not a single substantial value, a financial audit was carried out by financial inspectors or inspectors, but an independent system audit did not exist. Such approach is known as the Latin (Napoleon's) type of construction of control in countries. Countries with such decentralizing approach in control is Belgium, France, Italy, Portugal, Greece, Spain. For today such approach loses the positions and begins to mutate, as he does not answer modern conceptions of construction of internal control in the countries of the European Union. Modifications will consist in development of responsibility of guidance internal audit, dividing an internal audit and inspection, підпорядковуюючи previous financial control under responsibility of guidance.

The second construction of state internal financial control developed the different forms of governmental corporate management (systems in which government institutions are managed and controlled), in that time as a leader was responsible for the financial decisions and management results and that is why nose responsibility for development and improvement of the internal checking systems. For fulfilling commitment to the leader it followed to use recommendations of internal audit. An internal public accountant estimated, as far as these financial checking and management systems answered standards, gave a report properly to guidance and gave to recommendation in relation to the improvement of these systems. Such approach which was based on the posts of complete responsibility of guidance and independent internal audit was named South-European approach or approach of responsibility of leader. The just the same construction of state internal financial approach was realized by the European Commission as conception in 2000.

The duties of Commission touch determination of standards of control and audit in the public sector of the European countries in relation to which controlled and checked up by an audit adequacy of the national checking of the use of budgetary resources. The primary purpose of introduction of only standards is an obstacle to the swindle in a country during the expense of budgetary facili-

ties. Memorandums are about the mutual understanding, celled between countries and European Commission, which inculcates conception of SIFC based on that in the states which chose the democratic way of development it must be built “corresponding financial control” and “national body of financial control”. Will consider essence of such terms, as they are important during development of standards of financial control in Ukraine. After opinion of the European Commission, financial control will correspond, if it is possible to show the “effective chart of internal and external control, related to activity of institutes of control and functionally independent public accountant actions of department audit, effective system of record-keeping and accounting”. The external in relation to controlled department establishment (but internal in relation to parliamentary control) body of control submitted, as a rule, in to Ministry of Finance. This body of the centralized control must keep independence from be what executive branch of power and to report immediately in front of minister or government. Its duties to develop standards for harmonization of internal audit and control are laid, in order to avoid application of different approaches in a state sector.

A concept “corresponding financial control” was exposed through conception of SIFC by Robert de Koning in 1999. Meant state, in opinion of specialist, scope of all types of activity of public sector in a counterbalance to control procedures and audit in the private sector of economy. Internal – that, which embraces control procedures, which are carried out by centralized and by decentralizing government bodies in a counterbalance to external control which is carried out on behalf of parliament. Financial – underlines character (administrative, budgetary, administrative) of types of activity, which are subject to verification. Control, after opinion of Robert de Koning, means all measures for the review of all sphere of financial management, giving possibility to “manage” state finances to the government. Therefore embraced all instruments of control, as, for example, previous control and audit. From here the concept of state internal financial control is interpreted as an internal monitoring of government system, sent to defence of financial interests of government on the whole, at that time as name the measures of financial control, which are conducted by the external body of control, external control, on which lay a task to study and estimate the financial checking of government of country systems. In this context internal audit state to the sector is the general sphere of measures of next verification by subdivision, which is the constituent of public institution of that, whether control system and control comport with the purpose of budgetary establishment, its rules, standards, in general expression – with principles of the proper financial management. These internal audits include tests on accordance and authenticity, system audits, operating audits, audits of information technologies and other varieties of verification, which the independent internal audit of public institution considers a necessity to conduct for providing of that guidance adhered to the financial rules and decisions. For effectiveness of results of internal audit of public institution in standards it follows to provide the adequate mechanism of retroaction on the got conclusions and recommendations of internal audit.

Experience of state control, which was formed to the middle of 1990 in foreign countries, influenced on such understanding of elements of SIFC. Determinations of internal control and internal audit must be wider, as internal control embraces financial control more than. Internal audit – it more than only next verification, and he differs from an administrative inspection or next financial control.

There are many practical recommendations in the sphere of internal control and internal audit, but international standards, worked out INTOSAI became basic norms for determination of internal control. A term “the internationally concerted standards and determinations and the best practice of EU” is a term, fixed in basis of understanding of standards and determinations in relation to control. Last release of standards, викладених in Guidance from internal control in the public

sector of INTOSAI in November, 2004 was extended by positions from a management risks on the enterprises of state sector, known as conception of COSO I and COSO II.

Historical pre-conditions of term are an audit, which are realized in modern conception of SIFC and must be realized in standards for control, formed long before a present epoch. In 1285 King of England Eduard II decided that inferior, “what owe for to the accounts, can be convict to imprisonment”. In further mention about conception of realization of audit is found researchers in the records of the English public accountants, when information of Treasurers of City of London must be checked up by a committee on “six good people, select in presence all society of city”. Thus, practice of “hearing of accounts” is old enough, and she proceeded long time. At the beginning of the XIV century next advice to the public accountants was stopped up Walter of Henley in a book from property administration: public “accountants are under an obligation to be faithful and careful. and accounts must be heard after every manor, it is and then possible to know about gains and losses, businesses and improvement of сенешаля, police officer, police and other”.

In 1494 Luca Pacioli, franciscan monk, was the first, who described principles of double entry, such, as they were practiced in North Italy. His “Sum” from algebra contains the treatise of “De Computis et of Scripturiis”. Chapter 32 examined, as ledgers were closed and opened. Records in books were read out aloud by a helper, whereupon a proprietor (listener) marked them a mark in a ledger. At the end of reading out and realization of audit in it appeared books any articles which did not appear in both from them.

The audits of City of Aberdeen, which are dated 1580 for years used expressions it is “heard, are seen, considered, counted up and settled by public accountants”. In 1882 in the British magazine “Accountant” the done reference to the old encyclopaedia which it is said in, that to “conduct an audit means to listen everything, that can be mentioned on the considered subjects, to form an opinion, which on the whole is used to the study and writing down of accounts by persons, adopted public accountants, but which in these transactions rather inspector”.

Analogical practices are found researchers in Mesopotamia, Chinese and Indian, Greek and Roman civilizations.

Clearly, that since then an audit tested substantial development, but main descriptions of audit – to listen, mutual trust, preparation of reports and recommendations on independent basis. A mutual trust can exist clearly, that, only if an audit is conducted by an objective, professional and transparent method. During an audit fear of punishment is the wrong state for open discussions and for a confidence. An internal audit, in particular, is based exceptionally on a trust between partners, but not to fear. To listen, to check, possibly only about the events of the past. Therefore an audit is next activity. A public accountant listens, that a leader (for example, in the accounts) will say about structures and models of control system and control, and check afterwards, whether these statements answer to the rules, and whether these systems comport with principles of economy, efficiency and effectiveness. Therefore a term “next audit” testifies to obvious, and here a previous audit is impossible on determination.

And mark however, that a term “previous audit” is used, for example in the questions of state audit in relation to the preliminary estimates of marketability of those or other budgetary programs. In France also there is a similar variety, has the name “initial audit”, carried out by the central union of power, which consists of general inspectors, to estimate adequacy of formulation of purpose of the ministerial programs which are offered by a minister on questions a budget. In these audits the criteria of quality touch aims and indicators of the program, plans of actions, but not transactions, as the last did not yet take place.

A previous audit is not remembered in Division 1 of Lima Declaration (<http://www1.worldbank.org/publicsector/pe/befa05/LimaDeclaration.pdf> [22.05.2014]), although there is reference to the audit which is preceded to those or other transactions, as activity or review before actual administrative or financial actions, which is inalienable for the proper management state funds. An audit, executed by such method, is let in on the ground in relation to that which can warn losses to their actual appearance. However also has certain defects, as here the washed out of duties and responsibility is after an operating right.

In the context of conception of SIFC in the European countries understand next determination of the internal checking which is carried out in the state sector of economy system.

The internal checking system embraces rules, processes, tasks, conduct and other aspects of public institution, which together:

1. Promote her to the effective and effective functioning, giving possibility properly to answer on substantial economic, operating, financial risks, risks of violations and other risks, to attain unit of establishment. It also foresees maintenance of assets from the no-purpose use or from a loss or swindle, and providing of that obligations were determined and managed.
2. Help to provide quality of the internal and external accounting. It needs support of the proper records and processes which generate the stream of modern, actual and reliable information inwardly and from outside public institution.
3. Help to provide implementation of corresponding laws and decisions, and also internal rules in relation to realization of economic activity.
4. Carries out control on the basis of analysis of risks and management risks.

If to specify the aims of state financial control, then in accordance with a table tasks specify his aspiration in relation to certain controlled units.

Table 1. Objectives and tasks of state internal financial control

Objectives of SIFC	A task is in accordance with objectives
Providing of legality of forming, distribution, accumulation, use of budgetary facilities	Providing of observance of budgetary legislation Providing of observance of other legal acts which regulate budgetary legal relationships Improvement of financial discipline Warning, non-admission, prevention, preparation of recommendations, violation of budgetary legislation is from the removal of the educed violations
Upgrading of budgetary account and accounting	Estimation of rightness of budgetary account and accounting Validifying of budgetary account and accounting Estimation of accordance to the normative requirements of budgetary account and accounting Warning, non-admission, prevention of rules of conduct of budgetary account and accounting is preparation of recommendations from the removal of the educed violations
Increase of efficiency of budgetary facilities	Estimation of efficiency of the use of money state and local budgets Estimation of economy of money spending of state and local budgets Estimation of effectiveness of money spending of state and local budgets Exposure of possibilities of increase effectiveness of money spending of state and local budgets

The internal audit of public institution system represents a control environment which embraces her organizational structure. The system includes, after the most general approach, next elements:

1. Control activities (previous, followings, inspection, revision, monitoring).
2. Processes of information and communication.
3. Processes are for monitoring of the protracted effectiveness of the internal checking system.

External elements in relation to a control environment are the Higher public accountant committee (in Ukraine absent analogues) and Parliamentary budgetary committee. Internal audit and after the standards of internal audit, and from scientific determinations of such concept interpreted as activity from the grant of objective guarantees and consultations, which independently follows inwardly establishments and adheres to philosophy of receipt of benefit, to improve the operations of establishment and attain results. He helps establishment in achievement of aims by the systematized and successive going near an estimation and increase of efficiency of processes of management, control and corporate management public institution, risks.

4. Conclusion

Thus, the internal control which operates in accordance with conception of SIFC system accepted by the European Commission for basis, must create such due control environment which except for the basic constituents of the internal checking system at the level of establishment, would contain certain descriptions of control environment. A culture, code and other systems, which support general aims, management and internal checking system risks, behaves to them. Control environment, formed at the level of public institution it must demonstrate necessary propensity to the competence, honesty and assistance of клімат trust, clearly to determine plenary powers, responsibility and accountability, that made decision and control actions were carried out the proper level, in obedience to the accepted standards.

As a control environment is characterized by a management risks, must at the level of standards be produced clear strategies for the conduct of public accountants, inspectors with the educed risks, which is supported by adequate knowledge, abilities, instruments and attention to the necessities at adaptation of processes and control actions, to represent new and changeable risks.

SIFC takes into account all these aspects and combines internal control and internal audit in one conception, as well as in the model of COSO, adding a new element – centralized establishment, accountable for harmonization and co-ordination of standards and rules both internal control and internal to the audit for all agencies of government service here. Introduction of new principles without any centralized accompaniment creates pre-conditions of the differentiated going near introduction of conception of SIFC, and that is why an element of centralization at the level of body of state administration is the inalienable constituent of this process.

The idea of conception of SIFC it is possible to represent as follows:

SIFC = Internal Control + Central Unit of Harmonization

Internal control (IC) is described by a formula:

IC = Internal Control System + Internal Audit

An inspection guidance separately is not distinguished in this formula, but enters in the complement of the internal system and named decentralizing next control. The inspection centralized at the same time from the side of government control body must be limited to investigation

of complaints, swindle and violations and not carry out standard control actions, as for example, previous and current financial control.

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Chapter 28

Optimization of Management Processes of Crediting Innovation in Ukraine

Tetyana Novikova, Snizhana Pashova

1. Introduction

In the article the steps of optimization of the processes of management crediting innovations in Ukraine are suggested, the expediency of carrying out the optimization management that will improve the financing of innovative projects and programs in Ukraine is grounded. The practical significance of the use management processes optimization and crediting innovation in Ukraine is proved.

2. Statement of the problem

One of the direction in the works of scientists who were engaged in improving the bank investment crediting is implementation of the optimization management in banking institutions, the essence of which is to provide the process of bank investment crediting with the most profitable characteristics that are in the ratio of the minimal price of the resources borrowed, minimal risk and maximal profitability.

Usage of the optimization management in that bank investment crediting of innovation activity in Ukraine is impossible without taking into account the current condition of the banking sector, namely the spectrum of problems, shortcomings and unsolved issues of the precrisis, crisis periods and the period of stabilization. It is determined by, on the one hand, the banking sector – is a separate component of the source of funding innovations, the development of which requires permanent financial resources, the accumulation of which is achieved by the use of it different bank accumulation instruments and redistribution of funds between the subjects of market relations, and on other of the influences the implementation of the state innovation and of the investment policy by achieving efficiency and sustainability of the subjects of innovation activity by investment crediting of innovations. The availability of the existing range of banking sector issues forces to use various management decisions on the use of financial instruments not only for the implementation of measures to eliminate them, but also in order to satisfy the needs of the subjects of innovation activity in bank investment crediting of innovation projects.

3. The results of the management of crediting innovation of the researches in Ukraine

Examining the relationship between investment and innovation subjects, based on the continental-European model of organization of innovation activity, it should be emphasized the existence of stable relations between them and the banking sector. That is why the satisfaction of needs of innovative activity in the banking investment innovation crediting is defined as the use of various management decisions on the accumulation and redistribution of “long funds” and is measured to solve problems, shortcomings and unsolved issues from the interaction of investment and innovation activity.

Drawing attention to the agreement need of management measures to minimize the problems, shortcomings and unsolved issues raised not only in the banking sector, but also in the relationships between the subjects of investment and innovation activities, in our point of view, it is appropriate to apply the optimization management in the implementation of the investment banking crediting innovation activity in Ukraine. Then its essence can be determined, foremost, as the basis of efficiency of management interactions between the subjects of innovation and the banking sector, based on the current state of Ukraine’s economy. In our opinion, one of the main factors of this interaction – is a clarification need of opportunities to prevent or minimize the impact of problems, shortcomings and unsolved issues in the marked interaction. Therefore, it can be claimed that the overall efficiency of bank investment crediting innovation activities depends largely on the formation of administrative decisions of the bank, foremost, to address the problems and shortcomings of the outstanding issues in its work on innovative investment crediting projects. By the development of this interaction increases the efficiency of bank investment crediting innovation.

Talking about the need for optimization of the management process of banking investment crediting innovation activity in Ukraine, from our point of view, it is necessary to define its main stages, the realization of which by the application management solutions allows to activate bank innovation crediting investment activity in Ukraine. Because of this, we define five stages of the optimization of process management banking investment crediting innovation activity in Ukraine: setting goals, identifying problems, shortcomings and unsolved issues, the implementation of management decisions to minimize themselves, realization of bank investment crediting innovation activity in Ukraine, obtaining results from implementation of management decisions.

3.1. The first stage of the optimization management processes of crediting innovation in Ukraine

Adhere the view that the first stage is reduced to setting goals: boosting investment banking crediting innovation activity in Ukraine. In other words, to achieve closeness of the relationship between the banking sector and subjects of business innovation activities, regarding the implementation of innovative investment crediting projects.

3.2. The second stage of the optimization management processes of crediting innovation in Ukraine

In our opinion, the second optimization stage of the management process in banking investment crediting innovation activity in Ukraine provides, as already noted, the detection range of issues, gaps and unsolved issues of the banking sector. Moreover, considering the fluidity and variability of economic fluctuations and their detection in the pre-crisis and crisis periods, as well as during stabilization process.

3.3. The third stage of the optimization management processes of crediting innovation in Ukraine

The third stage of the optimization process management, from our point of view, is making the decision by banks in Ukraine in order to minimize the negative impact of problems, shortcomings and unsolved problems of the banking sector on the interaction between the subjects of investment and innovation.

Thus, the problems, shortcomings and unsolved problems of the banking sector during pre-crisis period were characterized by the high cost of credit, which was tried to reduce centralized methods by decreasing the rate of the National Bank of Ukraine (hereinafter – NBU) (Pashova, 2012). However, these actions caused not only the reduction in price of bank credits, but also the reduction of deposits rates. This, in turn, created a new problem – lack of potential bank resource. A high proportion of short-term funds in the potential bank resource forced governance incur additional costs on advertisement to create an attractive image of the bank. Moreover, the need to develop encouraging programs for investors’ “long funds”. However, even in this way the problem was solved.

Adhere the view that in the implementation of government crediting programs priorities for innovation enterprises formed a closer relationship between the government, the banking sector and business innovation, as the result it has improved attractive investment climate in Ukraine. However, the lack of clear regulation legislation and confusion categorical apparatus did not favored the development of innovation infrastructure.

Implementation of process optimization management during the crisis required a greater effort on the part of the banking sector, as economic instability significantly influenced the development of relations between the subjects of investment and innovation. With the depreciation of the currency escalated risk of non-repayment and interest. Banks tried to extinguish its timely and complete formation of reserves, however, as a result, have met with the problem reducing the resource base. However, the attempt to stop increasing arrears failed. Escalated the problem outflow deposits from banks, to eliminate National Bank of Ukraine has applied a centralized ways of influencing – a moratorium on repayment of deposits.

So stick to the view that the problem of distrust of enterprises in Ukraine and in the financial and credit system was the result of a national financial instability. Therefore, appeared a new problem associated with long-term imbalance volumes of loans and deposits. Bank crediting of the economy dropped to a critical point, and the number of financially weak banks unable to secure the interests of clients increased.

Changing fluctuations of the banking sector led to the decline of the insurance sector, the bankruptcy of the non-bank financial institutions. Thus, working in stable conditions adopted business model activities were ineffective during the crisis. There was a need to develop new business models of financial institutions and implementing instructional materials for them.

The state as a guarantor of economic stability was forced to support the banks and begin debt restructuring. Public investment has been directed to implement programs mergers and acquisitions of weak banks stable. We believe that the implementation of these management decisions contributed securing financial and credit sector from significant losses, and an infusion of cheaper money into the economy – reduced the cost of bank loans and increase their availability. The results of the implementation of management decisions were – financial stabilization customer service, improvement of financial institutions balances, reducing the balance of risks.

The only area of economic relations, which is hardly affected by the crisis, in our opinion, was the field of financial derivatives. State legislation is not conducive to the emergence of the virtual economy, as in Ukraine derivatives are not widely used. Therefore, this deficiency was a positive factor.

Implementation of process optimization management during stabilization on overcoming and minimization problems, shortcomings and unsolved problems of the banking sector and enhance investment banking lending innovation activity is the implementation of management decisions (Tab. 1).

Thus, according to the materials meeting the “round table” on “Innovative approaches to Ukraine’s economic development: priorities and ways of achievement” (Zhalilo et al.), we reckon the determining trends shaping the modern instruments public policies aimed at stimulating innovation and investment, including:

- to exempt from tax funds of banks, insurance companies, pension funds and other financial institutions that have invested in the company of the real economy in order to create financial and industrial groups, and individual investment and innovation projects;
- to differentiate corporate tax rate banks based on uses of resources by reducing their long-term loans in case of high-tech projects and increasing investment of resources in case of high yield transaction in financial market;
- to introduce preferential taxation of income from insurance business innovation (by taking away the relevant changes to the Tax Code of Ukraine);
- to mobilize and concentrate the available investment resources to increase the effectiveness of their distribution and use for economic restructuring, attract external financing and foreign investment;
- to weaken the dominant role in the emission channel exchange mechanism in favor of increasing the effectiveness of interest policy. The main problem, from our point of view – is to ensure positive values of the real interest rate, because it is an important factor in the investment activity of enterprises. We believe that the main condition for the diffusion of innovation in sectors of the economy is low interest rates on loans to eligible enterprises in these sectors that have significantly lower levels of profitability.

Table 1. Acceptance of management decisions during of the stabilization process

No.	Problems, shortcomings and unsolved problems	Management decisions	Result of making management decisions
1	2	3	4
1	Lack of capitalization of banks	<u>NBU</u> : implementation of the capitalization of banks. <u>Banking institutions</u> : implementation management of internal and external sources to accumulate capital	Increasing equity, improving the reliability, stability and dynamic development of the banking sector, strengthen the capacity of resource base
2	Inconsistency innovation and investment policy of the bank and the state	<u>State</u> : enabling environment to attract banks to lend projects of innovation. <u>Banking institutions</u> : the creation of credit products for credit investment and innovation projects; development of adequate and most important criteria decision on the possibility of investment crediting innovation activity	Implementation of crediting innovation
3	High risks initiate a bank investment lending innovation activities	<u>Banking institutions</u> : implementation of syndicated or consortium of lending, implementation of innovative projects involving international capital	Distribution of risk between the parts of the credit relationship
4	Corruption, non-market approaches, poor credit management	<u>Banking institutions</u> : the distribution of risk between the parts of credit relationship	Increasing the culture of market relations
5	Low interest of bank crediting in innovation	<u>State</u> : decreasing tax on banks' profits. <u>NBU</u> : facilitate the establishment of specialized innovative investment banks <u>Banking institutions</u> : the establishment of integration associations of all types, of interbanks, science and banking consortiums, investment and innovative integration associations, <i>etc.</i>	Diversification of credit, increasing the opportunities for crediting innovation
6	The absence of innovation infrastructure	<u>State</u> : establishing state plans of crediting innovation activity in priority areas <u>NBU</u> : increasing the power of banks within the integration associations of all types <u>Banking institutions</u> : liaising with members of the investment crediting innovation, borrowing useful experience	The development of innovation infrastructure, strengthening partnerships between the subjects of investment and innovation activities
7	Formation of innovative investment component in the credit portfolio of banks and its subsequent usage	<u>Banking institutions</u> : the establishing of internal guidance material to determine whether crediting innovation, ranking according to quality characteristics are useful	Simplification operation of bank in choosing investment project, saving time and current costs for making decision where to invest

Source: Pashova, 2011, p. 119.

Thus, we believe that for strengthening the role of the banking sector in investment lending innovation activities is required:

- to accelerate recapitalization of the banks by improving investment conditions in the banking sector;
- to impose tax incentives for investment in bank capital;
- to liberalize the access for foreign bank capital in the financial market of Ukraine;
- to create a network of specialized banks: mortgage, land, residential crediting, servicing small and medium-sized businesses and others. Practice shows that for the implementation of innovative practices crediting activity, banks should have cheap resources that are redistributed on behalf of the state. In such circumstances establishment of investment banks on the basis of public resources is relevant, but on the basis of commercial;
- to increase the proportion of “long money” in the structure of bank resources by enhancing the mechanisms of long-term refinancing, creating attractive conditions for long-term deposits of the population;
- to improve the insurance system of bank crediting and investment insurance innovation;
- to carry out the development of long-term bank crediting institutions, foremost, to introduce into force the State Bank for Reconstruction and Development, which will carry out a long-term credit support investment and innovation projects related to the restructuring and modernization of the industry.

We reckon that it will help:

- the organization of borrowings on international financial markets for crediting investment and innovation projects in Ukraine and the provision of state guarantees for such loans;
- to provide loans for innovative projects, including the competitive selection of projects, their expertise, financing costs of the project, the financial support of the project and repay the loan;
- institutionalization of processes managing the funds that remain available for businesses as a result of tax incentives for investments (more on that above);
- introduction of decentralized crediting instruments to encourage innovation activities of enterprises, in particular the combination of flexible forms of capital banks and enterprises through the establishment of mutual funds for the purpose of raising capital to implement innovative projects;
- state system of insurance against risks of innovation activities, including specially created public or public-private insurance companies;
- mechanism of state insurance innovation loans, including loans issued to small businesses that are developing and implement an innovative high-tech products and activities, are related to the significant investment risk;
- establish a state venture capital firm, which would have legally fixed right to conduct concessional lending companies-innovators through the appropriate department in the region (Zhalilo et al.).

3.4. The fourth stage of the optimization management processes of crediting innovation in Ukraine

The fourth stage of the optimization process of management of bank investment lending innovation, from our point of view, the realization of the purpose is lending, which is preceded by

a list of actions with consideration of specific innovative projects identified in their bank selection method, using evaluation criteria of innovation projects and making decision on the possibility of investment lending, method of providing innovative project to minimize risks attracting bank resources and other lending method.

3.5. The fifth stage of the optimization management processes of crediting innovation in Ukraine

From our point of view, the fifth stage of the optimization process management determines the outcome spectrum of management decisions taken by banks in Ukraine to minimize the negative impact of problems, shortcomings and unsolved problems of the banking sector on the interaction between the subjects of investment and innovation. The result of implementation of the optimization management process banking investment lending innovation activities by specific banking institution, the aggregate banking sector and the national economy consists of:

- long-term expansion of banks' resources;
- increasing the total amount of credited innovation;
- receiving national economic and social effects;
- supporting bank liquidity;
- strengthening anti-crisis measures;
- supporting global stability in the modern world;
- improving the competitiveness of the banking sector in investment lending innovation.

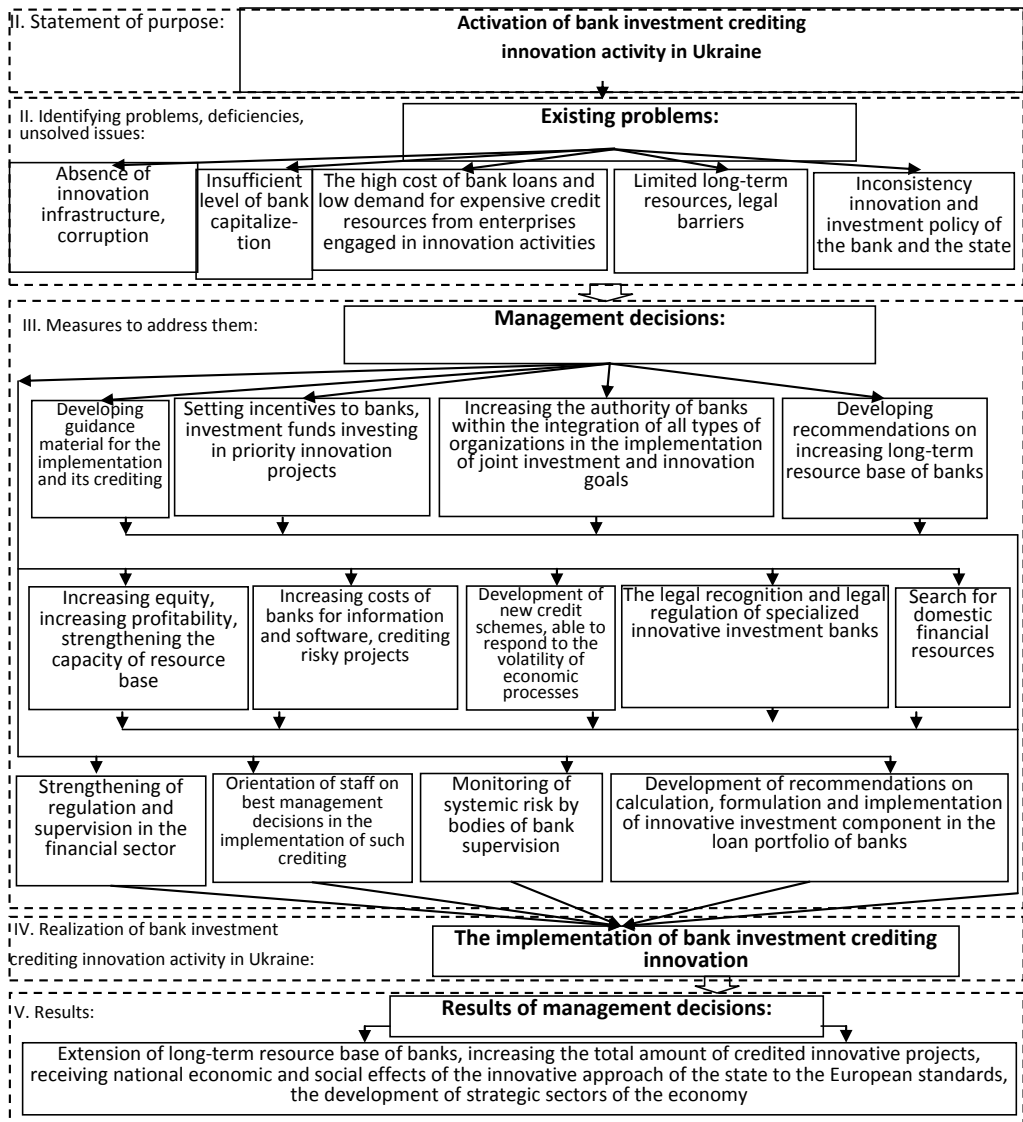
Thus, we reckon that achieving closeness of the relationship between the banking sector and business innovation activities in the implementation of innovative investment lending projects in the stages of pre-crisis, crisis periods and during the stabilization process through the implementation of the banking sector management solutions minimize the problems, shortcomings and unsolved issues of its operations, it is useful to generalize the optimization process of management of bank investment crediting innovation.

4. Activation of bank investment crediting innovation activity in Ukraine

We believe that the essence of optimization of management of bank investment lending innovation activities is interrelated defined as a whole stage: setting objectives, identifying problems, shortcomings and unsolved issues, the implementation of management decisions to minimize their realization in bank investment crediting innovation activity in Ukraine, obtaining result from the introduction of management decisions (Fig. 1) (Pashova, 2011, p. 116).

Realization of the optimization process of management banking investment crediting innovation activities is achieved, from our point of view, by developing inter-bank instructional materials and concepts of this process, the orientation on staff to achieve the best management decisions in the exercise of such loans, the development of credit schemes that can respond to the volatility of the economic environment and not to lose its attractiveness for lending innovation.

Figure 1. Stages of process of the optimization of management of bank investment crediting innovation activities



Source: own work.

5. Conclusion

Application of the optimization process of management of bank investment crediting innovation activity in Ukraine has a practical value:

- firstly, it combines the challenges, gaps and unresolved issues during the pre-crisis, crisis period and the period of stabilization processes and identifies measures to address them, which brings the optimization process of management of bank investment crediting innovation activity in Ukraine to the realities of today.

Only by examining the impact of the crisis on the banking investment crediting innovation activity in Ukraine starting from its inception, during the peak, and finishing with completion of the thaw, we can offer effective management decisions to enhance bank investment crediting innovation activity in Ukraine that provides further significance to the research:

- secondly, the result that is planned to obtain is adjusted to current economic conditions;
- thirdly, the main task of the optimization management is reduced to retaining stable processes in the banking sector and to activation of the state bank investment crediting innovation activity in Ukraine.

Stages of the process of the optimization management of bank crediting investment innovation activity accumulate management activities of the bank sector, the National Bank of Ukraine and the state, because of the close relationship between them, which directly affects the closeness of the relationship between the banking sector and business innovation activities to implement investment crediting innovation, reflecting the main goal of the implementation process.

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Chapter 29

Sources of Financing in the Market of Renewable Energy in Poland

Katarzyna Frodyma

1. Introduction

Energy-related issues such as variable prices of petroleum, interruptions of energy supply from non-EU countries or difficulties with accessing the market encountered by suppliers of gas and electricity have caused that energy has become one of the major political themes while the use of renewable energy sources is perceived as a key element in the energy policy. The 20-20-20 target¹ was adopted in 2009. It is a “climate and energy package” establishing targets for 2020; *e.g.*, that at least 20% of the final gross energy consumption in the EU is to be derived from renewable sources.

Detailed targets of Poland’s energy policy include increased share of renewable energy sources in the final energy consumption to 15.5% in 2020 (19.3% for electrical energy, 17% for heating and refrigeration, 10.2% for transport fuels). Increased use of energy from renewable sources, which is to be achieved by Poland by 2020, is connected with considerable financial expenditures on this economy sector. Funds used to finance renewable energy sources are to be taken from two sources:

1. domestic funds,
2. EU funds.

This article is aimed at presenting and analysing sources of financing for investments connected with deriving energy from renewable sources. It is divided into three parts. In the first part, there is the discussion of financing sources of renewable energy until 2013, when the period of financing investments with EU funds intended for the period 2007-2013 ends. This period has enabled practical testing of the mechanisms of applying for EU and domestic funds, their control and accounting. The second part contains the summary of the use of these funds in the period as well as the analysis of the effects of expenditures made. Another European Funds programme concerns the budget for 2014-2020. These funds will be actually available from 2015. During the bridging period of 2013-2014, the National Fund for Environmental Protection and Water

¹ Directive 2009/28/EC of 23 April 2009.

Management² will be the elementary source of investment financing. The third part of the article concerns currently available funding options for the investments connected with renewable energy sources.

2. Sources of financing until 2013

The major domestic source of financing is the National Fund for Environmental Protection and Water Management, which has functioned since 2 July 1989. The chief objective of the National Fund is to support financially environmentally-friendly investments of national and suprarregional importance as well as local tasks that are significant from the perspective of environmental needs. Three forms of financing are available in the National Fund:

- loans (loans granted by the National Fund, credits granted by banks from the resources of the National Fund, consortiums – joint financing – National Fund with banks, credit lines from the resources of the National Fund served by banks),
- grants (investment grants, non-investment grants, subsidies to bank credits, remissions),
- capital financing (acquisition of shares and stocks in companies that are incorporated or already exist, for the purpose of achieving ecological effect).

Under priority programmes, the National Fund for Environmental Protection and Water Management pursued schemes related to renewable energy³, described in Table 1.

Table 1. Programs of Fund for Environmental Protection and Water Management

Name of scheme	Form of financing	Kind of projects financed
OZE 1 (RES 1 – Renewable Energy Sources 1)	15-year loans with a low interest rate, covering up to 75% of eligible costs of investments in RES whose total cost exceeded PLN 10 million	production of heat and electrical energy by using biomass and biogas, wind power plants with a power below 10 MWe, generation of power from geothermal waters, hydropower plants with a power below 5 MWe, high-efficiency cogeneration without the use of biomass
OZE 2 (RES 2 – Renewable Energy Sources 2)	15-year loans with a flat 2% interest rate, covering up to 75% of eligible costs of investments in RES whose total cost amounts to PLN 0.5 to 10 million; the objective of the programme was to supply the market with extra 120 MW of green energy	production of heat and electrical energy by using biomass and biogas, wind power plants with a power below 10 MWe, generation of power from geothermal waters, hydropower plants with a power below 5 MWe, high-efficiency cogeneration, generation of thermal energy in heat pumps, generation of electrical energy in photovoltaic and solar systems

² National Fund for Environmental Protection and Water Management – Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej.

³ Based on “Fundusze na odnawialne źródła energii – poradnik” [Funds for renewable energy sources – guide].

Third scheme	credit subsidies for the purchase and installation of solar collectors, equal to 45% of the gross credit principal	purchase and installation of solar collectors used to heat tap water in buildings intended or used for residential purposes
GEO-TERMIA	grant for the use of geothermal waters for energy-related purposes	conducting environmental research related to prospecting for and exploration of thermal water resources to use these waters to produce energy
	grant for examining the geology of the country and management of mineral deposits and underground water resources	
	grant for reducing nuisance resulting from the exploitation of minerals	projects aimed at reducing nuisance resulting from the exploitation of minerals and their enrichment as well as limiting the negative environmental impact of the processes of liquidating mining plants, actions related to concluding liquidation and restoration works in the areas degraded by sulphur mining

Source: own work.

Province Funds for Environmental Protection and Water Management are province earmarked funds within the meaning of the Act on Public Finance of 30 June 2005, subordinate to local governments. The resources of province funds come from public funds, which is important for the financial engineering of projects supported under public aid rules. Each of the 16 province funds conducts its own policy of applying the aid instruments (arising out of the Act), which also results from the fund's resources. Province funds also give priority to projects focused on the fulfilment of accession obligations of Poland with regard to environmental protection, in particular in the range of waste management and waste and sewage management, and the majority of these resources are intended for this purpose. The protection of air is of lesser importance, so the development of renewable energy sources is not treated as a priority. Support instruments of province funds:

- preferential interest on loans with the option of partial remission,
- subsidies to interest on credits and loans,
- grants.

In each region of Poland there are separate programmes of supporting investments in renewable energy sources. They concern different kinds of beneficiaries, various types of investments and have varied forms as well as subsidy amounts.

Apart from domestic funds, there are also EU funds available. The cohesion policy for 2007-2013 was aimed at increasing the economic growth and employment in all regions and cities of the European Union. With the decision of 7 December 2007, the European Commission passed the Infrastructure and Environment Programme for 2007-2013. This programme involves extensive infrastructural investments in the field of environmental protection, transport, energy, culture and national heritage, health care and higher education. The total value of financial resources involved in the execution of the Infrastructure and Environment Programme for 2007-2013 amounted to EUR 37.7 billion, of which the European Union contribution was at the level

of EUR 28.3 billion and domestic funds amounted to EUR 9.4 billion. The Infrastructure and Environment Programme involved 15 priorities, including two related to the financing of renewable sources of energy:

- PRIORITY IV – initiatives aimed at adjusting enterprises to the requirements of environmental protection – EUR 667.0 million (of which EUR 200.0 million from ERDF⁴);
- PRIORITY IX – environmentally-friendly energy infrastructure and energy efficiency – EUR 1,403.0 million (of which EUR 748.0 million from CF⁵);

New EU member states also gained extra source of support from Switzerland. Under the Swiss-Polish Cooperation Programme, Poland was to be granted approximately EUR 311 million. Projects financed with these funds were selected by the Swiss Parliament (Bundesrat) in agreement with the beneficiary state. Motions and needs as well as the absorption capacity of each party applying for state funds were taken into account. The Bundesrat and the European Commission were to inform each other about the current use of the resources. Apart from that, the Commission was to conduct the preliminary control of the projects in terms of their compliance with the objectives of Community policies. Beneficiaries must make their own contributions, as well, usually 40% of project costs. Projects of institutional support and activities of non-governmental organisations which may be fully financed from the Swiss budget were privileged.

Furthermore, Poland used funds from European Territorial Cooperation Programmes for 2007-2013⁶. European Territorial Cooperation aims to support, promote and execute joint international programmes in the whole territory of the European Union. It means the continuation of crossborder, transnational and interregional co-operation programmes within the INTERREG III Community Initiative 2004-2006. European Territorial Cooperation was implemented with the help of three kinds of operational programmes:

1. Cross-Border Cooperation Programme focused on developing joint local and regional initiatives, promoting cooperation and direct contacts supporting economic and social development as well as environmental protection in borderland areas, usually characterised by lower development level in comparison to average in the country. Joint cross-border actions concerned, among others, energy systems.
2. Transnational Cooperation Programme directed at territorial integration of the European Union by supporting accessibility, sustainable development of urban areas, innovation and environmental protection.
3. Inter-regional Cooperation Programme enables the exchange of experiences and best practices in the scope of, for example, support of innovations and knowledge-based economy as well as environmental protection.

In the new programming period (2007-2013) within the European Territorial Cooperation Programme, only one programme was executed: Inter-regional Cooperation Programme – INTERREG IV C. This programme covered the whole territory of the European Union and included participation of partners from 27 EU member states as well as Norway and Switzerland. Under this programme, activities aimed at improving the effectiveness of regional policy were supported by promoting innovations and knowledge-based economy as well as environmental protection and hazard prevention. The budget of the programme amounted to EUR 321 million (ERDF funds exclusively).

⁴ ERDF – European Regional Development Fund.

⁵ CF – Cohesion Fund.

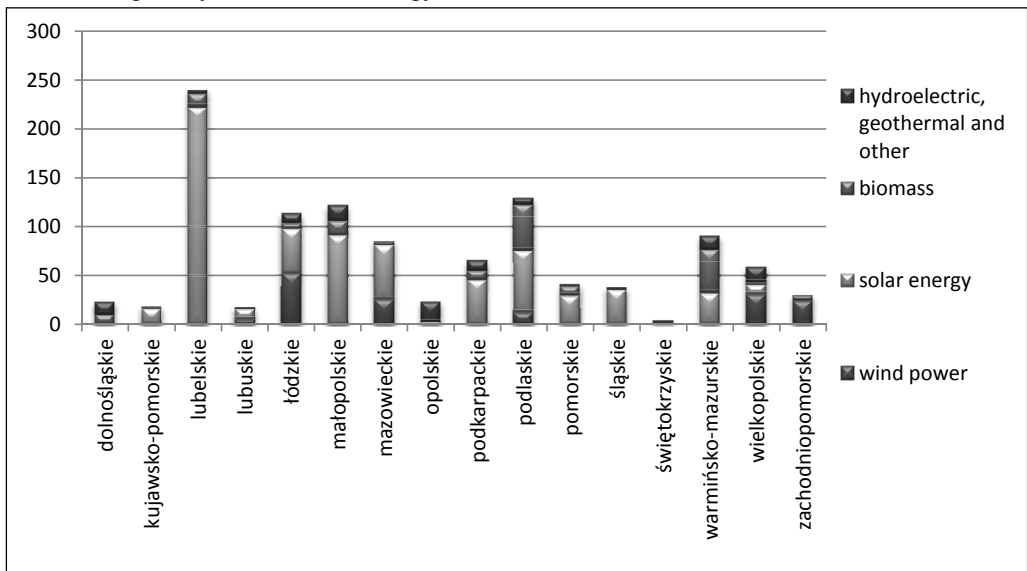
⁶ Information on European Territorial Cooperation Programmes taken from the Structural Funds website.

3. Effects of expenditures made until 2013

According to the data generated from the National Information System KSI SIMIK 07-13⁷, from its launching date to 30 April 2014, projects connected with renewable energy were subsidised with the total of almost PLN 1.6 billion from the resources of the Operational Programme Infrastructure and Environment. The largest projects were associated with wind power, with the grants amounting to PLN 1,268.05 million. In case of projects related to biomass, grants amounted to PLN 320.56 million and projects related to solar energy were subsidised with the sum of PLN 6.40 million.

The total amount subsidised with EU funds under Regional Operational Programmes was almost PLN 1.1 billion. The greatest amount of funds went to the Lublin Province (cf. Fig. 1) – more than PLN 239 million, of which over 222 million was intended for solar energy. The Łódź Province received the amount of more than PLN 52 million – the largest sum for investments connected with wind power. The highest grant for investments connected with biomass was obtained by the Podlaskie Province (PLN 47.34 million) and the Warmia-Masuria Province (PLN 44.65 million). The lowest amount of grant for investments related to renewable energy was used by the Świętokrzyskie Province (PLN 1.50 million for solar energy and 2.21 million for other sources).

Figure 1. UE grant amounts (in PLN million) within Regional Operational Programmes connected with priority: “Renewable energy”

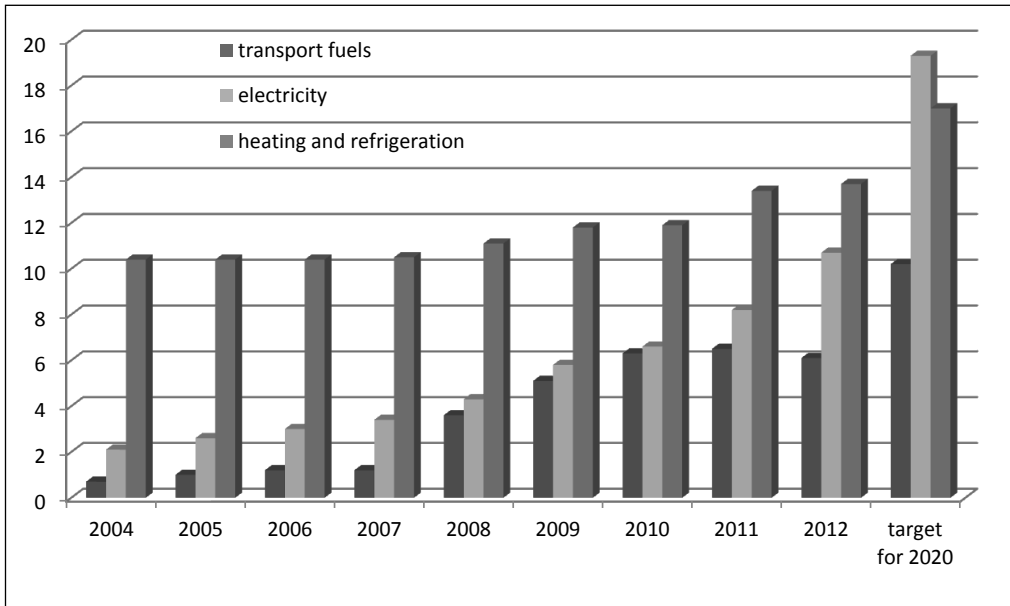


Source: own work.

Data for the period 2003-2012 shows a considerable share of energy from renewable sources in the total consumption of electricity in Poland (cf. Fig. 2).

⁷ The report was generated on 22.05.2014 from www.funduszeuropejskie.gov.pl.

Figure 2. Share of energy from renewable sources in the total consumption of energy in Poland



Source: own work.

The best situation in terms of the execution of the objectives of energy policy concerns heating and refrigeration (only 3.3 percentage points missing) but the worst situation is observed in the sphere of electricity (8.6 percentage points missing but the growth during the 8 years was the greatest and amounted to 8.8 percentage points). In the sphere of transport fuels, 4.1 percentage points are still missing to the assumed target. In order to comply with the EU obligations, successive investments are necessary in this field of economy.

4. Currently available sources of financing energy from renewable sources

The National Fund for Environmental Protection and Water Management⁸ has implemented many programmes since 2014, including several connected directly with the issues of energy from renewable sources. The “atmosphere protection” programme involves two schemes:

1. Scheme 3.3. Supporting distributed renewable energy sources; the scheme consists of four parts:

Part 1) STORK – Distributed renewable energy sources – programme aimed at limiting or avoiding CO₂ emission through increased generation of energy from installations using renewable energy sources.

Part 2) Scheme for renewable energy sources and high-efficiency cogeneration projects.

⁸ Information from the website of the National Fund for Environmental Protection and Water Management, www.nfosigw.gov.pl/srodki-krajowe/programy.

Part 3) Subsidies for partial repayment of bank credit principal intended for the purchase and installation of solar collectors for natural persons and housing communities.

Part 4) Prosumer – subsidy line intended for the purchase and assembly of micro systems of renewable energy sources.

2. Scheme 3.4. Green Investment Scheme, consisting of seven parts where three are directly associated with renewable energy sources:

Part 2) Agricultural biogas plant.

Part 3) Biomass power plants and thermal power stations.

Part 4) Construction, extension and reconstruction of power grids for the purpose of connecting generation sources of wind power (renewable sources of energy).

There will be eight priorities⁹ within the new Operational Programme Infrastructure and Environment in the years 2014-2020; two of them are connected with renewable energy sources. The first one is the Cohesion Fund: *Promotion of renewable energy sources and energy efficiency* to which the sum of EUR 1.263 million is to be intended. Through the Ministry of Economy, the funds are to be allocated to projects aimed at promotion, distribution or use of renewable energy sources, improved energy efficiency in the public and residential sector or implementation of smart distribution systems. Priority V is the European Regional Development Fund: *Development of energy security infrastructure*. Here, the mediator will be the Ministry of Economy again and the total grant amount will be equal to EUR 642 million. It is to involve the financing of projects aimed at the development of smart systems of distribution, storage and transfer of natural gas and electricity.

Regional Operational Programmes for the years 2014-2020 related to energy from renewable sources are executed in the following provinces: Małopolska Province, Podkarpackie Province, Silesia Province, Opole Province, Świętokrzyskie Province and Lublin Province¹⁰. These programmes (described in Table 2) are related to four priorities:

4.1 – Supporting the generation and distribution of energy from renewable sources;

4.2 – Promoting energy efficiency and using renewable energy sources in enterprises;

4.3 – Supporting energy efficiency, smart energy management and use of renewable energy sources in public infrastructure, including public buildings and the housing sector;

4.7 – Promoting the use of high-efficiency cogeneration of heat and electricity based on demand for useful heat.

⁹ More information can be found on the European Funds website.

¹⁰ Information from: www.eko-dotacje.pl.

Table 2. Regional Operational Programmes

Province	General information	Investment priority
Małopolska Province	within this programme, entrepreneurs can receive support in the scope of renewable energy sources under Priority Axis IV (Regional environmentally-friendly energy policy) in which the sum of EUR 411,764,706 is to be allocated	4.1 and 4.3
Podkarpackie Province	within this programme, entrepreneurs can receive support in the scope of renewable energy sources under Priority Axis III (Pure energy) in which the sum of EUR 298,500,000 is to be allocated	4.1 and 4.7
Silesia Province	grants for entrepreneurs for renewable sources of energy will be given under Priority Axis IV (Energy efficiency, renewable energy sources and low-emission economy). Allocation for Axis IV: EUR 880,325,830	4.2 and 4.7
Opole Province	entrepreneurs will be able to obtain grants for renewable sources of energy under Priority Axis IV (Low-emission economy) in which the sum of EUR 120,588,235 is to be allocated	4.1 and 4.2
Świętokrzyskie Province	grants for entrepreneurs for renewable sources of energy will be given under Priority Axis III: Effective and green energy	4.1 and 4.2
Lublin Province	within this programme, entrepreneurs can receive support in the scope of renewable energy sources under Priority Axis IV (Environmentally-friendly energy) and V (Energy efficiency and low-emission economy). Allocation for Axes IV and V: EUR 186,847,058 and EUR 278,858,824	4.1 and 4.2

Source: own work.

Furthermore, “Norwegian funds”¹¹ are still available: Operational Programme (PL04) “Saving energy and promoting renewable energy source” under the Norwegian Financial Mechanism 2009-2014. The goal of the programme is to reduce the emission of greenhouse gases and pollution as well as to increase the share of energy from renewable sources in the total balance of energy consumption. Projects eligible for grants are also those under the programme: “Reducing the production of waste and emission of pollution to air, water and soil”, which involve the modernisation or exchange of the existing sources of heat, with the modernisation of the combustion process or use of an alternative energy carrier (e.g. combustion of gas, oil or biomass by eliminating the combustion of coal).

“Swiss funds”¹² are available as well. Swiss Funds involve non-refundable foreign aid granted by Switzerland to Poland and nine other EU member states that accessed the European Union on 1 May 2004. Pursuant to international conventions concluded on 20 December 2007 in Bern, more than 1 billion Swiss francs are to be allocated to ten new member states. Almost half of the funds

¹¹ Information from the website of the National Fund for Environmental Protection and Water Management, www.nfosigw.gov.pl/srodki-norweskie/programy/program-pl04-2014-energia.

¹² Information from <http://fundacjaenergia.pl/obszar-aktywnosci/dofinansowania-i-doplaty/srodki-szwajcarskie>.

(approx. CHF 489 million) are intended for Poland under the Swiss-Polish Cooperation Programme. Swiss funds are supposed to reduce social and economic differences between Poland and more developed EU states as well as differences in Poland – between cities and regions which are poorly developed in structural terms. Several schemes have been created within Swiss funds, including programmes focused on environmental protection and renewable sources of energy.

European Territorial Cooperation Programmes for the years 2014-2020 in which Poland participates are still under preparation¹³. They are being developed by international working groups whose members include representatives of government and local government administration from countries involved in cooperation. Document drafts are also subject to social consultations. The initiation of these schemes is planned in 2015, after they are approved by the European Commission.

5. Conclusion

Increased share of energy from renewable sources in the total production of energy is currently one of the priorities of energy policy. Greater share is connected with incurring considerable financial expenditures on investments. These investments are financed from both domestic and foreign funds. Until 2013 Poland mainly used the financial resources of the National Fund for Environmental Protection and Water Management and Province Funds for Environmental Protection and Water Management. Poland also used foreign resources, such as the Infrastructure and Environment Programme within the Cohesion Fund, Swiss-Polish Cooperation Programme and European Territorial Cooperation Programmes.

The European Union has planned in its budget considerable funds for the development of this economy sector for subsequent years. New Infrastructure and Environment Programme for the years 2014-2020 was approved. Regional Operational Programmes will also be in effect. On 23 May 2014 the European Commission adopted “Partnership Agreement” – the most important document which specifies the strategy of investing a new pool of European Funds in our country. In this way, Poland was one of the first states to conclude negotiations on this strategic document. Poland will also use resources from Norway under the Norwegian Operational Programme and from Sweden under the Swiss Fund. Apart from foreign funds, also resources of the National Fund for Environmental Protection and Water Management are available.

Despite a considerable increase in the share of energy from renewable sources in the total consumption of energy in Poland in the years 2004-2012, much remains to be done to fulfil the requirements of the EU Directive on the promotion of the use of energy from renewable sources.

It should be added that expenditures on renewable sources of energy involve not only investments but also the financing of the society’s education in this respect. As the opinion polls of TNS OBOP¹⁴ indicate, Poles have a positive attitude to the issue of renewable energy. 45% of the population would be eager to use energy from renewable sources in their households. The same percentage of citizens give a positive answer to the question concerning their willingness to invest in small household renewable sources of energy.

¹³ More information can be found on the European Funds website www.ewt.gov.pl.

¹⁴ Based on “Polacy o źródłach energii odnawialnej. Wyniki badania opinii publicznej – 2013 r.” [Poles about sources of renewable energy. Results of opinion poll – 2013].

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Chapter 30

Evaluation of Organization of Retail Lending

Tetiana Girchenko, Kateryna Kupriyenko

1. Introduction

Nowadays the main participants of the retail lending are enterprises, organizations, credit unions, pawn shops and banks. The concept of retail lending covers a lot of features, including the ability to receive goods or services in a shorter time and at a convenient time for a customer, help in paying unexpected expenses (payment for policy of compulsory insurance of collateral, *etc.*).

Effective organization of this process is very important for banking institutions. As the customer's choice and future earnings of the bank depends on the operational efficiency.

The purpose of this article is to explore the basic principles of retail lending in the current conditions and to analyze the basic problems of retail lending.

The following objectives were set to solve these problems: to evaluate the components of the credit process in banks and to analyze this market.

2. Theoretical aspects of the retail banking

Proper organization of the bank lending process, development of efficient and flexible management of credit operations are the basis of financial stability and market steadiness of banks.

The following specific features of the retail lending can be identified (Vovk, 2008; Savluk, 2002; Moroz, 2009):

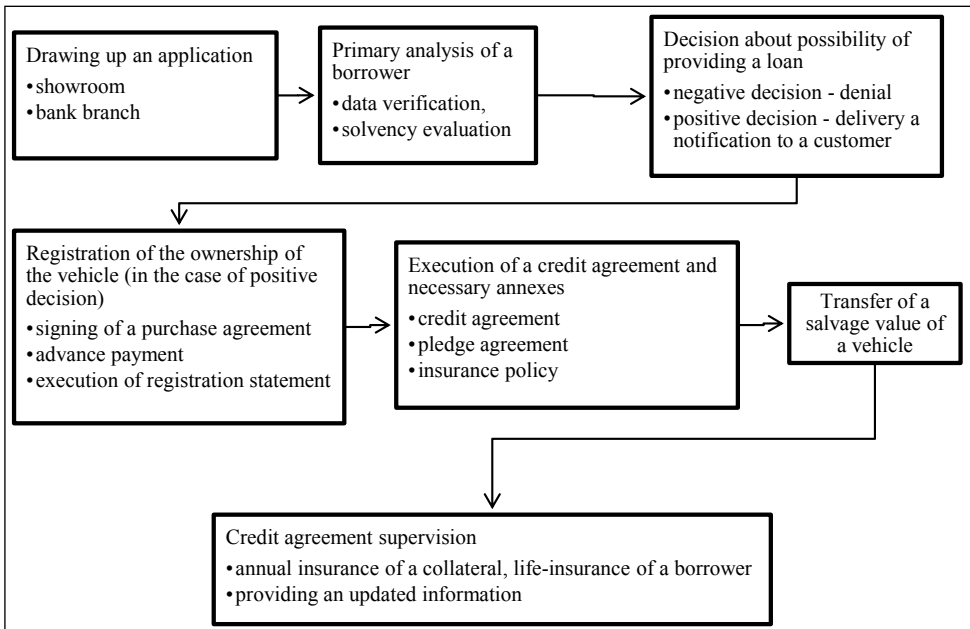
- consumer loans are granted for the purchase of final goods, contrary to the loans granted to business for financing certain economic projects;
- consumer loans are granted to individuals only in national currency and their final aim is to meet the individual needs of the customer, so the object of consumer loan can be durable goods (office equipment, audio and video equipment, *etc.*) mortgage, services;
- usually individuals tend to take a credit, when they do not have their own funds, while the entities use this money to expand their business and to make a profit;
- repayment of a consumer credit is not a result of the release of funds of the borrower, as in the case of lending to corporate clients, but is paid from their income or savings;

- as collateral for consumer loan can be fixed income of borrowers, product which is planned to be purchased with a credit, property;
- all types of consumer loans are a tool to satisfy personal needs of individuals and have a social nature as they contribute to solving social problems such as improving the standards of living (especially in low- and middle-income countries), the maintenance of the social justice principles. Besides determining the conditions of consumer loans helps regulate the circulation of money in the country (nowadays almost in all European countries special laws on consumer lending are adopted);
- consumer loan plays a significant role in encouraging individuals to work to get a higher income and to repay their debt, and in the formation of effective demand, which in turn affects the country's economy, facilitating the process of sales, accelerating entities profit earning and increasing government revenues;
- consumer loans according to the purpose factor are classified as purposeful, multi-purposeful and loans for the purchase of goods; and according to the technology of loan providing issuance – cash-loans, quick loans and card loans.

The following stages of the retail lending process in a bank should be outlined in order to conduct effective activity (Fig. 1a, 1b):

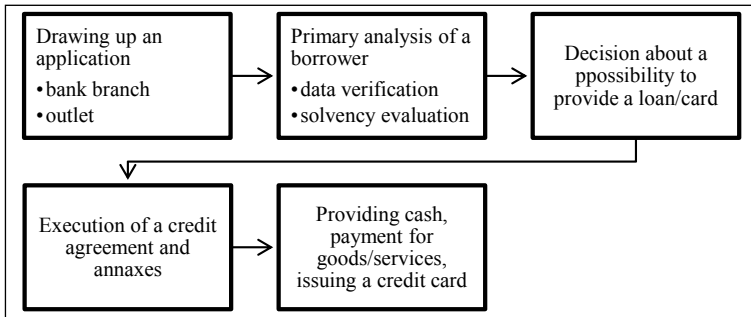
- for a loan to purchase a new vehicle,
- for cash loans and card loans.

Figure 1. Stages of the process of providing loan to purchase a new vehicle



Source: supplemented by the author.

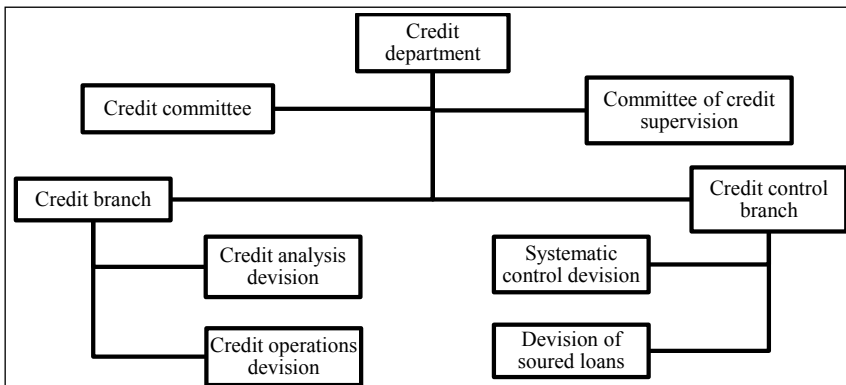
Figure 2. Stages of the process of providing cash loans and card loans



Source: supplemented by the author.

The organizational structure of the credit function in each bank has its own characteristics that are defined by the size of institution and customers’ needs. In the large banks an organizational structure may consist of several departments that include a wide network of divisions, sectors, committees, groups, economic councils *etc.* These structural units specialize in certain functions of a credit procedure, such as department of industry analysis, credit policy, credit products, economic forecasts, loan documentation department *etc.* In small banks all the functions are concentrated in a small number of structural units.

Figure 3. The most common organizational structure of a credit function in a bank



Source: Prymostka, 2004.

There is a wide range of structural units of a loan process in Ukrainian banks (Sydorenko, 2011):

- Credit Retail Banking Department;
- Department of Retail Banking Development;
- Credit committees (of a head office, of a first level, regional departments, local divisions and branches);
- Department of Risk Management;
- Department of Safety.

According to the Article 47 of the Ukrainian Law “On Banks and Banking” the bank must adhere to the basic principles of lending, including borrowers’ creditworthiness and collateral checking. The future income of a bank depends on an operational efficiency of decision-making about the possibility to grant a credit on a purchase of a vehicle. It should be noted that in the short term it is necessary to fully analyze a borrower’s future activity:

- a total family income;
- credit history;
- presence/absence of a negative information regarding identifying documents;
- presence/absence of a seizure of borrower’s property.

3. Ukrainian market of retail banking

In general, organization of retail lending in Ukraine is designed so that majority of banks do not try to build individual and long-term relations with each customer and to forecast the needs of a particular client. This is mainly due to the fact that almost every bank has a credit policy that aims at a certain level of the borrower and that modern retail lending market has become a production line. Only about 10 percent of potential borrowers really investigate the retail lending market, comparing the cost of registration and a total overpayment on the loan (including the cost of car registration, *etc.*). Unfortunately, this trend is caused by the financial literacy of the population and lenders attempt to mislead potential borrower.

Since 2009 some new trends appeared on the retail lending market. The majority of borrowers who want to get cash loans and/or loan to buy a vehicle are from middle and lower than middle class. Average salary compared with 2009 in 2013 increased by 41.62% and was about 408,48 USD (3265,00 UAH).

Table 1. Average salary, USD

	2009	2010	2011	2012	2013
Average nominal salary in Ukraine	239.19	281.22	329.17	378.46	408.48
Average nominal salary in Poland	1160.00	1103.00	1150.00	1200.00	1401.00

Source: <http://www.ukrstat.gov.ua/>, www.stat.gov.pl/.

The cost of cars (in case of Hyundai Elantra, which has been a market leader in Ukraine in 2013) today is 20,219 USD, in Poland this car can be purchased for 20,175 USD (according to official exchange rate of the NBU and the NBP).

It should be noted that nowadays, according to Automotive Corporation, which is one of the market leaders in the new cars sales, there are about 17 banks that offer loans for the purchase of the vehicle.

According to the data of the National Bank of Ukraine, financial institutions belong to the following groups: the first group is 8 banks, the second group – 4 banks, the third group – 2 banks and the fourth group – 3 banks (www.bank.gov.ua).

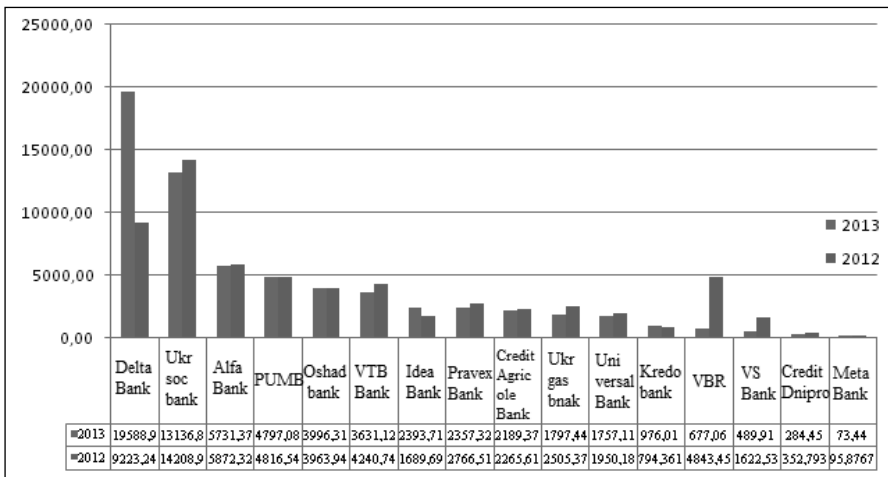
Table 2. Balance of loans and deposits at the end of the year

Year	Loans	Change over year, %	Deposits	Change over year, %
2009	241,248	-0.163	214,098	-0.018
2010	209,538	-0.151	275,093	0.222
2011	201,224	-0.041	310,390	0.114
2012	187,629	-0.072	369,264	0.159
2013	193,529	0.030	441,951	0.164

Source: www.bank.gov.ua/.

Since December 2013 the volume of loans to individuals began to fall. This is due to the political situation in the country. In addition, according to the resolution of the NBU No. 202 from 07.04.2014, most banks do not provide loans for consumer purposes (www.bank.gov.ua).

Figure 4. Dynamics of the granted loans in 2012-2013



Source: www. aub.org.ua.

It should be noted that in 2013 many banks managed to increase loan and deposit portfolios due to a high demand among the customers (especially in the summer 2013) and due to mergers and acquisitions (<http://ua.prostobank.ua/>).

For example, Delta Bank achieved growth of credits due to acquisition of assets of Kreditprombank, Astra Bank and Omega Bank, which portfolio decreased by 99% in 2013 (2.7 billion UAH). The leader in lending among large and medium-sized banks became Bank Platinum, which retail portfolio increased by 1.6 billion up to 4.3 billion UAH. Due to the merger of Fido-bank and Fidokombank the retail portfolio increased almost fourfold – about 1.7 billion UAH.

As nowadays there is a great danger of loan default, banks temporarily suspended consideration of applications. However, it should be noted that in the pre-crisis period banks, that of-

ferred loans for the purchase of vehicles, had at least three funding programs. The market leader in loans, according to the results of 2013, offered its customers 17 retail lending programs – 6 affiliate programs to buy a vehicle, 10 various credit cards and a cash loan program. Unicreditbank offered its clients 6 types of credit cards (including credit card for sailors), 3 cash loan products and a loan for the purchase of the vehicle.

Alfa Bank offers its clients today only four products – cash loans, consumer loans, credit cards and cash loans for the purchase of the vehicle (maximum amount for this loan is 100,000 UAH, and if the client after the signing the loan agreement brings to the Bank a vehicle registration document – the bank reduces the interest rate).

PUMB offers customers 8 loan programs – 7 programs for the purchase of a vehicle, credit card and consumer loan on special needs (maximum amount for this loan is 35,000 UAH).

Oshadbank, which is a state-owned bank, offers a wide range of retail products. Thus, the client who wants to get a cash loan can choose one of 5 program loans – loans secured by deposits, loans secured by precious metals, a mortgage loan, a loan for the purchase of industrial products through retail outlets, a surety loan. Also the bank has 7 programs of crediting for purchase of the vehicle (5 affiliate programs and 2 standard programs).

VTB offers customers the opportunity to get a deposit-secured loan (95% of the deposit), credit cards secured by a deposit (credit limit is 50% of the deposit, but less than 200,000 UAH.) and a loan to buy a vehicle. VTB is now focused on servicing small businesses and corporate clients.

Idea Bank offers its clients 18 retail lending programs: 10 cash loan programs (10,000UAH without income certificate, cash for the purchase of the vehicle, the deposit-secured loan, cash loan for pensioners *etc.*), 7 products for the purchase of vehicles, credit card (limits on such card depends on the client's official income and the availability of existing loans).

Pravex Bank, which belongs to Intesa Sanpaolo group, offers a wide range of various loans to buy a vehicle. There are 20 products (promotional offers to buy a car together with Ukravto, promotional offers to buy a Hyundai car, promotional programs for buying Italian brand cars, *etc.*). The Bank also offers cash loans (no mortgage loans and mortgage loans) and credit limits on salary cards.

Credit Agricole Bank offers 17 programs of crediting the purchase of a new car (2 standard programs and promotional programs for the purchase of cars of the following brands: Renault, Nissan, Infinity, Toyota, Lexus, Peugeot, Citroen, Subaru, Mazda, Suzuki, Kia, Hyundai and Italian brands cars, affiliate programs with Ukravto and Winner Automotive. Regarding cash loans the bank offers a product with a limit of 50,000 UAH.

State Bank Ukrgasbank offers 6 programs of retail lending – loans secured by deposits, cash loans up to 75,000 UAH and 4 programs for the purchase of a car.

Universal Bank provides a wide range of services in retail lending. The Bank offers potential customers loans secured by real estate, cash loans for any purpose, loans to improve their living conditions (the bank may lower interest rate on such a loan, if a customer provide a photo of the property, which needs repair), auto loans (affiliate programs with Ukravto, Bogdan Auto and Nico).

JSC Kredobank grants loans for current needs (limit is 400 percent of a client's salary), cash loans and unsecured car loans (standard conditions, promotional offers, affiliate programs with Ukravto and AIS).

VBR offers customers cash loans, loans secured with deposits, credit cards and four programs for the purchase of the vehicle.

VS Bank provides customers with cash loans secured by a used car, real estate or a deposit and no mortgage loans. As for car purchase loans – bank offers loans to purchase cars of any brand.

Credit Dnipro, which is a bank of the second group, offers customers cash loans, loans secured by deposits, mortgage loans. The Bank offers overdraft for sailors (valid for a contract period). As for loans to purchase the vehicle – the bank offers standard lending terms and conditions for the purchase of cars in Ukravto.

META Bank provides customers with loans for the following purposes – a loan secured by the deposit, mortgage loan and consumer loans (goods and services), overdrafts on card accounts, cash loans and a loan to purchase a vehicle.

According to the data of the “Prostobank Consulting” in 2013 the number of banks that offer cash loans among the 50 leaders increased from 25 to 32. The number of loan programs almost doubled: from 122 in the beginning of the year to 222 in its end. The number of credit applications also increased, in the beginning of the year the 50 leading banks offered 227-245 different auto loans, depending on the period, in the end of the year they offer already 370-390 programs (<http://ua.prostobank.ua/>).

4. Conclusion

Nowadays banks offer a wide range of services in retail lending. Retail lending market is very intense, but there are some problems in the organization of the retail lending:

- a political situation in the country (banking sector depends on this factor, as most operating in Ukraine banks belongs to sole owners (businessmen, politicians);
- permanent changes in exchange rates (as a car value depends on the dollar and/or euro). Since 2014 the official USD exchange rate rose by 31.74 per cent from 7.993 UAH to 11.709 UAH per USD. Consequently vehicles' values increased by 40% – 50%;
- increase in interest rates on loans;
- decrease of clients' official incomes;
- permanent legislation changes.

To solve these problems, it should be improved banking legislation, risk management in banks, borrowers' identification, nowadays there are many customers who mislead banking institutions by providing forged documents.

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Chapter 31

Project Finance in a Modern Volatile Economic Situation

Marina Puchkova, Michail Romanovskii

1. Introduction

As it is known, the Russian economy is greatly weakened in recent years. According to RBC its growth rate in 2017 will be 2 times lower than in developed countries. Only the unstable situation in Ukraine to Russia will cost 3% reduction in GDP and a number of other losses, *e.g.* due to the fact that the helicopter engine plants, plants of the construction of engines for ships remained within the Eastern Ukraine and will be largely lost to the defense sector.

It is important to underline that the Government is looking for a new model of accelerated economic development that is complicated in terms of increasing global risks in connection with the introduction of additional sanctions by the U.S. and the European Union. These conditions complicate the increase of public spending. In addition, increasing public spending is limited by lower tax revenues associated with a reduction in economic growth and a statement of the Government refrain from introducing the tax on a progressive scale, involving both citizens and investment sector. Nonetheless, the Government is looking for new models of development that affect funding for both basic science and development institutions. Lately there have been changes in the management of Russian fundamental science was formed Russian Research Fund, which was authorized to allocate funds for basic science. Starting from the basic provisions governing the activities of the fund, it is practically not accountable to anyone except the President of Russia. Perhaps, in Russia there is no other organization with such capabilities. Nevertheless, it should be noted that funding was cut industrial science and R&D conducted in the industry have been replaced by relevant innovative projects.

Introduction of changes in the financing of basic science requires significant changes in other sources of funding. In particular, changes in planning fundraising population by providing greater freedom to potential investors.

Under these conditions, the most important factor in stabilizing the Russian economy is implementation of various investment and innovation projects even in the face of capital outflows. Therefore, many companies implement investment projects, mainly hoping not to wait for stable government funding, but to use project finance.

This article focuses on the application of project finance for investment projects in an uncertain economic development, analysis of the risks, appeared during implementation of such projects and the development of recommendations for reducing them.

2. Advantages of Project Finance

At the moment there are a lot of definitions of project finance in both Russian and foreign literature. Despite the scientific importance of these definitions of project finance, they don't release specifics of the financing instrument. Based on the requirements set out in IAS 39 "Financial Instruments: Recognition and Measurement", which states that "a financial instrument – is any contract that gives rise to a financial asset of one party and a financial liability or equity instrument – the other"¹, we consider that project finance should be regarded as a specific tool, where an asset in the form of a loan is exchanged for another asset in the form of potential financial resources generated by the project. The specifics of the project finance is in the allocation of an independent structure in the form of the project company, which allows distribute the risks.

Development of project finance in Russia is rather difficult and nowadays there are a lot of problems. First of all, investors have to deal with legal problems. Due to the fact that the project finance in Russia is a new, not yet proven tool, there are a number of issues related to legal regulation, in particular, it is connected with the weakness of Russia's investment laws. However, certain steps are taken to address these issues. For example, it was adopted a plan to combat corruption, which provides introduction of new penalties in criminal proceedings for corruption, as well as better organization of public service delivery, which is important for the development of project finance in the organization of state agencies. Also at the same period came into force the Law on foreign investments in strategic sectors with the specification of the legal regime in key sectors. Now, foreign investors need to receive official approval for the acquisition of controlling stakes in companies operating in 42 strategic industries.

Certain difficulties are connected with the process of minimization of the risks due to securitization and direct agreements at governmental level. In Russia there is no standard practice of project contracts, each transaction requires a separate non-trivial solutions. Yet it should be noted that in Russia the process of creation public-private partnerships (PPPs) is very slow and it is necessary to attract private capital. According to the legislative changes, this process requires competitive bidding. Consequently, the organization of this procedure takes a lot of time and it shows the complexity of the development of project contracts with private investors and the need to make some changes in the law.

Infrastructure projects with cash flows in rubles create problems in the payment of loans that were received in dollars or euros. So at the moment in Russia is rather problematic to use such popular in the world financial instrument as currency swap. In order to mitigate the currency risk for investors and creditors it should be established an acceptable structural mechanism.

Despite the presence of a wide range of problems, western experts consider that the market for project finance in Russia expects a big rise. At this stage, with the help of project finance are developed major infrastructure projects such as: "Nord Stream", Orlovsky tunnel, "Pulkovo Airport" (a new passenger terminal for international flights), highway Moscow – Saint Petersburg, "Elevated Express" in St. Petersburg.

¹ IAS 39 "Financial Instruments: Recognition and Measurement".

Even in the difficult conditions of recovery of the global financial crisis and the difficulties of the initial stage of formation of project finance in Russia, the need for such financial instrument will increase. That's why it should be noted that developing market of project finance in Russia is very profitable and interesting niche for economic development.

The authors developed the concept with the advantages of implementing project finance in Russia, which can be formulated as the following:

High financial leverage. The project finance uses the fact that the loan is cheaper than equity because lenders are willing to receive a lower income (at lower risk) than investors. Naturally, investors need to be confident that the risk is minimal, and therefore the procedure should be carried out due diligence, to guarantee exerting efficiency of the financial structure. Of course, we can say that if the project has a high financial leverage, then the risk is high, and, therefore, should be created higher returns for investors, but in project finance higher financial leverage can be achieved only where the level of risk for the project is limited.

Tax Credit. Another factor that determines the attractiveness of high financial leverage is that the interest on capital are not taxed, while dividends shareholders such benefits do not apply, so the loan even cheaper than having its own capital, and therefore, the use of high leverage more than justified.

Lending capacity. Project financing increases the level of the loan for the project: resource-free financing engaged by the project company is usually not included in the corporate loan. Thus, it is possible to increase the capital of the investor, which is taken under the loan, and therefore he will be able to be responsible for several large projects simultaneously.

Risk limitation. The project investor, attracting funds in project financing, usually does not guarantee the payment of debt – and therefore limited to the amount invested risk equity. Credit rating companies are also unlikely to be reduced if the risks of investing in the project are limited to structure project financing.

Risk Allocation/joint venture. The project may be too difficult for one investor to take responsibility for its implementation; therefore should be invited other investors to share the risk, and as a result create a joint project company. This allows to spread the risk between investors and to limit the amount of risk for every investor. During the project it may need to have large costs with a high degree of risk, which will be written off if the project will slow down. Therefore, the developer can also attract a partner in the development stage of the project to spread the risk. This approach can also be used to attract the “limited partners” in the project. Creation of a joint venture also allows to reduce the risks associated with the project thanks to the exchange of information (*e.g.*, local knowledge plus the technical knowledge, experience builder properties plus manual skills; skills manual plus the art of marketing).

Unequal partnership. One developer who has an idea, but not enough money often lead projects, so he has to find investors. Project finance structure, which requires less equity, allows the developer to maintain equal partnership that requires less investment.

Lower cost of products or services. To pay the lowest price for a product or service, the buyer or end user will try to bring to the project the maximum possible means, and the resulting structure of project financing will be cost-effective. Therefore, if the buyer or end user wants for a long time to get the products at the lowest price and is able to influence the financing of the project, the use of project finance should be encouraged, for example, by signing project agreement that meets the financial requirements.

Additional investments in public infrastructure. Project finance can provide subsidies for additional investments in infrastructure, which the public sector cannot guarantee for other conditions because of economic or financial investment budget constraints.

Risk transfer. Contractual structure of the project finance involves the transfer of risk, for example, the risk of exceeding the cost of the project from the public to the private sector that is most often found in budget constraints.

The lower cost of the project. Private funding is now widely used for projects that were previously managed by the public sector (Barinov, 2007, p. 388). In addition to reduce pressure on public sector budgets such PPP-projects are characterized by the fact that the private sector can often build and manage such investments with higher returns than the government, even with the higher cost of funding.

A thorough inspection of third parties. The public sector can benefit from an independent procedure “due diligence”, which is carried out by lenders willing to make sure that all liabilities, associated with the project contracts, help to minimize the risks for them.

Additional domestic investment. In developing countries, project finance opens new opportunities for investment in infrastructure, because it can be used for domestic investment. Moreover, the successful financing of major projects, such as a power plant, can be emulated.

Technological transparency. For developing countries, where the economy is not strong enough and there are no reliable sources of funds, project financing becomes a way of attracting investment in infrastructure at the market price.

Exploring the most basic characteristics of project finance and advantages of using project finance for Russian companies, it is necessary to consider the risks associated with this process.

3. Analysis of the special risks’ inherent to Project Finance

Project finance involves a huge range of risks that could lead to default. The project cost can increase due to the growth of prices on construction materials, moreover, because the equipment can be supplied with a considerable delay, the production of the supplied equipment may not correspond to the declared quality, there can be not enough raw materials for continuous working of the enterprise, the market may intensify competition and so on. All these factors may lead to profitability decrease. That’s why we consider possible risks of project finance.

First of all, it’s necessary to consider the **risks of not completing the project**. This group of risks includes all risks that could stop completion of the object and putting it into operation (except the risk of underfunding), *i.e.* technology, construction, infrastructure and administrative risks. These risks are particularly high in the sphere of project finance because of presence of a large number of suppliers and contractors, the lack of a complete project documentation and initial permits and registration of rights (for instance, on land), as well as weak legal and financial study of key contracts on the pre-investment stage of the project.

The major *technological risks* in project finance include such risks as the risk of noncompetitive technology, the risk of new technology and the risk of lack of required quality.

Infrastructure risks mean the risks of non-agreement of technical specifications on gas, electricity, sewage treatment, water supply, *etc.*, various types of risks of not-bringing the roads, power lines, *etc.*, to the construction site and the risks of the dependence of operating activity from the suppliers of heat and electricity.

Construction risks include the risks of loss of funds invested in the project during the execution of construction works. The probability of realization of such type of risk is often rather small, but in the case of implementing it would have a serious delay of timing and a significant amount of the required financing of the project, and a significant deterioration of its economic efficiency.

Administrative risk, primarily, is connected with the presence or absence of strong support from the administration at various levels of government. Regional authorities can provide powerful support for the project by providing tax incentives, guarantees, indemnities of interest on the investment loan, taken for the project finance of the infrastructure costs (provision of sites for construction of an industrial facility, construction of roads, laying pipeline, etc.). Of course, such forms of support for the project are showed a great interest of the administration in the success of the project, as well as lead to minimization of associated risks like infrastructure risks.

Secondly, there are **risks of underfunding**. These risks are connected with plurality of sources of financing of the project, with increase of the initial cost of the project, with increase of duration of the investment phase of the project, with incorrect assessment of the needs for working capital, cost of entrance to the market and the actual structure of operating costs. *The risk associated with a multiplicity of sources of financing for the project* is appeared in the late submission or failure of providing agreed amount of financing by one or more participants in the project. *The risk of increasing of the initial cost of the project* mean an increase of capital costs for the project. According to statistics, the average initial cost of the project increased by 30% (not counting the inflation component).

The risk of increasing of the duration of the investment phase of the project means that if an object startup is delayed, the borrower will have to seek additional sources of funding to service the interest, to avoid defaulting on the loan as well as commercial banks do not provide a delay in the payment of interest on the investment phase of the project.

The risk of an incorrect assessment of the needs for working capital increases because of lack of industry experience and understanding of the actual conditions of payment for goods sold, schedules procurement of raw materials, the duration of the production cycle.

The risk associated with incorrect valuation of entrance to the market is typical for companies implementing projects in new areas for themselves. Often the budget of the project is limited by estimates of capital costs and simple calculations of demand for working capital. At the same time before the beginning of financing at least close to the reality of marketing and logistics budgets are not calculated. All this leads to an incorrect evaluation of financing requirements and a serious overestimation of performance of the project.

Often, socially significant investment projects in the framework of federal programs are provided with financial support, for example, in the form of subsidized interest on investment loans taken to finance such projects.

The risk associated with a delay (or default) of payment of subsidies and grants are usually related to the fact that not always declared financial support is provided without delay and in full amounts. Often, individual subordinate entities of the Federation with the budget deficit are not able to subsidize the project, and it could rely only on federal component of the payments.

Another group of risks that should be considered is **the risks of operational phase of the project**. This group includes the risks of wrong choice of strategy, market risks and risks of raw material supply.

Risk of wrong strategy is connected with the choice of non-competitive business strategies and therefore unprofitable projects. First of all, this risk affects the projects with no great external

and/or internal competitive advantages that are implemented in a highly competitive market or a market in which competition is seriously enforced because of its increased attractiveness to investors. Also the risk affects the companies that plan to implement new projects, using a high-risk strategy.

Market risks include the risks of failure of reaching of the planned sales, the risks of increased competition and price risks.

Risks of raw material supply are connected primarily to the lack of raw materials and problems with the supply of raw materials, quality of raw materials, rising prices for raw materials due to increased competition for raw materials, as well as high dependence on the company's major suppliers of raw materials.

Moreover, **the risks of the financial performance of the initiators of the project** are also important. This group is primarily associated with the risks of the current financial situation of investors, as well as the risks of a substantial deterioration of their financial performance in the future. The most effective tool for qualitative assessment of these risks is a classic financial analysis.

The risk associated with falling of earnings from operating activity may lead to underfunding of the project from its investors, the inability of investors of the project to serve the interest bearing on the investment phase of the project because of the deteriorating of financial performance of their business, diversion of cash flows of the project to cover losses from business of investors or cover liquidity gaps, a significant increase in the debt burden of business, *etc.*

The risk of over-investment activity is expressed in the loss of financial stability due to the excess of the amount of the investment program of its financial resources and, consequently, in an uncontrolled increase of the level of debt and interest bearing. Also in this group should be considered the *risk of loss of liquidity* (Belikov, 2009, pp. 31-160).

As it can be seen from the written above, project finance is associated with a huge range of risks that could lead to a decrease in profitability. Therefore, given the specificity of such risks we should focus on the private methods to reduce them.

1. **Diversification method** reduces risk by spreading the investment on research and innovative projects in different directions that are not directly related to each other. If as a result of unforeseen events is one of the projects will be unprofitable, other projects can be successful and will be profitable. However, in practice, diversification can not only reduce, but also increase the risk if the entrepreneur invests in investment project, which is directed to the area of activity in which his knowledge and managerial skills are limited.
2. **Transfer risk** applies when carrying out any work on the investment project is too risky and the magnitude of possible risk is unacceptable for an innovative organization.

Risk transfer usually produced by the conclusion of the following types of project contracts:

- construction contracts (all the risks associated with the construction, takes builder);
- rental of machinery and equipment (leasing);
- contracts for the storage and transport of goods;
- contracts of sale, service, logistics (supply agreement on organization materials, raw materials, necessary for the implementation of an investment project on the terms of maintaining minimum balance in stock, lease of equipment used for the project, with a guarantee of maintenance and technical repairs and the warranty to maintain performance/certain technical characteristics of the equipment used);
- factoring agreement;

- exchange transactions to reduce the risk of supply investment project in terms of inflation expectations and the lack of reliable operational procurement channels (use the advantages of modern financial instruments as options and futures).
3. **Risks Distribution Method**, which main objective is to transfer maximum liability risk to the member who best can control it. Allocation of risk between the parties innovation increases the reliability of results. This method is particularly relevant for projects with a large number of participants.
 4. **Limiting method** involves the restriction limiting the maximum expenditure limit sales credit. This method is used by banks to reduce risk when granting loans to innovators and enterprises – the sale of goods on credit and determining the amount of capital investment in various projects. The enterprise is realized by limiting the establishment of appropriate internal financial regulations in the policy development process of the various aspects of financial activity and does not require high financial costs.
 5. **Backup method** provides reliable operation of the system by creating a reserve from which damages awarded due to the failure of one of the elements of the system. Amount of the allowance shall be equal to or greater than the potential loss, but the cost of keeping the reserves shall not exceed the costs associated with the restoration of a system failure. Reserve funds advisable in the event of damage resulting from:
 - possible failure of the further development of products and termination of the project due to the implementation of a pessimistic scenario of the project;
 - exceeding the total cost of the project according to the budget allocated funds;
 - exceeding the deadline draft guidance value. These deadlines can be defined product development agreements, orders and other documents.
 6. **Hedging method** – the system to enter into futures contracts and transactions aimed at avoiding the adverse effects of changes in exchange rates. The principal means of hedging are immediate derivatives (forwards, futures options, *etc.*), as their use does not require the diversion of resources in significant quantities or not at all required.
 7. **Project Contracts** that ensure the interests and obligations of all the participants of project finance. Project contracts provide the basis for the establishment and operation of the project. The most important of these is the Project Agreement (*i.e.* contract that specifies the conditions for payments to the project company). There are 2 main models of Project Agreement (Yescombe, 2009, p. 69):
 - Offtake Contract (the project company produces goods and sells to the buyer);
 - Concession Agreement (the project company serves the State or the public).

These contracts that Project Company enters into serve as a sort of support for project finance, primarily due to the fact that on the basis of project contracts, project risks are redistributed among all project participants.

4. Conclusion

In the context of the global post-crisis financial situation, of the decline of investment activity in Russia, of the reducing liquidity and volatility of global currency and commodity markets, it requires to reassess the risks and to ensure sustainable financing of investment projects. Decided to realize the investment projects, companies are faced with various risks, especially if there

a lot of participants and financing sources. In this case, project finance can clearly identify a list of risks and help to develop a timely action to reduce them.

Method of using of project finance depends primarily on the industry, secondly, on the type of project contract. You cannot select a single standard structure of project finance because of the fact that each contract has its own specific features. However, in this article we determined common characteristics of project finance, such as: the debtor is the separate independent legal entity – project company; the indicator Debt to Equity is around 70%; there are a lot of participants in this scheme and all project risks are allocated between them; *etc.* These essential characteristics allow conclude that project finance differs from other methods of bank lending. Moreover, in this article were analyzed the main advantages of project finance.

Due to the fact that the implementation of project finance is connected with a large number of participants from different fields of activity, it was interesting, what prospects exist for this method of financing on a global scale and what is its position in Russia. We came to the conclusion that in Russia there are a lot of difficulties due to the fact that project finance is absolutely new tool and Russian law base is not enough prepare for its implementation. Nevertheless the need for such financial instrument increases. That is why it should be noted that developing market of project finance in Russia is very profitable and interesting niche for economic development.

The existence of risks has led to the formation of the need to develop specific methods and techniques of detecting them. Moreover, there is a wide range of tools to reduce the risks by analyzing and developing options to minimize identified risks. One of the possible measures of minimizing the risks is to sign right-chosen project contract to ensure the interests and obligations of all the participants of project finance.

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Chapter 32

System of Enterprise Financial Liquidity Rating as an Instrument of Company Management in the Variable Economic Environment

Yuriy Nemish

Changes in the contemporary world economy cause appearance of new tasks in the sphere of financial management of the enterprise. These tasks derive from search of new theoretical, methodological and practical recommendations and solutions in relation to main economy forming unit which is company. Most of the enterprises have need in system of financial assessment of its functioning, which could disclose problems at the before crises stage and to find solutions for the problems in the field of financial liquidity of company because available for the management instruments do not treat financial liquidity as a complex matter in its variety of financial interrelations.

Present development of world economy is characterized by profound structural changes caused by accelerated development of science and technology, raising of production level, deeper division of labor and increase of competition at the internal and external market. This makes the company to constantly monitor its environment and results of its work.

Actuality of the topic derives from needs of the enterprise which strives to survive in the world of competition at the international market. As a rule most of the analyses of financial liquidity are conducted on the bases of separate indicators in the non-systemized manner. The aim of the present article is to find an important for management of a company solution in form of precise instrument which would allow to perform profound analyses and to take right business decisions.

Events outside and inside of the company have influence on indicator of financial liquidity what makes him universal and in the same time very important in the diagnoses of the enterprise. For enterprise as an economic unit it is crucial to define determinants that form financial liquidity. One can differentiate next groups of determinants: macroeconomic, sectorial and microeconomic (Łukasik, 1998, pp. 32-51). Depending on the group of determinants the company has different possibilities to eliminate their negative influences. Determinants such as country's policy, fiscal policy, duties regulations *etc.* stay beyond company's influence and if company has influence it already matters of Central Anti-Corruption Bureau. Factors that appear in the sector of activity of the company have influence in dependence with the type and the level of development of the sector itself and position of the company in it. Determinants from microeconomic sphere are the most informative on the side of a com-

pany because they also display results of influence of factors form macroeconomic and sectorial group of determinants. Concerning eventual control over them they are the most inclinable to manage them. That is why indicators that display level of liquidity based on state of finances of company have to be used for constructing of integrated, compound system of financial liquidity assessment.

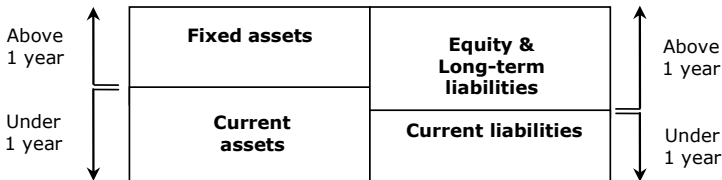
In order to develop the compound system of financial liquidity analyses it is necessary to have clear, scientifically grounded methodology, which will have in its core the static and dynamic assessment of liquidity, built on analyses covering all aspects of financial life of the enterprise.

Measurement of financial liquidity can be accomplished in many ways. Nevertheless most often for this purpose are separately used:

- level of current assets and current liabilities enclosed in balance statement,
- operational cash streams registered in cash flow statement,
- mixed methods which combines balance and cash flow values.

Engagement of current assets and liabilities for assessment of financial liquidity forces transfer accounting statement of comprehensive position (balance sheet) to analytical one. It is presented at the Figure 1.

Figure 1. Shortened statement of comprehensive financial position of an enterprise



Fixed Assets	= Fixed Assets
	+ Account receivables above 12 month
Current Assets	= Current Assets
	- Account receivables above 12 month
Long-Term Liabilities	= Equity
	+ Reserve for the postponed income tax
	+ other long-term reserves
	+ long-term liabilities
	+ Account Payables with request period greater than 12 month
	+ Negative value of company and other long-term prepayments
Short-term financial sources (Current liabilities)	= Short-term liabilities
	+ Short-term liabilities decreased by account payables above 12 month
	+ Short-term prepayments and accruals

Source: Sierpińska, Jachna, 2004, p. 77.

For analytical purposes it is important to draw attention to systematization of assets and liabilities according to time criteria (Fig. 1).

By using analytical statement of comprehensive financial position one can assess net working capital according to formula:

$$\text{Net Working Capital} = \text{Long-term capital} - \text{Fixed assets}$$

$$\text{Net Working Capital} = \text{Current assets} - \text{Current liabilities}$$

The second formula shows that net working capital is a part of current liabilities which is free of covering short-term liabilities.

To the task of working capital in company belongs reduction of risk connecting to lower liquidity of a part of current assets (stock, receivables) or losses flowing out of those assets. For example difficulty to sell output of products. It constitutes some kind of safety buffer which permits company to sustain financial liquidity.

Solution of task of quick profound assessment of financial liquidity could lay in development of ranking scale of static evaluation of financial liquidity based on chosen most information vital indicators.

Next determinants of financial liquidity which depict stature of “health” of company in certain period of time can be chosen for further research:

1. Quick ratio (Acid Test).
2. Accelerated ratio.
3. Current liquidity ratio.
4. Receivables to liabilities ratio.
5. Receivables turnover period.
6. Payables turnover period.
7. Working capital turnover period.
8. Current asset to total assets ratio.
9. Own resources supply ratio.
10. Financial stability ratio.

In economy practice there is couple methods for classification of enterprises according to results received out of financial indicators. Different values of the indicators generate different points acknowledgement and their sum permits classification of the enterprise to one out of five given below groups of financial liquidity (Донцова, 2004, p. 135).

1. **Absolute financial liquidity (I class).** To this group belong companies which financial position provides timely regulation of all liabilities. These are the companies that have rationally, well-built structure of assets and passives. As a rule these are very profitable companies.
2. **Normal financial liquidity (II class).** This group comprises out of companies which have close to optimal level values of financial ratios, but for couple of them deviation is allowed. Such companies have unbalanced structure of liabilities, which comes out in form of greater than optimal level of outer liabilities. This results in increase of credit liabilities.
3. **Problematic financial liquidity (III class).** To this group belong companies which have shown in its analyses some low values of couple of indicators. Operations of such companies provides “weak” cash flows at the minimum acceptable level, but in the same time these enterprises have rational structure of liabilities or have a deviation in structure of liabilities but operations supply with sufficient positive cash flows.
4. **High risk of bankruptcy (IV class).** Financially unstable companies are classified to this group. These companies have unsatisfactory structure of liabilities, cash flows are at minimum sufficient level and such companies usually do not generate profit.
5. **Very high risk of bankruptcy (V class).** This group form companies in critical state that do not generate any profit.

Table 1 (in the Appendix) presents classification of enterprises according to 5 groups with considering of values of financial indicators that companies reached during the analyses.

On the bases of received points it is possible to classify enterprise according to five class rating system:

- 88.5-100 points – enterprise belongs to I class.
- 60.5-88.5 points – enterprise belongs to II class.
- 46.3-60.5 points – enterprise belongs to III class.
- 27.13-46.3 points – enterprise belongs to IV class.
- 27.13> – enterprise belongs to V class.

On other side dynamic assessment of financial liquidity is based on cash flows that consist of outflows and inflows of money. These changes are depicted in the company's accounting reports. This methods foreseen identification of all book entries on debit side for inflows and on credit side for outflows from the accounts.

Grouping of the book entries according to accounting schemes allows for categorization of outflows and inflows according to type of activities of enterprise. This is the basis for the classification for operational, investment and financial cash flows (IAS 7, 2010, p. 2).

Methodological bases for the dynamic assessment of financial liquidity is methodology grounded on stature of cash estimated according to next formulae:

Cash at the beginning of the period + received cash inflows – sustained cash outflows = Cash at the end of the period.

For every class of the enterprise is outlined corresponding proper dynamic, which is showing how an enterprise operates in the market and where it heads:

- 1. Dynamics of I class.** Enterprises in this class can be characterized as one with the stable development and which dynamics is increasing.
- 2. Dynamics of II class.** This dynamic is proper for the stable companies which development causes in some periods deviation in values of indicators from the development trend line, but those changes are not strong enough to influence financial liquidity of the company.
- 3. Dynamics of III class.** To this group belongs companies which negative and positive cash flows do not form programmed dynamic, what could be a sign of controlled development and efficient management of company. Inflows overweigh outflows in every period and their tendency is difficult to outline. Moreover enterprise in this class shows that positive cash flows in last periods overcome negative cash flows and operational relation to depreciation and amortization increases in last years.
- 4. Dynamics of IV class.** To this group belong companies with negative developing dynamics. It is characterized with the inflows covering outflows but every time less than previous.
- 5. Dynamics of V class.** This class comprises companies with negative dynamics of cash flows. According to received points companies are classified into 5 groups of outlined dynamics:
 - 80-100 points – dynamics of I class.
 - 60-80 points – dynamics of II class.
 - 40-60 points – dynamics of III class;
 - 20-40 points – dynamics of IV class;
 - 20> – points – dynamics of V class.

Table 2 (in the Appendix) presents the way to classify companies according to value of the indicators of financial liquidity dynamic assessment received in the researched period. Researched period have to last minimum 3 years, but for more accurate analyses it is recommended to use minimum 5 year period.

Presented rating system is based on the relative values of the indicators received in the screened period. Dynamics of changes have to be constantly monitored, and changes over 50% have to be additionally monitored and assessed. The system foresees supplementary possibility to assess received values of indicators, dynamics of changes and to end up analyses with synthesized result which is received out of indicators from the measurement system.

In the Tables 3 and 4 there is presented rating system that permits for every possible variation of the value and dynamics of changes of financial liquidity indicator to designate appropriate meaning in the assessment system:

Table 3. Assignment of points according to periods and dynamics

Period Description	I	II	III
Positive dynamics (increasing)	+	+	+
Value of the indicator in the period	1	1.75	2.25
Negative dynamic (decreasing)	-	-	-
Value of the indicator in the period	-1	-1.75	-2.25

Key to table:

Deterioration of the result comparing to previous period	-
Improvement of the result comparing to previous period	+

Source: own work.

Table 4. Assignment of points to the possible combinations of the indicators values

Possible combinations of indicators values	Table of assignment of points to combinations						
	Entrance points	Points depending on period					Points for combination
+ + +	5	1	1.75	2.25			10
+ + -	5	1	1.75	-2.25			5.5
+ - -	5	1	-1.75	-2.25			2
- - -	5	-1	-1.75	-2.25			0
- - +	5	-1	-1.75	2.25			4.5
- + +	5	-1	1.75	2.25			8
- + -	5	-1	1.75	-2.25			3.5
+ - +	5	1	-1.75	2.25			6.5

Key to table:

Deterioration of the result comparing to previous period	-
Improvement of the result comparing to previous period	+

Source: own work.

Additional measure in dynamic assessment of financial liquidity is the trend which can be ascending or descending. It is necessary to make a forecast how dynamics of the indicators will be forming in next years if the indicators are of positive (ascending) dynamics in researched periods. If in every followed year one has ascending dynamics (every next year is characterized

by higher positive change, for example first year: +2%; second year: +3,5%; third year: +7% *etc.*) then such enterprise is assigned symbol **A**. The same is repeated by each of the indicators.

If the dynamics is positive but descending (every followed year is characterized by lower positive change, for example: +7%; second year: +3,5%; third year: +2% *etc.*) then such enterprise is assigned symbol **B**.

If the dynamics is negative the descending trend is observed and every followed year is characterized by lower negative change than previous (for example first year: -7%; second year: -3,5%, third year: -2% *etc.*) then to such enterprise is assigned symbol **C**. The trend is descending and by negative dynamics is tells that company can in next periods move in the certain dynamic value to positive dynamic.

In another situation when the dynamics is negative and the trend is progressive which means that every following year is characterized by greater negative change (for example the first year: -2%, second year: -3,5%; third year: -7% *etc.*) then to such enterprise is assigned symbol **D**. Progressive trend with the negative dynamic depicts situation when company functions in worsening manner and points out the danger of bankruptcy.

Tables 5 and 6 (in the Appendix) show results of such combined analysis for real company. According to static financial liquidity measurement company belong to II class, but according to dynamic assessment it belongs to V class with 8 D as additional information for decision making. Static measurement constitutes that company has correct liabilities structure, has enough liquid assets to meet its liabilities, but dynamic measurement point out to the fact that already for couple years company is heading into troubles and can shortly be classified to lower class. This example presents the fact how important is to process combined analyses and how the meaning of the analyses is changed due to the broader and well-rounded view.

In practice for the financial liquidity analyses of the enterprise most of the management use only some of the indicators of static assessment. In the financial reporting statements prepared by most of big enterprises there are no indicators of dynamic measurement of financial liquidity. Such attitude is not correct in the sense it does not allow to see what really is going on in the enterprise.

Research of the financial liquidity has to consist of two stages:

1. **Research on the basis of static assessment method**, which has to indicate where is the company according to its financial liquidity stature in concrete moments of period.
2. **Research on the basis of dynamic assessment method**, which has to show type financial liquidity dynamics and the direction in which company is heading.

Enterprise has to change to anti-crises management, which has as a main aim to improve financial situation. Company must to engage methods of stimulation of positive cash flows in its general operations. An anti-crises management is from one side a management during crises and from another side it is a management during crises period for the company. In transforming markets where companies meet many of the crisis problems for the first time they have to use efficiently experience of the western companies for the finding of the solutions for conduction of operations in completely different conditions. Globalization has influenced markets in the way that some local crises become global and their frequency has increased significantly.

Management of the company in this period has to cover next terms (ЮН, 2004, pp. 59-60):

- research of economic situation and roots of crises situations or events;
- conduction of enterprise's outer environment analyses, completion advantages analyses and choice of their strategy development;

- business planning of competition advantages development and improvement of financial condition;
- elaboration of competition advantages development procedures and improvement of financial condition with the system of control over their accomplishment;
- procedures of anti-crises management and system of performance control.

In order to analyze results of financial liquidity of an enterprise it is possible to use different approaches for realization of the aims of the management in relation to financial condition, stage of development and market position of an enterprise. It is connected to the management's intention to realize in the most efficient way strategy of enterprise, its tactical and operational plans. All these demand profound analyses of the results of business activities and also outer as well as inner environment of the company. One of the most important element of analyses is financial liquidity of enterprise which can be precisely and integrally researched by means of combined instrument that uses indicators of static as well as indicators of dynamic assessment. With help of summary tables management transforms data into information needed to take the right business decision. Efficient management of financials of enterprise allows realize expectations of stakeholders and to receive funds for development of company through accomplishment of its strategy.

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Appendix

Table 1. Classification of enterprises according to indicators of static financial liquidity assessment

No.	Indicators	Normal (optimal) value	Decrease in points	Classes of enterprises according to financial analysis				
				I class	II class	III class	IV class	V class
1	Quick ratio (Acid Test)	$L_{\square} (0.1-0.7)$	Every 0.01 causes decrease by 0.2 points	value from 0.70 and more awards 12 points	value from 0.69-0.50 award from 11.8 to 8 points	value from 0.49-0.30 awards from 8 to 4 points	value from 0.29-0.10 awards from 4 to 0 points	less than 0.10 awards 0 points
2	Accelerated ratio.	acceptable value: $L = (0.7-0.8)$; optimal value: $L = 1$	Every 0.01 causes decrease by 0.2 points	value from 1 and more = 11 points	value from 0.99-0.80 = from 11 to 7 points	value from 0.79-0.70 = from 7 to 5 points	value from 0.69-0.60 = from 5 to 3 points	value from 0.59 and less = from 3 to 0 points
3	Current liquidity ratio	acceptable value: $L = 0.2$ optimal value: $L = (1.2-2.0)$	Every 0.01 causes decrease by 0.1 points	2 and more = 15 points $1.70-2.0 = 12$ points	value from 1.69-1.40 = from 12 to 9 points	value from 1.39-1.10 = from 9 to 6 points	value from 1.09-0.90 = from 6 to 4 points	0.89 and less = from 4 to 0 points
4	Receivables to liabilities ratio.	$L = 1$	Decrease of indicator from 1 for every 0.01 causes increase for 0.05 points and increase of indicator and vice versa.	more than 0.5 to 0 – from 7.5 to 10.	value from 0.9 to 0.5 – from 5.5 to 7.5 points	value from 1 to 0.9 – from 5 to 5.5 points	value from 1 to 1.5 – from 5 to 2.5 points	more than 1.5 – from 2.5 to 0 points
5	Receivables turnover period	$L < 60$ optimal value within limits 30-45;	For every 1 day awards 0.1 point in set limits	less than 21 – awards 10 points, from 21 to 30 – from 8 to 10 points	value from 30 to 45 – from 7 to 8 points	from 45 to 50 – from 5 to 7 points	50 to 60 – from 3 to 5 points	more than 60 – from 0 to 3 points

6	Payables turnover period	L > 30 optimal value within limits 30-45	For every 1 day awards 0.1 point in set limits	Value from 60 and more – 10, from 50 to 60 – from 8 to 10 points.	value from 45 to 50 – from 7 to 8 points	value from 30 to 45 – from 5 to 7	value from 21 to 30 – 3-5 points	less than 21 – from 0 to 3 points
7	Net working capital turnover period	Decrease of indicator is negative. When increase of sales there is a need to increase working capital in order to sustain liquidity. L > = 0.5		By increasing award of 6 points, otherwise 0 points	By increasing award of 6 points, otherwise 0 points	By increasing award of 6 points, otherwise 0 points	By increasing award of 6 points, otherwise 0 points	By increasing award of 6 points, otherwise 0 points
8	Current assets to total assets ratio	L > = 0.5	Value from 0.9 and more – 10 points, every 0.01 causes decrease by 0.11 points.	value from 0.9 and more = 10 points	value from 0.89-0.50 = from 10 to 5.5 points	value from 0.49-0.30 = from 5.5 to 3.3 points	value from 0.29-0.20 = from 3.3 to 2.2 points	less than 0.20 => from 2.2 to 0 points
9	Own resources supply ratio	L > = 0.1 optimal value 0.5	Value from 0.5 and more awards 10, and every 0.01 causes decrease by 0.2 point	value from 0.5 and more = 10 points	value from 0.49-0.40 = from 10 to 8 points	value from 0.39-0.20 = from 8 to 4 points	value from 0.19-0.10 = from 4 to 2 points	less than 0.10 = from 2 to 0 points
10	Financial stability ratio	L = 0.4-0.6	Value from 0.8 and more awards 6 points, and every 0.01 causes decrease by 0.075 point	value from 0.80 and more = 6 points	value from 0.79-0.60 = from 6 to 4.5 points	value from 0.59-0.40 = from 4.5 to 3 points	value from 0.39-0.20 = from 3 to 1.5 points	0.19 and less = from 1.43 to 0 points
				88.5-100	60.5-88.5	46.3-60.5	27.13-46.3	0-27.13

Source: own work on the basis of Донцова, Никифорова, 2004, p. 136.

Table 2. Rating table of indicators of dynamic measurement of financial liquidity

Indicators	Researched period and dynamics of changes								Summary
	I 2011	II 2012	Change %	III 2013	Change %	IV 2014	Change %		
1. Operating Cash flow/Sales Ratio									
2. Operating Cash flow/Operating and financial profit									
3. Operating Cash flow/Total liabilities									
4. Operating cash flow sufficiency for covering long term liabilities ratio									
5. Operating cash flow general sufficiency									
6. Depreciation and amortization to Operating cash flow ratio									
7. Return on capital ratio (Operating Cash flow/average equity)									
8. Dynamic degree of liquidity (Operating Cash flow/average current liability)									
9. Cash return (inflows) to sales ratio									
10. Operating Cash flow/Operating profit									
Total points									
Proper dynamics of enterprise									
Additional marking of dynamics									

Source: own work.

Table 5. Static financial liquidity assessment of „X” Sp. z o.o.

#	Indicator	Optimal limits	max. points	Period			
				20XX	20XX	20XX	20XX
1	Quick ratio (Acid Test)	$L > = (0.1-0.7)$	12	0.90	0.87	0.69	0.63
2	Accelerated ratio.	acceptable value: $L = (0.7-0.8)$; optimal value: $L = 1$	11	1.58	1.56	1.71	1.80
3	Current liquidity ratio	acceptable value: $L = 0.2$ optimal value: $L = (1.2-2.0)$	15	11.00	11.00	11.00	11.00
4	Receivables to liabilities ratio.	$L = 1$ value from 2 (0 points) to 0 (20 points)	10	1.45	1.59	1.45	1.87
5	Receivables turnover period	$L < 60$ in construction and industry; optimal value within limits 30-45;	10	9.50	11.00	9.45	13.70
6	Payables turnover period	$L > 21$ optimal value 30-45	10	0.68	0.70	1.14	1.21
7	Net working capital turnover period	Decrease of indicator is negative. When increase of sales there is a need to increase working capital in order to sustain liquidity.	6	5.8	6.5	4.3	3.95
8	Current assets to total assets ratio	$L > = 0.5$	10	42.27	23.76	46.24	63.77
9	Own resources supply ratio	$L > = 0.1$ optimal value 0.5	10	5.5	9.5	4.5	0
10	Financial stability ratio	$L = 0.4-0.6$	6	54.07	34.54	49.16	54.32
	Total points		100,00	8.40	5.50	7.40	8.40
				19.76	13.06	21.76	23.56
				-	0	6	6
				0.91	0.90	0.86	0.83
				10	9.9	9.46	9.13
				0.22	0.28	0.36	0.42
				4.4	5.6	7.2	8.4
				0.40	0.55	0.82	1.06
				3	4.13	6	6
				69.60	75.13	77.29	78.56

Table 6. Dynamic measurement of financial liquidity of "X" Sp. z o.o.

Indicators	Researched period and dynamics of changes								Summary
	I	II	III	Change	IV	Change	Change	%	
	20XX	20XX	20XX	%	20XX	%	20XX		
1. Operating Cash flow/Sales Ratio	0.12	0.05	0.03	-60%	-0.02	-40%	-169%	0	
2. Operating Cash flow/Operating and financial profit	1.98	1.19	0.50	-40%	-1.21	-58%	-345%	D	
3. Operating Cash flow/Total liabilities	0.74	0.49	0.20	-34%	-0.11	-59%	-155%	D	
4. Operating cash flow sufficiency for covering long term liabilities ratio	2.72	2.46	1.32	-9%	-1.05	-46%	-180%	D	
5. Operating cash flow general sufficiency	2.72	1.44	0.50	-47%	-0.58	-65%	-216%	D	
6. Depreciation and amortization to Operating cash flow ratio	10.16	7.55	2.84	-26%	-1.54	-62%	-154%	D	
7. Return on capital ratio (Operating Cash flow/average equity)	1.89	0.86	0.25	-54%	-0.12	-71%	-148%	D	
8. Dynamic degree of liquidity (Operating Cash flow/average current liability)	0.81	0.51	0.21	-37%	-0.13	-58%	-163%	D	
9. Cash return (inflows) to sales ratio	0.99	0.98	0.92	-1%	1.02	-6%	12%	4.5	
10. Operating Cash flow/Operating profit	1.40	0.95	0.37	-32%	-0.47	-61%	-225%	D	
Total points								4.5	
Proper dynamics of enterprise								V group	
Additional marking of dynamics								8 D	

Chapter 33

Is it Creative Accounting, Risk Management, Manipulation or a Fraud?

Artur Holda, Anna Staszal

1. Introduction

The term creative accounting is mainly associated with a process of misleading of those who use financial reports, with dishonest manipulation of information or simply with a fraud. Similarly, an image of a creative accountant is created in the media: he are presented as a fraudster or a manipulator. Whereas an adjective creative itself is the term with positive connotation and people are expected to be imaginative – educational programs just from the first step of education highlight a need of inducing an ability of creative thinking in children and almost every other job advertisement includes the magic word *creative*. However, there is an exception from this rule: according to most people’s belief an accountant should not be creative. The question arises why it is so? What are the origins of the off-putting image of a creative accountant, opposite to intuitive understanding of the adjective and who was the first to use the phrase in the negative way? In order to find the answers for the questions, the authors have searched and then thoroughly analyzed selected titles in the worldwide professional literature, which include various definitions of creative accounting and related terms such as aggressive accounting or earnings management. The outcomes achieved from the research conducted are comprised in the following chapter.

2. The survey of worldwide literature in terms of a meaning and usage of such terms as creative accounting, earnings management, aggressive accounting and the like

In the Polish academic community, there is an abundant group of those who treat creative accounting and a financial fraud as one¹, equally to the way this word is understood by public

¹ Check for example in Wąsowski W. (2005), *Creative Accounting. A Fraudulencia of Financial Statements*, Warszawa, Difin, p. 14; Piaszczyk A. (2011), *The Control System of an Enterprises in After-crisis Economy*, Warszawa, C.H. Beck, pp. 57-60.

opinion². However, many authors of the accounting field point out to a positive aspect of creative accounting³. It turns out that an area of leeway in accounting is a source of many arguments not only in Poland but also abroad, where also there is not an agreement concerning unambiguous definition of creative accounting or other related terms like earnings management, a phrase used much more frequently there.

On account of the lack of unanimity among accountants concerning the meaning of debatable phrases, one should determine who used them for the first time and in which context.

2.1. Creative accounting

The understanding of the term ‘creative accounting’ as a convenient synonym for description of manipulations of financial and accounting data, which violate the rule of ‘true and fair view’, was introduced on a large scale in Great Britain in the 1990s. Griffiths (1986, p. 1) wrote in 1986 “Every company in the country is fiddling its profits. Every set of published accounts is based on books which have been gently cooked or completely roasted. The figures which are fed twice a year to the investing public have all been changed in order to protect the guilty. It is the biggest con trick since the Trojan horse... In fact this deception is all in perfectly good taste. It is totally legitimate. It is creative accounting” what unambiguously defined creative accounting. Jameson (1988, pp. 7-8) did the same in 1988 by writing: “The accounting process consists of dealing with many matters of judgement and of resolving conflicts between competing approaches to the presentation of the results of financial events and transactions... this flexibility provides opportunities for manipulation, deceit and misrepresentation. These activities – practised by the less scrupulous elements of the accounting profession – have come to be known as ‘creative accounting’”. The other authors, for example Naser (1993, p. 2) have written about creative accounting in a similar way: “Creative accounting is the transformation of financial accounting figures from what they actually are to what preparers’ desire, by taking advantage of existing rules and/or ignoring some or all of them” or Amat, Blake and Dowds (1999, p. 3): “creative accountancy is a process whereby accountants use their knowledge of accounting rules to manipulate the figures reported in the accounts of a business”. In almost each of these definitions of creative accounting the word manipulation occurs, also later works support views on a bad nature of creative accounting: “an assembly of techniques, options and freedom room left by accounting regulation, without moving away from laws or accounting requirements, allowing to the managers to change the financial result or the financial statements” (Stolowy, Breton, 2002, p. 44). Cimskey and Mulford (2002, p. 15) define it similarly: “Creative Accounting Practices – Any and all steps used to play the financial numbers game, including the aggressive choice and application of accounting principles, both within and beyond the boundaries of generally accepted accounting principles, and fraudulent financial reporting”. The authors of the last definition mentioned in order to define what creative accounting really is used a phrase ‘fraudulent financial reporting’, which meaning is worth focusing on.

² Check for example in Creative accounting in Dell, *Gazeta wyborcza*, 19.08.2007; Enron – A Victim of creative accounting, *Gazeta wyborcza*, 09.12.2002; Świderek T. (2011) Kreatywna rachunkowość ma się dobrze, *Rzeczpospolita*, 14.11.2011; Dolecki K. (2010) Sentences for Creative Accounting in Polchem’s Case, *Gazeta wyborcza*, 30.12.2010; Andrzejewski P., Piński J. (2002) Tfu(!)rcza księgowość, *Wprost*, No. 27 (1023)/2002.

³ Check for example in Surdykowska S. (ed.) (2005), *Creative Accounting and Financial Fraud*, Dąbrowa Górnicza, Wydawnictwo Wyższej Szkoły Biznesu w Dąbrowie Górniczej; Gut P. (2006), *Creative Accounting and Fraudulence of Financial Statements*, Warszawa, C.H. Beck, pp. 11-12; Kutera M., Hołda A., Surdykowska S. (2006) *Accounting Frauds – A Theory and a Practice*, Warszawa, Difin; Hulicka M. (2008), *Fraudulent Statements*, Kraków, Wydawnictwo Uniwersytetu Jagiellońskiego.

2.2. A fraud and a fraudulent financial reporting

A definition of a fraud in comparison with other elusive concepts seems to be the least controversial and unquestionable. The article 11 of International Standards on Auditing (ISAs) number 240 (<http://www.ifac.org/auditing-assurance/clarity-center/clarified-standards>) points out that by a fraud one should understand “intended steps taken by one or many members of management, a person who is in charge of a unit, employees or a third party by means of lies in order to obtain ungrounded or unlawful benefits”. Similarly, the fraud as a deliberate and intentional action, a forged depiction of facts or their omission which is misleading and results in decisions changing of financial reports’ users, is defined by Association of Certified Freud Examiners (1993, p. 12). Characterising what fraudulent statements really are also seems to be a simple and undoubted task and is included in the binding standard financial statements. ISA 240 is mainly focused on two kinds of frauds, which lead to a distortion of financial statements: fraudulent statements and asset misappropriation. The article A2 of ISA 240 states that fraudulent statements include intentional deformations, which comprise an omission of a sum or information concealing in financial reports, with an aim of deluding the financial reports users. Whereas the article A3 indicates three aspects of fraudulent statements, which may result from:

- a manipulation, a distortion or a change in a source documentation which financial statements were based on,
- a false representation or deliberate overlooking of events, transactions and other important information in financial reports,
- intentional improper usage of financial rules concerning sums, classification or a way of presenting and revealing information.

Cimskey and Mulford (2002, p. 16) also point out what fraudulent statements are: “Fraudulent Financial Reporting Intentional – misstatements or omissions of amounts or disclosures in financial statements done to deceive financial statement users”. The authors draw the attention to the fact that the phrase is used interchangeably with a term accounting irregularities and what is more, in case of a fraud one must prove that a user of a report consisting irregularities suffers losses due to that, and “accounting practices are not alleged to be fraudulent until done so by an administrative, civil, or criminal proceeding, such as that of the Securities and Exchange Commission, or a court” (Cimskey, Mulford, 2002, pp. 15-16).

2.3. Earnings management

The article A2 ISA 240 points out that fraudulent statements can be caused by aspirations of management to shape incomings in such a way to fraud the users of financial reports by influencing perception of the outcomes of their activities and a unit profitability. According to the standard such practices, called earnings management, may have their origins in improper corrections of premises and changes in assessments made by the management. ISA 240 emphasizes that in case of earnings management the executive intentionally takes attitude leading to fraudulent statements caused by introducing important distortions to them. Although it has been quite clearly defined in ISA, the term of earnings management has become a bone of contention among many authors in the accounting field.

S. Davidson, C. Stickney and R. Weil (1987) in the chapter titled ‘accounting magic’ define earning management as “a process of taking deliberate steps within the constraints of generally accepted accounting principles to bring about a desired level of reported earnings”, and K. Schip-

per (1989, p. 92) states that “by earnings management it really mean disclosure management in the sense of purposeful invention in the external financial reporting process with the intend of obtaining some private gain”.

Merchant’s thoughts are of a similar kind: “Earnings management can be defined as any action on the part of management which affects reported income and which provides no true economic advantage to the organisation and may in fact in longer-term be detrimental” (Merchant, 1989, pp. 168-169) and National Commissions of Fraudulent Financial Reporting (1987, pp. 5-6) indicates that “Earnings management activities can mislead financial-statement users and sometimes are precursors of more serious, illegal (fraudulent reporting) activities”.

Defining earnings management, Bruns and Merchant (1990, pp. 22-25) likewise the author quoted above focus their attention on a management’s intentions: “Earnings management is recognized as attempts by management to influence or manipulate reported earnings by using specific accounting methods (or changing methods), recognizing one-time non-recurring items, deferring or accelerating expense or revenue transactions, or using other methods designed to influence short-term earnings” while Day (1988, pp. 195-235) points out also on the other side of the coin: “investment incentive for earnings management will exist if one shareholder group wishes to impress a prospective shareholder group with the firm’s past performance”.

Ch. Levitt (1998, p. 3) states that “Flexibility in accounting allows it to keep pace with business innovations. Abuses such as earnings management occur when people exploit this pliancy”, and Healy and Wahlen (1999, p. 368) add “Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the under lying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers”.

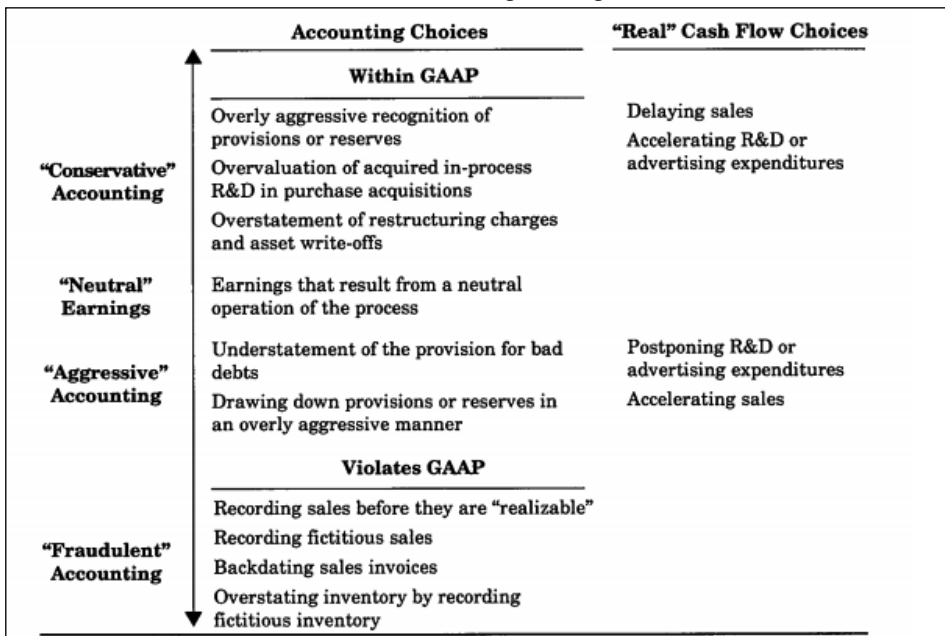
Such a definition of earnings management seems to be identical to what in Poland authors as well as public opinion call creative accounting. Now an issue of a leeway left for accountants and its overuse arises. In the worldwide literature there is not agreement concerning relations between earnings management and creative accountancy. Ibanichuka and Ihendinihu (2012, pp. 126-127) trying to find appropriate definitions of creative accounting and earnings management state: “Earnings management is another form of creative accounting and it is generally described as a purposeful intervention by management in the earnings determination process, usually to satisfy”. It should be emphasised that such placing of the definitions in question is in accordance with the way they are understood by Polish public opinion. Yaping (2006, p. 11) points out the relations between the terms in a reverse way, claiming: “Earnings manipulation is management’s action taken to bring reported earnings to a desired level. Earnings manipulation has three mutually exclusive forms: earnings management, earnings fraud, and creative accounting. When earnings manipulation is performed through exercising the discretion accorded by accounting standards and corporate laws, and/or structuring activities in such a way that expected firm value is not affected negatively, it is earnings management, otherwise it is earnings fraud. Creative accounting is the earnings manipulation that does not violate accounting standards or corporate laws because of the lack of relevant standards or laws, for example, when firms engage in business innovations”.

At the same time, Yaping (2006, p. 11) emphasises that similarly to Schipper he perceives also positive aspects of earnings management. In the author’s work’s summary one can read that: “Many maintain that earnings management is harmful. Arguing that this is untrue, the paper studies the benefits of earnings management to firms various contracting parties and investors, as well as the benefits on social resource allocation”.

In his disquisition, he tries to point out the positive aspects of earnings management, in this way denying many other authors' views, who comprehend this term as an intentional manipulation, geared to obtaining personal benefits. Earnings management as a manipulation is clearly and directly discussed by M.F. McNichols (2000, p. 313), N. Ahadiat and H. Hefzi (2012, p. 245) or Cimskey and Mulford (2002, pp. 15-16). Rather a subtler term is used by Amat, Elvira and Platikanova (<http://econpapers.repec.org/paper/upfupfgen/1129.htm>, p. 2) who compare earnings management with misstatements. Even more restrained in their views are Phillips, Pincus and Rego (2003, p. 493), since they define earnings management using a word strategy: "A strategy of generating accounting earnings which is accomplished through managerial discretion over accounting choices and operating cash-flows". Ronen and Yaari (2008, p. XIV) instead of a definition use an apt metaphor: "Earning management is an umbrella for acts that affect the reported accounting earnings or their interpretation".

Another attempt of comparing different stands on the matter of earnings management has been made by P.M. Dechow and D.J. Skinner (1994, pp. 236, 247-248), who in one of their conclusions included in the work titled "Earning management: Reconciling the Views of Accounting Academics, Practitioners and Regulators" emphasise: "Some earnings management is expected and should exist in capital markets. This is necessary because of the fundamental need of judgments and estimates to implement accrual accounting — the first-order effect of allowing these judgments and estimates is to produce an earnings number that provides a "better" measure of economic performance than cash flows. Eliminating all flexibility would in turn eliminate the usefulness of earnings as a measure of economic performance". The authors proposed a classification of disputable terms in the way showed in a Figure 1.

Figure 1. The distinction between fraud and earnings management



Source: Dechow and Skinner, 2000, p. 239.

These authors also take a stand to defend the positive aspect of earning management. Whereas Brown (1991, pp. 61-63) points out that: "There is a very thin line that separates earnings management and management fraud and managers are reluctant to even discuss the linking of these two concepts".

2.4. Income smoothing

Apart from a debatable concept of earning management, which definition is a bone of contention among authors (similarly to a situation in Poland where there are many controversies over a term of creative accounting, more popular than earning management), a phrase of smoothing income is often formulated, which by many authors unanimously is rated as one of earning management's forms (Schipper, 1989, p. 94). One of the first definition given by Copeland (1968, pp. 101-116) explains that smoothing income is "behaviour to curb fluctuations in income and cause income to approach the level where management's utility is maximized". Itoh (2007, p. 207) adds that this term should be treated as: "The equalization of income in each period to a certain level" and points out that it is not direct manipulation of accounting data, but rather "indirect control of the accounting figures by means of control of the business activity vectors that are the basis for the figures" (Itoh 2007, p. 198).

There are some authors who defend a positive aspect of income smoothing, for example Wang and Williams (p. 96) who prove that "income smoothing enhances the informational value of reported earnings". On the other hand, there are also some who treat income smoothing as a form of a manipulation: "The active manipulation of earnings toward a predetermined target(...) often earnings management entails taking steps to reduce and "store" profits during good years for use during slower years. This more limited form of earnings management is known as 'income smoothing'". Cimskey and Mulford (2002, pp. 15-16) indicate that it is a practice intended "to remove peaks and valleys from a normal earnings series. The practice includes taking steps to reduce and 'store' profits during good years for use during slower years" (Cimskey, Mulford, 2002, p. 16).

3. Conclusion

The concept of creative accounting which definition is a bone of contention among Polish accounting theorists seems to be clearly and undoubtedly defined in foreign literature as activities being at the same time legal, in accordance with accounting laws and totally contrary with its spirit. They are thought to create, under an illusion of good will, an image of a unit in a financial report which is contradictory to actual state. However, in foreign literature another term appears and which undoubted definition poses a trouble for many accounting theorists and which is a source of many arguments, that is earnings management. A location of this term is also troublesome: is this a form of creative accounting or rather the other way around – creative accounting becomes a part of earnings management. Despite of any definitions used and whatever meaning one would ascribe to the above mentioned phrases, the main problem concerns not the nomenclature, but the leeway left for accountants in the accountancy system.

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Chapter 34

Management and Tridimensionalism

Agnieszka Giszterowicz

1. Introduction

The three parts of this chapter apply to three-dimensional phenomena in management sciences, which firstly manifests itself in their identity. Identity is a tool proving a “right to exist”, located on the network of past-present-future relation. With some simplification we can say that if a person possesses the identity, she or he is able to answer the questions: where do you come from? (what is your origin?; your genesis?), where are you at the moment? (what are you doing?; who are you?) and where are you going? (What are your goals?; what are you doing to achieve them?). These questions can be also posed to science, because the ratio of past-present-future applies also to its fields.

Another significant phenomenon of three-dimensionality in management sciences is tridimensionalism in brand management. As known, the perception of the brand as a logo, mark, pattern, sound or colour is not sufficient, because a brand is a multidimensional phenomenon. Therefore, the creators of brands (Interbrand), who can be compared to artists, moved the creative process from a 2D plane (graphics), to a 3D plane (architectural). This procedure allows to affect the senses of customers in the greater extent, and roots the consciousness of the brand.

The last example of three-dimensionality in management sciences which will be presented in the text is a three-dimensional model of accounting developed by American scientist of Japanese origin – Yuji Ijiri. The 3D accounting model is an alternative to the classical (2D) accounting system used by the business units. This model of accounting is based on the three-dimensional relationship past-present-future and explains the changes in revenues and expenses using the third dimension of independent accounts – accounts of economic muscles.

2. Tridimensionalism as management’s identity

Identity escaped from terminological rules because its range of references is extremely wide. Identity’s phraseology refers not only to human being (identity of an individual, social identity, national identity or even online identity) but also to objects, events, science, and organisation.

It is incessantly used as a tool proving “the right to exist” and its temporalising nature means it can be perceived as a special rendezvous of present with past and future.

Nowadays, the crisis of management sciences, which is a result of serious doubts of this science towards its own subject, is noticeable (Sobczyk, 2010, p. 336). “The management does not dispose any theories, or rules, or even substitute of ‘science methods’ (Sułkowski, 2005, p. 55), and a basic management myth is that it exists at all” (Bloch, 1992, p. 83).

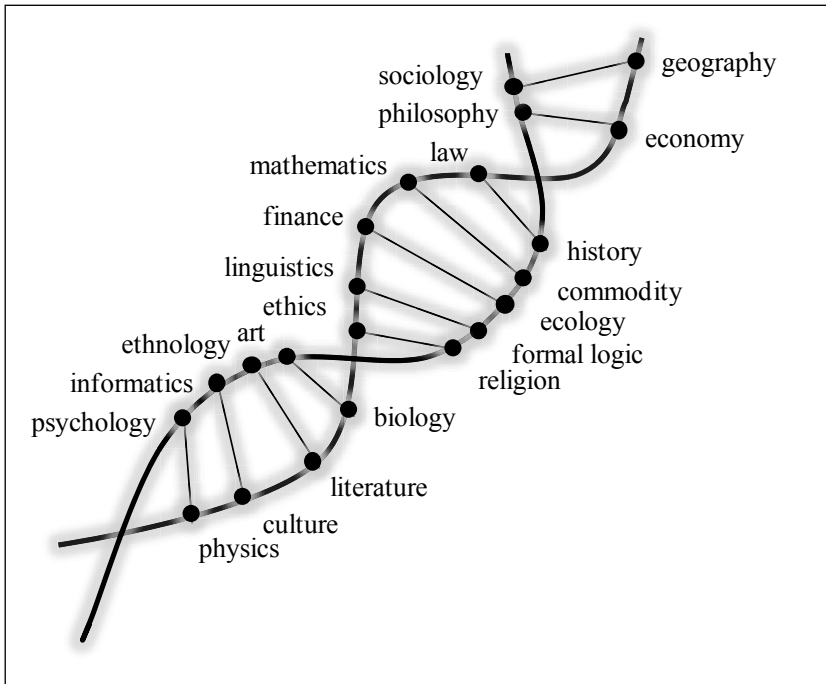
“Unquestionably, the management is an atypical science, (...) is a peculiar science. (...) The management sciences have a common subject, so it largely covers the areas of interests of other science disciplines” (Sułkowski, 2005, pp. 54-55). Transdisciplinarity of management can be regarded by one as a cause of identity crisis of this science (Krzyżanowski, 1999, p. 283), and by the other one as something absolutely opposite (Kostera, 1996) – it is its entrenchment and proclaims about increased consciousness of its own existence. The identity negation which is based on arguments that say about the lack of unified theory or research method, does not abolish the management “right to exist” among other sciences. The lack of unified theory cannot lead to a full identity negation, for identity has a temporary character, what means that it is connected with a changeability in a natural way. The science doubts towards its own subject seem to be unfounded because finding the identity is a guarantor of getting rid of the doubts.

The management identity is proved by many evidences of its placement on the tridimensional past-present-future relation (Giszterowicz, 2014), and also transdisciplinary attitude. “The strength of social management sciences is a result of their variety” (Kozłowski, 1983, p. 11).

“The tridimensional management is noticeable in methodological eclecticism. Naming someone as an eclectic was (...) a praise. It meant, that a given person knew what is right for him/her. In fact, everyone (...) always followed, copied and cited, whether correctly or not. The 19th century French politician and thinker, Victor Cousin, who was called eclectic by himself, gloried in his ability of choosing and reconciling conceptual systems differing from each other a lot” (Rykwert, 2005). “The eclecticism does not only mean the freedom of choice, composing and interpretation of legacy. The eclectic wants and must get to know what he chooses, what he denies, what he wants to interpret. The eclectic (...) rejects the naïve belief that the world can be suddenly discovered in the same way as the Island Utopia was. S/he notices how, in more and more global order, forms the style, not international but transnational” (Bielecki, 2005). The eclecticism in management sciences is seen in attachment with other sciences (Fig. 1).

“The good economist will never be the person who is just the economist” (Sedláček, 2012, p. 23) – Sedláček paraphrases John S. Mill and looks for the economy in myths, religion, theology, philosophy and science, and next searches the economy for myths, religion, theology, philosophy and science. Sedláček says: “as the economy wants to understand everything, we have to go beyond of our discipline and try to understand everything” (Sedláček, 2012, p. 23). “...I claim we can derive from myths, religion, philosophers and poets not less wisdom than from unyielding mathematical models of economic attitudes. I claim the economy should search, discover and discuss its own system of values, although we were taught that it is a value-free science. I claim it is not true, and there is more mythology, religion and archetypes than mathematics in economy. I claim the contemporary economy is too much focused on method and too less on content. I claim and I will try to prove that economist as well as general public will gain from acquiring the knowledge from the wide range of sources” (Sedláček, 2012, p. 32).

Figure 1. Tridimensionalism in management



Source: own work.

The managers gain benefits from the others scientific disciplines as well as from art, that seems to have not much in common with the economy. However, it turns out that on the one hand, the economy includes many aspects which provoke and inspire artists and on the other hand, the art is the thing that often arouses the economists (Kozioł et al., 2013). The art is visible in many forms of economic actions and is the subject matter of the economists' interest, who search for reference to studied reality, willing or trying to discover the identity of studied sciences. A topic of the art presence in economic sciences was a subject matter of many publications. Gicala (2006) presents many examples of complicated linguistic and poetic forms applied in a literature and economists' utterances. The contribution of metaphors and analogy into development of economics and accountancy science was also studied by Kurek (2009). Ijiri (1993) writes about the beauty of double-entry accountancy, whereas Wilkin (2011) search for a beauty usually associated with literature, architecture or painting in economics. Kostera (1996) presents the topic of postmodernism in management and compares the structure of organization to a theatre, where each actor plays a particular role (Kostera et al., 2001a, pp. 321-344; 2001b, pp. 7-26). A group of authors: Hatch, Kostera and Koźmiński were working on the analysis of a managerial symbolics that is promoted by a Harvard Business Review in interviews with famous managers (Grajewska-Rychlik, 2001, p. 149). However, Dobija states that: "During the decision making process, elements of art and science combine. The creation element resulting from the employee's individual features and pre-dispositions, and who is a part of a decision making process, refers to an artistic creation by its subjectivism of procedures and usage of information" (Dobija, 2005, p. 46).

Often, the most radical changes on the field of management are connected with the influence of other people from outside this discipline (Griffin, 2000, p. 69). “It is crucial ... to be open for concepts and methods coming from different science disciplines” (Sulkowski, 2012).

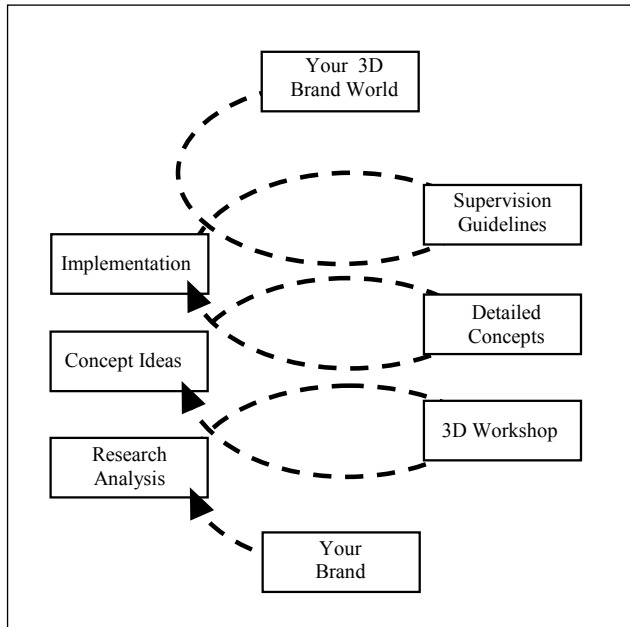
Managers, to derive largely benefits from tridimensionality, should accept the methodological eclecticism, and not reject it for the benefit of creating a discipline, “that rate ... is the status of erudition in itself” (Mokrzycki, 1980, p. 12), emphasizing that eclecticism cannot be replaced by a pastiche.

3. Branding in three dimensions

Urbanek defines a brand as a complex of functional, economic, and psychological benefits for a user, that are delivered by a product marked by a given identifier (Urbanek, 2012, pp. 353-357). Managing the brand, the same as many other management specializations, is a tridimensional phenomenon, strictly connected with the ability of evoking and creating pictures in thoughts. This ability is imagination, which is the basis of all taken actions. Managing the brand consists in creating links with different groups of interest by involving as much senses as it is possible. It requires from the manager to be the artist on the field of sensual marketing and to be able to engage the receivers’ senses using his/her own imagination because brand is not only a definition but first and foremost it is a multidimensional phenomenon: historical, economic, social and cultural. This fact was noticed by founders of Interbrand (forty-two offices in twenty-eight countries) long ago, the biggest corporation of brand managers, known also because of preparing the ranks together with the Deloitte (for example Best Global Green Brands) and inform that “Interbrand was founded in 1974, when the world considered the brand as another term for logo” (www.interbrand.com) and in this way they announce they are unquestioned pioneers in this discipline. There are projects in portfolio of Interbrand, that does not finish on preparing the logo and distributing it among the receivers, but also they transfer the brand on a tridimensional space, which aim is to build its awareness. The brand identity presented in a three-D gains more sensually substantial quality. People can understand and feel it in a better way. Tridimensional branding is something much more than hanging the logo or painting the walls in its colours. Properly arranged space generates many stimuli that influence the brand reception. To achieve this aim, one needs to know, that each detail of a project plays a vital role. Elements, such as: colour, typography, materials and shapes must match. The result of these actions is an extensive experience of the brand. Precisely designed interior is the best way to present the brand with its all aspects, and what is more, to increase the trust towards it and to create a strong link between the brand and receiver. The tridimensional branding begins with workshops, where Interbrand specialists along with the investor create basis of the future project. The workshop helps the investor to understand the rules of creation and to imagine how his/her brand will be perceived in a tridimensional space. Interbrand creates tridimensional template, which presents the aspects influencing the brand perception – form, function, construction, material, light and colour (attributes that create value). The first task is to determine the character (symbolism, reflected quality) of created space. Participants experiment with images and put them on a tridimensional space. The discussion is accompanied by a presentation of images among which the participants choose the ones that reflect the brand in a best way. During the session, there are also chosen colours, materials and shapes, which in next stages will fill the tridimensional space. Each participant creates collage from

the elements, which in his/her opinion reflect the brand attributes in a best way. On their basis, Interbrand works out few alternative conceptions, among which the investor chooses the one that in his/her opinion best illustrates the brand in a tridimensional way (Kracht, 2014, pp. 2-4). Figure 2 presents all elements of creating the brand in a tridimensional space by Interbrand.

Figure 2. Expressing a brand in three dimensions



Source: own work based on Jens-Ole Kracht, *Expressing a Brand in Three Dimensions, Creating and Managing Brand Value*, Interbrand, http://www.interbrand.com/Libraries/Articles/11CGN_3D_EN_120106.sflb.ashx [03.04.2014].

CBM is a Creative Brand Manager, that can be compared to a good storyteller (www.ted-burdett.blogspot.com). The brand manager is an extremely creative person, who possesses the knowledge of economics and adequate for an artist – the sense of beauty and aesthetics. Some aspects of the management have definitely a scientific character. It arises from the fact that this science uses a proper set of research methods and established the differences with other similar sciences, but its significant part still remains an art. Followers of classifying the management to the art, claims that it requires creative abilities and predispositions (Gonciarski, 2014), which let the manager to move among numerous dimensions of this discipline.

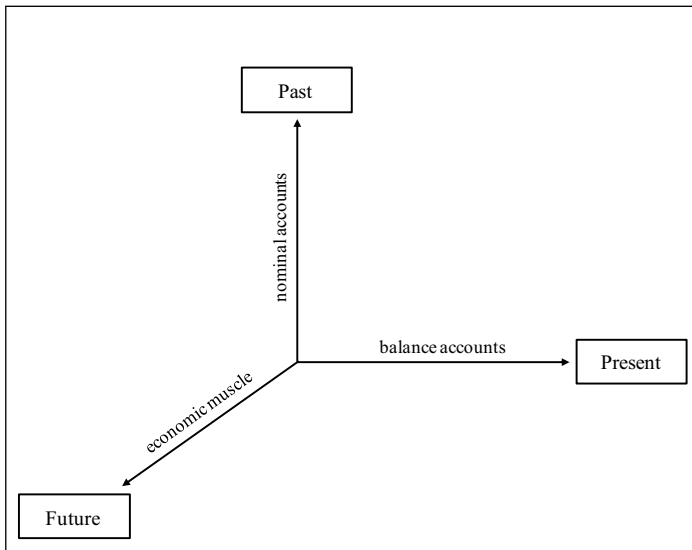
4. Ijiri’s conception of triple entry-bookkeeping

The proven management identity allows to treat this science as a specific meeting of the present with the past and the future. The present-past-future relation is a foundation of a tridimensional accountancy system created by Y. Ijiri (1989), where particular management disciplines

(for example brand managing) have their places as economical strengths. The past-present relation was reflected in a double accountancy. The present is reflected by balance accounts, which mathematical equivalent is a straight, that is one-dimensional space. The balance accounts allow to estimate the rate of assets and liabilities increase, displaying the results at the end of the given period. Nominal accounts (revenues and expenses), on the other hand, sum operations of a past period. Overall, balance accounts and nominal accounts form two axes of coordinates (Fig. 3), that is a two-dimensional space (<http://mfiles.pl>).

Ijiri tried to explain the changes of revenues and expenses by the third dimension of independent accounts. He hypothesized that expenses and revenues are not the most elementary categories of accountancy and can be defined by more analytical quantities. Accordingly, he distinguished two notions, which are a subject matter of interest and measurement in a two-dimensional accountancy: income – the increase of asset in a given period and impetus – the rate of the asset increase (Dobija, 2003, p. 172). The basic difference between the measurement of income and impetus consists in that the income measurement takes place on the basis of a period of time, whereas the measurement of impetus takes place in a particular moment, so it can be measured many times during the period. An economic muscle – explains the rate of impetus changes in a given period, a stimulus – explains the changes of the states of impetus in a given time, and the result of the stimulus is the action (Dobija, 1999, p. 185).

Figure 3. Three dimensions in accounting



Source: own work.

One of a triple accountancy conclusion says that similarly towards the world of Physics (Dobija, 1992), an equity capital remains constant, by the time the economical impetus, that is equivalent of a momentum, will change. The economic impetus changes under the influence of the economic muscles, which can affect it in a positive or negative way. The economic muscle performing in a time evokes a particular measurable economic stimulus, that influences the size

of the income. The significance of Ijiri's achievement also consists in that by a formal reasoning, he came to the economic muscle identification affecting, in a positive way as well as in a destructive one, the invested capital.

Ijiri presented a proposal of an economic muscle set, in a division of the internal muscles which influence is dependent on the factors, which remain under the enterprise control; the external muscles which are a result of the exogenous factors, and the residual muscles which are defined as the factors inside the enterprise, dependant on its functioning, but in fact, cannot be formed by the executives (<http://mfiles.pl>). There are also possible other divisions of the economic muscles, such as, using the figures from the economic and financial analysis of a given enterprise, or the accelerating and delaying muscles – factors causing a positive or negative increment of revenues and expenses (Dobija, 2005, p. 331).

Treating the capital (personal asset) as an inertial mass, which is influenced by the economic muscles, Ijiri introduced the interpretation of three dimensions of the accountancy and adequate formulas of income measurement (Dobija, 2012, p. 16).

A model of a tridimensional accountancy allows the enterprise, in many different ways, to measure the same financial result, in other words to elaborate and precisely identify the factors that form the enterprise income. When it comes to the practical aspects of the accountancy, the lack of codified and formalized research on causes of changes and values changes of the economic impetus, is a kind of inconvenience. So at the beginning, the system of muscle accounts should be, to a large extent, dependant on a discretion of a chief accountant and a company, where it is employed. A specific selection of particular accounts in a muscle accounts system allows the managers to focus on the precisely defined areas of enterprise's activities. It will result in a possibility to define precisely the strengths and weaknesses of the company and, what is more, the opportunity to focus on the maximizing the profits and minimizing the losses present in particular departments of the enterprise. The system of tridimensional accountancy may be helpful for the managing staff, similarly to the management accounting, in making decisions connected with the future. This model allows, in a more complex and farsighted way, to formulate plans and the strategy of the company (Dobija (ed.), 2005, p. 201, 337).

For example, the management discipline that requires such an attitude is described in a previous part the brand managing. The tridimensional accountancy can overcome difficulties in presenting the investment's influence in building the brand on the increase of the asset backing. The tridimensional accountancy gives a possibility to prove that as a result of actions directed towards the branding, takes place the increase of values, also in a longer period of time.

5. Conclusion

When it comes to the management, the benefits coming from the tridimensionality are similar to the ones connected with a visual technology and among them can be numbered: the possibility of getting more realistic image, the possibility of perceiving larger number of essential details, better view on observed phenomenon, getting the information allowing for constant improvement and fast and accurate decision making. The tridimensionality evokes senses and imagination, associates with a nature, better quality and perfection. It is not surprising that researchers connected with the management sciences, import the tridimensionality, and a tridimensional view on an organizational reality is more and more common. Summing up, the tridimensionality in manage-

ment sciences is a methodological eclecticism strictly connected with the identity of this science discipline and its temporary character based on past-present-future relation. In brand managing, the tridimensionality is visible in managers' innovative attitude towards the process of branding. The artist-manager or the brand builder, is connected not only with a two-dimensional space (logo, packagings, promotional materials, commercial), but also with a tridimensionality (interiors). Finally, the tridimensionality has also its role in accountancy, thanks to creating by Yuji Ijiri, the alternative system of accountancy based on three types of accounts, named as tridimensional accountancy.

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Chapter 35

The Human Capital Theory as a Basis for the Development of Financial Reporting

Jurij Renkas

1. Introduction

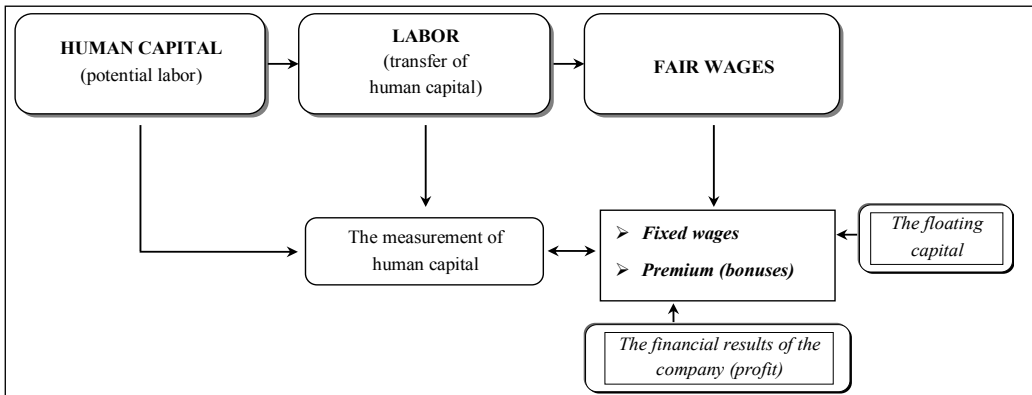
The research in the area of human capital (in the light of its abstract nature as the ability of doing labor) and existent economic constant of potential growth has been made for over 15 years. The first article in this area was published in 1997 (Dobija, 1997). Since then, there have been a lot of publications in which authors developed issues in the area of human capital measurement theory, the theory of fair wages for their work, the theory of basic and premium wages, the labor productivity theory, the theory of money and economy without deficit. These theories are a consequence of implementation of the human capital measurement model and understanding the relationships between categories of capital, labor and fair wages. This line of research amounted to a new scientific research program entitled as laborizm. The aim of this article is to provide a method of preparing a report about the level of human capital pay the employees of the company, which in the light of laborizm found new solutions. For this purpose, the measurement model was presented to the individual human capital of workers and the method of determining the size of fair wages.

2. Original scientific research program M. Dobb in the sphere of human capital and labour

The fundamental principle of double-entry bookkeeping, which distinguishes heterogeneous assets from the abstract and homogeneous capital (Ijiri, 1995) and is the basis of accounting theory and systems is not used in other disciplines of economics. And this is the reason why the misunderstanding of the principle of duality can not ultimately understand the nature of the category of capital. Therefore, lack of adequate knowledge of the basic relationships occurring between capital, labor and pay, even though these concepts are crucial in economics. It is harm to most of the economics theory for which the solution of basic problems triad “capital – work – fair pay for work” is also a key question (Dobija, 2011).

Nowadays there are all reasons to conclude that the original scientific research program in the sphere of human capital has been formed as a result of economic research, which has begun in the 90-s of the last century. From year to year these studies become more and more developed and wider range finds proper theoretical explanation. What is more, such open economic questions as money, credit and budget deficit are elucidated differently within the new scientific research program. One of the last publications of M. Dobija (2011) became a sign of fundamental changes in economic thought. There are signs that the new scientific research program, proposed by the author, is gradual in terms of methodology of I. Lakatos. In this program capital, labor and fair wages constitute an inseparable triad (as illustrated in Figure 1), in which labor is presented as a capital transfer to labor products. The origin of the name for the scientific research program comes from laborism (eng. *labor*).

Figure 1. The triad: capital – labor – fair wages



Source: author's research.

The research program is based on the understanding of nature of the capital as the ability to work, and advanced study of its theory. Exactly this fact is the most important in the program.

3. Models of human capital and compatible wages in the light of laborizm

For each person the size of its capital determine necessary required, such as cost of living, costs of education, capital of work experience and expenditures own work, as in the case of teachers. Identification of these expenditures and determine the function of capital growth as a result of acquired experience, leads to a well-known and well-verified human capital model, which was presented in many previous publications (Kozioł, 2007, 2010; Kurek, 2004; Dobija, 2009; Dobija et al., 2010).

Human capital is a function of many variables, where: k – the monthly maintenance costs, t – the time variable, T – the length of professional career (in years), and p – the economic constant of potential growth. Stated below formula represents the simplest model of human capital:

$$H(k, t, T, p) = K \tag{1}$$

where $H(k, t, T, p)$ – the value of human capital, K – the capitalized cost of living with rate p .

The expanded model contains more variables associated with professional education and obtained work experience. Its character can be described as follows (Cieślak, Dobija, 2007, pp. 5-24):

$$H(T,p) = (K + E) \times [1 + Q(T)] \tag{2}$$

where $H(T,p)$ – the value of capital of person with T years of experience, K – the capitalized costs of living, E – the capitalized costs of education, $Q(T)$ – the growth factor experience after T years of work.

This model can also be presented in additive form:

$$H(T) = K + E + D(T) \tag{3}$$

where $D(T)$ is the capital of work experience after T years and $D(T) = H(0) \times Q(T)$, where $D(0) = 0$. This model is more convenient for analysis and explaining the wages.

The human capital model can be supplemented with capital creativity ratio (Cr) or variable U_i , which is used in the human capital measurement model of university professors (Kozioł, 2010). It sets the extent of capitalized costs of getting another scientific degree (where t_i is the amount of years from the date of receiving the degree to measurement date). These models are shown in Table 1.

Table 1. The human capital measurement models of employees

No.	The human capital measurement models	Characteristics of the human capital measurement models
1	$H(T) = K$	The human capital of an employee who does not have a university degree and work experience (consists only of capitalized costs of living)
2	$H(T) = K + E$	The human capital of an employee who has a university degree (there is an additional variable – the capitalized costs of education)
3	$H(T) = (K + E) \times (1 + Q(T))$	The human capital of an employee who has work experience (the rate of capital growth experience depends on years of professional experience, especially in the first years of work)
4	$H(T) = K + E + D(T)$	The additive form of the employee’s human capital model
5	$H(T) = K + E + D(T) + Cr$	The human capital of an employee who has a capital of creativity
6	$H(T) = K + E + D(T) + U_i \times (1 + Q(t_i))$	The human capital of university professors (where, t_i – the number of years from the date of receiving the degree to measurement date)

Source: author’s research.

Thus, you can determine the extent of the human capital of each employee by using the models described above and this amount will be a basis for determining fair wages for every employee. It should be emphasized that level of capitalization is also important and from study it is 8% per annum (Kurek, 2008; Renkas, 2011).

4. Estimating the fund premium wage

Usually, the payment system in the company contains a fixed component in the form of basic salary of employees, and a variable (bonus), which depends on the financial results obtained. In determining the size of the bonus payable to employees applies the following cost model of the production function (Dobija, Renkas, 2011, pp. 179-188):

$$P = We^{r+I} \left\{ 1 + \frac{A}{H} \times \frac{z}{u} \right\} \cong W \exp \frac{A \times M}{H} \quad (4)$$

where P – realized production for the year in sales prices, W – wages, A – the value of assets, H – human capital, $L = p \times H$, L – wages fixed, p – economic constant, $u = p + v$, v – percent of salary bonus, z – turnover ratio, r – profitability of costs.

The variable H is calculated by the formula $H = L/p$. The variable L is the total amount of the basic salary of employees of the company, which can be easily determined from the data of financial reporting. As a result of the conversion of the variable of human capital H on appropriate indicators we get the following model of production:

$$P = W \times e^{\frac{AMp}{L}} \quad (5)$$

This model allows determining the real level use of human capital in the production process and its appropriate fee. The proposed method of bonuses can determine the size bonus, which is shared between workers in accordance with a fixed bonus system for the enterprise. Fund pay (W), hence the fixed and variable component, can be represented by the following formula:

$$W = u \times H(T) = p \times H(T) + m \times H(T) \quad (6)$$

where u – variable real of labor fee, p – 8-percent economic constant, m – percentage of the premium.

As a result of the appropriate transformation non-linear model of cost production functions we obtain a formula by which to calculate the variable M and Q:

$$M = \frac{L \ln Q}{Ap}, \quad Q = \frac{P}{W} \quad (7)$$

Also, with this model, we obtain a formula for calculating the fund of paying job, as a function of the data that characterize the economic results of the company:

$$W = \frac{P}{e \frac{AMp}{L}} \tag{8}$$

Using the above-mentioned formulas, we can analyze the system of paying job at every company and on the basis of selected parameters to calculate the appropriate indicators for next year.

Table 2 shows the results of calculations carried out on the basis of empirical data for the year 2011, received in Zhytomyr factory mechanical repairs, and the forecast for the next year. On the basis of these indicators have been established variables M and Q and the calculated percent premium over the basic salary.

Table 2. The calculation of the level paying job in Zhytomyr factory mechanical repairs

The financial data	2011	The budget for 2012
Sold production (P), UAH	64,125,000.0	65,030,000.0
The value of assets (A), UAH	56,904,000.0	56,936,000.0
Fixed remuneration (L), UAH	9,552,000.0	9,576,000.0
Fund for payment of job (W), UAH	11,011,000.0	11,173,540.0
Variable Management (M)	3.70	3.70
Labour productivity (Q)	5.82	5.82
The percentage of premiums (h), %	15.27%	16.68%
The premium, UAH	1,459,000.0	1,597,540.0

Source: own calculations on the basis of financial reports of Zhytomyr factory mechanical repairs.

The last column of Table 2 shows the planned budget for next year. Plan foresee a few percent increase in production along with a small increase in cost. Variable management should not be reduced because it contains profitability and asset turnover. Achieving the anticipated financial results will give us the opportunity to pay a premium of 1,597,540 UAH, which represents 16.68% of the amount of salaries. This bonus is a good incentive for employees to achieve the desired budget. Such a motivation in the future will encourage increased of labor productivity. It must be added that, based on this example, we can provide several variants of development of the financial situation at the company.

5. Human capital theory as a basis for the development of financial reporting

Synthetic human capital measurement model developed by M. Dobija gives the opportunity to organize a system of registration and the development of data relating to the human capital of workers and the level of his pay, which refers to the concept of statements about the level of payment human capital. Based on this model, we can calculate the value of individual human capital of each of the employees in company and the overall value of this ratio throughout the company. Output data for determining the overall value of the company’s assets (including human) in order to reflect them in financial reporting are presented in Tables 3 and 4.

At this point we need to say a few words about the human assets of the company. We must remember that hiring workers, the employer does not buy people with physical point of view,

but buys their ability to work. Pays their salary as compensation for the transferred human capital. Therefore, using the term human assets under them understand the overall value of the human capital of workers that offer to employers your ability to do the job and in return expect the equivalent of its fee. It is these assets are crucial in the company and from them depends on its efficiency.

Table 3. Output data for determining the overall value of the company's assets

Indicator	Amount
Number of employees, including:	3
– employee I category	1
– employee II category	2
Human capital determined on the basis of cost of living (K)	1,270,014.00
Capital of education (E)	71,830.00
Capital of work experience (D(T))	312,130.00
Amount accrued salaries (labor costs), including:	167,100.00
– bonuses	30,000.00

Source: author's research.

Accordingly, the asset structure of the company, including the indicators outlined above, will look as follows (Tab. 4):

Table 4. The structure of the company's assets

The structure of the human capital		
1.	Human capital determined on the basis of cost of living (K)	1,270,014.00
2.	Capital of education (E)	71,830.00
3.	Capital of work experience (D(T))	312,130.00
4.	The total value of human capital	1,653,974.00
The structure of the company's assets		
5.	Material assets of the company	1,800,000.00
6.	Intangible assets of the company	860,000.00
7.	Human assets of the company	1,653,974.00
8.	The total value of assets of the company	4,313,974.00

Source: author's research.

As we see, shown in Table 4 the data make it possible to compare different companies in light of their material, intangible and human assets. Having quoted the above pieces of information that apply to the human capital of workers, we introduce a new form of report (Tab. 5). Its structure was built in the light of the scales of which are essential in regulating the distribution of qualifying employees. It gives the ability to analyze the value and the percentage of the payment of the human capital of workers in the context of their qualifying division. Below (Tab. 5) is given an example of completing the statements about the level of payment human capital of workers which is used a tariff containing two types of qualifications. Output data partake of Tables 3 and 4.

Table 5. Sample statements about the level of payment human capital of workers

	Item	At the beginning of the reporting period	At the end of the reporting period
I. The structure and rate of return on human capital of workers			
1.1.	Human capital of workers	-	1,653,974.00
1.2.	Intellectual capital of workers	-	383,960.00
1.3.	Capital of work experience	-	312,130.00
1.4.	Normative labor costs (1.1 × 0.08)	-	132,317.92
1.5.	Basic salary	-	137,100.00
1.6.	Amount difference (1.5 – 1.4)	-	4,782.08
1.7.	Percentage of compliance (1.5/1.1×100%)	-	8.3%
1.8.	Amount premium	-	30,000.00
1.9.	The total amount of remuneration (1.5 + 1.8)	-	167,100.00
1.10.	The real level paying of work (1.9/1.1×100%)	-	10.1%
II. The structure and rate of return on human capital of workers I category			
2.1.	Human capital of workers I category	-	748,560.00
2.2.	Intellectual capital of workers I category	-	215,900.00
2.3.	Capital of work experience I category	-	142,770.00
2.4.	Normative labor costs (2.1 × 0.08)	-	59,884.80
2.5.	Basic salary	-	61,000.00
2.6.	Amount difference (2.5 – 2.4)	-	1,115.20
2.7.	Percentage of compliance (2.5/2.1×100%)	-	8.2%
2.8.	Amount premium	-	14,000.00
2.9.	The total amount of remuneration (2.5 + 2.8)	-	75,000.00
2.10.	The real level paying of work (2.9/2.1×100%)	-	10.0%
III. The structure and rate of return on human capital of workers II category			
3.1.	Human capital of workers II category	-	905,414.00
3.2.	Intellectual capital of workers II category	-	168,060.00
3.3.	Capital of work experience II category	-	112,360.00
3.4.	Normative labor costs (2.1 × 0.08)	-	72,433.12
3.5.	Basic salary	-	76,100.00
3.6.	Amount difference (2.5 – 2.4)	-	3,666.88
3.7.	Percentage of compliance (2.5/2.1×100%)	-	8.4%
3.8.	Amount premium	-	16,000.00
3.9.	The total amount of remuneration (2.5 + 2.8)	-	92,100.00
3.10.	The real level paying of work (2.9/2.1×100%)	-	10.2%

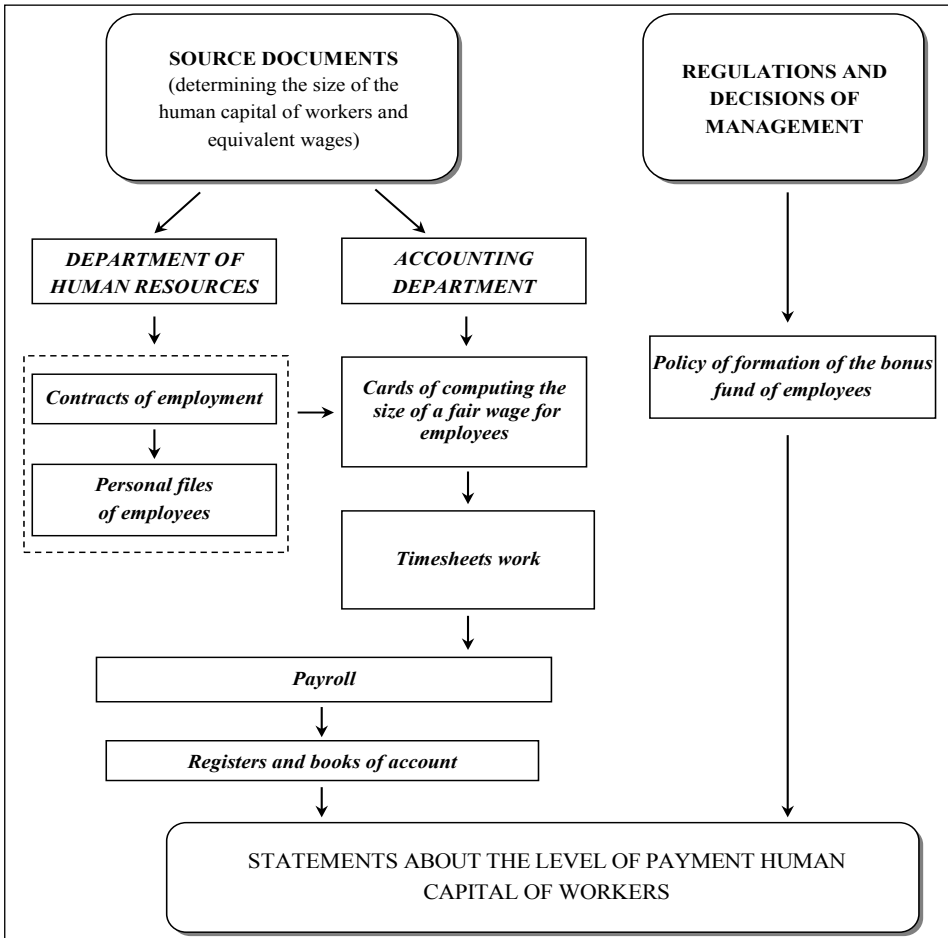
Source: own study based on data from Table 3 and 4.

As we can see from Table 5, the real level paying of work in total in the company is 10.1% (of the total value of the human capital of workers). In the case of employees I category it amounted to 10%, of which it can be concluded that the employee is able to compensate for the natural dissipation of his capital (which according to the theory amounts to 8%) and additionally use

the remaining 2% of its development. So now every employee of a company with the help of this report can analyze and evaluate the level of payment of their individual human capital.

The listed report requires an additional source of information, which is becoming personal files of employees supplemented by an assessment of components of their individual human capital. This clearly speaks for its originality. The entire process of creating statements about the level of payment human capital of workers from the source documents to the relevant report is shown in Figure 2.

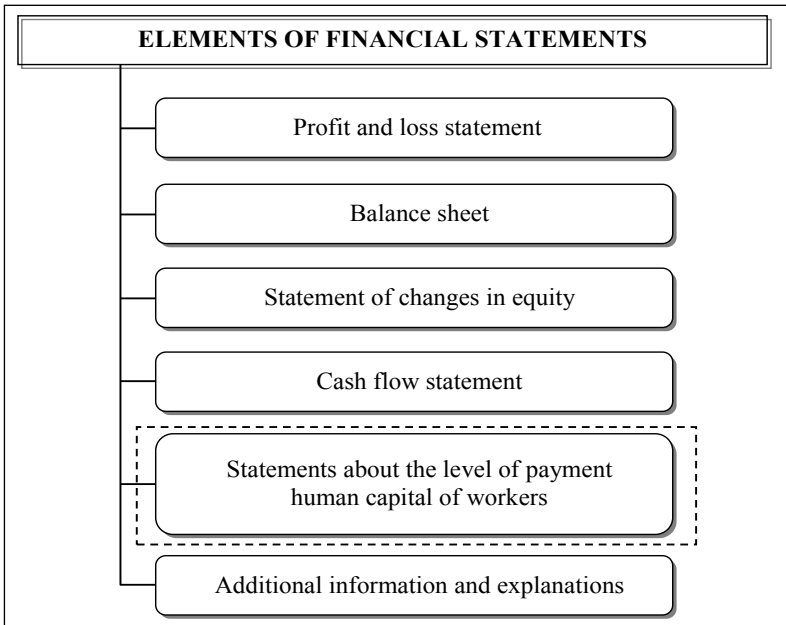
Figure 2. Scheme formation of statements about the level of payment human capital of workers



Source: author’s research.

The proposed above report will take its place among the five statutorily defined elements of financial reporting, which today are made in enterprises (Fig. 3). As a sixth element of reporting it satisfy the information needs of employees and other recipients of information concerning the level of payment human capital of employees.

Figure 3. Statements about the level of payment human capital of workers as a sixth separate element of the financial reporting



Source: author's research.

The introduction of such statements will eliminate the information gap concerning the payment human capital of workers. Because capitalism, in the positive sense of the word, provides coverage of all types of capital (regardless of location), and equal rights for its preservation and multiplication, and the financial statements are supplemented by the information mentioned above is a manifestation of the social market economy.

6. Conclusion

Because every accountant has adequate access to the information necessary to prepare a statements about the level of payment human capital of workers, the only problem remained to find the right method for determining the size of individual human capital, calculated on the basis of which is the size of a fair wage. Presented in this article the concept of measuring human capital helped solve this problem. Also, it was found that the size of wages directly depends, first, on the components of human capital, and, secondly, on the number of hours worked.

Today, using this concept accountants have the ability to make computational cards for determining the amounts of the fair wages of employees, which in turn enables the preparation of statements about the level of payment human capital of workers.

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Chapter 36

Labour Costs vs. Economic Performance of Companies

Anita Mrówka

1. Introduction

The development of the socio-economic accounting within the scope of human resources has a positive effect on the financial reporting, by way of creating a more accurate and richer picture of a business entity within wide understood social determinants. A constitutive problem conditioning the progress of this field of science is to determine the structure of human capital and identify a method for measuring the value of individual components that would suit the accounting method (Dobija, 2002, p. 66).

Issues of how to assess and remunerate employees of economic entities have been a point of scientific interest since long ago. Nowadays, these issues are examined in a broader context of intellectual capital perceived as a stimulus generating both economic value and social welfare. Money, although they are necessary, cannot replace thinking, and all the accumulated machinery and equipment, even when efficiently working, do not make inventions. Thinking and creativity are the domain of the human being. This view had a major impact on the popularisation of the opinion that human capital is the most valuable asset of the economic entity (Dobija, 2002, p. 67).

Authors of numerous works in the field of human resource accounting indicate that both HRA (Human Resource Accounting) and HRCA (Human Resource Costing and Accounting) can deliver many benefits to financial statements' users, if financial statements would be enriched by descriptions of the human capital status and of human assets. External and internal decision-makers should have access to information about changes in the status of human resources, mainly in order to adequately assess these resources and to assess the associated wages and profits. Therefore, we can notice high activity in the field of HRA and HRCA, despite the fact that the main terminology-related problem within this accounting and within the economics has still not been adequately and sufficiently solved. This problem concerns terms: capital, human capital, human capital value (Dobija, 2009, pp. 27-29).

Within the currently functioning money-goods economy, wages – being the main source of labour costs of an economic entity – are determined by two sources: one are products containing

labour costs and used assets and the other is money, that is payroll. These two aspects constantly confront each other within the free market trade. These two sources can be quantitatively described with consideration of the proper function of production and function of money creation (Dobija, 2010, pp. 174-176).

Financial accounting and cost accounting as well as periodic reporting of economic values that are directive for the economic entity and that characterize its business allow for an in-depth analysis of economic processes taking place in the company, along with an attempt to evaluate them. Economic values measured in the accounting system generate arguments for production function. The task of production function is to transform productive factors in final products (Dobija, Jędrzejczyk, 2007, p. 48).

The purpose of this paper is to give a new look at productivity seen from labour costs perspective. This new look makes an attempt to determine the relationships between productivity and issues of analysing and managing a business entity. The research of workforce productivity is presented in this paper on the example of the time period spanning prehistory and the economic achievements of Sumer. The paper is based on critical and analytical study of Polish and English language literature, mainly in the field of history and theory of accounting, economics, historiography as well as on the basis of empirical research of archives. Another point of interest of this paper are scientific achievements of the Department of Accounting of the Management Faculty at the University of Economics in Krakow under the direction of Professor Mieczyslaw Dobija, who is particularly interested in categories of capital and labour. This paper addresses cognitive issues of exploratory and explicative nature. The results of this study extend the economic knowledge concerning accounting theory, labour costs and labour productivity.

2. Labour in the economy and accounting of Sumerian city-states

Measuring the value of performed work constitutes an inalienable element of the economic system. This element has been present in the economic life from the earliest times. In the economy of Mesopotamia we can indicate two basic periods. The earliest period, characterized by use of tokens in organizational systems of work and corresponding payroll system. This first period originates from the 8th millennium BC. The oldest artefacts being of interest for accounting history researchers were found in the region of Zargos in the contemporary Iran. They originate from Tepe Asiab and Ganj-i-Dareh Tepe, from 8500 years BC (Panosa, 2004, p. 7). Mid 4th millennium is the beginning of the second period in the economy of Mesopotamian city-states. This period lasts until the beginning of the dark ages, that is until the Trojan War. Initially in this second period tokens are replaced by clay tablets with embossed token characters, then gradually replaced with pictographic writing. A significant breakthrough of the second period dates back to the 3rd millennium BC. Then, tokens and pictograms are replaced by the invented – very efficient – cuneiform writing. Clay tablets containing confirmation of records of performed work constitute a considerable part of the archaeological excavations. They allow to reliably and accurately reconstruct the system based on the ancient labour accounting (Dobija, 2010, p. 35).

However, in both historical periods, the essence of the accounting system consisted in recording the performed work, which was preceded by measurement of that work. The system included also measurement of labour-related costs, along with an attempt to estimate the salary according

to the previously adopted value of work. This way of reasoning guaranteed that the economy stayed balanced in peacetime (Dobija, 2010, pp. 35-37).

Thanks to publications of scholars researching the “very first matters” in the history of mankind, we are able to identify as early as in the 3rd millennium numerous traces of use of an abstract unit when clearing performed work. Researchers of the narrow slice of the world commonly known as the Middle East often referred to as “those who know the most about the smallest” in their research work came across the issue of “work shifts” used as a settlement unit (Kramer, 1961, p. 5). This information originates from conclusions drawn by V. Struve once he had examined the clay tables found in Umma, that dated back to the 23rd century BC. This researcher of Sumerian archives notes that the tablets recorded the number of employees performing, under guidance of a supervisor, a given work assigned to them as well as the standard time to perform a given work. This time was most often expressed in days, less often in months, “(...) writers noted the number of workers on the clay tables and later multiplied this number by 360 days in a year. As a result, they calculated the number of workers per day. This results in a conclusion that Sumerian accountants used the concept of man-days and summed up the labour input in these units” (Struve, 1969, p. 128).

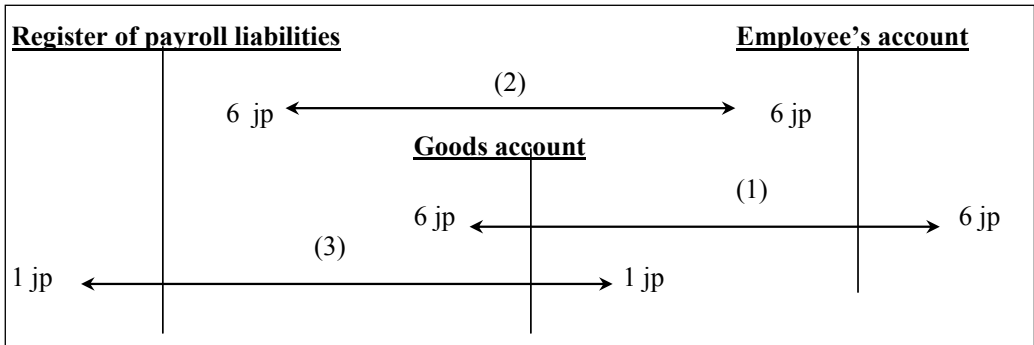
An example of the above observations is shown in a monograph creating an overall picture of cultural and spiritual achievements of the of one of the oldest and most prolific civilizations throughout the history, Sumerian country, contained in the book by M. Bielicki, a Polish writer, essayist and journalist. In this book will can read among others: “In one of wicker workshops of Umma – according to the discovered reports – in one year 13282 1/3 shifts of work were performed with 147 shifts lost due to diseases. Sumerian documents generally do not state numbers of employees; they only operate numbers of work shifts” and then “(...) The construction of a ship with a tonnage of 120 gur required 1800 shifts, *i.e.* 60 employees” (Bielicki, 1966, p. 287).

In the previously cited work V. Struve presents conclusions on the essence of the nature of accounting and economy “The introduction of the concept of “work shift” in the accounting records was undoubtedly motivated by the desire to simplify the calculations of products given to employees as remuneration for their work. In addition to the concept of “shift” the accountants distinguished also such factors as: 5/6; 2/3; 1/2; *etc.* that were used to express a part of a shift. Employees whose productivity was estimated at 5/6; 2/3; 1/2 unit of work received accordingly reduced portions of grain (...)” (Struve, 1969, p. 136). This quoted passage is noteworthy because it can be easily interpreted and depicted. The quoted fractions are power factors attributed to individual employees with the assumption that factor 1 means the highest power. It is worth emphasizing that the nowadays payroll systems use identical solutions. In order to calculate power factor in the contemporary payroll systems, wage of a given employee is divided by the value of the wage of the best earning employee (Dobija, 2010, p. 38).

The work performed by the Sumerians was meticulously recorded in form of payables recorded on an individual account of each employee. The level of earned receivables determined the amount of goods that an employee could take from temple warehouses. This mechanism ensured that each working Sumerian could spend exactly as much as he earned (Dobija, 2003, p. 223).

The labour accounting system based on the understanding of economics by inhabitants of the ancient Sumer has been vividly reflected on the basis of a model based on three accounts.

Figure 1. The general model of labour accounting in ancient times



Source: the authors' compilation based on Dobija, 2005, p. 80.

The above Figure 1 shows the essence of the ancient accounting and its timeliness up to the present day. The three operations depict a comprehensive system of recording labour, production and redistribution of goods in the form of payment for performed work. The standard unit of work (jp) expresses an equivalent of employee's labour costs per unit of time. To illustrate the above Figure 1 it has been assumed that the employee has worked for 30 days with the productivity estimated at 1/5. The product of these two factors is 6 jp (unit of work) and represents the cost of performed work and at the same time the contribution to the value of the product. Thus, the operation (1) in the Figure 1 increases the product account and at the same time records the cost on the employee's account. The same value increases payroll liabilities towards the employee, that are recorded in the register kept by the administration of the city-state and at the same time constitutes a payable for the performed work. Thus, in the operation (2) the liability towards the employee and the receivables of the employee were recorded. The last process in this figure (3) illustrates the receipt of goods that could be valued at market price or cost price and that will decrease by this value the T-account of products and liabilities of the administration of the city-state towards the employee. This form of remuneration does not exceed the value of the total of receivables for work recorded in the account of that employee (Dobija, 2003, p. 236).

Accounting records had to be very meticulously kept to ensure smooth and complete operation of the presented labour accounting system. This justifies the pedantic work of scribes. Consequently, one of our first thoughts when thinking about Sumerians is that they were *obsessive accountants*, since we can observe numerous manifestations of their meticulous management of work processes. This meticulous system made it impossible to record receivables from work that would not be productive or would not increase the value of products. This extensive activity of the Sumerian accountants is legitimized by normative recognition of all economic values and very well-functioning system of centralized management (Dobija, 2003, p. 237).

3. Fundamentals of labour cost accounting

Accounting as a theory is aimed at retrospective and prospective identification, measurement and analysis of economic values characterizing the operation of an enterprise to which this cognitive process refers. Labour costs are an important economical and decision-making variable

characterizing business operation of enterprises. Labour costs are a major issue of the theory of value based on labour that is a foundation of accounting and in particular cost accounting theory (Dobija, 2011, p. 82).

The principle of conservation of energy in relation to an employee means the principle of retaining the capital of the employee, which in reference to wages generated the need to create the theory of fair wage. Fair wage is basic salary, in the amount that does not result in a loss or reduction of employee's capital, but that balances or can potentially increase this capital. A person employed in an enterprise when performing his job expends his energy which in terms of economic categories means transformation of human capital in work products. When using the employee's human capital, the employer is obliged to compensate the costs of this capital. In the face of this assumption, the theory of natural fair wage is derived from the measurement of individual capital available to an employee and the theory of capital return rate. The fair wage is therefore justified and balanced in the capital of the employee (Cieślak, Kucharczyk, 2004, p. 53), and bonus-based remuneration, as being dependent from periodic business performance, can be analysed by means of production function (Dobija, 2007, p. 39).

Theoretical bases of labour costs accounting originate from application of the physical concept of work (Dobija, 2003, pp. 35-37). This approach has been developed by B. Kurka (2004, p. 35), leading to creation of the following economic formula of labour costs:

$$\text{labour costs} = \text{employee productivity} \times \text{work time} \times \text{social utility coefficient} \quad (1)$$

Productivity of the employee is the relationship between the productivity of a given employee and the highest possible productivity achieved by the employees in the company in question. To calculate the standard value of productivity factor (WP) we need to divide the salary of a given employee by the salary of the best earning employee. The use of the productivity factor, which is expressed as a fraction of a closed interval between zero and one and it is determined by the payroll system of the company, results in conversion of work time into units of work (jp) (Dobija, 2003, p. 234). The discussed employee's productivity is considered the same as the power factor in the analysis of Sumerian accounting and economy.

The social utility ratio is contained in the closed interval between minus one and one. B. Kurek (2007, p. 78) explains it using the example of a teacher. The social utility ratio of a good and wise teacher amounts to one, while for a teacher who has insufficient knowledge and didactic skills it amounts to less than one. Social utility ratio below zero would be assigned to a teacher, who teaches untrue knowledge and by doing this act harmfully towards students and society. A teacher conducting classes in an empty classroom would be rated zero for his social utility.

The accounting system focused on labour costs presents the following example:

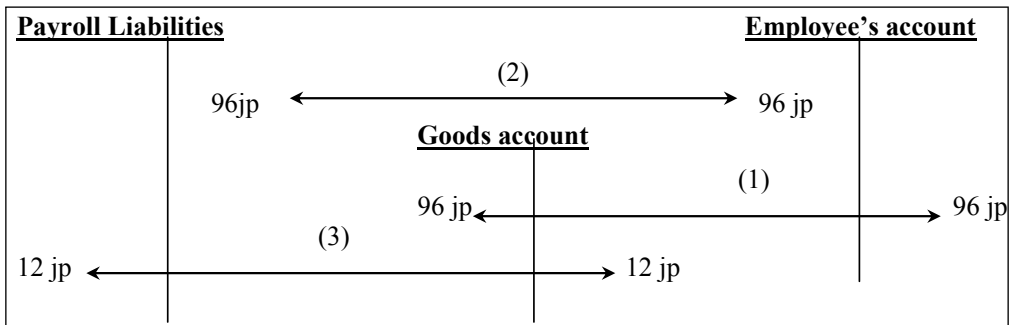
- assumptions: an employee performed socially useful work for 160 hours with productivity equal to $\frac{3}{5}$,
- using the labour costs formula we get:

$$\text{labour cost} = \frac{3}{5} \times 160 \times 1 = 96 \text{ (jp)} \quad (2)$$

This result means that the work done by the employee is equal to 96 units of work (jp), that are equated by M. Dobija with monetary units (2002, p. 67). The employee's energy expenditure increased the value of products by 96 units of work (jp) and thus increased labour costs by

96 (jp). In the Figure 2 below, this has been depicted as operation (1). Assuming that the employee's wage is equal to the work he performed, the operation (2) "covers employer's liabilities towards the employee and liabilities of the state administration towards this employee" (Dobija, 2003, p. 44). When the employee receives goods priced at 12 (jp), the employee's account gets reduced by 84 units of work [96 jp – 12 jp = 84 jp], which has been shown in the operation (3).

Figure 2. The general model of labour costs accounting



Source: the authors' compilation based on Dobija, 2003, p. 236.

Wages can be expressed as the product of the degree in which the employee is paid for his work and of the human capital according to the following formula:

$$\frac{W}{W_{max}} = \frac{uW}{uH_{max}} = \frac{H}{H_{max}} = WP \quad (3)$$

where: W – employee's wage, W_{max} – maximum wage of an employee with the highest productivity, u – degree of payment to employee, H – human capital, H_{max} – maximum capital assigned to the employee with the highest productivity, WP – productivity factor (Dobija, 2007, pp. 40-41).

The accounting system focused on labour costs is simple and sufficient to manage the economy of the society. Correct determination of the productivity factor is however decisive for the efficiency of the system. It is also important to correctly determine the value of products received due to payroll receivables of the company employees. The value of the products can be determined by the market or by means of cost accounting systems. Once an adequate cost accounting system is organized, the price of a good can be determined based on the "cost plus" principle with risk cost included (Dobija, 2004, p. 237).

Labour cost accounting system allows us to compare the value of goods according to labour input that is necessary to produce these goods. Units of work (jp) fulfil both the function of accounting and monetary units. Money is receivable for work. The system that would operate on the basis of these assumptions makes it possible to compare the work of employees in various positions. An employee who contributes the most to the development of the company should have a possibility to also receive the most from the company, since he contributes to keep the company on the market and to increase its competitive advantage over companies employing less productive employees, and thus their performance should also be lower (Kurek, 2007, p. 80).

4. Workforce productivity in the evaluation of the company's business

Within the economic management, the workforce productivity factor (WP) can be used to assess the growth and development of the company, provided that remuneration is in line with labour value, which is equivalent to the requirement to maintain human capital of employees. Workforce productivity factor constitutes quotient of the real GDP and the total of labour costs. So it shows the product value per a zloty of labour costs. With regard to an enterprise – workforce productivity factor (WP) is defined by the relationship between the periodic production expressed in actual sale prices (P) and the sum of wages (W). In special cases, the P value can be identical to the book value of value of sales S. The workforce productivity factor (WP) is one of the synthetic indicators for the assessment of the economic activity of the company. The productivity factor (WP) is also closely linked to the variable (Z), that is used to measure the management level (Dobija, 2011, p. 82).

The work is both a transformation of the capital of people employed in a company as well as concentration of capital in products of this work. In the course of this transformation process, consumption of the human capital is expressed as labour cost that get harmonized with the assets, consequently creating the final product. The flow of manufacturing process in a company can be expressed by means of production function that presents variables involved in it. How labour costs and assets harmonize is depicted by an analytical production function of six variables (Dyła, Koczuba-Sobieraj, 2004, p. 46).

The final product is formed by adding the value of production factors. Therefore the production function should be based on summation. Given the above, and assuming the natural approach based on cost accounting, production function can be expressed by means of seven specified arguments. The production function when analytically expressed can be a tool of economic analysis using differential calculus or it may be a source of many non-linear models describing the behaviour of a given value (Dobija, 2007, p. 43).

The value of production can be represented as the sum of expenditures (Dobija, 2004, p. 8):

$$PR = (W + zA - sA)(1+r)(1+l) \quad (4)$$

where: PR – value of production expressed in market selling prices, W – labour costs, A – assets in historical prices as shown in the balance sheet, z – annual asset consumption ratio, s – dissipation of assets in production processes, r – increase of historical prices to market prices, l – additional increase of value as a result of the existence of intellectual capital in the company.

This formula included all natural variables occurring in production processes of a company, since the factor:

$$(W + zA - sA) = (W + KM - KR) \quad (5)$$

$$W = uH \quad (6)$$

where: KM – costs arising from the use of assets, KR – costs of existing risk, u – the rate payment of human capital, H – total value of human capital employed in the company.

Since the sums $(1 + r)$, and $(1 + l)$ are close to zero, we can apply an approximate value: $(1 + x = e^x)$ we can finally, after various transformations, derive the formula for the calculation of the overall productivity WP as a function of numerous variables and present this formula as follows (Dobija, 2007, p. 44):

$$WP = e^{r+1} \left[1 + \frac{A}{H} \frac{z-s}{u} \right] \quad (7)$$

The WP value is the workforce productivity understood as a multiplier of labour costs, generating the production volume. This value at the same time represents the volume of production per a zloty of labour costs. The increasing value of assets in relation to the human capital $\frac{A}{H}$ and the (z) factor that expresses the speed of assets rotation, provide for an increase in productivity. Productivity growth means an increase in the well-being of employees and consequently of the whole society. If $A = 0$, that is in the absence of tangible assets, $WP = 1$, since the market cannot exist in the absence of assets, therefore $r = 0$. Lack of assets means that primitive men had to win their food needed for survival without any tools, and that food constituted their remuneration (Dobija, 2007, p. 44).

To define the objective of management process we need to dispose of a production function with variables that are measurable using the data derived from the accounting system. We need, therefore, to introduce a few new symbols and adequately transform the derived formula to get the formula defining the management variable (Z). For the calculation of human capital, we can use the following relationship (Dobija, 2007, p. 45):

$$H = \frac{L}{p} \quad (8)$$

where: L – basic wage, p – risk premium

After transformations, the management variable is presented in the following formula:

$$Z = \frac{L \left(\ln WP - \frac{Z_k}{KR} \right)}{pA} \quad (9)$$

where: Z – management variable, Z_k – cost profitability variable, KR – sum of costs per types of costs, which applies only to the accounting year, $\left(\frac{Z_k}{KR} \right)$ – indicates how much profit is generated on a zloty of incurred costs (Dobija, 2007, p. 45).

Work productivity exponentially depends on costs profitability, the relationship between the assets and labour costs (technical devices and degree in which an employee is paid for his job) as well as the management variable. Using the presented formulas we can evaluate the management variable (Z) and analyse the impact of various values on production (PR) or workforce productivity (WP) (Dobija, 2007, p. 46).

On the basis of the above considerations we can consider the workforce productivity ratio (WP) to be a synthetic measure of company assessment. Growth of this ratio over time is a strong

premise to express an opinion about good and improving management and development of the company (Dobija, 2007, p. 47).

5. Conclusion

The main scientific question being investigated in this study relates to labour costs which constitute an important economic and decision-making variable. In this article labour costs are analysed in many respects, showing a significant role of labour costs from the very beginning of the age of conscious and rational management, along with an attempt to define their role in the accounting and business management.

The theoretical analysis and synthesis regarded also the issue of workforce productivity which is a measurable and controllable economic value, of essential importance for the existence and proper operation of companies. The concept of workforce productivity is important everywhere, where salaries are paid, because if they are paid without correlation to a specific work affecting, even indirectly, the growth of the domestic product, then such remuneration will increase inflation and erode the value of money. Increase in workforce productivity is economically essential and important, since it can affect the growth of real wages and the improvement of the standard of living, and on the other side it can affect reduction of money inflation by levelling increase of wages and labour costs. Workforce productivity is therefore important for the whole economy.

This article also presents the natural production function that has the cost of production as starting point. We are led to production function by natural generalization of cost accounting, with consideration of theoretical achievements in the field of human capital. These generalizations allow us to include labour costs in the model of production function.

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Chapter 37

In Quest of the Most Selected Depreciation Method

Anna Jonkisz-Zacny

1. The concept of capital and depreciation

Deeper understanding of the concept of capital as an abstract capacity to perform work, allows addressing the issue of depreciation measurement as a transfer of capital from fixed assets to the means of production (Dobija (ed.), 2010). The aim of the study is to model the change of the initial value of a selected group of fixed assets, according to new theoretical premises. The goal of developing a new method of depreciation measurement is more precise measurement of capital movement and consequently improvement of cost accounting. Furthermore, more sophisticated depreciation method will lead to more accurate net value of tangible assets and indication of profit. It is generally known that the concept of capital is inextricably connected to risk, as risk is the indicator of capital growth in management processes. As stressed by M. Dobija (2010, p. 21), capital does not arise from nothing; it is transferred through labour, which accumulates in specific resources.

This abstract approach to the concept of capital went through a number of evolutions, the word “capital” itself comes from Latin *capitalis* (*caput* = head) and initially denoted a major sum of money to be lent with interest (Fetter, 1937, p. 5). The above understanding means that capital was expressed in money. In Middle Ages capital was treated only as tangible goods, and money served the sole purpose of purchasing usable goods (Grabski, 1928, pp. 20-21). At that time, money was not used to attain economic benefits, collection of interest was prohibited by the First Council of Nicaea of 325 (Skrzypek, 1939, p. 13). Money stopped functioning as a means of earning capital for a long time. No earlier than in the modern period, Nicholas Barbon (1640-1698) initiated the understanding of money as a technical-economic term. Afterwards, A. Smith (1723-179) presented his view of capital as a sum of three factors: means of production, land and labour. In his works, Smith (1954, p. 347) distinguished the “skill of earning” *i.e.* useful human skills that are nowadays referred to as human capital.

In present-day approach, capital is treated as an abstract value. The precursors of the intangible theory of capital were *inter alia*: J.B. Clark, S. Grabski, I. Fisher and B. Say, who emphasised the need for distinguishing capital from matter. By this concept, capital could mean anything,

as stressed by J.B. Clark: "... Capital is eternal and indestructible unlike goods, which are not..." (Skrzypek, 1939, pp. 127-128).

The measurement of capital movement is possible due to double entry accounting, stemming from core identity. The essence of double entry accounting is measuring the content of capital in assets. Core identity shows the abstract nature of the concept of capital.

$$\text{Value of assets} = \text{Equity} + \text{Outside capital} \quad (1)$$

Identity (1), pointed out by M. Dobija (2010, p. 9), "...shows capital in two sections: left side represents total capital invested in different assets, whilst the other side shows capital belonging to owners and outstanding capital. The point here is to understand that capital invested in assets is the type of capital that represents their value, and the capital measurement unit, *i.e.* work unit is the indicator of all the values in the equation".

Each balance sheet valuation strives for making net value in fixed assets as close to market value as possible. G. Felthman and J. Ohlson (1996) point out that the book value of goodwill should be aligned with its market value. Aligning financial reporting with fair value is also recommended by the International Financial Reporting Standards (Bonham, Mike et al., 2003, p. 117).

Study of depreciation methods requires division of fixed assets into two groups. The first one comprises assets whose value does not depend on passage of time. In such case it is reasonable to use straight-line depreciation. The other group comprises assets whose value depends on time passage, and in order to properly reflect cost allocation, depreciation must be measured with the inclusion of current value of the fixed asset. Such division of fixed assets was described in the study of O. Burt (1972).

2. Depreciation methods

Depreciation determines the difference between the capital consumption and its gross value. Under depreciation process, fixed assets are consumed and their values transferred to products generated through their use. According the above, the ideal, according to B. Lev and H. Theil (1978), would be the situation where "cost allocation during depreciation process reflected the decrease of service capacity". Similar view on depreciation is demonstrated by J. Iwin and Z. Niedzielski (2002, p. 107), who define depreciation as a circular movement and turnover of fixed assets in production process.

Some principles of depreciation result from the Accounting Act, with Art. 7.1.1., stating that financial result must take into account the reductions of service or commercial value of assets, including those arising from depreciation or amortisation. The method of determining depreciation stems from Art. 32 of the Act, by which depreciation is performed through systematic and planned division of the initial value of fixed asset for a set depreciation period. The rate and method of depreciation also take into account useful economic life, which is influenced by:

- a number of shifts in which fixed asset operates,
- pace of technical and economic progress,
- capacity measured with working hours, number of manufactured products or other relevant indicator,
- legal and other limitations of the time of operating the fixed asset,
- net sales price of a major residue of the fixed assets on closure.

A slightly different approach to the problem is taken in tax regulations, which interpret depreciation as the basis to reduce tax liabilities.

The basis for depreciation is the set initial value of a fixed asset, including: purchase price, manufacturing cost, or fair value, increased by the costs and outlays connected with commissioning of the asset. The initial value of a fixed asset and the date of its commissioning comprise the basis for depreciation. After establishing the initial value of a fixed asset, depreciation method is selected in such a way as to optimally reflect the capital consumption. Typical accounting methods of depreciation are: straight-line or uniform method, units-of-production method, double declining balance method, progressive method.

The most commonly used depreciation method is the **straight-line method**, whereby charge is set at the same rate throughout the whole period of fixed asset depreciation. This method provides for a fixed asset being worn/consumed at the same rate within each time unit. The measurement of straight-line depreciation follows the formulas presented below:

Straight-line depreciation for balance sheet purposes	Straight-line depreciation for tax purposes
$a = \frac{Wp - Wr}{t} \quad (2)$	$a = a\% * Wp \quad (3)$
<p>where:</p> <p><i>a</i> – annual depreciation rate, <i>Wp</i> – initial value of fixed asset, <i>Wr</i> – residual value at the end of economic life <i>t</i> – anticipated economic life of fixed asset (in years).</p>	<p>where:</p> <p><i>a</i> – annual depreciation rate, <i>a%</i> – depreciation rate resulting from tax law <i>Wp</i> – initial value of fixed asset,</p>

Example 1.

Establishing depreciation charge using straight-line method – assumptions:

1. *An Alfa Romeo car was purchased and commissioned for use in December 2013, its value being: PLN 72,900.*
2. *Straight-line depreciation started as of January 2014.*
3. *The anticipated useful economic life is 5 years.*
4. *The projected residual value is 0.*

Establishing depreciation charge using straight-line method:

1. *Establishing the percentage of depreciation rate: 72,900 PLN/5 years = 14,580 PLN.*
2. *Annual depreciation percentage is: 100%/5 years = 20%.*

Table 1. Straight-line depreciation plan for Alfa Romeo car

Financial year	Annual depreciation	Total depreciation	Net value of fixed asset
2014	14,580	14,580	58,320
2015	14,580	29,160	43,740
2016	14,580	43,740	29,160
2017	14,580	58,320	14,580
2018	14,580	72,900	0

Source: proprietary calculations.

Units-of-production method assumes that capital consumption is equal for each work unit. Under this method, the consumption is proportional to units of production, *i.e.* tonnes, pieces hours or kilometres. The time factor is not taken into account.

Double declining balance method also called degressive depreciation. By this method, the economic usefulness of a fixed asset declines over time. Depreciation is measured through quick, accelerated charges in the first years of fixed asset use, *i.e.* during its highest efficiency, and much lower charges in the final period of its use. The principle of this method is using depreciation rates with increased rate (*e.g.* 2.0) in the first year of operation. However, the rate must not be higher than 2.0 in the subsequent years, and the initial value is reduced by deducting previous depreciation charges. This results in decreasing depreciation rates in subsequent periods. Following this method, the depreciation could be used forever. Therefore, a principle was adopted stating that the double declining balance method is used until the charges are lower than straight-line depreciation charges and then straight-line depreciation begins to apply.

Example 2.

Establishing depreciation charge using double declining balance method – assumptions from straight-line method:

Annual depreciation charges in straight-line method: $72,900 \text{ PLN} \times 20\% = 14,580 \text{ PLN}$.

Establishing depreciation charges for subsequent years:

2014 r.: $72,900 \text{ PLN} \times (20\% \times 2.0) = 29,160 \text{ PLN}$,

2015 r.: $(72,900 \text{ PLN} - 29,160 \text{ PLN}) \times (20\% \times 2.0) = 17,496 \text{ PLN}$,

2016 r.: $(72,900 \text{ PLN} - 29,160 \text{ PLN} - 17,496 \text{ PLN}) \times (20\% \times 2.0) = 10,497.6 \text{ PLN}$.

As the depreciation amount calculated using double declining balance method is lower from the amount established through straight-line method (PLN 14,580), as of 2016, the unit will apply straight-line method.

Table 2. Double declining balance method for Alfa Romeo car

Financial year	Annual depreciation	Total depreciation	Net value of fixed asset
2014	29,160	29,160	43,740
2015	17,496	46,656	26,244
2016	14,580	61,236	11,664
2017	11,664	72,900	0

Source: proprietary calculations.

According to Polish tax law, this method can only be applied in relation to production machines and devices and means of transport, excluding passenger cars. Chapter 4 presents modifications to the double declining balance method aimed to improve it.

Progressive method also called increasing charge method. This method assumes that the obsolescence of an object results in a growth of costs of its operation, resulting *e.g.* from the necessity to repair and renovate. Under this method depreciation rates are increasing. The method is rarely used and is recommended if a loss is incurred in the first years of the use of fixed asset.

Another “method” of depreciation is **one-time (simplified) depreciation**, *i.e.* recognition of the whole value of a fixed asset in operating expenses. Such situation takes place when costs borne for the purpose of generating a fixed asset are of low unit value, tax regulations set that value at the level of PLN 3,500.

Polish legislation also provides for **individual method** that applies to second-hand fixed assets entered into the taxpayer records. Individual rates are set for a specific group of fixed assets, based on the initial value of these assets.

3. Book value of fixed asset and the time factor

Time is perceived as a process of diffusion, an ability to last and exist, *i.e.* to age/become obsolete over time. There is a proverb saying “All hours wound; the last one kills”. While analysing the process of capital diffusion and obsolescence, it is important to note that fixed assets can return high value (concentration of capital) when they are valuable themselves, *i.e.* at the beginning of their existence. Therefore, it appears that it is a non-linear process. The above opinion applies to people and things alike. Linear processes comprise *e.g.* cyclical ticking of a clock.

In relation with non-linear character of the obsolescence process, it seems that the method of depreciation measurement appropriate for fixed assets becoming more and more obsolete over time, is a method which includes the $\exp[-st]$ factor, where s is a coefficient of capital dispersion defined by general model (Kurek, 2010, p. 52). It is clear that the application of this approach leads to reducing balance method.

As M. Dobija (2010) points out, the initial value and value at the end of useful life, as well as the number of the years of use, allow us to define the pace of the decline of initial s value. We have the equation:

$$W_p e^{-st} = W_k \quad (4)$$

where: e^{-st} factor defines the reduction of the initial value over t years. Therefore, the s parameter is defined by the formula:

$$s = -\frac{1}{t} \ln \frac{W_k}{W_p} \quad (5)$$

Consequently, by using the above formulas to measure the residual values of a fixed asset we can determine a time passage rate specific for a given asset. Herein, the method of calculating depreciation rate by using the dispersion parameter is called the reducing balance method.

4. Reducing balance method – empirical studies

The aim of the article is investigating reducing balance method for fixed assets whose value declines over time. The analysis covers passenger car sector and compares market value in subsequent years with the net book value. The period of the study is 5 years. Empirical data are derived from INFO – EKSPERT system, developed by automotive and traffic sector appraisers, to determine value of vehicles. This program is used by appraisers, tax offices and insurance companies to establish the market value of means of transport.

Table 3 presents 10 passenger car brands and their market values in subsequent years. The sample selection includes only models that remained on the market for 5 years.

Table 3. Base value of individual car models and percentage decline in value for individual brands in the period 2014-2010

Carbrand		Base model value in subsequent years				
1.	Alfa Romeo Mi. To	72,900	51,200	42,500	37,200	32,950
2.	Chevrolet Cruze	61,200	46,300	39,150	34,350	29,950
3.	Citroën C3 Picasso	72,000	45,400	36,350	30,700	26,600
4.	Citroën C4	63,400	43,000	35,550	29,950	26,200
5.	Fiat 500 SGE TwinAir	56,000	39,050	32,400	28,150	25,100
6.	Ford Galaxy Trend	104,500	73,900	64,600	56,800	50,100
7.	Skoda Fabia Scout	67,000	46,700	40,100	35,150	31,300
8.	Volkswagen Passat B7	97,000	69,400	60,800	53,600	48,000
9.	Opel astra IV	57,600	43,100	36,650	31,700	27,600
10.	Mitsubishi Lancer	67,000	50,700	44,300	39,150	34,800
Decline in value (%)						
1.	Alfa Romeo Mi. To	100	70.23	58.30	51.03	45.20
2.	Chevrolet Cruze	100	75.28	63.66	55.85	48.70
3.	Citroën C3 Picasso	100	63.06	50.49	42.64	36.94
4.	Citroën C4	100	67.82	56.07	47.24	41.32
5.	Fiat 500 SGE TwinAir	100	69.73	57.86	50.27	44.82
6.	Ford Galaxy Trend	100	70.72	61.82	54.35	47.94
7.	Skoda Fabia Scout	100	69.70	59.85	52.46	46.72
8.	Volkswagen Passat B7	100	71.55	62.68	55.26	49.48
9.	Opel astra IV	100	74.83	63.63	55.03	47.92
10.	Mitsubishi Lancer	100	75.67	66.12	58.43	51.94
Average value in subsequent periods			70.86	60.05	52.26	46.10
Standard deviations			3.83	4.57	4.66	4.33
Average % of decline in value			29.14	39.95	47.74	53.90

Source: proprietary compilation based on data as of 05.2014 from INFO – EKSPERT system.

The second part of the table presents percentage decline in value of individual brands in relation with passing years, the highest declines can be observed in the first two years. In the first

year, the average decline rate amounted to 29% of the new car value, whilst in the second year the car value dropped by another 10%, with the passing of years the difference between subsequent values decreases.

Table 4 presents net values calculated using known methods: straight-line method and double declining balance method. Calculations are made for three selected brands.

Table 4. Straight-line and double declining balance depreciation for selected car models

Carbrand		Depreciation plan for individual methods									
		Annual depreciation	Net value	Annual depreciation	Net value	Annual depreciation	Net value	Annual depreciation	Net value	Annual depreciation	Net value
		I year		II year		III year		IV year		V year	
Straight-line 20 %											
1	Alfa Romeo Mi. To	14,580	58,320	14,580	43,740	14,580	29,160	14,580	14,580	14,580	0
2	Chevrolet Cruze	12,300	49,200	12,300	36,900	12,300	24,600	12,300	12,300	12,300	0
3	Citroën C3 Picasso	14,400	57,600	14,400	43,200	14,400	28,800	14,400	14,400	14,400	0
double declining balance											
1	Alfa Romeo Mi. To	29,160	43,740	17,496	26,244	14,580	11,664	11,664	11,664	0	0
2	Chevrolet Cruze	24,600	36,900	14,760	22,140	12,300	9,840	9,840	9,840	0	0
3	Citroën C3 Picasso	28,800	43,200	17,280	25,920	14,400	11,520	11,520	11,520	0	0

Source: proprietary calculations.

Tables 3 and 4 show very high differences between the market value in subsequent years (Tab. 3) and values calculated for the next years (Tab. 4).

The net value of a car as at the end of each year is calculated using the reducing balance method, presented in this study. Calculations make use of the *s* parameter from the middle (third) year.

Net value calculations for Alfa Romero car

1. *s* parameter

$$s = -\frac{1}{3} \ln \frac{W_k}{W_p} = -\frac{1}{3} \ln \frac{37200}{72900} = 0,224259959$$

2. Value as at the end of each year amounts to:

$$W_{kI} = W_p e^{-st} = 72900 * e^{-0,2243*1} = 58252$$

$$W_{kII} = W_p e^{-st} = 72900 * e^{-0,2243*2} = 46548$$

$$W_{kIII} = W_p e^{-st} = 72900 * e^{-0,2243*3} = 37195$$

$$W_{kIV} = W_p e^{-st} = 72900 * e^{-0,2243*4} = 29722$$

$$W_{kV} = W_p e^{-st} = 72900 * e^{-0,2243*5} = 23750$$

Table 5. Comparison of depreciation methods for Alfa Romeo car

Years	Depreciation period	Market value	Straight-line method		Double declining balance method		Reducing balance method $W_p e^{-st}$		Difference in market value in reference with applied depreciation method		
			Straight-line depreciation charge	Net value	Double declining balance depreciation charge	Net value	Reducing balance depreciation charge	Net value	Straight-line	Double declining balance	Reducing balance
2013	0	72,900		72,900		72,900		72,900	0	0	0
2014	I	51,200	14,580	58,320	29,160	43,740	14,648	58,252	-7,120	7,460	-7,052
2015	II	42,500	14,580	43,740	17,496	26,244	11,704	46,548	-1,240	16,256	-4,048
2016	III	37,200	14,580	29,160	14,580	11,664	9,353	37,195	8,040	25,536	5
2017	IV	32,950	14,580	14,580	11,664	0	7,473	29,722	18,370	32,950	3,228
2018	V	29,300	14,580	0		0	5,972	23,750	29,300	29,300	5,550
Standard deviations									14,700	10,364	5,154

Source: proprietary calculations.

Net value calculations for Chevrolet Cruze car

1. s parameter

$$s = -\frac{1}{3} \ln \frac{W_k}{W_p} = -\frac{1}{3} \ln \frac{34350}{61200} = 0,192515057$$

2. Value as at the end of each year amounts to:

$$W_{kI} = W_p e^{-st} = 61200 * e^{-0,1925*1} = 50483$$

$$W_{kII} = W_p e^{-st} = 61200 * e^{-0,1925*2} = 41643$$

$$W_{kIII} = W_p e^{-st} = 61200 * e^{-0,1925*3} = 34351$$

$$W_{kIV} = W_p e^{-st} = 61200 * e^{-0,1925*4} = 28336$$

$$W_{kV} = W_p e^{-st} = 61200 * e^{-0,1925*5} = 23374$$

Table 6. Comparison of depreciation methods for Chevrolet Cruze car

Years	Depreciation period	Market value	Straight-line method		Double declining balance method		Reducing balance method $W_p e^{-st}$		Difference in market value in reference with applied depreciation method		
			Straight-line depreciation charge	Net value	Double declining balance depreciation charge	Net value	Reducing balance depreciation charge	Net value	Straight-line	Double declining balance	Reducing balance
2013		61,200		61,200		61,200		61,200	0	0	0
2014	I	46,300	12,240	48,960	24,480	36,720	10,717	50,483	-2,660	9,580	-4,183
2015	II	39,150	12,240	36,720	14,688	22,032	8,840	41,643	2,430	17,118	-2,493
2016	III	34,350	12,240	24,480	12,240	9,792	7,292	34,351	9,870	24,558	-1
2017	IV	29,950	12,240	12,240	9,792	0	6,015	28,336	17,710	29,950	1,614
2018	V	26,500	12,240	0		0	4,962	23,374	26,500	26,500	3,126
Standard deviations									11,687	8,171	2,972

Source: proprietary calculations.

Net value calculations for Citroën C 3 Picasso car

1. s parameter

$$s = -\frac{1}{3} \ln \frac{W_k}{W_p} = -\frac{1}{3} \ln \frac{30700}{72000} = 0,284134488$$

2. Value as at the end of each year amounts to:

$$W_{kI} = W_p e^{-st} = 72000 * e^{-0,2841*1} = 54193$$

$$W_{kII} = W_p e^{-st} = 72000 * e^{-0,2841*2} = 40791$$

$$W_{kIII} = W_p e^{-st} = 72000 * e^{-0,2841*3} = 30703$$

$$W_{kIV} = W_p e^{-st} = 72000 * e^{-0,2841*4} = 23110$$

$$W_{kV} = W_p e^{-st} = 72000 * e^{-0,2841*5} = 17394$$

Table 7. Comparison of depreciation methods for Citroën C 3 Picasso car

Years	Depreciation period	Market value	Straight-line method		Double declining balance method		Reducing balance method		Difference in market value in reference with applied depreciation method		
			Straight-line depreciation charge	Net value	Double declining balance depreciation charge	Net value	Reducing balance depreciation charge	Net value	Straight-line	Double declining balance	Reducing balance
2013	0	72,900		72,900		72,900		72,900	0	0	0
2014	I	51,200	14,580	58,320	29,160	43,740	14,648	58,252	-7,120	7,460	-8,793
2015	II	42,500	14,580	43,740	17,496	26,244	11,704	46,548	-1,240	16,256	-4,441
2016	III	37,200	14,580	29,160	14,580	11,664	9,353	37,195	8,040	25,536	-3
2017	IV	32,950	14,580	14,580	11,664	0	7,473	29,722	18,370	32,950	3,490
2018	V	29,300	14,580	0		0	5,972	23,750	29,300	29,300	5,856
Standard deviations									14,700	10,364	5,154

Source: proprietary calculations.

Calculations show that the net value of cars under study is closest to their market value with the application of reducing balance method, *i.e.* method derived from the general theory of capital. Therefore, this method finds its theoretical justification. Further study aims at developing econometric model of depreciation process that optimises net value of fixed assets.

5. Conclusion

Depreciation is a transfer of capital invested in fixed assets to production goods. Establishing appropriate depreciation value, corresponding to the process of consumption and transfer of value, will allow recognising depreciation in cost account and in consequence improving financial result measurement. Apart from the above, balance sheet will become more reliable. The presented method allows mitigating discrepancies between straight-line depreciation and uneven process of consumption and obsolescence of fixed assets. Non-linear process of fixed asset value decline requires more precise calculation, with the application of reducing balance method. The presented preliminary study will contribute to building an econometric model of depreciation process.

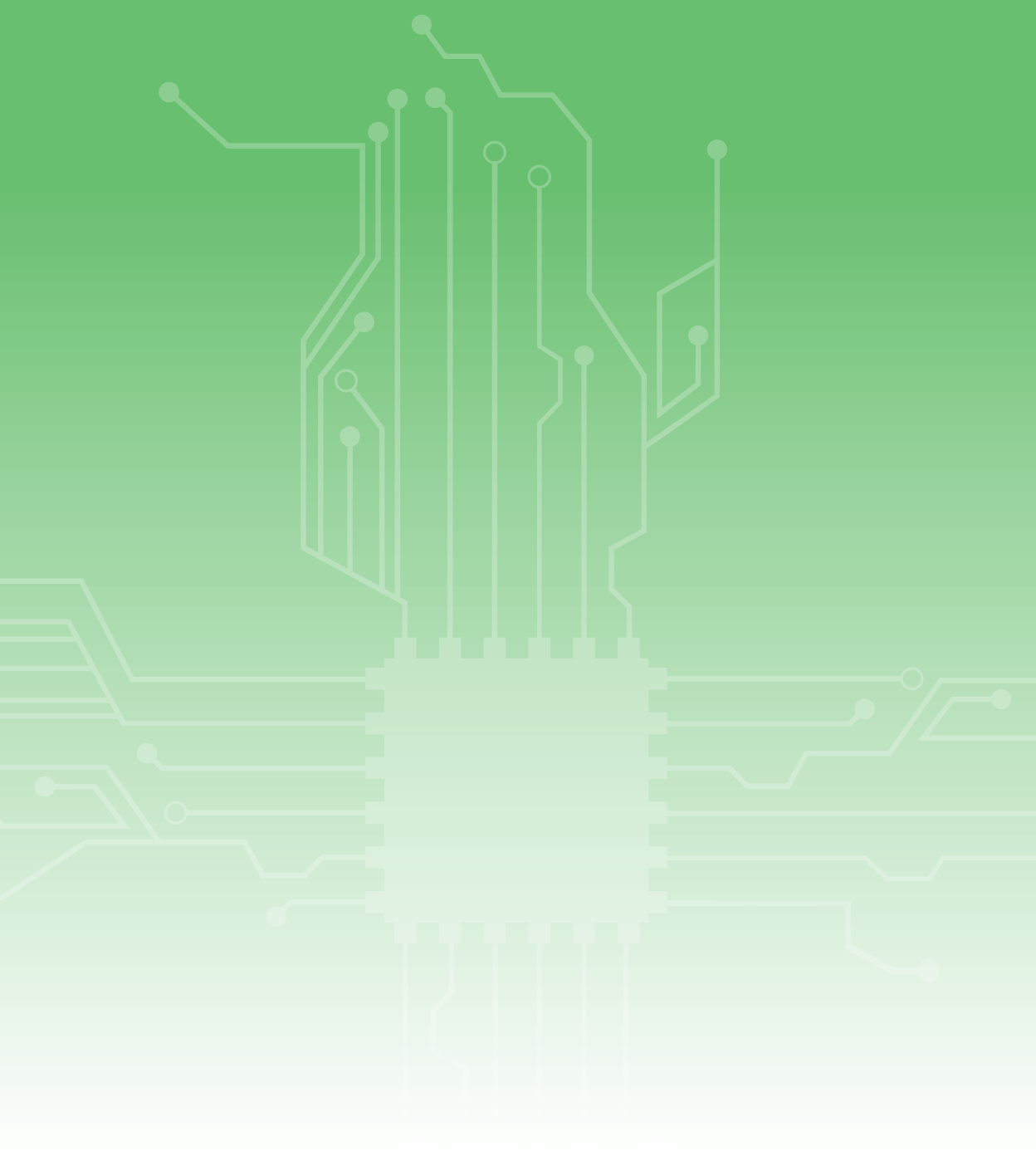
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Authors

<i>Małgorzata Adamska-Chudzińska</i>	Cracow University of Economics, Poland
<i>Stefan Alimpić</i>	University of Kragujevac, Serbia
<i>Bartosz Bednarz</i>	Cracow University of Economics, Poland
<i>Marian Bursztyn</i>	Cracow University of Economics, Poland
<i>Kanhiya Lal Chawla</i>	Fore School of Management, India
<i>Małgorzata Dolińska</i>	Maria Skłodowska-Curie University, Poland
<i>Katarzyna Frodyma</i>	Cracow University of Economics, Poland
<i>Tetiana Girchenko</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Agnieszka Giszterowicz</i>	Cracow University of Economics, Poland
<i>Pankaj Kumar Gupta</i>	Jamia Millia Islamia, India
<i>Kateryna Kupriyenko</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Artur Holda</i>	Cracow University of Economics, Poland
<i>Andrzej Jaki</i>	Cracow University of Economics, Poland
<i>Jan Jekielek</i>	NutshellModels.com, Canada
<i>Anna Jonkisz-Zacny</i>	Cracow University of Economics, Poland
<i>Božidar Leković</i>	University of Novi Sad, Serbia
<i>Andriy M. Lyubenko</i>	University of Banking of National Bank of Ukraine, Ukraine
<i>Paweł Łukasik</i>	Cracow University of Economics, Poland
<i>Slobodan Marić</i>	University of Novi Sad, Serbia
<i>Bogusz Mikula</i>	Cracow University of Economics, Poland

<i>Anita Mrówka</i>	Cracow University of Economics, Poland
<i>Yuriy Nemish</i>	Cracow University of Economics, Poland
<i>Jarosław Nowak</i>	Cracow University of Economics, Poland
<i>Tetyana Novikova</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Beata Olszewska-Łabędź</i>	Cracow University of Economics, Poland
<i>Snizhana Pashova</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Anna Piwowarczyk</i>	Cracow University of Economics, Poland
<i>Marina Puchkova</i>	Saint-Petersburg State University of Economics, Russia
<i>Ryszard Pukała</i>	State Higher School of Technology and Economics in Jaroslaw, Poland
<i>Jurij Renkas</i>	Cracow University of Economics, Poland
<i>Tomasz Rojek</i>	Cracow University of Economics, Poland
<i>Michail Romanovskii</i>	Saint-Petersburg State University of Economics, Russia
<i>Arunima Sirohi</i>	Jamia Millia Islamia, India
<i>Monika Salata</i>	Cracow University of Economics, Poland
<i>Joanna Sobula</i>	Cracow University of Economics, Poland
<i>Adam Stabryła</i>	Cracow University of Economics, Poland
<i>Anna Staszal</i>	Cracow University of Economics, Poland
<i>Michalina Szczepańska</i>	Cracow University of Economics, Poland
<i>Jadwiga Ślawska</i>	Cracow University of Economics, Poland
<i>Grażyna Śmigielka</i>	Cracow University of Economics, Poland
<i>Beata Tarczydło</i>	AGH University of Science and Technology, Poland
<i>Jolanta Walas-Trębacz</i>	Cracow University of Economics, Poland
<i>Mariola Wiater</i>	Cracow University of Economics, Poland
<i>Mirosław Woźniak</i>	Cracow University of Economics, Poland
<i>Nataliia Zavydivska</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Olga Zavydivska</i>	University of Banking of the National Bank of Ukraine, Ukraine
<i>Jarosław Żerulik</i>	Cracow University of Economics, Poland



ISBN 978-83-62511-54-9