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TRIANGULATION IN MARKETING RESEARCH: A BIBLIOMETRIC ANALYSIS

TRIANGULACJA W BADANIACH MARKETINGU W ŚWIETLE ANALIZY BIBLIOMETRYCZNEJ

Keywords: triangulation, research methodology, marketing research, integration of methodological approaches, VOSviewer

Słowa kluczowe: triangulacja, metodologia badań, badania marketingowe, integracja podejść metodologicznych, VOSviewer

Abstract

Every scientific study is based on the selection of an appropriate research methodology, which is crucial for ensuring the reliability and validity of the obtained results. Triangulation is one of the methodological approaches that enables the reduction of research errors and allows for a more accurate interpretation of the phenomena under analysis. The purpose of this article is to identify the application of triangulation as a method for enhancing the credibility of research results in marketing studies. The paper also examines the growing academic interest in this approach and indicates the main areas of its application within marketing research.

Streszczenie

Triangulacja to podejście metodologiczne umożliwiające redukcję błędów badawczych i pogłębioną interpretację analizowanych zjawisk. Celem artykułu jest identyfikacja zakresu i sposobów zastosowania triangulacji w badaniach marketingu. Na podstawie analizy bibliometrycznej z baz Web of Science i Scopus oraz oprogramowania VOSviewer zidentyfikowano główne trendy, autorów i obszary tematyczne w tym zakresie. Pogłębiona analiza potwierdza rosnące zainteresowanie tą metodą w badaniach marketingu.

INTRODUCTION

Contemporary marketing research is increasingly based on the analysis of phenomena characterized by high complexity, variability and multidimensionality. In such cases, traditional approaches using single research methods may provide an insufficient perspective on the reality under study. In this case, triangulation is not a supporting technique, but a comprehensive research approach that forms the basis for the design and implementation of research in marketing and related disciplines [Chlipała,

2018]. The choice of appropriate research methods is crucial for the reliability and validity of the results obtained. Triangulation refers to the use of different methods, techniques, data sources, and theoretical perspectives to increase the credibility of research [Denzin, 2009]. The use of triangulation in socio-economic research allows for a more complete picture of the phenomenon under study by reducing errors resulting from the limitations of individual research methods [Chlipała, 2018]. This approach makes triangulation a particularly important method in research that requires an interdisciplinary perspective and consideration of cultural, contextual, and methodological variables.

The aim of this article is to identify the application of triangulation as a method of enhancing the reliability of results in marketing research. The study comprises a review of scientific literature and a bibliometric analysis of publications containing references to triangulation and marketing. The specific objectives of the study included determining the current state of knowledge on this subject and identifying areas of application of triangulation in marketing research. In addition, the bibliometric analysis made it possible to determine the development of interest in triangulation in marketing over the years and to identify the main authors, research centres and thematic trends related to this issue. The study employed a literature review in conjunction with a with a bibliometric analysis conducted using VOSviewer software. The analysis encompassed scientific publications indexed in the Scopus database with the terms 'triangulation' and 'marketing' in their titles, abstracts, and keywords.

THE CONCEPT AND TYPES OF TRIANGULATION

Triangulation in social and economic research arises from the need to enhance the objectivity and reliability of research results [Matejun, 2016]. In traditional research approaches, the use of a single method may lead to distortions, therefore combining different techniques and perspectives allows for a more comprehensive understanding of the phenomenon under study. Many researchers emphasise that triangulation allows for increased data accuracy through the mutual complementarity of qualitative and quantitative methods [Flick, 2011]. The literature identifies several fundamental types of triangulation:

1. Methodological triangulation – involves the application of different research methods (e.g. qualitative and quantitative) in a single research project, enabling a complementary perspective on the issue under investigation [Denzin, 2009].
2. Data triangulation – refers to the use of diverse data sources (e.g. primary and secondary data), which allows for the verification of information and increases the reliability of results [Flick, 2011].
3. Theoretical triangulation – involves analysing the problem under study from multiple theoretical perspectives, which helps to avoid interpretative bias and to better explain complex economic phenomena [Jick, 1979].
4. Analytical triangulation – concern the use of various methods of data analysis, which allows for more robust research conclusions [Bryman, 2021].

It is worth noting that the term 'triangulation' originates from navigational and military strategies, where it was associated with the use of multiple reference points to precisely determine the position of a given object [Smith, 1975]. This etymology of the word also accurately reflects the essence of triangulation in the context of social and economic research. In this context, however, the objectives of triangulation may vary considerably. According to M. Hammersley [2008], there are four approaches

in which the purpose of triangulation depends on the philosophical and methodological assumptions adopted. The first approach focuses on the basic understanding of triangulation as the integration of research results from different sources. The second approach treats it as a verification tool, enabling the assessment of data validity through comparison. The third approach, referred to as indeterminate triangulation, emphasises the subjectivity of perceiving and interpreting the phenomena under study, recognising the influence of different perspectives. The final type, epistemological triangulation, focuses on overcoming methodological limitations through the integration of different research approaches, in particular quantitative and qualitative ones. Each of these types highlights different aspects of triangulation, making a significant contribution to research methodology.

ADVANTAGES AND CHALLENGES OF USING TRIANGULATION IN MARKETING RESEARCH

Triangulation is widely applied in the social and economic sciences, as it enables a more comprehensive understanding of socio-economic phenomena. It is particularly significant, for example, in the context of consumption research, where it is important to track sales trends and analyse consumer attitudes and motivations [Stolecka-Makowska, 2016]. This approach is also applied in business practice, particularly in marketing research, where it is crucial to consider both quantitative sales indicators and qualitative aspects of consumer behaviour. In market research, the use of methodological triangulation allows, for example, for a more precise identification of market segments and the effectiveness of marketing strategies [Dziakowicz, 2014; Wielki, 2024]. In turn, in the scientific approach, triangulation is seen as an integrated research strategy that allows for the combination of different methods, data sources and theoretical perspectives to achieve a more comprehensive and reliable understanding of the researched reality [Denzin, 2009]. Examples of the application of triangulation in marketing research include:

- deepening quantitative results through qualitative analysis of the research problem,
- verifying the mutual consistency of data from different sources and supplementing information,
- capturing various aspects of the phenomenon and identifying complementary or contradictory results,
- verifying the relationship between existing theories and business practice in order to demonstrate existing connections,
- replicating the research in different conditions and at different times in order to verify the universality of the results obtained.

In the context of marketing research, triangulation tends to be particularly effective when quantitative and qualitative analysis are combined, as this approach allows for a more comprehensive perspective on explaining market mechanisms [Tashakkori, Teddlie, 1998]. Importantly, this method can be applied not only in research conducted on a single market, but is also useful in the context of international marketing [Wiktor, 2014]. Triangulation is a method that has many benefits, but also presents significant challenges. In order to present them clearly, the main advantages and disadvantages of using triangulation in socio-economic research are summarised in the table below (Table 1).

Table 1. Advantages and disadvantages of triangulation

Tabela 1. Zalety i wady triangulacji

Advantages of triangulation	Disadvantages of triangulation
<ul style="list-style-type: none"> • Increased reliability and credibility of results <ul style="list-style-type: none"> • Broader research perspective • In-depth data interpretation • Reduction of errors and limitations of individual methodologies • Greater accuracy of managerial decisions • Combining the advantages of quantitative and qualitative methods 	<ul style="list-style-type: none"> • Time-consuming research process • Difficulties in integrating results <ul style="list-style-type: none"> • High research costs • Methodological problems • Risk of incomplete data consistency • Difficulty in achieving objective accuracy <ul style="list-style-type: none"> • Complexity of interpretation

Źródło/Source: own elaboration based on/opracowanie własne, na podstawie: [Hageman, 2008; Mazurek-Łopacińska, Sobocińska, 2019].

An overview of the advantages and disadvantages of triangulation indicates that, despite numerous methodological, organisational and interpretative challenges, this approach is a valuable tool for enhancing the reliability and credibility of marketing research. Triangulation allows for a broader cognitive perspective and a deeper interpretation of phenomena, but its effective application requires high research competence, a coherent methodological framework and adequate resources. Ultimately, the value of triangulation depends on the conscious and appropriate selection of methods, as well as the ability to integrate the results obtained into a coherent picture of the reality under study [Chlipała, 2018].

RESEARCH METHOD USED

The aim of this study was to identify the application of triangulation as a method of enhancing the reliability of results in marketing research. A review of scientific literature was carried out, accompanied by a bibliometric analysis of publications containing references to triangulation and marketing was performed. The specific objectives of the study were to determine the current state of research in this area and identifying areas of application for triangulation in marketing.

Bibliometric analysis enables the exploration of database content, the examination of research trends, the identification of dominant thematic areas, and the analysis of relationships between publications (Ejdys, 2016; Olczyk, 2016; Theus, 2016). In the presented study, bibliometric analysis made it possible to determine the development of interest in triangulation in marketing over the years and to identify the main authors, research centres and thematic trends related to this issue. The analysis encompassed a quantitative examination of publications indexed in the Web of Science (2025) and Scopus (2025) databases that contained the terms 'triangulation' and 'marketing' in their titles, keywords, or abstracts and were published up to the end of 2024. The connections between keywords were also mapped and the main research clusters were identified using VOSviewer software (2025). The analysis was based on the following research questions:

- What is the current state of research on triangulation in marketing?
- What are the most frequently occurring keywords related to triangulation in marketing?
- What are the main research areas associated with the use of triangulation in marketing?

All data for the study were exported from the Web of Science and Scopus databases (2025) on 1 June 2025, yielding 822 documents from the former and 327 publications from the latter. In the next part of

the study, the relationships between keywords were mapped using VOSviewer software (2025). The Web of Science database was selected for keyword mapping due to the substantially larger number of records available (822) compared to Scopus (327), which allowed for more stable and thematically saturated clustering. The Scopus database was used for comparative and descriptive analysis in the overall summary of the results.

TRIANGULATION IN MARKETING: BIBLIOMETRIC ANALYSIS

A total of 822 documents published by the end of 2024 and containing both the terms 'triangulation' and 'marketing' in their subject fields were classified in the Web of Science database. In comparison, 327 publications were available in the Scopus database. In terms of subject classification, the publications in the Web of Science database most frequently fell within the categories of Business (23.84%) and Management (19.46%), whereas those in the Scopus database were predominantly classified under Business, Management and Accounting (27.1%). For the purposes of the study, a general summary of the literature available in both databases was compiled (Table 2).

Table 2. List of literature available in the Web of Science and Scopus databases combining the topics of triangulation and marketing

Tabela 2. Zestawienie literatury dostępnej w bazach Web of Science i Scopus łączących tematykę triangulacji i marketingu

Data	Web of Science	Scopus
Number of publications	822	327
Number of citations	14939	5340
Average number of citations	18,17	16,33
h-index	56	39
Year of oldest publication	1993	1991
Thematic categories of publications	Business; Management; Education Educational Research; Economics; Hospitality Leisure Sport Tourism; Environmental Studies; Business Finance; Public Environmental Occupational Health; Environmental Sciences; Green Sustainable Science Technology; Communication	Business, Management and Accounting; Social Sciences; Computer Science; Engineering; Medicine; Economics, Econometrics and Finance; Environmental Science; Agricultural and Biological Sciences; Arts and Humanities
Authors with the highest number of publications	Gupta, S. (7); Kumar, V. (6); Mondal, S. (4); Samaddar, K. (4); Schiavone, F. (4)	Kumar, V. (5); Mondal, S. (4); Samaddar, K. (4); Crick, J.M. (3); Kaczmarek, M. (3)
Publications with the highest number of citations	Richard et al., 2009 (968); Sansoni et al., 2009 (456); Lyon et al., 2000 (431)	Fawcett et al., 2008 (479); Homburg et al., 2012 (195); Sobh, Perry, 2006 (179)

The keywords shown on the cluster map are divided into four thematic clusters:

- the red cluster (20 elements) focuses on triangulation and marketing strategy; the most popular keyword in this cluster is 'triangulation', which appeared in 84 elements in the indicated set,
- green cluster (19 elements) focused mainly on knowledge and innovation management; the most frequently occurring keyword in this cluster is 'performance',
- blue cluster (15 elements) this cluster is mainly focused on customer relationship management, the most frequently occurring word is 'management',
- yellow cluster (13 elements) focusing on research on the development and challenges of organisations, the most frequently occurring keyword in this cluster is 'model'.

From a methodological perspective, the identified thematic clusters can be interpreted through the lens of different types of triangulation. The red cluster is primarily associated with methodological triangulation, it integrates qualitative and quantitative approaches in strategic marketing research. The green cluster reflects data triangulation, combining diverse data sources related to performance, innovation, knowledge. The blue cluster corresponds mainly to analytical triangulation, as it links various analytical techniques applied to customer relationship management and consumer behaviour. The yellow cluster can be interpreted in terms of theoretical triangulation, as it integrates different conceptual frameworks used to explain organizational development and future organizational challenges.

Based on the bibliometric analysis, four basic thematic sub-areas can be identified, which can be considered the dominant research directions related to the use of triangulation in marketing (Table 3).

Table 3. Main research sub-areas for topics combining triangulation with marketing

Tabela 3. Główne podobszary badawcze dla tematyki łączącej triangulację z marketingiem

Research sub-area	Sample topics	Most popular keywords	Sample references
Triangulation and marketing strategy (red cluster)	Marketing strategy, media, marketing orientation, sustainable development	<i>triangulation (84), sustainability (27), marketing (20), strategy (20), behavior (17);</i>	Kumar, Anand Song, (2017); Sethuraman, (2009); Malodia, Gupta, Jaiswal (2020).
Knowledge management (green cluster)	Innovation and technology, internationalisation, competitive advantage, business	<i>performance (77), innovation (51), knowledge (31), technology (25), business (19);</i>	Mukonza, Swarts, (2020); Gupta, Ramachandran (2021); Shih (2010).
Customer relationship management (blue cluster)	Consumer perception, buyer satisfaction, management, consumption	<i>management (58), impact (52), determinants (27), market (26), perceptions (22);</i>	Kim, Lee, Johnson, (2013); Eid, (2005); Wang, Tian, Filimonau, Ning, Yang, (2022).
Organisational development and challenges (yellow cluster)	Growth dynamics, challenges, success, future	<i>model (43), entrepreneurship (22), framework (21), system (21), organizations (15);</i>	Urbaniec, Żur, (2021); Sila, Walczak (2017); Ward, Fielden, Muir, Holliday, Urwin (2017).

Source/Źródło: own study/badania własne.

An analysis of the identified clusters indicates a clear thematic diversity in the research, while maintaining coherence around the issue of triangulation in marketing. Individual thematic groups approach the phenomenon from different perspectives, ranging from marketing strategy development and consumer communication activities to knowledge management, innovation, and organisational development. This

diversity confirms the growing importance of integrating various research approaches in management sciences, which facilitate a comprehensive explanation of the relationships between business practice and marketing theory.

SUMMARY

Triangulation, as a research method, is perceived not only as a tool for enhancing the credibility and reliability of research results, but also as an integrative approach that combines different cognitive perspectives, enabling a more comprehensive understanding of complex phenomena [Chlipała, 2018]. By using different research methods and data sources, it is possible to obtain a more comprehensive picture of the research reality [Tashakkori, Teddlie, 1998].

The results of the visualisation of keyword connections in articles on triangulation and marketing in the Web of Science database made it possible to identify four dominant thematic clusters covering issues related to marketing strategy, knowledge management, customer relationship management, and organisational development. This thematic diversity highlights the interdisciplinary nature of triangulation, which integrates various research paradigms within contemporary management and quality sciences. Furthermore, the identified clusters indicate that triangulation acts as a bridge between marketing theory and practice.

The application of triangulation in marketing research contributes to enhancing both its cognitive and practical value. The growing presence of this topic in the literature on the subject testifies to the existing need to integrate diverse methodological approaches in order to increase the reliability of analyses. It also points to the growing importance of combining quantitative and qualitative data, diverse sources of information and methods of interpreting results, which leads to more multidimensional conclusions from research. This approach fosters a deeper understanding of market processes among researchers and, at the same time, increases the usefulness of research results for economic practice. The findings of the study confirm that triangulation is not merely a technique supporting the research process, but rather a fully-fledged approach that redefines the way research is conducted. Despite its well-established position in marketing research, the bibliometric analysis indicates that experimental research designs, long-term, time-based studies and the joint use of behavioural data with in-depth qualitative methods remain weakly represented in the existing literature. This suggests potential directions for future research based on broader data integration within triangulation-based marketing studies.

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