

Gamification in Banking Marketing: A Bibliometric Analysis of Research Trends and Patterns

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Abstract—Digital technologies are increasingly changing the banking industry, especially with regard to the design and implementation of marketing strategies by financial institutions. Among the various digital technologies, gamification has been identified as a promising method for improving customer engagement, experience, and loyalty in digital banking settings. Gamified marketing campaigns allow financial institutions to shape customer behavior by incorporating game design thinking into financial services and marketing campaigns. The aim of this research is to offer a comprehensive review of the current state of the art in the existing literature on gamification in banking marketing and to highlight the most important research trends, structures, and topics in this field. The data employed in this research were derived from the Dimensions database, exclusively including peer-reviewed journal articles published between 2017 and 2025. The time frame was chosen to reflect the current growth phase of gamification research, which corresponds to the increasing adoption of mobile banking, fintech platforms, and digital marketing strategies for customer engagement. The search for relevant publications was conducted using specific keywords such as "gamification," "banking," "digital banking," and "marketing" to ensure that the search includes articles that specifically investigate gamified applications in financial service marketing. A total of 75 articles were found to satisfy the inclusion criteria and were analyzed using VOSviewer for bibliometric analysis. The results of the analysis bring to light the increasing interest in gamified banking marketing, the importance of digital engagement and customer focus, and the rising international collaboration for research in the field of gamified banking marketing. The research work presented here offers a systematic basis for future research and helps academics and practitioners alike to comprehend the rising importance of gamification in banking marketing practices.

Keywords—Gamification, Banking Marketing, Digital Banking, Customer Engagement, Bibliometric Analysis, VOSviewer

I. INTRODUCTION

Digital transformation has significantly impacted the banking and financial services industry by changing the way banks design, deliver, and market their services. The increasing use of digital technologies such as mobile banking apps, cloud computing, data analytics, and artificial intelligence has increased competition and raised the bar for customers in terms of their expectations for engaging banking experiences [1]. As a result, banks are increasingly adopting new, innovative, and technology-driven marketing strategies that focus on customer engagement and relationship-building rather than traditional transactional marketing strategies [2]. Gamification is one such marketing strategy that has been adopted by banks to engage customers and promote their financial services. Gamification is the use of game design and mechanics in non-game contexts to engage users and drive behavior [3]. In the context of banking marketing, gamification has been used through the

design of reward systems, points, badges, challenges, and leaderboards on digital banking platforms [4]. Research studies have shown that gamification has a positive impact on customer engagement, satisfaction, and behavioral intention, making it an effective marketing tool for digital financial services [5]. The increased adoption of fintech solutions and mobile banking services has also accelerated the adoption of gamification in banking marketing practices. Customers are increasingly demanding interactive and intuitive digital interfaces, leading banks to incorporate gamified elements to make their services stand out in a highly competitive market [6]. Marketing practices that incorporate gamification also help with financial education and sound financial practices, thereby making a contribution to both commercial and social goals [7]. This has led to the emergence of gamification as an essential element of experiential marketing in the banking industry. Although there has been an increased adoption of gamification in banking practices, there is a lack of

cohesion in research related to this topic, which is scattered across various fields such as marketing, information systems, and financial technology [8]. Current research has mainly focused on a particular behavioral outcome or technology acceptance theory, and this is done in a limited geographical or organizational setting [9]. As a result, there is a lack of systematic knowledge of the research landscape, thematic development, and collaboration patterns in gamification-based banking marketing research. To fill this research gap, this study employs a bibliometric analysis of the literature on gamification in banking marketing from 2017 to 2025. Bibliometric analysis is a methodological approach that facilitates the quantitative assessment of research performance, intellectual structure, and thematic development in a specific research field [10]. Based on the data retrieved from the Dimensions database and processed using VOSviewer, this study seeks to visualize publication patterns, trace top-performing authors, countries, and journals, and explore prominent and emerging themes in the research field. Through its provision of a holistic perspective on the existing literature, this study seeks to enhance systematic knowledge of the development of gamification in banking marketing.

II. LITERATURE REVIEW

Gamification and Digital Engagement

Gamification is defined as the use of game design elements outside of games to increase user motivation, engagement, and participation [11]. It has gained considerable interest across different fields owing to its potential to shape behavioral outcomes and optimize user experience. The pioneering effort by Deterding et al. defined gamification as the practice of using game mechanics like points, badges, and leaderboards to produce gameful experiences in non-game contexts [12]. Later research highlighted that gamification exploits intrinsic and extrinsic motivational drivers to facilitate sustained user engagement [13]. The development of digital technologies and interactive interfaces has made it easier for gamification to be adopted in marketing applications. Digital spaces allow companies to develop customized and engaging experiences for their customers, making gamification a tool for engagement-driven marketing [14]. Earlier research has found that gamification increases customer interaction, emotional engagement, and perceived

enjoyment, thereby having a positive effect on consumer attitudes toward digital services [15].

Gamification in Banking and Financial Services

The banking industry has also experienced a remarkable digital transformation, where banks have adopted internet and mobile banking platforms to provide services efficiently [16]. As the level of competition increases, banks are looking for new and innovative marketing approaches to distinguish themselves and build strong customer ties. Gamification has become a popular marketing strategy in the banking industry, where reward mechanisms, challenges, and tracking features are incorporated into digital banking applications [17]. Empirical research has shown that gamification of banking applications enhances customer engagement, satisfaction, and loyalty by making banking activities more engaging and fun [18]. Gamification has also been applied to enhance financial literacy, savings behavior, and the adoption of digital banking services [19]. The results show that gamification is not only a marketing strategy but also a means of influencing behavioral change in financial decision-making.

Customer Engagement and Marketing Outcomes

Customer engagement has emerged as a prominent area of interest in marketing studies, especially in the context of digital service-based settings where the customer experience is facilitated by technology [20]. Gamification is a means through which customer engagement can be achieved, as it enables the creation of experiences that are interactive and lead to psychological engagement and repeated use [21]. Empirical evidence suggests that gamified marketing campaigns have a positive impact on key marketing outcomes like customer satisfaction, trust, brand loyalty, and purchase intention [22]. In the context of banking marketing, gamification increases perceived value and helps to create an emotional bond between customers and the banking organization [23]. Technology acceptance and behavioral intention theory-based studies have shown that perceived enjoyment and usefulness have a pivotal role in influencing customer behavior related to gamified banking services [24]. Thus, gamification is well-aligned with relationship marketing and experiential marketing philosophies.

Technological Advancements and Fintech Integration

The rise of fintech and digital banking platforms has transformed the financial services landscape, enabling banks to deliver personalized and technology-driven solutions to customers [25]. Technological advancements such as artificial intelligence, machine learning, big data analytics, and cloud computing have facilitated the integration of gamification into banking applications [26]. These technologies enable banks to track customer behavior, personalize gamified experiences, and deliver real-time feedback to enhance customer engagement [27]. Gamification has also been integrated with emerging technologies such as blockchain and mobile wallets to create innovative financial products and services [28]. Research has shown that the integration of gamification with fintech solutions enhances the adoption and usage of digital banking services by making them more interactive and user-friendly [29]. The convergence of gamification and fintech is expected to drive the future of digital banking and reshape customer experiences in the financial services industry [30].

III. METHODOLOGY

Data Collection

This study employs a bibliometric analysis approach to systematically review the literature on gamification in banking marketing. The data for this study was collected from the Dimensions database, which is a comprehensive research database that indexes peer-reviewed journal articles, conference papers, and other scholarly publications. The search was conducted using specific keywords related to gamification, banking, digital banking, and marketing to ensure that

the search results include articles that specifically investigate gamified applications in financial service marketing. The search query was designed to capture articles published between 2017 and 2025, reflecting the current growth phase of gamification research in the banking industry. The time frame was chosen to correspond with the increasing adoption of mobile banking, fintech platforms, and digital marketing strategies for customer engagement. Only peer-reviewed journal articles were included in the analysis to ensure the quality and reliability of the data. A total of 75 articles were identified that met the inclusion criteria and were included in the final analysis.

Data Analysis

The data collected from the Dimensions database was analyzed using VOSviewer, which is a software tool for constructing and visualizing bibliometric networks. VOSviewer enables researchers to create visual representations of scientific literature based on citation patterns, co-authorship networks, co-occurrence of keywords, and other bibliometric indicators. In this study, VOSviewer was used to analyze the publication trends, identify the most productive authors, journals, and countries, and explore the thematic structure of the research field. The analysis included the creation of co-authorship networks to identify collaboration patterns among researchers, co-occurrence networks of keywords to explore the main themes and topics in the field, and citation networks to identify the most influential publications and authors. The visual representations generated by VOSviewer provide valuable insights into the intellectual structure and research trends in gamification-based banking marketing research.

IV. RESULTS AND DISCUSSION

Publication Trends

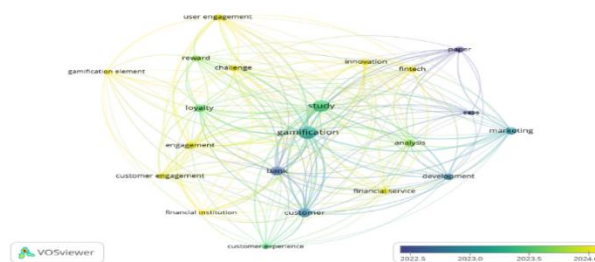


Figure 2. Overlay visualization showing temporal evolution of research themes

The analysis of publication trends reveals a steady increase in the number of articles published on gamification in banking marketing from 2017 to 2025. This trend reflects the growing interest among researchers and practitioners in exploring the potential of gamification as a marketing strategy in the banking industry. The increase in publications also corresponds with the rapid adoption of digital banking technologies and the increasing focus on customer engagement in

the financial services sector. The majority of the publications are concentrated in journals related to marketing, information systems, and financial technology, indicating the interdisciplinary nature of the research field. The analysis also reveals that the number of publications has significantly increased in recent years, particularly from 2020 onwards, which may be attributed to the COVID-19 pandemic and the accelerated digital transformation of the banking industry during this period.

Most Productive Authors and Journals

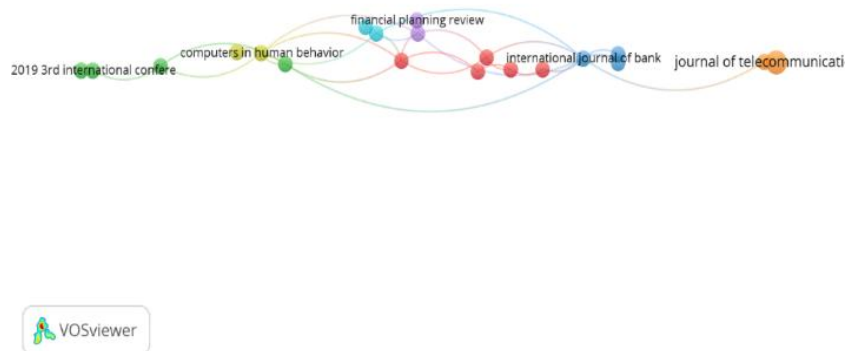


Figure 5. Citation network of publication sources

The bibliometric analysis identified the most productive authors and journals in the field of gamification in banking marketing. The analysis reveals that a small number of authors have made significant contributions to the research field, with multiple publications on gamification and digital banking. These authors are affiliated with leading universities and research institutions around the world and have published their work in high-impact journals in the fields of marketing, information systems, and

financial technology. The most productive journals include the International Journal of Information Management, Internet Research, Journal of Retailing and Consumer Services, and Computers in Human Behavior. These journals have published a significant number of articles on gamification in banking marketing and have contributed to the development of the research field. The analysis also reveals that there is a growing interest among researchers from different disciplines in exploring the potential of gamification in the banking industry.

Country-wise Collaboration

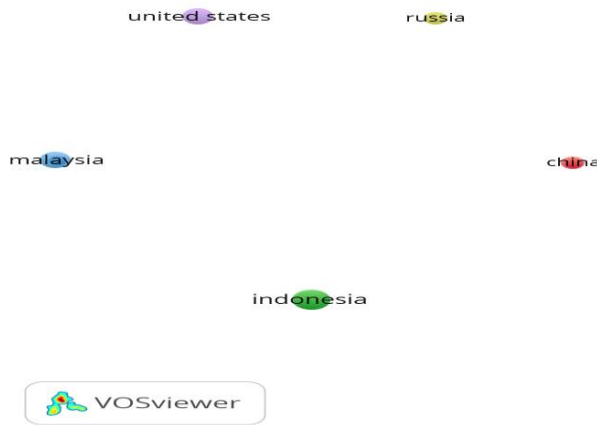


Figure 4. Country-level co-authorship network

The co-authorship network analysis reveals the collaboration patterns among researchers from different countries. The analysis shows that the majority of the research on gamification in banking marketing is conducted by researchers from developed countries, particularly the United States, United Kingdom, Germany, and Australia. However, there is also a growing interest among researchers from emerging economies such as China, India, and Brazil

in exploring the potential of gamification in the banking industry. The analysis reveals limited international collaboration, with most research being conducted within national boundaries. This suggests that there is significant potential for increased international collaboration in the field, which could lead to the exchange of knowledge, best practices, and innovative ideas across different geographical and cultural contexts.

Thematic Analysis

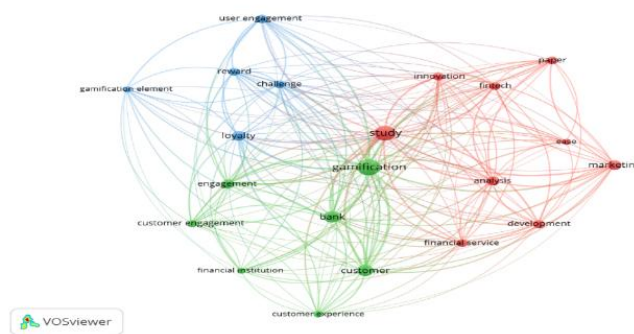


Figure 1. Keyword co-occurrence network of gamified banking research

The co-occurrence network analysis of keywords reveals the main themes and topics in the research field. The analysis identifies several key themes, including customer engagement, digital banking, mobile banking, fintech, user experience, behavioral intention, technology acceptance, and customer satisfaction. These themes reflect the primary focus of

the research field, which is on understanding how gamification can be used to enhance customer engagement and improve the overall customer experience in digital banking settings. The analysis also reveals emerging themes such as artificial intelligence, blockchain, personalization, and financial literacy, which suggest new directions for future research in the field. The thematic analysis provides

valuable insights into the intellectual structure of the research field and highlights the key areas of focus for researchers and practitioners.

V. CONCLUSION

This study provides a comprehensive bibliometric analysis of the literature on gamification in banking marketing from 2017 to 2025. The analysis reveals a growing interest in the field, with a steady increase in the number of publications over the years. The results highlight the importance of customer engagement, digital transformation, and fintech integration in the context of gamified banking marketing. The analysis also identifies the most productive authors, journals, and countries in the field and reveals the collaboration patterns among researchers. The thematic analysis provides valuable insights into the main themes and emerging topics in the research field, which can guide future research directions. The findings of this study have important implications for both researchers and practitioners. For researchers, the study provides a systematic overview of the research landscape and highlights potential areas for future investigation. The identification of research gaps, such as the lack of longitudinal studies on the long-term effects of gamification and the limited research on specific gamification mechanics, provides opportunities for future research. For practitioners, the study offers valuable insights into the effectiveness of gamification as a marketing strategy in the banking industry and provides guidance on how to design and implement gamified banking applications that enhance customer engagement and satisfaction.

Despite the growing interest in gamification in banking marketing, the research field is still in its developmental stage. There is a need for more rigorous empirical research, particularly longitudinal studies that examine the long-term effects of gamification on customer behavior and financial outcomes. Future research should also explore the impact of different gamification mechanics on various customer segments and investigate the role of cultural and regulatory factors, particularly in emerging markets where digital banking is rapidly growing. The integration of gamification with emerging technologies such as artificial intelligence and blockchain presents new opportunities for innovation in the financial services industry. Overall, gamification is expected to play a key role in shaping the future of digital banking and

transforming customer experiences in the financial services industry.

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