DOI:10.17951/h.2026.60.2.137-172

ANNALES
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA
LUBLIN – POLONIA
VOL. LX, 2 SECTIO H 2026

TOMASZ SIUDEK

tomasz_siudek@sggw.edu.pl
Warsaw University of Life Sciences. Institute of Economics and Finance
ul. Nowoursynowska 166, 02-787 Warsaw, Poland
ORCID ID: https://orcid.org/0000-0001-8400-5631

ALDONA ZAWOJSKA

aldona_zawojska@sggw.edu.pl
Warsaw University of Life Sciences. Institute of Economics and Finance
ul. Nowoursynowska 166, 02-787 Warsaw, Poland
ORCID ID: https://orcid.org/0000-0003-3668-0127

# *Banking Products and Services as Significant Determinants of Bank Competitiveness in the Financial Market: A Review Approach*

**Keywords:** banking products; financial services; competitiveness; banks; literature review; conceptual model

**JEL:** D53; G21; M31; M37

**How to quote this paper:** Siudek, T., & Zawojska, A. (2026). Banking Products and Services as Significant Determinants of Bank Competitiveness in the Financial Market: A Review Approach. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, *60*(2), 137–172.

**Abstract**

**Theoretical background:** Competitiveness represents a multidimensional construct reflecting an entity's capacity to secure a superior market position. This phenomenon operates across global, national, regional, sectoral, organizational, product, and service dimensions. Within the banking sector, competitiveness is paramount since banks, as financial intermediaries, inherently depend on the scope, quality, accessibility, innovation, and perceived value of their products and services. Furthermore, rapid digitalization and artificial intelligence continuously reshape their portfolios, establishing personalization, efficiency, and enhanced

customer experience as critical drivers of competitive advantage. This paper examines banking products and services as primary determinants of bank competitiveness by analyzing their impact on customer-centric outcomes, including satisfaction, trust, and loyalty. These outcomes serve as the foundational mechanism linking banking activities to sustained market performance, as positive customer experiences fortify retention, relationship depth, and institutional reputation. Ultimately, this study conceptualizes the essence of banking products and services, identifying the specific attributes that most robustly augment customer outcomes and, consequently, elevate a bank's competitive standing.
**Purpose of the article:** This article aims to clarify the significance, nature, and key characteristics of banking products and services, highlight their role in shaping customer outcomes and bank competitiveness, and develop a theoretical model showing how e-banking products and services relate to customer satisfaction, trust, and loyalty.
**Research methods:** The paper adopts a theoretical and descriptive approach, drawing on a narrative literature review and critical, comparative, and synthetic analyses. Relevant literature was sourced from Web of Science, Google Scholar, ScienceDirect, BazEkon, and other databases using Boolean keyword searches.
**Main findings:** Banking products and services strengthen bank competitiveness by enhancing customer value, satisfaction, trust, and loyalty. Key factors include service quality, reliability, convenience, security, personalization, and digital usability. The findings further indicate that digitalization and AI reshape competitive dynamics by transforming how banking services are designed, delivered, and experienced by customers.

## Introduction

Competitiveness remains a subject of considerable interest in economic research and continues to merit further investigation. It is commonly analysed at different levels, including the macro, meso, micro, and micro-micro levels, referring respectively to countries, regions, industries, enterprises, products, and services. In the banking sector, competitiveness and its outcomes are particularly important, as banks act as financial intermediaries and operate in an increasingly technology-driven financial environment. Emerging empirical evidence reveals that banks face intensified competitive pressure across multiple dimensions from FinTech firms, which offer similar financial products and services but with greater agility, lower costs, lower customer retention, and superior user experience, enabling them to capture market share and reduce traditional banks' profitability and lending spreads (Huterska, 2024; Khan et al., 2025; Solarz & Adamek, 2023; Song et al., 2023). For bank managers, assessing a bank's competitive position and the factors driving its changes is essential, especially as competitiveness in modern banking increasingly depends on superior product and service quality, strong customer relationships, digital channels, and technological innovation.

The intensification of competition in financial markets underscores the need to view competitiveness not merely as a measurable market outcome but as a broader analytical category. It is a complex, multidimensional, and relative construct, inherently embedded in the dynamics of market rivalry. Given this conceptual ambiguity, a precise and explicit definition of competitiveness is essential for developing a rigorous analytical framework. The literature offers various interpretations of the concept (see Siudek & Zawojska, 2014). In the corporate context, including the banking industry, Flejterski (1999) and Adamkiewicz-Drwiłło (2002) define competitiveness as an entity's ability to generate and sell products more attractive to consumers than those offered by rivals. This ability is shaped by factors such as price, quality, and auxiliary attributes.

The studies examine three fundamental dimensions of competitiveness: competitive potential, the competitive strategy adopted, and the competitive position held by an entity. According to Flak and Głód (2009), a firm's competitive potential consists of the tangible and intangible resources available to build, maintain, and strengthen its competitiveness. Similarly, Stankiewicz (2005) defines competitive potential as the aggregate of tangible and intangible resources necessary for an entity to operate and compete in a specific market. Competitive strategy, the second dimension, denotes the actions undertaken by a firm to achieve or enhance competitive advantage within its industry or competitive environment (Flak & Głód, 2009; Wheelen et al., 2017). Competitive strategy determines whether a firm competes through lower costs and prices or through differentiation based on non-cost factors, such as service quality. The third dimension, competitive position, refers to a firm's relative strength *vis-à-vis* its direct competitors (Simmonds, 1986) and reflects its ability to compete successfully within a given sector or industry (Stankiewicz, 2005). It is assessed by comparing the firm's performance with that of its competitors and may improve, remain stable, or deteriorate over time.

Our literature review reveals a substantial body of academic research on bank competitiveness, primarily focused on identifying the factors that determine its level. These factors can be grouped into macroeconomic and institutional conditions, technological development, market structure, bank-specific resources and capabilities, strategic orientation, customer-related attributes, and regulatory environment. They include, among others, economic and institutional development, innovativeness, information technology, bank consolidation, market concentration, bank size, entry barriers, human capital, reputation, distribution channels, service quality, innovation, trust, credibility, financial soundness, security, efficiency, comprehensiveness of offer, and legal regulations. Furthermore, bank competitiveness in financial markets is often considered to depend on the quality of products and services offered. This focus is justified because this dimension represents one of the most tangible and customer-oriented manifestations of competitiveness. It directly shapes customer satisfaction, trust, loyalty, and the perceived attractiveness of a bank's offer, thereby influencing its competitive position in the market. Accordingly, this article focuses on this dimension of competitiveness.

In the extant literature, banking products and services are analyzed primarily through the lens of their attributes as factors shaping competitiveness (Ali & Naeem, 2019; Arvidsson, 2014; Chhabra, 2018; De Jager et al., 2020; Harahap et al., 2020; Herington & Weaven, 2009; Ho & Lin, 2010; Hussien & El Aziz, 2013; Jayawardhena, 2004; Jun & Cai, 2001; Jun & Palacios, 2016; Kumar et al., 2010; Pikkarainen et al., 2006; Probojakti et al., 2024; Rod et al., 2009; Sharma & Halvadia, 2015;

Siudek, 2022; Zeithaml et al., 2002). Academic literature increasingly examines e-banking, digital banking, and AI-enabled technologies as key delivery channels for banking products and services, particularly in relation to customer experience, service efficiency, personalization, security, and continued usage (Bakare, 2015; Fredrick, 2012; Harasis & Rasli, 2016; Li et al., 2021; Manta et al., 2025; Nguyen & Le, 2025; Ojokuku & Sajuyigbe, 2012; Rahi et al., 2019; Sharma et al., 2026; Zungu et al., 2025).

Exploring bank competitiveness from a product and service perspective is particularly relevant in view of rapid technological change, which requires banks to continuously adapt their offerings, delivery channels, and business models. New technologies, such as mobile and biometric solutions, cloud computing, big data, artificial intelligence, blockchain, RegTech, and the Internet of Things, create opportunities to improve efficiency, innovation, and customer value. This perspective is also practically important, as it helps identify factors that stimulate or constrain bank competitiveness and development. This study establishes a foundation for future empirical assessments of bank competitiveness regarding products and services. Furthermore, our findings offer valuable insights for both academic research and managerial strategies aimed at optimizing and differentiating banking portfolios.

This theoretical research reviews the state of the art in banking competitiveness, highlighting how products and services drive competition. To achieve this, the manuscript adopts a traditional narrative literature review, uniquely suited for mapping the long-term conceptual foundations of the discipline. Unlike restrictive systematic frameworks, this approach synthesizes both the historical and contemporary evolution of service quality, customer outcomes, and banking competitiveness. The analysis spans a broad temporal horizon, from foundational physical service frameworks to recent digital disruptions. To identify relevant literature, a systematic search was conducted across major databases (including ScienceDirect, Scopus, Web of Science, and Google Scholar) using Boolean operators to combine key terms such as "banking products," "banking services," "e-banking," "bank competitiveness," "bank customer outcomes," "customer satisfaction," "customer experience." Synonyms and related expressions (e.g., "retail banking services," "service quality," "customer value," "competitive advantage in banking," "digital banking") were also incorporated using the operators *AND* and *OR* to broaden and refine the search scope.

To construct a rich, multi-dimensional narrative, the selection strategy intentionally applied broad inclusion boundaries: empirical studies utilizing diverse analytical techniques; theoretical and descriptive papers to capture qualitative evolutions and framework definitions that numerical data alone cannot express; a broad, unrestricted time span to track how banking paradigms shifted from traditional brick-and-mortar operations to a mobile-first environment delivering a comprehensive, comparative synthesis. Through this comprehensive collection strategy, a corpus of more than 190 papers was gathered, forming a deep historical and conceptual dataset. To manage the large volume of literature and mitigate descriptive bias across selected sources, data extraction was structured using analytical synthesis tables. Moving beyond a simple narrative, these tables served as a critical tool to dissect and compare the material across two vital dimensions: an author and timeline matrix, which maps researchers chronologically to track the long-term evolution of banking theories, and conceptual definitions, which isolate how various authors theoretically defined "banking products," "banking services" and "service quality" for a more rigorous comparative analysis. The study addresses the following research questions:

Q1: What are the fundamental differences between products and services in general, and how are these differences conceptualized in the literature?

Q2: What are the distinctive characteristics of banking products and services?

Q3: How can bank competitiveness be measured and evaluated with respect to the scope and quality of their products and services?

Q4: Which attributes of banking products and services exert the most significant influence on banks' competitiveness and their ability to deliver positive customer outcomes?

The remainder of the paper is structured as follows. The first section outlines the conceptual foundations of banking products and services, with particular attention to the distinctions between these two categories. The subsequent section examines the nature, quality, and classification of banking products and services. This is followed by the development of a theoretical model that explicates the relationships between customer satisfaction, trust, and loyalty, emphasizing their dependence on the quality and pricing of e-banking products and services. This section also presents practical recommendations, highlighting how banks can leverage these relationships to enhance customer experience, strengthen trust, and foster long-term loyalty.The final section presents the study's conclusions, discusses its limitations, and suggests avenues for future research.

## The product-service dichotomy: Conceptual foundations and distinctions

The product-service dichotomy has long been a subject of theoretical debate within the literature. While both categories represent forms of economic offerings, they differ in terms of tangibility, production and consumption processes, and customer interaction. Given the lack of a clear and consistent distinction between products and services, this section reviews selected definitions proposed in the literature to clarify these concepts.

Products and services represent goods designed to satisfy specific needs through economic exchange, market offerings, and a distinct use value (Skinner, 1990). However, scholarly consensus establishes that classical physical products differ significantly from services; they are inherently tangible, standardized, and separable (Bessom, 1973; Eiglier et al., 1977; Rathmell, 1974; Zeithaml et al., 1985) (Table 1). Product tangibility (physicality) implies that products can be seen, touched, and tested, unlike services. Moreover, while products are typically standardized, services are inherently variable and tailored to individual customer needs.Furthermore, while physical goods are produced and consumed separately, services are characterized by the inseparability of these two phases. Consequently, products can be evaluated before purchase based on tangible physical attributes, whereas services lack these substantive cues, forcing consumers to rely on alternative informational signals.

**Table 1.** Differences between classic products and services

| Criteria/features | Products | Services |
|---|---|---|
| Immateriality | no | yes |
| Standardisation | yes | no |
| The inseparability of production and consumption | no | yes |
| Pre-purchase evaluation | yes | no |
| The basis for a purchase decision | physical attributes of the product | buyer experience, family and friends' recommendations and credibility of the service provider |
| Post-purchase evaluation | easier | more difficult |
| Consumer participation in the production process | no | yes |
| Product/service purchase risk | small | large |
| Product/service attributes | product price and its physical attributes (shape, colour, packaging, brand) | price and service delivery environment (office, staff dress code, equipment) |
| Choice of product/service | large | small |
| Self-produced product/service | rather impossible | possible |
| Testing the product/service before purchase | yes | no |
| Comparability of products/services | possible | impossible |
| Complexity of the product/service (number of attributes) | small | large |
| Guarantee and warranty obligations | yes | no |
| Return of goods/services | yes | no |
| Consumer loyalty to a brand (producer/service provider) | less | greater |
| Source of consumer dissatisfaction with product/service purchase | manufacturer and/or seller | service provider and/or consumer |
| Consumer focus of product/service provider | less | greater |
| Copying | no | yes |
| Patenting | yes | no |
| Storage | yes | no |

Source: Authors' own study based on (Zeithaml, 1981).

The evaluation of services is based primarily on experiential attributes, word-of-mouth recommendations, and the provider's credibility. Additionally, whereas consumers are detached from the production of goods, they actively participate as co-creators in service delivery. Consumers may test products before purchase, unlike services. In addition, products tend to be less complex and can be returned if defective, which does not apply to services. Dissatisfaction with purchased products is generally attributed to the manufacturer or seller, whereas service-related claims may involve both the provider and the consumer. Additionally, physical products can be stored for future use, whereas services are inherently perishable and cannot be inventoried. This fundamental difference makes product comparisons relatively straightforward, while evaluating and comparing services before consumption remains significantly more constrained.

In the banking sector, the distinction between products and services remains difficult to delineate, as the literature frequently employs these terms interchangeably. This lack of clear differentiation stems from the hybrid nature of banking offerings, which simultaneously exhibit characteristics of both products and services. A review of the literature confirms that the notions of "banking products" and "banking services" are often used synonymously. However, some researchers reject this lack of distinction, emphasizing the need for clearer conceptual separation between the two categories. For instance, Wang et al. (2003) attempted to differentiate between these concepts by identifying their distinctive characteristics, thereby addressing the conceptual ambiguity present in much of the literature. The authors identify usability, efficiency, compliance, reliability, quality, convenience, and accessibility as key attributes of banking products, whereas reliability, responsiveness, assurance, and empathy are associated with banking services. They further argue that banking products and services are typically delivered simultaneously. In this context, deposits, loans, and payment cards are considered primary banking products, while financial advice and information provision are classified as banking services. While Wang et al. (2003) distinguish between banking products and services based on their attributes, Dobosiewicz (2011) adopts a broader approach, arguing that banking products are comparable to products sold or purchased by manufacturers. A bank also sells and buys products, yet their features differ from those of classic tangible products. Banking products predominantly involve the provision or placement of funds for a specified period. On the one hand, a bank buys the right to dispose of money by accepting deposits and issuing bonds and deposit certificates. On the other hand, it sells this right by granting loans and buying bills and bonds. According to Dobosiewicz, any service offered to customers by a banking institution may be considered a product. He defines banking products as homogeneous components of the banking offer, clearly delineated by their form and price.

In summary, banking products are conceptualized as highly standardized operations defined by explicit attributes. Consequently, much like conventional goods, consumers can evaluate their utility based on intrinsic characteristics before acquisition. Primary examples include loans and deposits, whose parameters are strictly governed by financial regulations. Conversely, non-standardized financial activities constitute banking services. This category encompasses *ad-hoc* provisions such as financial advisory or institutional customer support channels, which are consumed instantly upon delivery. In most instances, the execution of a banking service requires the simultaneous engagement of both an employee and a customer. The nature of this interaction is inherently unique in each case, whether initiated at a physical branch or mediated through electronic channels.

**The nature and classification of banking products and services**

As previously indicated, the category of banking products and services encompasses a bank's activities or operations conducted on behalf of its customers. The Banking Law categorizes these products and services into two distinct groups:

- *sensu stricto* (in a narrow sense) – reserved exclusively for banks (e.g., granting loans and guarantees, accepting deposits, issuing bank securities);
- *sensu largo* (in a broad sense) – allowed for both banks and non-banks (e.g., sale of receivables, cheques, and bills of exchange operations, guarantees).

Under the Polish Banking Law (1997, Art. 5.1–5.2), institutional banking operations are legally structured into core intermediary functions (deposit-taking, account maintenance, and lending) and specialized financial services. These include payment and monetary settlements, electronic money issuance, forex trading, guarantees/letters of credit, forward transactions, and the asset-backed safekeeping of valuables and securities. In addition to core operations (in a narrow sense), Art. 6.1 authorizes banks to engage in investment and advisory activities. Their scope covers trading securities, acquiring corporate shares or investment fund units, and underwriting securities issuances. Furthermore, banks may engage in real estate transactions, financial consulting, and other activities authorized by separate legislation.

While the aforementioned statutory framework establishes a rigid binary division of banking activities, Marcinkowska (2013) conceptualizes a multi-criteria matrix to capture the operational complexity of financial intermediation. This comprehensive taxonomy systematically segments banking operations across six primary analytical dimensions:

- entity focus: own, customer, and external operations;
- geographic scope: domestic and foreign, interbank and interbranch operations;
- accounting treatment: on-balance sheet and off-balance sheet;
- currency denomination: domestic currency (in PLN) and foreign currency transactions;
- settlement mechanics: cash and non-cash operations;
- financial reporting alignment: active, passive, and intermediate operations based on their exact asset-liability position within financial statements.

The latter subdivision, representing the most prevalent classification framework, delineates: (1) active operations, which entail the deployment of accumulated capital through mechanisms such as credit extension, securities acquisition, and interbank fund allocation; (2) passive operations, comprising fund-raising activities primarily executed via deposit mobilization, the underwriting of securities and debt issuance; and (3) intermediary operations, which encompass fiduciary and transactional services performed on behalf of clients, including clearing and settlement mechanisms, asset procurement, and financial advisory services.

When mapping these banking operations onto products and services, active and passive operations constitute distinct banking products, whereas intermediary operations are classified as banking services. The definitive features and primary characteristics of these classifications are systematized in Table 2. A detailed characterization of each product and service lies beyond the scope of this paper due to volume limitations.

**Table 2.** Selected features of banking products and services

| Features | Nature of banking products and services |
|---|---|
| Immateriality (intangibility) | Inability to touch, see, and store the product/service |
| Standardization and heterogeneity | Core banking products are inherently standardised (often due to regulation) yet highly heterogeneous, owing to the significant involvement of banking staff in the distribution process |
| Abstract nature | Banking service abstractness poses a dual challenge: ensuring customer comprehension and addressing the inability to satisfy tangible needs |
| Spreading consumption over time | Banking products are usually consumed over time. Banks can actively impact their use process, which mainly applies to term products (loans and deposits) |
| Inseparability of service provision and consumption | Service consumption occurs through the customer's physical presence at the bank or via direct electronic communication, with legal regulations defining the rights and obligations of both parties |
| Risk exposure of banking products and services | A banking transaction is inherently risky, with varying degrees of risk affecting both parties. Risk is a commercial category and is subject to pricing |
| Banking services as a package of services | The customer is usually not interested in individual services but in a package of services. He is often not aware of their purchase |

Source: (Flejterski & Świecka, 2004 as cited in Marcinkowska, 2013).

Overall, banking products and services are characterized by a wide range of attributes, many of which are specific to the banking sector. To remain competitive, banks must continuously adapt their offerings to changing market conditions, customer expectations, and risk requirements. Digital banking has significantly transformed the distribution of banking products and services, improving accessibility, convenience, and efficiency. At the same time, the growing use of artificial intelligence creates new opportunities and challenges related to personalization, automation, data security, risk management, and customer trust. Consequently, banks' competitiveness increasingly depends on their ability to combine high-quality offerings with secure, innovative, and risk-sensitive digital solutions.

## Quality of banking products and services as a determinant of bank competitiveness

The focus on quality in this section is justified by its role as a key analytical category for examining the effects of banking products and services on customer outcomes and bank competitiveness. The reviewed literature generally focuses on the quality of banking services. Given their intangible nature, banking products and services are often examined jointly and assessed using service quality methodologies. Although the term "banking products and services" is common in academic studies, quality assessment is usually limited to banking services.[1] Related studies seek to identify key quality dimensions and develop appropriate measurement tools. Most research in this area focuses on banking service quality models that explain its determinants and support bank managers in improving existing services and designing new ones.The academic literature on bank service quality is extensive with remarkable contributions by Grönroos (1984), Parasuraman et al. (1985), Mersha and Adlakha (1992), Ennew et al. (1993), Avkiran (1994), Blanchard and Galloway (1994), Joseph et al. (1999), Bahia and Nantel (2000), Jun and Cai (2001), Sureshchandar (2001), Aldlaigan and Buttle (2002), Al-Hawari et al. (2005), Karatepe et al. (2005), Ehigie (2006), Ho and Lin (2010), Kumar et al. (2010), Kumbhar (2012), Sharma and Halvadi (2015), Jun and Palacios (2016), Ali and Naeem (2019), Harahap (2020), Müller et al. (2024), and Pokhrel et al. (2026).

Extensive literature offers numerous definitions of banking service quality that align with general service quality constructs. Table 3 presents selected conceptualisations grouped by their dominant theoretical orientation.

**Table 3.** Selected definitions and conceptualisation of the quality of banking services

| Authors | Definition/conceptualisation of service quality |
|---|---|
| | *Subjective/perceptual definitions* |
| (Bain, 1982: after Grasing & Hessick, 1988) | Subjective rather than objective assessment, based mainly on personal preferences and feelings |
| (Chiao et al., 2008; Padhy & Swar, 2009) | Customer's evaluation of the service provided by the organisation |
| | Excellence/superiority-based definitions |
| (Zeithaml, 1988) | The consumer's evaluation of overall service excellence or superiority |
| (Bitner & Hubbert, 1994) | Overall consumer evaluation of the organization and its services relative to competitors |
| | Expectation–perception/gap-based definitions |
| (Grönroos, 1984) | The result of an evaluation process in which customers compare their expectations with the service they received |
| (Parasuraman et al., 1985) | An elusive and vague construct. The result of comparing the expected service with the consumer's perceived service |
| (Zeithaml et al., 1990) | The degree and direction of discrepancy between customers' expectations or desires and their perceptions |
| (Bojanic, 1991) | The outcome of comparing expected and perceived services |
| (Mangold & Babakus, 1991) | The result of a process in which consumers' expectations of a service are compared with the actual delivered service |
| (Bahia & Nantel, 2000) | Consumers' judgment results from comparing their expectations with the service actually perceived |
| (Gefen, 2002: after Ho & Lin, 2010) | The subjective comparison that customers make between the quality of service they expect to receive and the quality of service they receive |
| (Chau & Ngai, 2010; Santhiyavali & Sandhya, 2011) | The gap/difference between customers' expectations and perception of services |

[1] The explanation for this issue (although not explicitly stated in scientific publications) seems to be treating banking products and banking services by most researchers as identical concepts. It is worth emphasising that some researchers do not accept such unity.

| Authors | Definition/conceptualisation of service quality |
|---|---|
| | *Attitude-based definitions* |
| (Cronin & Taylor, 1992) | Perceived service quality is the consumer's attitude |
| | *Multi-dimensional/attribute-based definitions* |
| (Schembri & Sandberg, 2002) | A multi-dimensional consumer attitude, where each dimension encompasses several attributes of the service |
| (Imam & Khan, 2025) | A multi-dimensional concept shaping customer perceptions, satisfaction, reputation, and success, driven by both tangible and intangible elements |
| | Performance/standard-based definitions |
| (Suuroja, 2003) | The result of comparing the performance of a service against a standard |
| | Needs/satisfaction/relationship-oriented definitions |
| (Ennew et al., 2017) | Customers' subjective perception of how satisfactory a service meets their needs and expectations |
| (Tedja et al., 2024) | Service quality is analysed together with perceived value as an antecedent of satisfaction and intention to continue the relationship |
| | *Digital/e-service quality definitions* |
| (Al Balushi, 2021) | E-service quality refers to an ICT service's capacity to meet user expectations and maintain trust. It is assessed through personalisation, usability, performance, web design, security, user involvement, satisfaction, and loyalty |
| (Ighomereho et al., 2022) | Service quality is a subjective comparison of how well a service meets customer expectations and needs. In e-channels, it is measured through website appearance, ease of use, reliability, security, personalisation, fulfilment, and responsiveness |
| (Ingaldi, 2022) | E-service quality in e-commerce should be assessed using hierarchical service-quality models and attributes that reflect the online shopping experience, because online shopping differs from traditional purchasing |
| (Kaur et al., 2023) | E-service quality is conceptualised as a measurable multidimensional construct. Their validated scale includes information quality and usability, reliability, security and privacy, efficiency, system availability and assurance |
| (Mamakou et al., 2024) | E-service quality is treated as a key component of electronic commerce that interacts with user experience and overall customer satisfaction; the study applies E-S-QUAL and UX metrics to evaluate electronic service quality |
| (Ashiq & Hussain, 2024) | E-service quality is examined as a factor influencing e-trust, e-satisfaction and e-loyalty in online shopping environments |
| | *Sector-specific definitions: e-banking* |
| (Kim & Yang, 2025) | Digital quality is conceptualised through system, information, and service qualities, which indirectly influence brand loyalty through customer satisfaction in digital banking |
| (Islam et al., 2023) | Online banking e-service quality is shaped by perceived security risk, ease of use, website quality, and responsiveness, which together drive customer satisfaction |
| (Ayinaddis et al., 2023) | Electronic banking service quality is a multidimensional construct comprising responsiveness, reliability, security and privacy, speed, convenience, system availability, ease of use, and service charges |
| (Gautam & Sah, 2023) | Online banking service quality is an E-S-QUAL-based construct defined by six dimensions: e-customer service, organisational site, website efficiency, user-friendliness, security, and privacy |

Source: Authors' own study based on the literature review.

Early paradigms primarily define service quality as a subjective customer judgement or a gap between expectations and perceptions. Subsequent approaches conceptualise it as a multidimensional construct comprising distinct attributes and dimensions. More recently, studies increasingly focus on e-service quality, evaluating digital interfaces, system availability, privacy, security, usability, fulfilment, responsiveness, user experience, and loyalty outcomes. Examining these definitions reveals two distinct approaches. The first conceptualises service quality as a gap between customer expectations and actual performance ("expectations minus performance"). Here, expectations align with customer needs; when expectations surpass actual performance, perceived quality decreases, directly resulting in customer dissatisfaction. The second approach defines service quality as the customer's overall attitude. While expectations rely on past experiences, this overall attitude is shaped cumulatively by immediate experiences, impressions, feelings, and observations.

Service quality can be defined from three main perspectives: philosophical, technical, and user-based. The philosophical approach views quality as excellence, the technical approach assesses it against established standards, and the user-based approach treats it as a subjective evaluation shaped by customer perception. Thus, perceived service quality may differ from quality assessed according to normative or technical criteria (Radomir et al., 2012). According to the cited authors, service quality is a subjective rather than objective assessment, shaped by customers' requirements, preferences, impressions, and feelings. It is widely recognized as a key determinant of building and maintaining positive customer relationships.

A complementary approach focuses on the internal structure of service quality. The literature distinguishes three components: technical quality, functional quality, and image. Technical quality refers to what the customer receives from the service provider, whereas functional quality concerns how the service is delivered, including the psychological interaction between buyer and seller. The provider's image results from both dimensions and from additional factors such as tradition, recommendations, prices, advertising, and public relations (Grönroos, 2001; Sangeetha & Mahalingam, 2011; Tatikonda & Zeithaml, 2002).

One of the major challenges in service quality research is the operationalization and measurement of this complex construct. The literature identifies two main approaches: the first compares customers' expected service with the service received, while the second focuses solely on customers' perceptions of actual service performance. The first approach is represented by Parasuraman et al. (1985), who developed the SERVQUAL instrument based on the gap between customer expectations and perceived performance. The second, performance-only approach was developed by Cronin and Taylor (1992, 1994), who criticized the gap-based method as an inappropriate basis for measuring service quality. They argued that service quality should be assessed through consumers' perceptions of service attributes and provider performance, which led to the development of the SERVPERF instrument. In contrast, the SERVQUAL paradigm assumes that service quality is sufficient when perceived performance equals or exceeds expectations (Parasuraman et. al., 1985). However, this approach raises concerns when customers evaluate a service for the first time or when the service is complex and opaque. Its limitation lies in the dependence on customer expectations: the same service may be perceived as high quality by customers with low expectations and as low quality by those with high expectations. Another important issue in service quality research concerns whether quality should be assessed through its individual components or as an overall, holistic judgement. A review of the literature indicates that scholars often measure overall service quality without explicitly accounting for its constituent attributes (Radomir et al., 2012).

Service quality has been widely studied in marketing and banking, with numerous models developed to identify the key factors shaping customer perceptions and satisfaction. Early frameworks focused on service outcomes and delivery processes, while later models introduced multi-dimensional constructs such as reliability, responsiveness, and empathy. Over time, these approaches have expanded to include sector-specific and technology-driven aspects, particularly in banking, where digitalisation, security, and personalisation play an increasingly important role. Table 4 presents a chronological overview of key service quality models, outlining their principal determinants. It illustrates the progression from traditional service encounter perspectives to modern, technology-enabled frameworks that capture both human and digital aspects of service delivery.

**Table 4.** Models and key determinants of banking service quality

| Models | Key service quality determinants |
|---|---|
| Technical and functional quality model (Grönroos, 1984, 1990) | Technical quality (service outcome for consumer), functional quality (service delivery process), and the service vendor's (corporate) image. These elements constitute the customer's overall assessment of the service experience |
| GAP model/functional quality model (Parasuraman et al., 1985) | Five components: tangibles (physical facilities, equipment); reliability (ability to perform the promised service carefully, accurately); responsiveness (willingness to help customers and deliver the service promptly); assurance (staff competence and politeness, capability to inspire confidence); empathy (personalised assistance to customers) |
| Mersha and Adlakha model (1992) | Service knowledge, accuracy, reliability/consistency, reasonable pricing, willingness to correct errors, and timeliness and promptness of service |
| Ennew et al. model (1993) | Staff knowledge of business and market conditions, helpful advice, service range, competitive pricing (interest rates, fees, commissions), rapid decision-making, personalised service, and direct access to credit decision-makers |
| Blanchard and Galloway model (1994) | Staff behaviour (responsiveness and service culture); trustworthiness (customer confidence in staff); communication (clear financial advice and timely notifications); accessibility of teller/cashier services (absence of queues) |
| Blanchard and Galloway service-features perspective (1994) | Three dimensions: service process versus outcome, subjective versus objective service features, and soft versus hard service features |
| Johnston model (1997) | Accessibility to service facilities/personnel; visual appeal (facilities image, staff appearance); helpfulness (willingness to assist); care (compassion and patience to customers); service venue (cleanliness, orderliness); staff interpersonal skills (clear, effective, and transparent communication); competence (professional knowledge), courtesy (kindness, respecting customer); flexibility (tailoring services and products to evolving customer needs); friendliness (staff warmth and approachability); functionality (facility usability and usefulness); fairness (staff integrity, trustworthiness); responsiveness (service speed and timeliness); customer physical and property safety during service delivery |

| Models | Key service quality determinants |
|---|---|
| Joseph et al. model (1999) | Convenience and accuracy; complaint handling and feedback, queue management; service availability and customisation |
| Bahia and Nantel/BSQ model (2000) | Effectiveness and assurance (competence and courtesy, interpersonal skills, safety); service access (customer accessibility, responsiveness); price (financial fairness); tangibles (visual appeal, service venue); service portfolio (flexibility, product breadth); reliability (care and helpfulness, service accuracy) |
| Sureshchander et al. model (2001) | Service package (core or ancillary); human side of service provision (reliability, responsiveness, confidence, empathy); service process (procedures, systems, technology); staff appearance; the equipment; the physical surroundings of the service provision; social responsibility (ethical behaviour of the service provider) |
| Aldlaigan and Buttle model (2002) | Service system quality (functional and technical attributes); behavioural service performance (staff courtesy, friendliness, helpfulness); service accuracy (staff service errors rate); reliability/effectiveness of equipment and systems |
| Al-Hawari et al. model (2005) | Technology-enabled banking quality, especially ATM, internet banking, telephone banking, and related pricing perceptions |
| Karatepe et al. model (2005) | Service environment; service provider-customer interaction; staff empathy and reliability |
| Ehigie model (2006) | Staff skills, knowledge, experience; responsiveness; service speed and efficiency; customer safety; transaction confidentiality; staff positive attitude, credibility/reputation, attention; information and customer support; extended access (Saturday banking); customer insurance cover |
| Pal and Choudhury model (2009) | Customer-orientedness (e.g., error-free execution of transactions); staff competence; tangibles (branch and staff presentation); service convenience (e.g., suitable branch operating hours, physical proximity of locations, and ease of using banking systems) |
| Kumar et al. model (2010) | Tangibles (e.g., modernity of equipment); reliability; competence; convenience |
| Hussien and Aziz model (2013) | Usability, reliability, responsiveness, privacy, efficiency, assurance, and empathy |
| Mittal et al. model (2015) | Tangibles (service physical environment); performance, reliability (delivery of promised service); core service features; employee/system competence |
| Shayestehfar and Yazdani model (2019) | Tangibles, service accessibility, effectiveness, assurance/certainty, reliability |
| BANK SERVQUAL (Gupta & Kumar, 2020) | A banking-specific service-quality framework identifying six dimensions derived from 40 variables used to assess customer attitudes toward banking service quality and satisfaction |
| Modified e-SERVQUAL for internet banking (Raza et al., 2020) | User-friendliness, website efficiency, personal needs, and site organisation |
| DBS quality framework (Vivek et al., 2025) | Customisation, security, operational effectiveness, customer orientation, real-time feedback, and continuous service adaptation; AI, blockchain, and IoT as emerging enablers of perceived quality |
| DB expectations-risk-satisfaction model (Barjaktarović Rakočević et al., 2025) | Digital banking satisfaction depends on customer expectations, perceived service characteristics, and bank-mitigated risks. Perceived risks associated with the security of personal and financial data, insufficient knowledge of digital banking services, and fraud risk significantly influence customer satisfaction levels |
| DBS quality and retention model (Lama & Kayestha, 2025) | Efficiency, ease of use, and security are the strongest drivers of customer satisfaction in digital banking; satisfaction partially mediates the effect of service quality on customer retention |
| Digital Transformation Service Quality Model (Kien, 2025) | Service quality improvement in banking is linked to digital transformation, including cloud migration, open banking integration, organisational agility, and customer-centric operating models |

DB – digital banking; DBS – digital banking service

Source: Authors' own study based on the literature review.

The dominant themes in recent research on mobile banking quality are trust, security, service quality, usability, and customer satisfaction. Future work is expected to focus more strongly on AI, financial inclusion, and regulatory change (Sahar et al., 2025).

A literature review indicates that, as with traditional service quality, there is a lack of consensus on conceptualising the term "e-service quality." Butt and Aftab (2013) conceptualize electronic service (e-service) quality as a consumer's comprehensive evaluation of service delivery within a virtual marketplace. Consistently, a foundational body of literature defines the construct as the user's aggregate appraisal and cognitive judgment of services mediated via internet-based platforms (Amin, 2016; Bauer et al., 2006; Liao et al., 2011; Parasuraman et al., 2005; Santos, 2003; Zeithaml et al., 2002). Synthesizing these perspectives, e-service quality is broadly operationalized as the degree to which a website or digital ecosystem facilitates the efficient and effective procurement and delivery of products and services.

Moreover, no consensus has yet been reached regarding the dimensions and determinants of e-service quality, including e-banking service quality. The diversity of these approaches is presented in Table 5. Previous studiesidentify several key dimensions of e-banking service quality, including website design and content, ease of use, reliability, efficiency, transaction security and privacy, responsiveness, and service diversity. In electronically delivered banking services, direct interaction between bank employees and customers is largely absent, thereby diminishing the relative importance of the human dimension of service delivery. Instead, banking products and services are provided through electronic channels, such as online, mobile, terminal, and telephone banking systems.

A critical review of the empirical e-banking service quality models presented in Table 5 raises the question of their relative suitability for evaluating digital banking products and services. A comprehensive analysis suggests that the framework developed by Jun and Cai (2001) is particularly appropriate, as it conceptualizes service quality through three overarching dimensions: banking product quality, online customer service, and Internet system performance. As delineated in Table 6, this framework operationalizes the construct through seventeen distinct dimensions stratified across these three overarching domains. This comprehensive and coherent model synthesizes core banking products with complementary customer service components. Furthermore, it explicitly accounts for the technical quality of the electronic transactional systems that facilitate customer access to digital banking solutions.

**Table 5.** Models and determinants of e-banking services quality

| Models/Authors | Dimensions and determinants |
|---|---|
| E-S-QUAL/E-RecS-QUAL (Parasuraman et al., 1991) | Efficiency of website facilities, fulfilment, system availability, privacy, responsiveness, compensation, contact |
| (Joseph, 1999) | Convenience, accuracy, feedback and complaint management, performance, availability and quality of online systems |
| (Jun & Cai, 2001) | Quality of online customer service, online transaction system quality and banking products quality |

| Models/Authors | Dimensions and determinants |
|---|---|
| (Zeithaml et al., 2002) | Website accessibility and information content, ease of usingthe transaction service, privacy and security, and interactivity |
| (Han & Baek, 2004) | Website design and content, reliability (quick resolution of customer problems), responsiveness (quick resolution of customer problems), empathy (staff understanding of customer needs and offering assistance) |
| (Jayawardhena (2004) | Access speed to the bank's website, ease of navigation, efficiency of the search function, security and privacy of customer information |
| (White & Nteli, 2004) | Convenience, speed, timeliness, variety and security of services |
| (Bauer et al., 2005) | Security and trust, quality of core services, transaction support, responsiveness |
| (Pikkarainen et al., 2006) | Content, ease of use, accuracy |
| (Sohn & Tadisina, 2008) | Trust, personalised communication, ease of use, website content and functionality, reliability and speed of delivery |
| (Rod et al., 2009) | Online customer service quality (reliability, responsiveness, empathy), quality of transaction system (ease of use, accuracy, security/privacy, timeliness, content, aesthetics), products/services quality (scope, features, fees, variety) |
| (Ho & Lin, 2010) | Customer service excellence (responsiveness, email efficiency, complaint resolution, reliability), website design (layout and content, ease of use), online environment security, preferential client treatment (reduced fees), information accuracy & currency (real-time updates on banking products/services |
| (Hussien & El Aziz, 2013) | Usability, reliability, responsiveness, privacy, incentives, fulfilment, efficiency, assurance and empathy |
| (Arvidsson, 2014) | Ease of use, trust and perceived risk |
| (Jun & Palacios, 2016) | Quality of mobile banking applications (content, accuracy, ease of use, speed, aesthetics, security, variety of applications and features, convenience), customer service quality (reliability, responsiveness, competence, courtesy, accessibility, communication, customer understanding and continuous service improvement) |
| (Agrawal et al., 2018) | Security and trust, efficiency, reliability, fulfilment, ease of use, website aesthetic, responsiveness, contact, personalisation |
| (Chhabra, 2018) | Meeting customer demands (transaction security, tailored product/service delivery), website architecture & usability (intuitive, comprehensible layout), platform performance & efficiency (high-speed transactional execution) |
| (De Jager et al., 2020) | System performance, privacy, assurance, trust, website aesthetics, responsiveness, contact |
| (Windasari et al., 2022) | Eight variables when using digital-only banking: economic value, ease of use, social influence, firm reputation, promotion, features, curiosity, and reward |
| (PYMNTS & Amount, 2022a, 2022b) | The strategic bundling of banking products (such as combining credit cards, accounts, and payment services) |
| MPQe-BS (Malc et al., 2023) | Efficiency (easy to use, efficient and well-organized services), privacy and security (data protection, transaction security), design/aesthetics/guide, system availability, fulfilment of consumer demands and expectations, contact |
| DBSQual (Mir et al., 2023) | Web architecture, user-friendliness, website efficiency, responsiveness, reliability, security, and personalisation |
| (Chiruvelli, 2026) | Automated logic & AI capabilities (using machine learning for complex, personalized customer bundling); product configuration; customer segmentation (tailoring services dynamically to different customer groups); multi-channel deployment (supporting seamless, simultaneous customer engagement across distributed banking platforms); processing efficiency (maintaining high system speed and performance using advanced computational methods) |

Source: Authors' own study based on the literature review.

**Table 6.** Areas and dimensions of e-banking product and service quality studies

| Quality of banking products (1st area) | |
|---|---|
| 1. Product variety/diversity of product properties<br>• product range<br>• product features | |
| **Quality of customer service (2nd area)** | |
| 1. Reliability<br>• correct service<br>• keep service promise<br>• accurate records<br>• keep promise as advertised | 6. Access<br>• availability of help<br>• ATM access<br>• phone access<br>• e-mail access<br>• account access when abroad |
| 2. Responsiveness<br>• prompt service<br>• quickly solve problems<br>• convenient service | 7. Communication<br>• clear answer<br>• providing customers with important information<br>• availability of status of transactions |
| 3. Competence<br>• ability to solve problems<br>• knowledge to answer questions | 8. Understanding the customer<br>• personal attention |
| 4. Courtesy<br>• friendly address complaints<br>• consistently courteous | 9. Collaboration<br>• external collaboration<br>• internal collaboration |
| 5. Credibility<br>• confidence in the bank's services<br>• good reputation of the bank | 10. Continuous improvement<br>• continuous improvement of online systems<br>• continuous improvement of banking products<br>• continuous improvement of customer services |
| **Quality of online systems (3rd area)** | |
| 1. Contents<br>• information about products and services online<br>• other information that customers need | 4. Timelines<br>• up-to-date information |
| 2. Accuracy<br>• accurate online transactions<br>• errors in the interface<br>• errors in contents | 5. Aesthetics<br>• attractiveness of the Website |
| 3. Ease of use<br>• compatibility<br>• user-friendly<br>• easy login<br>• speed of responses<br>• accessibility of the Website<br>• functions needed by customers<br>• easy navigation | 6. Security<br>• privacy<br>• information transaction safety |

Jun and Cai (2001) distinguish banking products from banking services, defining the latter as customer service.
Source: Adapted from (Jun & Cai, 2001, p. 282).

The literature review allows several issues related to the quality of banking products and services to be summarized. First, the reviewed studies confirm the multi-dimensional nature of quality and employ diverse quality attributes, measures, and assessment methods. Second, the use of different characteristics across studies limits the comparability of their findings. Third, the selection of appropriate quality attributes and the determination of their relative importance continue to pose significant methodological challenges. Moreover, customers' perceptions of banking service quality may vary across cultural contexts, as the reviewed studies were conducted in different countries. Despite these challenges, the literature provides valuable insights for bank managers seeking to improve the quality of banking products and services and, consequently, strengthen bank competitiveness.

## Quality of banking products and services and customer satisfaction, trust, and loyalty

Customers play a central role in the banking industry as both a source of revenue and a key focus of business strategy. Given their influence on banks' performance and social responsibility, customer satisfaction, trust, and loyalty are essential to sustainable banking relationships. This section examines how the perceived quality of banking products and services shapes these customer outcomes and, in turn, contributes to bank competitiveness.

Customer satisfaction is conceptualized in diverse ways in the literature. A widely cited definition is offered by Oliver (1980, 1997, p. 13), who describes satisfaction as "the consumer's fulfilment response," understood as a judgement that a product or service, or one of its features, provides a pleasurable level of consumption-related fulfilment, including levels of under- or over-fulfilment.Unlike Oliver's experience-based conceptualization, other authors define customer satisfaction as the result of comparing expected and perceived performance (Fullerton & Taylor, 2015; Rust & Zahorik, 1993; Sharifi & Esfidani, 2014). In banking, this comparison concerns the extent to which perceived products and services meet prior customer expectations. An overview of the definitions of customer satisfaction and the quality of banking products and services reveals considerable conceptual overlap. The distinction between these constructs is commonly attributed to the fact that satisfaction is transaction-specific, whereas perceived product or service quality reflects a relatively stable judgement formed through repeated evaluations of product or service attributes. Thus, perceived quality is understood as an overall evaluation or attitude toward a product or service, while satisfaction refers to a particular consumption or service experience (Parasuraman et al., 1988).

The interrelationship between product and service quality and consumer satisfaction has been the subject of academic interest for decades. Some researchers consider product and service quality as antecedents or determinants of customer satisfaction (Amin & Isa, 2008; Anderson & Sullivan, 1993; Cronin & Taylor, 1992; Gonu et al., 2023; Kashif et al., 2015; Sheng & Liu, 2010; Yap et al., 2012). Others believe that quality perception results from consumer satisfaction (Bitner et al., 1990; Carman, 1990; Gajewska et al., 2020; Parasuraman et al., 1985).

Empirical findings reported in the literature support the view that the quality of banking products and services is a key driver of customer satisfaction or dissatisfaction. The overview of research results presented in Table 7 indicates that information technology plays a particularly important role in shaping customer satisfaction with electronic banking products and services. In particular, the functionality, efficiency, ease of use, and security of e-banking transaction systems, as well as the functionality and speed of website navigation, emerge as especially relevant factors. For instance, Rod et al. (2009) found that online information system quality is a stronger predictor of overall e-banking service quality than online customer service quality or banking product quality. The electronic transaction system is therefore central to customer satisfaction, as it serves as the interface between the customer and the bank and functions as the self-service technology through which banking products and services are delivered. The growing adoption of digital and network technologies enables banks to provide their offerings through electronic channels at lower cost and with improved quality, provided that these technologies are used effectively.

In electronic banking, the customer interface becomes a crucial component of perceived service quality. A key aspect of e-banking systems is therefore the design, structure, and navigation of the website, which facilitate customers' access to information on banking products and services. Accordingly, the website can be regarded as one of the most important dimensions of e-banking system quality and customer satisfaction, as highlighted by several authors (Alarifi & Husain, 2023; Arcand et al., 2017; Rod et al., 2009; Vatanasombut et al., 2008). Moreover, consistent with the literature, customers' digital literacy influences both the use of e-banking systems and satisfaction with e-banking products and services (Anderson & Srinivasan, 2003; Herington & Weaven, 2009; Ho & Lin, 2010; Huterska, 2024; Kim et al., 2026; Lang & Colgate, 2003; Li-hua, 2012; Ribbink et al., 2004; Ullah et al., 2022).

Empirical research indicates a positive association between the quality of e-banking products and services and user satisfaction, as summarized in Table 7. Therefore, improving the quality of banking offerings constitutes an important strategy for enhancing customer satisfaction. Since banking products and services are often similar across institutions, banks' competitiveness is increasingly shaped by those factors that differentiate otherwise comparable offerings, particularly quality and price. These dimensions influence customer satisfaction, trust, and loyalty, and thus play a central role in sustaining competitive advantage. Delivering high-quality bank products and services is vital for enhancing the bank's trustworthiness and fostering customer trust (Jan & Abdullah, 2014; Roy et al., 2015; Yu et al., 2015).

**Table 7.** Quality of e-banking products/services and satisfaction, trust and loyalty of bank customers

| Authors | Study findings/conclusions |
|---|---|
| (Jun & Cai, 2001) | The most frequent sources of customer satisfaction with online banks are banking service dimensions such as responsiveness, ease of use, access and competence |
| (Bauer et al., 2005) | Electronic customer service's benefits include higher customer satisfaction and loyalty, new customers, stronger relationships with them, boosted sales and market share, improved image and increased banks' financial results |
| (Kassim & Abdullah, 2008) | Customer satisfaction with online banking products/services positively impacts their long-term relationship with the bank |

| Authors | Study findings/conclusions |
|---|---|
| (Poon, 2008) | Privacy and security are the primary sources of customer dissatisfaction with banking e-services, while accessibility, convenience, design and content source customer satisfaction |
| (Vatanasombut et al., 2008) | The functionality of bank websites and the user interface design significantly impact customer satisfaction with products/services offered by banks |
| (Herington & Weaven, 2009) | Good e-service performance (represented by personal needs, site organisation and user-friendliness) impacts customer satisfaction positively |
| (Rod et al., 2009) | Customer satisfaction is significantly related to the quality of online customer service, online information systems, banking service products and Internet banking service quality |
| (Hussien & Aziz, 2013) | Increasing the quality of customer service has a positive impact on customer satisfaction and the banks' financial performance |
| (Singh & Kaur, 2013) | Improving the quality of electronic banking services positively affects customer satisfaction |
| (Bressolles et al., 2014) | Interface usability, security and privacy significantly impact customer loyalty in e-banking |
| (Dahlstrom et al., 2014) | The relationship between customer satisfaction and loyalty is stronger when the perceived risk of e-banking services is lower |
| (Rajaobelina et al., 2014) | To increase e-customer satisfaction and loyalty, banks should develop online systems that are secure, responsive and personalised for their users |
| (Kaura et al., 2015) | There is a positive relationship between the quality of online banking services and the satisfaction of e-customers |
| (Amin, 2016) | The relationship between Internet banking service quality, e-customer satisfaction and e-customer loyalty is significant. The higher level of Internet banking service quality significantly impacts e-customer satisfaction, consequently leading to e-customer loyalty and a lower intention to terminate the relationship with the bank |
| (Arcand et al., 2017) | Mobile banking service quality dimensions influence customer trust and commitment/satisfaction. Trust significantly and positively affects commitment/satisfaction and is related to security/privacy and practicality. Commitment/satisfaction is driven by enjoyment and sociality. Marketing strategy to enhance long-term customer relationships should consider the above factors |
| (Ayo, 2018) | The higher levels of customer satisfaction resulting from high-quality banking e-services lead to increased customer loyalty |
| (Moghavvemi et al., 2018) | Staff skills and competence, bank image, core products and internet banking are essential determinants of overall bank service quality significantly affecting customer satisfaction. To strengthen competitiveness, local and foreign banks must focus on the quality of the online system (ease of use, accuracy, security) |
| (Chhabra, 2018) | Internet banking service quality (including the bank's website efficiency) affects online customer trust and satisfaction and contributes to the development of customer loyalty. Customer e-satisfaction drives e-loyalty and e-trust |
| (Yaseen & Qirem, 2018) | The rapid adoption of digital and network technologies enabled banks to deliver e-services at lower prices and higher quality, provided that these technologies were used optimally |
| (De Jager et al., 2020) | High-quality e-banking service (website accessibility, ease of navigation, transaction processing time and efficiency) is critical for banks since it enhances customer satisfaction and loyalty |
| (Albarq, 2023) | Customer knowledge management (CKM) and customer satisfaction serve as strong direct antecedents of customer trust. Customer trust exerts a significant, positive direct effect on customer loyalty and fully mediates the path between customer satisfaction and loyalty |
| (Kim et al., 2024) | Systematic and Meta-Analysis (PRISMA) reveal that satisfaction, trust, service quality, image, commitment, reliability, perceived value, ethical, perceived usefulness and experience often and significantly influence customer loyalty |

| Authors | Study findings/conclusions |
|---|---|
| (ITA Group, 2025) | Emotional connection enhances satisfaction and loyalty in banking |
| (Moraes & Schaefer, 2026) | Customer satisfaction in digital banking is structurally linked to service quality, mobile banking capabilities, insurance integration, and digital channels' performance. Modern banking success relies on the strategic integration of advanced digital technologies alongside traditional channels, rather than relying on digital platforms in isolation |
| (Kim et al., 2026) | Higher technological competency strengthens ease of use, usefulness, and trust in digital banking, where ease of use predicts usefulness and satisfaction, and usefulness determines perceived value and trust. Ultimately, satisfaction and perceived value predict customer trust, confirming a capability-driven pathway to trust formation |
| (Fernandez et al., 2026) | Research within the U.S. retail banking sector confirms that emotional responses, specifically pleasure and dominance, act as significant mediators between customer experience and satisfaction. The study highlights that pleasurable and empowering interactions drive satisfaction and loyalty |

Source: Authors' own study based on the literature review.

In product and service contexts, trust is commonly understood as customers' willingness to rely on an exchange partner, in this case, the provider of a product or service (Roy et al., 2015). Mayer et al. (1995) distinguish between trust and trustworthiness, defining trust as a trustworthiness outcome. Customers' trust in a bank refers to the belief that the bank will act in line with their expectations. It is inherently forward-looking and risk-related, as many banking products and services are difficult to assess before, and sometimes even after, purchase or use. A bank's credibility is the foundation of customer trust. It encompasses the bank's commitment to conduct its business in alignment with customer expectations (Pizło & Parzonko, 2022; Zielinski, 2012). Trust is essential for fostering customer loyalty and strengthening bank-customer relationships. Building and maintaining trust requires banks to ensure secure financial transactions and safeguard the confidentiality of customer data (Zhao et al., 2010; Zhou, 2011). The usability of the interface, along with the security and privacy measures, is a key factor influencing customer loyalty to e-banking. Recent studies confirm that security, privacy, perceived risk, and the reliability of digital channels are among the key determinants of trust in e-banking and FinTech services, particularly as customer interactions with banks increasingly occur through online and mobile platforms (Che et al., 2023; Jafri et al., 2023).

The concept of e-loyalty extends the traditional notion of customer loyalty to the context of online consumer behaviour. Reichheld and Schefter (2000), who introduced the term e-loyalty, define it as gaining the trust of suitable customers, namely those for whom an online seller can consistently deliver a superior experience. Such customers are more likely to conduct all their transactions with the seller, make repeat purchases, increase their spending, and recommend the seller to others. Importantly, loyalty is not driven by technology itself, but by the ability to provide a consistently high-quality customer experience. Other definitions of e-loyalty likewise emphasize these core characteristics.

Online banking customer loyalty refers to the tendency to return to a particular website and purchase banking products and services (Amin et al., 2013; Ramseook-Munhurrun & Naidoo, 2011). It is also reflected in customers' willingness to recommend e-banking services to others, including family members, neighbours, and friends (Chhabra, 2018; Nguyen, 2020). Loyalty can be viewed as an emotional and psychological disposition that shapes customers' intentions to maintain a long-term relationship with a company and continue using its products and services (Baumann et al., 2012; Wong & Zhou, 2006). Consistent with the literature, customers satisfied with e-banking services are more likely to develop enduring and mutually beneficial relationships with banks, thereby exhibiting higher levels of loyalty (Al-alak, 2014; Levy, 2014; Reichheld & Schefter, 2000). Dissatisfied customers may engage in negative online word-of-mouth and disseminate harmful information about the bank as a form of retaliation for poor service experiences, which can ultimately lead them to switch to alternative banks (Amin et al., 2011; Azemi et al., 2020; Laksamana et al., 2013).

Ultimately, the findings underscore that banking products and services play a pivotal role in shaping customer loyalty by influencing key antecedents, including satisfaction, trust, perceived value, and the overall customer experience. Empirical evidence consistently shows that satisfaction and trust are among the most significant drivers of loyalty in the banking sector, operating both as direct and mediating mechanisms in long-term relationship building (Albarq, 2023; Kim et al., 2024; Leninkumar, 2017; Sitorus & Yustisia, 2018; Van Deventer & Redda, 2023). Different categories of financial products contribute to loyalty in distinct ways. Digital banking products, characterized by convenience, personalization, and technological innovation, enhance customer retention by improving the user experience and aligning with evolving expectations (Ho et al., 2025). At the same time, high-involvement financial products (e.g., mortgages or investment services) often require substantial emotional and cognitive engagement, making emotional connection and perceived relationship quality critical to strengthening loyalty outcomes (Fernandez et al., 2026; ITA Group, 2025). Moreover, the strategic bundling of banking products has been shown to increase convenience and perceived value, thereby reinforcing customer attachment and retention (PYMNTS, 2022a, 2022b). When banking products effectively meet customer needs, whether through functional performance, ethical alignment, pricing competitiveness, or value creation, they reduce customers' propensity to switch providers and foster durable loyalty, particularly in highly competitive and digitally transforming markets (Batmunkh, 2025; Kim et al., 2024).

Drawing on diverse strands of the literature, this study develops an original integrated model of customer satisfaction, trust, and loyalty in relation to electronic banking service providers (Figure 1). The proposed model initially distinguishes three key dimensions: product quality and pricing, service quality and pricing, and the quality of electronic transaction systems. Each dimension is subsequently operationalized by assigning relevant variables or determinants. The first dimension comprises four variables, the second eleven, and the third eight. Most of these variables pertain to the quality of e-banking products, services, and electronic systems, whereas two variables relate specifically to product prices and service fees and commissions. Drawing on the literature, the model assumes that the overall quality of e-banking offerings directly influences customer satisfaction and trust, which subsequently foster customer loyalty. The model considers product and service pricing, which affect customer market behaviour and satisfaction, while simultaneously serving as important competitive instruments for banks within the financial market (Broby, 2021; Dhasan & Aryupong, 2019; Sharma & Sakshi, 2017; Shayestehfar & Yazdani, 2019; Zeithaml, 1988; Zeithaml et al., 2002, 2017).

The study suggests that, to improve customer satisfaction and loyalty, banks should focus on developing reliable, secure, responsive, and customer-oriented online systems. Furthermore, enhancing customer loyalty in e-banking requires implementing effective marketing strategies that highlight the benefits of e-banking products and services. In formulating competitive strategies, banks should prioritize the continuous modernization of existing technologies and the adoption of innovative solutions across key e-banking channels. Beyond technological advancement, banks should also focus on enhancing system security, reliability, and user experience to build customer trust and satisfaction. Importantly, integrating advanced analytics and artificial intelligence can enable greater service personalization, allowing banks to better respond to individual customer needs and preferences. Investment in user-friendly interfaces and seamless omnichannel integration is equally essential for ensuring a consistent and convenient customer journey across platforms.

In addition, banks should strengthen customer engagement through targeted digital marketing strategies and educational initiatives aimed at increasing awareness of and confidence in e-banking services. Continuous monitoring of customer feedback and service performance is essential for identifying areas requiring improvement and for maintaining long-term customer loyalty.

It is worth emphasizing that the effectiveness of banks' competitive strategies does not depend solely on their internal actions and technological capabilities. External factors, including the macroeconomic environment (Monferrer-Tirado et al., 2016), regulatory frameworks, technological advancements, customer socio-demographic characteristics, such as gender, age, education, income, occupation, residence place or IT skills (Yaya et al., 2016) and trust in online financial systems, also play a crucial role in the adoption and success of e-banking services. Therefore, while financial institutions should focus on modernising infrastructure and implementing innovative solutions across mobile, internet, terminal, telephone and emerging digital banking channels, they must also actively respond to broader market conditions. This includes cooperating with regulators to ensure compliance with regulatory and security requirements, as well as engaging in customer education initiatives to enhance users' confidence and ability to use digital banking services effectively and securely.

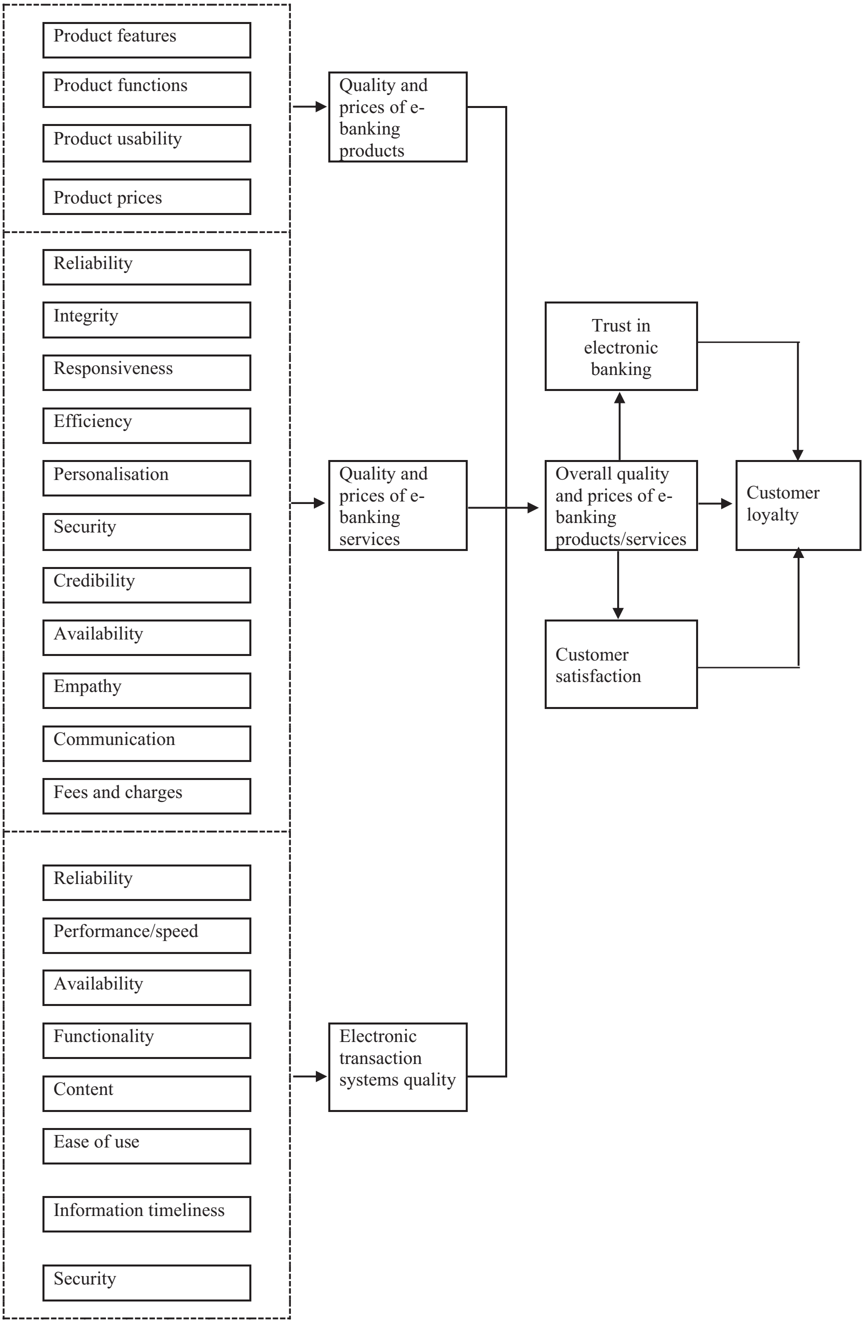


**Figure 1.** A theoretical model linking the use of e-banking products with customer satisfaction, trust, and loyalty.

Source: Authors' own study based on the literature review.

## Conclusions

The assessment of bank competitiveness, based on products and services, remains inherently complex due to the multidimensional nature of their characteristics. One effective approach is the use of a composite index that aggregates relevant variables into a single measure, enabling comparisons and rankings across banks. However, evaluating the quality of banking products and services remains challenging due to the subjective nature of customer perceptions and expectations. Overall, these challenges highlight the need for comprehensive and flexible analytical approaches.

A comprehensive assessment of bank competitiveness should consider the full spectrum of products and services offered, while also evaluating competitiveness from the perspective of customer outcomes. This requires focusing on customer satisfaction, expectations and the perceived importance of banking offerings. Furthermore, three key dimensions should be taken into account: banking products, customer service, and the transaction systems through which they are delivered. The key conclusion drawn from the literature is that the range, quality, and pricing of banking products and services are fundamental determinants of customer satisfaction, trust, and loyalty, which in turn shape banks' competitiveness, their financial performance and market position.

The competitive process in banking is complex and requires the effective integration of all organisational resources, including human, tangible, and intangible assets, as well as operational processes. Banks must align their offerings with customer needs while promoting customer awareness and engagement. Cooperation between banks and public institutions in providing financial, digital, cybersecurity and consumer education can enhance customers' understanding of banking products and promote the secure use of digital banking systems.

Digitalisation, increasingly driven by artificial intelligence (AI), has become a key source of competitive advantage in modern banking. Rapid technological change necessitates continuous innovation in products and services, as well as ongoing monitoring of the competitive environment. The growing role of FinTech and AI-based solutions further intensifies this dynamic, enabling advanced data analytics, personalised offerings, and improved risk management. Consequently, investment in research and development, particularly in AI and digital technologies, is essential for maintaining competitiveness and delivering high-quality, innovative banking solutions.

With a strong emphasis on innovation and technology, the banking sector requires employees who are capable of adapting to ongoing technological change. Human capital remains a critical determinant of banks' competitive potential, encompassing both tangible and intangible resources, as well as the processes that transform these resources into banking outputs. This highlights the need for continuous development of employees' knowledge, skills, and competencies through targeted training and appropriate managerial incentives.

Future research could explore the growing role of artificial intelligence in shaping bank competitiveness, particularly its impact on customer satisfaction, trust, and loyalty. This includes examining how AI-driven solutions, such as personalised services, chatbots, and advanced analytics, affect customer experience and decision-making. Additionally, further studies may investigate the implications of AI adoption for risk perception, data privacy, and ethical concerns, as well as differences in customer acceptance of AI across segments and markets.

This study is subject to several limitations inherent to its theoretical and literature-based nature. First, as the paper is grounded in a review of existing literature rather than an empirical investigation, the proposed relationships among customer satisfaction, trust, and loyalty are conceptual and not empirically validated. Consequently, the model requires further testing and verification in different empirical contexts. Second, the study relies on previously published research, which may reflect specific perspectives, methodologies, and contexts that do not fully capture the diversity of the banking environment. As a result, certain relevant variables or emerging trends may not be fully represented in the proposed model.

## References

Adamkiewicz-Drwiłło, H.G. (2002). *Uwarunkowania konkurencyjności przedsiębiorstw*. Wyd. PWN.

Agrawal, V., Tripathi, V., & Agrawal, A.M. (2018). Exploring key dimensions of e-service quality: A case of Indian banking industry. *International Journal of Services and Operations Management*, *29*(2), 252–272. **https://doi.org/10.1504/IJSOM.2018.089256**

Al-alak, B.A. (2014). Impact of marketing activities on relationship quality in the Malaysian banking sector. *Journal of Retailing and Consumer Services*, *21*(3), 347–356. **https://doi.org/10.1016/j.jretconser.2013.07.001**

Alarifi, A.A., & Husain, K.S. (2023). The influence of Internet banking services quality on e-customers' satisfaction of Saudi banks: Comparison study before and during COVID-19. *International Journal of Quality & Reliability Management*, *40*(2), 496–516. **https://doi.org/10.1108/IJQRM-06-2021-0168**

Al Balushi, T.H. (2021). E-services quality: A perspective of service providers and service users. In K. Kang (Ed.), *Digital Service Platforms* (pp. 1–15). IntechOpen. **https://doi.org/10.5772/intechopen.97077**

Albarq, A.N. (2023). The impact of CKM and customer satisfaction on customer loyalty in Saudi banking sector: The mediating role of customer trust. *Administrative Sciences*, *13*(3), article 90. **https://doi.org/10.3390/admsci13030090**

Aldlaigan, A.H., & Buttle, F.A. (2002). SYSTRA-SQ: A new measure of bank service quality. *International Journal of Service Industry Management*, *13*(4), 362–381. **https://doi.org/10.1108/09564230210445041**

Ali, S.F., & Naeem, M. (2019). Does service quality increase the level of banks performance: Comparative analysis between conventional and Islamic banks. *Journal of Management Development*, *38*(6), 442–454. **https://doi.org/10.1108/JMD-05-2018-0149**

Amin, M. (2016). Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. *International Journal of Bank Marketing*, *34*(3), 280–306. **https://doi.org/10.1108/IJBM-10-2014-0139**

Amin, M., & Isa, Z. (2008). An examination of the relationship between service quality perception and customer satisfaction: A SEM approach towards Malaysian Islamic banking. *International Journal of Islamic and Middle Eastern Finance and Management*, *1*(3), 191–209. **https://doi.org/10.1108/17538390810901131**

Amin, M., Isa, Z., & Fontaine, R. (2011). The role of customer satisfaction in enhancing customer loyalty in Malaysian Islamic banks. *The Service Industries Journal*, *31*(9), 1519–1532. **https://doi.org/10.1080/02642060903576076**

Amin, M., Isa, Z., & Fontaine, R. (2013). Islamic banks: Contrasting the drivers of customer satisfaction on image, trust, and loyalty of Muslim and non-Muslim customers in Malaysia. *International Journal of Bank Marketing*, *31*(2), 79–97. **https://doi.org/10.1108/02652321311298627**

Anderson, E.W., & Sullivan, M.W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, *12*(2), 125–143. **https://doi.org/10.1287/mksc.12.2.125**

Anderson, R.E., & Srinivasan, S.S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology and Marketing*, *20*(2), 123–138. **https://doi.org/10.1002/mar.10063**

Arcand, M., PromTep, S., Brun, I., & Rajaobelina, L. (2017). Mobile banking service quality and customer relationships. *International Journal of Bank Marketing*, *35*(7), 1068–1089. **https://doi.org/10.1108/IJBM-10-2015-0150**

Arvidsson, N. (2014). Consumer attitudes on mobile payment services – results from a proof of concept test. *International Journal of Bank Marketing*, *32*(2), 150–170. **https://doi.org/10.1108/IJBM-05-2013-0048**

Ashiq, R., & Hussain, A. (2024). Exploring the effects of e-service quality and e-trust on consumers' e-satisfaction and e-loyalty: Insights from online shoppers in Pakistan. *Journal of Electronic Business & Digital Economics*, *3*(2), 117–141. **https://doi.org/10.1108/JEBDE-09-2023-0019**

Asubonteng, A., McCleary, K.J., & Swan, J.E. (1996). SERVQUAL revisited: A critical review of service quality. *The Journal of Services Marketing*, *10*(6), 62–81. **https://doi.org/10.1108/08876049610148602**

Avkiran, N.K. (1994). Developing an instrument to measure customer service quality in branch banking. *International Journal of Bank Marketing*, *12*(6), 10–18. **https://doi.org/10.1108/02652329410063223**

Ayinaddis, S.G., Taye, B.A., & Yirsaw, B.G. (2023). Examining the effect of electronic banking service quality on customer satisfaction and loyalty: An implication for technological innovation. *Journal of Innovation and Entrepreneurship*, *12,* Article 22. **https://doi.org/10.1186/s13731-023-00287-y**

Ayo, C.K., Oni, A.A., Adewoye, O.J., & Eweoya, I.O. (2016). E-banking users' behaviour: E-service quality, attitude, and customer satisfaction. *International Journal of Bank Marketing*, *34*(3), 347–367. **https://doi.org/10.1108/IJBM-12-2014-0175**

Ayo, F.E. (2018). A two-phase multiobjective optimization for benchmarking and evaluating service quality in banks. *International Journal of Intelligent Computing and Cybernetics*, *11*(4), 446–470. **https://doi.org/10.1108/IJICC-12-2017-0155**

Azemi, Y., Ozuem, W., & Howell, K.E. (2020). The effects of online negative word-of-mouth on dissatisfied customers: A frustration-aggression perspective. *Psychology & Marketing*, *37*(4), 564–577. **https://doi.org/10.1002/mar.21326**

Bahia, K., & Nantel, J. (2000). A reliable and valid measurement scale for the perceived service quality of banks. *International Journal of Bank Marketing*, *18*(2), 84–91. **https://doi.org/10.1108/02652320010322994**

Bakare, S. (2015). Varying impacts of electronic banking on the banking industry. *Journal of Internet Banking and Commerce*, *20*(2), 1–9.

Barjaktarović Rakočević, S., Rakić, N., & Rakočević, R. (2025). An interplay between digital banking services, perceived risks, customers' expectations, and customers' satisfaction. *Risks*, *13*(3), article 39. **https://doi.org/10.3390/risks13030039**

Bauer, H.H., Falk, T., & Hammerschmidt, M. (2006). eTransQual: A transaction process-based approach for capturing service quality in online shopping. *Journal of Business Research*, *59*(7), 866–875. **https://doi.org/10.1016/j.jbusres.2006.01.021**

Bauer, H.H., Hammerschmidt, M., & Falk, T. (2005). Measuring the quality of e-banking portals. *International Journal of Bank Marketing, 23*(2), 153–175. **https://doi.org/10.1108/02652320510584395**

Baumann, C., Hamin, H., & Tung, R.L. (2012). Share of wallet in retail banking. *International Journal of Bank Marketing, 30*(2), 88–101. **https://doi.org/10.1108/02652321211210868**

Bessom, R.M. (1973). Unique aspects of marketing services. *Arizona Business Bulletin*, *9*, 8–15.

Bitner, M.J., Booms, B.H., & Tetreault, M.S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *The Journal of Marketing, 54*(1), 71–84. **https://doi.org/10.1177/002224299005400105**

Bitner, M.J., & Hubbert, A.R. (1994). Encounter satisfaction versus overall satisfaction versus quality: The customer's voice. In R.T. Rust, & R.L. Oliver (Eds.), *Service Quality: New Directions in Theory and Practice* (pp. 72–94). Sage Publications. **https://doi.org/10.4135/9781452229102**

Blanchard, R.F., & Galloway, R.L. (1994). Quality in retail banking. *International Journal of Service Industry Management*, *5*(4), 5–23. **https://doi.org/10.1108/09564239410068670**

Bojanic, D.C. (1991). Quality measurement in professional service firms. *Journal of Professional Services Marketing*, *7*(2), 27–36.

Bressolles, G., Durrieu, F., & Senecal, S. (2014). A consumer typology based on e-service quality and e-satisfaction. *Journal of Retailing and Consumer Services*, *21*(6), 889–896. **https://doi.org/10.1016/j.jretconser.2014.07.004**

Broby, D. (2021). Financial technology and the future of banking. *Financial Innovation*, *7*(1), article 47. **https://doi.org/10.1186/s40854-021-00264-y**

Butt, M.M., & Aftab, M. (2013). Incorporating attitude towards Halal banking in an integrated service quality, satisfaction, trust and loyalty model in online Islamic banking context. *International Journal of Bank Marketing*, *31*(1), 6–23. **https://doi.org/10.1108/02652321311292029**

Carman, J.M. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. *Journal of Retailing*, *66*(1), 33–35.

Chau, V.S., & Ngai, L.W.L.C. (2010). The youth market for internet banking services: Perceptions, attitude and behaviour. *Journal of Services Marketing*, *24*(1), 42–60. **https://doi.org/10.1108/08876041011017880**

Che, M., Say, S.YA., Yu, H., Zhou, Q., Shu, J., Sun, W., Luo, X., & Xu, H. (2023). Investigating customers' continuous trust towards mobile banking apps. *Humanities and Social Sciences Communications*, *10*, article 960. **https://doi.org/10.1057/s41599-023-02483-3**

Chemingui, H. (2013). Resistance, motivations, trust and intention to use mobile financial services. *International Journal of Bank Marketing*, *31*(7), 574–592. **https://doi.org/10.1108/IJBM-12-2012-0124**

Chhabra, K. (2018). Does service quality matters in the context of internet banking? A perceptualanalysis of India's internet banking customer's perception regarding service quality, trust, satisfaction and loyalty. *Journal of Commerce and Accounting Research*, *7*(3), 52–60.

Chiao, Y., Chiu, Y., & Guan, J. (2008). Does the length of a customer-provider relationship really matter? *Service Industries Journal*, *28*(5), 649–667. **https://doi.org/10.1080/02642060801988191**

Chiruvelli, K.P. (2026). Generative AI for personalized product bundling in consumer services: A profit optimization framework. *Journal of International Crisis and Risk Communication*, *9*(1), 315–323. **https://doi.org/10.63278/jicrcr.vi.3634**

Cronin, J.J., & Taylor, S.A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, *56*(7), 55–68. **https://doi.org/10.1177/002224299205600304**

Cronin, J.J., & Taylor, S.A. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing*, *58*(1), 125–131. **https://doi.org/10.1177/002224299405800**

Dahlstrom, R., Nygaard, A., Kimasheva, M., & Ulvnes, A.M. (2014). How to recover trust in the banking industry? A game theory approach to empirical analyses of bank and corporate customer relationships. *International Journal of Bank Marketing*, *32*(4), 268–278. **https://doi.org/10.1108/IJBM-03-2014-0042**

De Jager, J.W, Wulandari, N., & Wannenburg, E. (2020). Cross country analysis of online banking service quality in South Africa and Indonesia. *Eurasian Journal of Economics and Finance*, *8*(4), 194–203. **https://doi.org/10.15604/ejef.2020.08.04.001**

Dhasan, D., & Aryupong, M. (2019). Effects of product quality, service quality and price fairness on customer engagement and customer loyalty. *ABAC Journal*, *39*(2), 82–102.

Dobosiewicz, Z. (2011). *Bankowość*. Wyd. PWE.

Ehigie, B.O. (2006). Correlates of customer loyalty to their bank: A case study in Nigeria. *International Journal of Bank Marketing*, *24*(7), 494–508.

Eiglier, P., Langeard, E., Lovelock, C.H., Bateson, J.E.G., & Young, R.F. (1977). *Marketing Consumer Services*: *New Insights*. Marketing Science Institute.

Ennew, C.T., Reed, G.V., & Binks, M.R. (1993). Importance-performance analysis and the measurement of service quality. *European Journal of Marketing*, *27*(2), 59–70. **https://doi.org/10.1108/03090569310026402**

Ennew, C.T., Waite, N., & Waite, R. (2017). *Financial Services Marketing. An International Guide to Principles and Practice.* Routledge.

Fernandez, C.A.E., Martin, I.T., Oromendia, A.R., Klaus, P., & Luong, V.H. (2026). Customer experience and emotional drivers of satisfaction and loyalty in U.S. banking: An application of the EXQ model. *Journal of Financial Services Marketing*, *31*, article 18. **https://doi.org/10.1057/s41264-026-00348-9**

Flak, O., & Głód, G. (2009). *Konkurencyjność przedsiębiorstwa. Pojęcia, definicje, modele*. Wyd. Akademii Ekonomicznej.

Flejterski, S. (1984). Istota i mierzenie konkurencyjności międzynarodowej. *Gospodarka Planowa*, *9*, 390–394.

Fredrick, A. (2012). *The impact of electronic banking transaction in the banking industry: The case of ADB, SG-SSB and Barclays Bank branches in the Eastern Region* [Master's thesis]. Kwame Nkrumah University of Science and Technology, Ghana.

Fullerton, G., & Taylor, S. (2015). Dissatisfaction and violation: Two distinct consequences of the wait experience. *Journal of Service Theory and Practice*, *25*(1), 31–50. **https://doi.org/10.1108/JSTP-10-2013-0237**

Gajewska, T., Zimon, D., Kaczor, G., & Madzík, P. (2020). The impact of the level of customer satisfaction on the quality of e-commerce services. *International Journal of Productivity and Performance Management*, *69*(4), 666–684. **https://doi.org/10.1108/IJPPM-01-2019-0018**

Gautam, D.K., & Sah, G.K. (2023). Online banking service practices and its impact on e-customer satisfaction and e-customer loyalty in developing country of South Asia-Nepal. *Sage Open*, *13*(3). **https://doi.org/10.1177/21582440231185580**

Gonu, E., Agyei, P.M., Richard, O.K., & Asare-Larbi, M. (2023). Customer orientation, service quality and customer satisfaction interplay in the banking sector: An emerging market perspective. *Cogent Business & Management*, *10*(1), 2163797. **https://doi.org/10.1080/23311975.2022.2163797**

Grasing, R.E., & Hessick, M.H. (1988). *Achieving Quality in Financial Service Organizations: How to Identify and Satisfy Customer Expectations*. Robert E. Nolan Company.

Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, *18*(4), 36–44. **https://doi.org/10.1108/EUM0000000004784**

Grönroos, C. (1990). *Service Management and Marketing: Managing the Moments in Truth in Service Competition*. Lexington Books.

Grönroos, C. (2001). The perceived service quality concept – a mistake? *Managing Service Quality: An International Journal*, *11*(3), 150–152. **https://doi.org/10.1108/09604520110393386**

Gupta, R., & Kumar, B. (2020). A comprehensive model for understanding banking service quality: BANK SERVQUAL. *International Journal of Business Forecasting and Marketing Intelligence*, *6*(3), 204–220. **https://doi.org/10.1504/IJBFMI.2020.111371**

Han, S., & Baek, S. (2004). Antecedents and consequences of service quality in online banking: An application of the SERVQUAL instrument. *Advances in Consumer Research*, *31*, 208-214.

Harahap, D.A., Hurriyati, R., & Amanah, D. (2020). A conceptual model of e-service quality at branchless banking in Indonesia. *Journal of Internet Banking and Commerce*, *25*(2), 1–11.

Harasis, A.A., & Rasli, A. (2016). A Review of theories relevant to e-banking usage continuance. *International Review of Management and Marketing*, *6*(S4), 277–283.

Herington, C., & Weaven, S. (2009). E-retailing by banks: E-service quality and its importance to customer satisfaction. *European Journal of Marketing*, *43*(9/10), 1220–1231. **https://doi.org/10.1108/03090560910976456**

Ho, C.T.B., & Lin, W.C. (2010). Measuring the service quality of Internet banking: Scale development and validation. *European Business Review*, *22*(1), 5–24. **https://doi.org/10.1108/09555341011008981**

Ho, H., Han, S.-M., Cha, J., & Pham, L. (2025). Mobile banking customer satisfaction and loyalty: The roles of technology readiness. *Journal of Risk and Financial Management*, *18*(7), article 403. **https://doi.org/10.3390/jrfm18070403**

Hussien, M.I., & Aziz, R.A.E. (2013). Investigating e-banking service quality in one of Egypt's banks: A stakeholder analysis. *The TQM Journal*, *25*(5), 557–576. **https://doi.org/10.1108/TQM-11-2012-0086**

Huterska, A.A. (2024). Payment innovations offered by banks and PayTechs – which of them better meet consumer needs? *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, *58*(5), 21–45. **http://dx.doi.org/10.17951/h.2024.58.5.21-45**

Ighomereho, S.O., Ojo, A.A., Omoyele, S.O., & Olabode, S.O. (2022). From service quality to e-service quality: Measurement, dimensions and model. *Journal of Management Information and Decision Sciences*, *25*, 1–15. **https://doi.org/10.48550/arXiv.2205.00055**

Imam, Y., & Khan, A.K. (2025). Understanding service quality: A review of concepts, models, and future directions. *International Journal of Research and Analytical Reviews*, *12*(2), Article IJRAR25B1423. **https://ijrar.org/papers/IJRAR25B1423.pdf**

Ingaldi, M. (2022). E-service quality assessment according to hierarchical service quality models. *Management Systems in Production Engineering*, *30*(4), 311–318. **https://doi.org/10.2478/mspe-2022-0040**

Islam, K.M. A., Islam, S., Karim, M.M., Haque, M.S., & Sultana, T. (2023). Relationship between e-service quality dimensions and online banking customer satisfaction. *Banks and Bank Systems*, *18*(1), 174–183. **https://doi.org/10.21511/bbs.18(1).2023.15**

Jafri, J. A., Mohd Amin, S. I., Abdul Rahman, A., & Mohd Nor, S. (2024). A systematic literature review of the role of trust and security on Fintech adoption in banking. *Heliyon*, *10*(1), Article e22980. **https://doi.org/10.1016/j.heliyon.2023.e22980**

Jan, M.T., & Abdullah, K. (2014). The impact of technology CSFs on customer satisfaction and the role of trust: An empirical study of the banks in Malaysia. *International Journal of Bank Marketing*, *32*(5), 429–447. **https://doi.org/10.1108/IJBM-11-2013-0139**

Jayawardhena, C. (2004). Measurement of service quality in Internet banking: The development of an instrument. *Journal of Marketing Management*, *20*(1–2), 185–207. **https://doi.org/10.1362/026725704773041177**

Johnston, R. (1997). Identifying the critical determinants of service quality in retail banking: Importance and effect. *International Journal of Bank Marketing*, *15*(4), 111–116. **https://doi.org/10.1108/02652329710189366**

Joseph, M., McClure, C., & Joseph, B. (1999). Service quality in the banking sector: The impact of technology on service delivery. *International Journal of Bank Marketing, 17*(4), 182–193. **https://doi.org/10.1108/02652329910278879**

Jun, M., & Cai, S. (2001). The key determinants of Internet banking service quality: A content analysis. *International Journal of Bank Marketing*, *19*(7), 276–291.

Jun, M., & Palacios, S. (2016). Examining the key dimensions of mobile banking service quality: An exploratory study. *International Journal of Bank Marketing*, *34*(3), 307-326. **https://doi.org/10.1108/IJBM-01-2015-0015**

Karatepe, O.M., Avci, T., & Tekinkus, M. (2005). Measuring service quality of banks: Scale development and validation. *Journal of Retailing and Consumer Services*, *12*(5), 373–383. **https://doi.org/10.1016/j.jretconser.2005.01.001**

Kashif, M., Wan Shukran, S.S., Rehman, M.A., & Sarifuddin, S. (2015). Customer satisfaction and loyalty in Malaysian Islamic banks: A PAKSERV investigation. *International Journal of Bank Marketing*, *33*(1), 23–40. **https://doi.org/10.1108/IJBM-08-2013-0084**

Kassim, N.M., & Abdullah, N.A. (2008). Customer loyalty in e-commerce settings: An empirical study. *Electronic Markets*, *18*(3), 275–290.

Kaur, B., Kaur, J., Pandey, S.K., & Joshi, S. (2023). E-service quality: Development and validation of the scale. *Global Business Review*, *24*(5), 953–971. **https://doi.org/10.1177/0972150920920452**

Kaura, V., Prasad, C.S.D., & Sharma, S. (2015). Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction. *International Journal of Bank Marketing*, *33*(4), 404–422. **https://doi.org/10.1108/IJBM-04-2014-0048**

Khan, H.H., Qureshi, F., & Jamali, D. (2025). Digital disruption in financing: Are fintech and bigtech credit reshaping corporate access to capital? *Journal of International Financial Markets, Institutions and Money*, *103*, article 102198. **https://doi.org/10.1016/j.intfin.2025.102198**

Kim, L., Jindabot, T., & Yeo, S.F. (2024). Understanding customer loyalty in banking industry: A systematic review and meta analysis. *Heliyon*, *10*(17), article e36619. **https://doi.org/10.1016/j.heliyon.2024.e36619**

Kim, S.H., & Yang, Y.R. (2025). The effect of digital quality on customer satisfaction and brand loyalty under environmental uncertainty: Evidence from the banking industry. *Sustainability*, *17*(8), article 3500. **https://doi.org/10.3390/su17083500**

Kim, L., Rakangthong, N.K., Lak, C., & Aujirapongpan, S. (2026). A competency mechanism for customer trust enhancement in digital banking services. *Journal of Open Innovation: Technology, Market, and Complexity*, *12*(2), article 100752. **https://doi.org/10.1016/j.joitmc.2026.100752**

Kumar, M., Kee, F.T., & Charles, V. (2010). Comparative evaluation of critical factors in delivering service quality of banks: An application of dominance analysis in modified SERVQUAL model. *International Journal of Quality and Reliability Management*, *27*(3), 351–377. **https://doi.org/10.1108/02656711011023320**

Kumbhar, V.M. (2012). Conceptualization of e-services quality and e-satisfaction: A review of literature. *Management Research and Practice*, *4*(4), 12–18.

Laksamana, P., Wong, D., Kingshott, R.P., & Muchtar, F. (2013). The role of interaction quality and switching costs in premium banking services. *Marketing Intelligence and Planning*, *31*(3), 229–249. **https://doi.org/10.1108/02634501311324591**

Lama, J., & Kayestha, M. (2025). From swipe to stay: How digital banking service quality drives customer retention through customer satisfaction. *Journal of Innovation in Academia*, *4*(1), 135–163. **https://doi.org/10.32674/5zshz137**

Lang, B., & Colgate, M. (2003). Relationship quality, on-line banking and the information technology gap. *International Journal of Bank Marketing*, *21*(1), 29–37. **https://doi.org/10.1108/02652320310457785**

Leninkumar, V. (2017). The relationship between customer satisfaction and customer trust on customer loyalty. *International Journal of Academic Research in Business and Social Sciences*, *7*(4), 450–465. **http://dx.doi.org/10.6007/IJARBSS/v7-i4/2821**

Levy, S. (2014). Does usage level of online services matter to customers' bank loyalty? *Journal of Services Marketing*, *28*(4), 292–299. **https://doi.org/10.1108/JSM-09-2012-0162**

Li, F., Lu, H., Hou, M., Cui, K., & Darbandi, M. (2021). Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. *Technology in Society*, *64*, 101487–101498. **https://doi.org/10.1016/j.techsoc.2020.101487**

Liao, C.H., Yen, H.R., & Li, E.Y. (2011). The effect of channel quality inconsistency on the association between e-service quality and customer relationships. *Internet Research*, *21*(4), 458–478. **https://doi.org/10.1108/10662241111158326**

Li-hua, Y. (2012). Customer satisfaction antecedents within service recovery context: Evidences from 'Big 4' banks in China. *Nankai Business Review International*, *3*(3), 284–301. **https://doi.org/10.1108/20408741211264585**

Malc, D., Dlačić, J., Pisnik, A., & Milfelner, B. (2023). The development of e-banking services quality measurement instrument: MPQe-BS. *Sustainability*, *15*, 12659. **https://doi.org/10.3390/su151612659**

Mamakou, X.J., Zaharias, P., & Milesi, M. (2024). Measuring customer satisfaction in electronic commerce: The impact of e-service quality and user experience. *International Journal of Quality & Reliability Management*, *41*(3), 915–943. **https://doi.org/10.1108/IJQRM-07-2021-0215**

Mangold, G.W., & Babakus, E. (1991). Service quality: The front-stage vs. the back-stage perspective. *Journal of Services Marketing*, *5*(4), 59–70. **https://doi.org/10.1108/08876049110035675**

Manta, O., Vasile, V., & Rusu, E. (2025). Banking transformation through FinTech and the integration of artificial intelligence in payments. *FinTech*, *4*(2), article 13. **https://doi.org/10.3390/fintech4020013**

Marcinkowska, M. (2013). Pojęcie i charakterystyka produktów i usług bankowych. In M. Zaleska (Ed.), *Bankowość* (pp. 72–85). Wyd. C.H. Beck.

Mayer, R.C., Davis, J.H., & Schoorman, F.D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, *20*(3), 709–734. **https://doi.org/10.2307/258792**

Mersha, T., & Adlakha, V. (1992). Attributes of service quality: The consumers' perspective. *International Journal of Service Industry Management*, *3*(3), 34–45. **https://doi.org/10.1108/09564239210015157**

Mir, R. A., Rameez, R., & Tahir, N. (2023). Measuring Internet banking service quality: An empirical evidence. *The TQM Journal*, *35*(2), 492–518. **https://doi.org/10.1108/TQM-11-2021-0335**

Mittal, S., Gera, R., & Batra, D.K. (2015). An evaluation of an integrated perspective of perceived service quality for retail banking services in India. *International Journal of Bank Marketing*, *33*(3), 330–350. **https://doi.org/10.1108/IJBM-02-2014-0020**

Moghavvemi, S., Lee, S.T., & Lee, S.P. (2018). Perceived overall service quality and customer satisfaction: A comparative analysis between local and foreign banks in Malaysia. *International Journal of Bank Marketing*, *36*(5), 908–930. **https://doi.org/10.1108/IJBM-06-2017-0114**

Monferrer-Tirado, D., Estrada-Guillén, M., Fandos-Roig, J.C., Moliner-Tena, M.Á., & Sánchez García, J. (2016). Service quality in bank during an economic crisis. *International Journal of Bank Marketing*, *34*(2), 235–259. **https://doi.org/10.1108/IJBM-01-2015-0013**

Moraes, J.B. de, & Schaefer, J.L. (2026). Customer satisfaction in digital banking services: A network analysis focused on service quality, insurance, mobile banking, and digital channels. *Journal of Enterprise Information Management*, 1–24. Advance online publication. **https://doi.org/10.1108/JEIM-04-2025-0237**

Müller, A., Demaeght, A., Greschuchna, L., & Reiter, J. (2024). Digital transformation in banking – how do customers assess the quality of digital banking services? In F.F.-H. Nah & K.L. Siau (Eds.), *HCI in Business, Government and Organizations* (Vol. 14721, pp. 209–220). Springer. **https://doi.org/10.1007/978-3-031-61318-0_15**

Nguyen, D.T., Pham, V.T., Tran, D.M., & Pham, D.B.T. (2020). Impact of service quality, customer satisfaction and switching costs on customer loyalty. *The Journal of Asian Finance, Economics and Business*, *7*(8), 395–405. **https://doi.org/10.13106/JAFEB.2020.VOL7.NO8.395**

Nguyen, T.H., & Le, X.C. (2025). Artificial intelligence-based chatbots – a motivation underlying sustainable development in banking: Standpoint of customer experience and behavioral outcomes. *Cogent Business & Management*, *12*(1), article 2443570. **https://doi.org/10.1080/23311975.2024.2443570**

Ojokuku, R.M., &Sajuyigbe, A.S. (2012). The impact of electronic banking on human resource performance in the Nigerian banking industry. *International Journal of Economic Development Research and Investment*, *3*(2), 61–69.

Oliver, R.L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*(4), 460–469. **https://doi.org/10.1177/002224378001700405**

Oliver, R.L. (1997). *Satisfaction: A Behavioral Perspective on the Consumer*. Irwin/McGraw-Hill.

Padhy, P.K., & Swar, B.N. (2009). *A study on customer satisfaction & service gaps in selected private, public & foreign banks*. 3rd IIMA Conference, Marketing Paradigms for Emerging Economies, Indian Institute of Management.

Pal, M.N., & Choudhury, K. (2009). Exploring the dimensionality of service quality: An application of TOPSIS in the Indian banking industry. *Asia-Pacific Journal of Operational Research*, *26*(1), 115–133. **https://doi.org/10.1142/S0217595909002110**

Parasuraman, A., Berry, L., & Zeithaml, V. (1991). Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, *67*(4), 420–450.

Parasuraman, A., Zeithaml, V.A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, *7*(3), 213–234. **https://doi.org/10.1177/1094670504271156**

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41–50. **https://doi.org/10.1177/002224298504900403**

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, *64*(1), 12–40.

Pikkarainen, K., Pikkarainen, T., Karjaluoto, H., & Pahnila, S. (2006). The measurement of end-user computing satisfaction of online banking services: Empirical evidence from Finland. *International Journal of Bank Marketing*, *24*(3), 158–172. **https://doi.org/10.1108/02652320610659012**

Pizło, W., & Parzonko, A. (2022). Virtual organizations and trust. In J. Paliszkiewicz & K. Chen (Eds.), *Trust, Organizations and the Digital Economy. Theory and Practice* (pp. 61–78). Routledge.

Pokhrel, L., Anup, K.C., & Shrestha, B.K. (2026). Does mobile banking service quality matter? A two-staged structural equation modeling-artificial neural network approach. *Journal of Marketing Analytics*, *14*, 474–486. **https://doi.org/10.1057/s41270-024-00363-6**

Poon, W.C. (2008). Users' adoption of e-banking services: The Malaysian perspective. *Journal of Business and Industrial Marketing*, *23*(1) 59–69. **https://doi.org/10.1108/08858620810841498**

Probojakti, W., Utami, H.N., Prasetya, A., & Riza, M.F. (2024). Building sustainable competitive advantage in banking through organizational agility. *Sustainability*, *16*(19), article 8327. **https://doi.org/10.3390/su16198327**

PYMNTS, & Amount. (2022a). *Bundled banking products: How credit cards secure customer loyalty*. PYMNTS.

PYMNTS, & Amount. (2022b). *Bundled banking products: Matching product offerings with customer demand.* PYMNTS.

Radomir, L., Plăiaş, I., & Nistor, C.V. (2012). A review of the service quality concept: Past, present and perspectives. In I. Plăiaș & D.C. Dabija (Eds.), *Marketing – from Information to Decision* (pp. 404–427). Risoprint.

Rahi, S., Ghani, M.A., & Ngah, A. (2019). Integration of unified theory of acceptance and use of technology in internet banking adoption setting: Evidence from Pakistan. *Technology in Society*, *58*, 101120. **https://doi.org/10.1016/j.techsoc.2019.03.003**

Rajaobelina, L., Ricard, L., Bergeron, J., & Toufaily, É. (2014). An integrative model of installed online trust in the financial services industry. *Journal of Financial Services Marketing*, *19*(3), 186–197. **https://doi.org/10.1057/fsm.2014.18**

Ramseook-Munhurrun, P., & Naidoo, P. (2011). Customers' perspectives of service quality in Internet banking. *Services Marketing Quarterly*, *32*(4), 247–264. **https://doi.org/10.1080/15332969.2011.606753**

Rathmell, J.M. (1974). *Marketing in the Service Sector*. Winthrop Publishers.

Raza, S.A., Umer, A., Qureshi, M.A., & Dahri, A.S. (2020). Internet banking service quality, e-customer satisfaction and loyalty: The modified e-SERVQUAL model. *The TQM Journal*, *32*(6), 1443–1466. **https://doi.org/10.1108/TQM-02-2020-0019**

Reichheld, F.F., & Schefter, P. (2000). E-loyalty: Your secret weapon on the Web. *Harvard Business Review*, *78*(4), 105–113.

Ribbink, D., Riel, A., Liljander, V., & Streukens, S. (2004). Comfort your online customer: Quality, trust, and loyalty on the Internet. *Managing Service Quality*, *14*(6), 446–456. **https://doi.org/10.1108/09604520410569784**

Rod, M., Ashill, N.J., Shao, J., & Carruthers, J. (2009). An examination of the relationship between service quality dimensions, overall internet banking service quality and customer satisfaction: A New Zealand study. *Marketing Intelligence and Planning*, *27*(1), 103–126. **https://doi.org/10.1108/02634500910928344**

Roy, S.K., Devlin, J.F., & Sekhon, H. (2015). The impact of fairness on trustworthiness and trust in banking. *Journal of Marketing Management*, *31*(9–10), 996–1017. **https://doi.org/10.1080/0267257X.2015.1036101**

Rust, R.T., & Zahorik, A.J. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing*, *69*(2), 193–215. **https://doi.org/10.1016/0022-4359(93)90003-2**

Sahar, R., Ziarmal, A., Labib, I., & Hotak, S. (2025). Mobile banking service quality and customer satisfaction: A bibliometric and content analysis with future research directions. *Journal of Intelligent Management Decision*, *4*(3), 235–255. **https://doi.org/10.56578/jimd04030**.

Sangeetha, J., & Mahalingam, S. (2011). Service quality models in banking: A review. *International Journal of Islamic and Middle Eastern Finance and Management*, *4*(1), 83–103. **https://doi.org/10.1108/17538391111122221**

Santhiyavalli, G., & Sandhya, B. (2011). Service quality evaluation in select commercial banks: A comparative study. *IUP Journal of Operations Management*, *10*(1), 43–62.

Santos, J. (2003). E-service quality model of virtual service dimensions. *Managing Service Quality*, *13*(3), 233–246.

Schembri, S., & Sandberg, J. (2002). Service quality and the consumer's experience: Towards an interpretive approach. *Marketing Theory*, *2*(2), 189–205. **https://doi.org/10.1177/147059310222003**

Schneider, B., & White, S.S. (2004). *Service Quality: Research Perspectives*. Sage Publications.

Sharifi, S.S., & Esfidani, M.R. (2014). The impacts of relationship marketing on cognitive dissonance, satisfaction, and loyalty: The mediating role of trust and cognitive dissonance. *International Journal of Retail & Distribution Management*, *42*(6), 553-575. **https://doi.org/10.1108/IJRDM-05-2013-0109**

Sharma, L., & Sakshi (2017). Customer satisfaction with service quality: An empirical study of banking sector. *BVIMSR's Journal of Management Research*, *9*(2), 189–195.

Sharma, M.S., & Halvadia, N.H. (2015). Measuring service quality of Internet banking portal in India. *Annals of Management Science*, *4*(2), 29–52.

Sharma, A.K., Duggal, R., & Sharma, R. (2026). Digital transformation in banking: Enhancing customer experience through technological innovation. In O. Ergunova, T. Nabi, P. Kansra, & U. Gupta (Eds.), *Data-Driven Monetization Strategies for Economic Insights* (pp. 151–182). IGI Global. **https://doi.org/10.4018/979-8-3373-2772-3.ch007**

Shayestehfar, R., & Yazdani, B. (2019). Bank service quality: A comparison of service quality between BSI branches in Isfahan and Dubai. *The TQM Journal*, *31*(1), 28–51. **https://doi.org/10.1108/TQM-04-2018-0052**

Sheng, T., & Liu, C. (2010). An empirical study on the effect of e-service quality on online customer satisfaction and loyalty. *Nankai Business Review International*, *1*(3), 273–283. **https://doi.org/10.1108/20408741011069205**

Simmonds, K. (1986). The accounting assessment of competitive position. *European Journal of Marketing*, *20*(1), 16–31. **https://doi.org/10.1108/EUM0000000004626**

Singh, J., & Kaur, P. (2013). Customers' attitude towards technology based services provided by select Indian banks: Empirical analysis. *International Journal of Commerce and Management*, *23*(1), 56–68. **https://doi.org/10.1108/10569211311301439**

Sitorus, T., & Yustisia, M. (2018). The influence of service quality and customer trust toward customer loyalty: The role of customer satisfaction. *International Journal for Quality Research*, *12*(3), 639–654. **https://doi.org/10.18421/IJQR12.03-06**

Siudek, T., & Zawojska, A. (2014). Competitiveness in the economic concepts, theories and empirical research. *Acta Scientiarum Polonorum. Oeconomia*, *13*(1), 91–108.

Siudek, T. (2022). *Konkurencyjność banków w Polsce w zakresie produktów i usług bankowości elektronicznej: Teorie, modele i wyniki empiryczne*. Wyd. CeDeWu.

Siudek, T., & Zawojska, A. (2024). A theoretical model of customer acceptance and use of electronic banking as a distribution channel for banking products and services. *European Research Studies Journal*, *27*(4), 866–889. **https://doi.org/10.35808/ersj/3553**

Skinner, S.J. (1990). *Marketing*. Houghton Mifflin Company.

Sohn, C., & Tadisina, S.K. (2008). Development of e-service quality measure for internet-based financial institutions. *Total Quality Management*, *19*(9), 903–918. **https://doi.org/10.1080/14783360802224412**

Solarz, M., & Adamek, J. (2023). Trust and personal innovativeness as the prerequisites for using digital lending services offered by FinTech lenders. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, *57*(1), 197–218. **https://doi.org/10.17951/h.2023.57.1.197-218**

Song, X., Yu, H., & He, Z. (2023). Heterogeneous impact of fintech on the profitability of commercial banks: Competition and spillover effects. *Journal of Risk and Financial Management*, *16*(11), article 471. **https://doi.org/10.3390/jrfm16110471**

Srinivasan, S.S., Anderson, R., & Ponnavolu, K. (2002). Customer loyalty in Internet banking: An exploration of its antecedents and consequences. *Journal of Retailing*, *78*, 41–50. **https://doi.org/10.1016/S0022-4359(01)00065-3**

Stankiewicz, M.J. (2005). *Konkurencyjność przedsiębiorstwa. Budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji*. Wyd. Dom Organizatora.

Sureshchandar, G.S., Rajendran, C., & Kamalanabhan, T.J. (2001). Customer perceptions of service quality: A critique. *Total Quality Management*, *12*(1), 111–124. **https://doi.org/10.1080/09544120020010138**

Suuroja, M. (2003). Service quality: Main conceptualizations and critique. *University of Tartu Economics and Business Working Paper*, *2003*(23), 1–27.

Tatikonda, M.V., & Zeithaml, V.A. (2002). Managing the new service development process: Multi-disciplinary literature synthesis and directions for future research. In T. Boone & R. Ganeshan (Eds.), *New Directions in Supply-Chain Management: Technology, Strategy, and Implementation* (pp. 200–233). American Management Association.

Tedja, B., Al Musadieq, M., Kusumawati, A., & Yulianto, E. (2024). Systematic literature review using PRISMA: Exploring the influence of service quality and perceived value on satisfaction and intention to continue relationship. *Future Business Journal*, 10, article 39. **https://doi.org/10.1186/s43093-024-00326-4**

Ullah, S., Kiani, U.S., Raza, B., & Mustafa, A. (2022). Consumers' intention to adopt m-payment/m-banking: The role of their financial skills and digital literacy. *Frontiers in Psychology*, *13*, article 873708. **https://doi.org/10.3389/fpsyg.2022.873708**

Van Deventer, M., & Redda, E.H. (2023). Customer loyalty and trust in South African retail banking. *Innovative Marketing*, *19*(2), 211–222. **https://doi.org/10.21511/im.19(2).2023.17**

Vatanasombut, B., Igbaria, M., Stylianou, A.C., & Rodgers, W. (2008). Information systems continuance intention of web-based applications customers: The case of online banking. *Information and Management*, *45*(7), 419–428. **https://doi.org/10.1016/j.im.2008.03.005**

Vivek, S., Bakhshi, P., & Maddulety, K. (2025). A framework for assessing the perceived quality of services in digital banking: A systematic review. *European Economic Letters*, *15*(1), 1292–1305. https://www.eelet.org.uk/index.php/journal/article/view/2508

Wang, Y., Lo, H.P., & Hui, Y.V. (2003). The antecedents of service quality and product quality and their influences on bank reputation: Evidence from the banking industry in China. *Managing Service Quality*, *13*(1), 72–83. **https://doi.org/10.1108/09604520310456726**

Wheelen, T.L., Hunger, J.D., Hoffman, A.N., & Bamford, Ch.E. (2017). *Concepts in Strategic Management and Business Policy: Globalization, Innovation and Sustainability*. Pearson Prentice Hall.

White, H., & Nteli, F. (2004). Internet banking in the UK: Why are there not more customers? *Journal of Financial Services Marketing*, *9*(1), 49–56. **https://doi.org/10.1057/palgrave.fsm.4770140**

Windasari, N.A., Kusumawati, N., Larasati, N., & Amelia, R.P. (2022). Digital-only banking experience: Insights from gen Y and gen Z. *Journal of Innovation & Knowledge*, *7*(2), 100170. **https://doi.org/10.1016/j.jik.2022.100170**

Wong, A., & Zhou, L. (2006). Determinants and outcomes of relationship quality: A conceptual model and empirical investigation. *Journal of International Consumer Marketing*, *18*(3), 81–105. **https://doi.org/10.1300/J046v18n03_05**

Yaya, L.H., Marimon, F., & Casadesus, M. (2016). Customer satisfaction and the role of demographic characteristics in online banking. In Information Resources Management Association (Ed.), *Web-Based Services: Concepts, Methodologies, Tools, and Applications* (pp. 1786–1802). IGI Global. **https://doi.org/10.4018/978-1-4666-9466-8.ch079**

Yap, B.W., Ramayah, T., & Shahidan, W.N.W. (2012). Satisfaction and trust on customer loyalty: A PLS approach. *Business Strategy Series*, *13*(4), 154–167. **https://doi.org/10.1108/17515631211246221**

Yaseen, S.G., & Qirem, A.E. (2018). Intention to use e-banking services in the Jordanian commercial banks. *International Journal of Bank Marketing*, *36*(3), 557–571. **https://doi.org/10.1108/IJBM-05-2017-0082**

Yu, P.L., Balaji, M., & Khong, K.W. (2015). Building trust in Internet banking: A trustworthiness perspective. *Industrial Management and Data Systems*, *115*(2), 235–252. **https://doi.org/10.1108/IMDS-09-2014-0262**

Zeithaml, V.A., Bitner, M.J., & Gremler, D.D. (2017). *Services Marketing: Integrating Customer Focus Across the Firm*. McGraw Hill.

Zeithaml, V., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, *30*(4), 362–375. **https://doi.org/10.1177/009207002236911**

Zeithaml, V.A. (1981). How consumer evaluation processes differ for products and services. In J.H. Donnelly & W.R. George (Eds.), *Marketing of Services* (pp. 186–190). American Marketing Association.

Zeithaml, V.A. (1988). Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2–22. **https://doi.org/10.1177/002224298805200302**

Zeithaml, V.A., Parasuraman, A., & Berry, L.L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: The Free Press.

Zhao, A.L., Koenig-Lewis, N., Hanmer-Lloyd, S., & Ward, P. (2010). Adoption of Internet banking services in China: Is it all about trust? *International Journal of Bank Marketing*, *28*(1), 7–26. **https://doi.org/10.1108/02652321011013562**

Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, *21*(5), 527–540. **https://doi.org/10.1108/10662241111176353**

Zieliński, T. (2012). Zaufanie jako regulator decyzji ekonomicznych (analiza literatury). *Management and Business Administration. Central Europe*, *20*(4), 73–91.

Zungu, N.P., Amegbe, H., Hanu, C., & Asamoah, E.S. (2025). AI-driven self-service for enhanced customer experience outcomes in the banking sector. *Cogent Business & Management*, *12*(1), article 2450295. **https://doi.org/10.1080/23311975.2025.2450295**