

IMPACT OF BRAND EQUITY ON CUSTOMER BEHAVIOR: EVIDENCE FROM TIEN PHONG COMMERCIAL JOINT-STOCK BANK (TPBANK) IN THE ERA OF DIGITAL BANKING

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ABSTRACT:

In the context of rapid digital transformation, the banking sector is undergoing profound changes driven by technological innovation and evolving customer expectations. This study examines the impact of brand equity on customer behavior, with a particular focus on Tien Phong Commercial Joint Stock Bank (TPBank) in Vietnam. It aims to analyze how digitally oriented components of brand equity influence customer behavior within an increasingly competitive banking environment. A mixed-methods approach is employed, integrating qualitative insights with quantitative analysis based on data collected from 300 customers who have used TPBank's digital services, including LiveBank and mobile banking applications. The study applies Cronbach's Alpha, Exploratory Factor Analysis (EFA), and multiple regression techniques to assess the relationships among variables. The findings indicate that five components: brand engagement, LiveBank convenience, brand trust, digital service experience quality, and personalization, exert significant positive effects on customer behavior. Among these, digital experience quality emerges as the most influential factor, while personalization demonstrates a comparatively weaker effect. The study contributes to the literature by extending traditional brand equity frameworks to incorporate digital banking dimensions and provides empirical evidence on the role of digital service quality in shaping customer engagement and behavioral outcomes.

Keywords: brand equity, customer behavior, digital banking, TPBank, LiveBank, digital experience.

1. Introduction

1.1. Research motivation and background

The global banking industry is undergoing a profound transformation driven by rapid technological advancements associated with the

Fourth Industrial Revolution. Innovations such as artificial intelligence, big data analytics, blockchain, and cloud computing are fundamentally reshaping the structure and delivery of financial services. In this evolving landscape, digital banking has emerged not

merely as a supplementary channel but as a core strategic platform through which banks interact with customers, deliver value, and compete in increasingly dynamic markets. In emerging economies such as Vietnam, this transformation is particularly pronounced. The rapid growth of internet penetration, smartphone adoption, and digital payment ecosystems has accelerated the shift from traditional branch-based banking toward digital service models. At the same time, the competitive landscape has intensified, with commercial banks not only competing among themselves but also facing increasing pressure from fintech firms and non-bank digital platforms.

As a result, banks are compelled to continuously innovate and reposition their strategies to meet the changing expectations of customers. Customer expectations in the digital era have evolved significantly. Modern banking customers, especially younger and digitally native segments, demand not only financial security and reliability but also seamless, fast, and personalized service experiences. This shift has transformed the way customers evaluate banking services, placing greater emphasis on digital experience quality, system usability, and technological innovation.

Consequently, traditional sources of competitive advantage, such as physical branch networks or product variety, are becoming less decisive compared to digital capabilities and customer experience. Within this context, brand equity remains a critical determinant of customer behavior. Classical theories of brand equity (Aaker, 1991; Keller, 1993) emphasize dimensions such as brand awareness, perceived quality, associations, and loyalty as key drivers of consumer response. However, these frameworks were developed in relatively stable and pre-digital environments, where customer interactions were primarily physical and less technology-dependent.

In the context of digital banking, the nature of brand equity is evolving, as customers increasingly form perceptions based on their experiences with digital platforms rather than traditional service encounters.

This transformation raises important questions regarding the adequacy of existing brand equity models in capturing the realities of digital banking.

Specifically, there is a need to understand whether and how technology-driven factors—such as digital experience quality, convenience, trust in technological systems, and personalization—contribute to the formation of brand equity and influence customer behavior. Addressing these questions is particularly important for banks that position technology as a core element of their brand identity.

In this regard, Tien Phong Commercial Joint Stock Bank (TPBank) represents a compelling case. As one of the pioneers of digital transformation in Vietnam, TPBank has invested heavily in developing a technology-driven ecosystem, including its LiveBank system, mobile banking applications, and advanced digital services. Unlike traditional banks that use technology primarily as a support tool, TPBank integrates digital innovation into its core branding strategy. This positioning provides a unique opportunity to examine the role of digital brand equity in shaping customer behavior within a real-world context.

Therefore, this study is motivated by the need to bridge the gap between traditional brand equity theory and the emerging realities of digital banking. By investigating how digital-related dimensions of brand equity influence customer behavior, this research aims to provide a more comprehensive understanding of brand value creation in the digital era, while also offering insights that are relevant for both academic research and practical application in the banking industry.

1.2. Research gap, objective and contribution

Despite the growing body of literature on brand equity and customer behavior, several critical gaps remain, particularly in the context of digital banking in emerging markets such as Vietnam.

First, most existing studies continue to rely on traditional brand equity frameworks, such as those proposed by Aaker (1991) and Keller (1993), which primarily emphasize dimensions such as brand awareness, perceived quality, brand associations, and loyalty.

While these models have been widely validated, they were developed in pre-digital contexts and do not fully capture the role of technological factors in shaping customer perceptions and behavior in digital banking environments. In particular, constructs such

as digital experience quality, system usability, and technological capability have not been systematically incorporated into brand equity models in the Vietnamese context.

Second, although recent international studies have begun to highlight the importance of digital experience and technology-driven interactions (e.g., Indriasari et al., 2022; Akın, 2024), empirical evidence remains limited, especially in developing markets.

Existing research in Vietnam tends to focus on isolated constructs such as service quality or customer satisfaction, without integrating these factors into a comprehensive brand equity framework. As a result, there is a lack of empirical models that simultaneously capture both traditional and digital dimensions of brand equity and examine their combined effects on customer behavior.

Third, there is limited research focusing on digitally oriented banks, particularly those that position technology as a core element of their brand identity. TPBank, as one of the pioneers in digital transformation in Vietnam, provides a unique and relevant context for examining how digital brand equity influences customer behavior. However, existing studies have not systematically analyzed this relationship within TPBank's digital ecosystem, including platforms such as LiveBank and mobile banking applications.

Furthermore, prior studies have not clearly identified the relative importance of different components of brand equity in the digital era. It remains unclear whether functional attributes such as digital experience and convenience exert a stronger influence on customer behavior than traditional factors such as engagement and brand perception. This lack of clarity limits both theoretical development and practical application.

To address these gaps, this study aims to investigate the impact of digital brand equity on customer behavior, with a specific focus on TPBank. The study pursues three main objectives: (i) to identify and conceptualize key dimensions of brand equity in the context of digital banking; (ii) to examine the effects of these dimensions on customer behavior; and (iii) to evaluate the relative importance of technological versus traditional factors in shaping customer responses.

This study contributes to the literature in several important ways. From a theoretical perspective, it extends the customer-based brand equity framework by incorporating digital experience as a central dimension, thereby providing a more comprehensive and contextually relevant model for analyzing brand equity in technology-driven service environments.

From an empirical perspective, the study provides evidence from an emerging market, where digital banking is rapidly evolving but remains under-researched. From a practical perspective, the findings offer valuable insights for banking practitioners in designing digital strategies that enhance customer engagement, trust, and loyalty, thereby supporting sustainable competitive advantage in the digital era.

2. Theoretical framework

2.1. Conceptualization of brand equity and customer behavior in digital banking

Brand equity remains a key concept in banking, where customers rely on trust, reliability, and reputation when evaluating intangible services. It plays an important role in influencing both initial adoption and long-term behaviors such as loyalty and continued usage. However, digital transformation has reshaped how brand equity is formed, as customer interactions increasingly occur through technological platforms. In digital banking, customer evaluations are now driven more by system-related factors such as reliability, speed, usability, and security. As a result, traditional brand equity components are being redefined to include digital experience elements like convenience, efficiency, and personalization. This shift highlights the need for an integrated perspective in which technological capabilities and digital experiences become central to understanding customer behavior.

2.2. Digital experience as an extension of brand equity

Recent studies have expanded the understanding of brand equity by incorporating digital and experiential factors. For instance, Indriasari et al. (2022) emphasize that digital banking experience—such as convenience, efficiency, and security—plays a critical role in shaping customer perceptions and satisfaction. Similarly, Akın (2024) highlights the importance of digital and emotional experiences in strengthening brand loyalty and behavioral intention.

In the Vietnamese context, previous studies mainly focus on individual factors such as service quality or customer satisfaction but fail to develop an integrated model of digital brand equity. Moreover, limited research has examined banks with strong digital positioning, such as TPBank, where technology is embedded in brand identity. Therefore, there remains a need for a comprehensive framework that integrates both traditional and digital dimensions to better explain customer behavior in modern banking environments.

2.3. Research gap and development of the proposed model

Despite the growing literature, several key research gaps remain in the context of digital banking in Vietnam. First, existing studies largely rely on traditional brand equity frameworks without incorporating digital experience as a core dimension, limiting their ability to explain customer behavior in technology-driven environments.

Second, empirical evidence on the relationship between digital brand equity and customer behavior in Vietnam is still limited, with prior research often examining isolated factors such as service quality or customer experience rather than developing an integrated model, particularly in the context of digitally advanced banks like TPBank.

Third, the relative importance of technological factors (e.g., digital experience, convenience, trust, personalization) versus traditional brand elements remains unclear, as well as how these factors interact within the brand equity framework.

3. Research methodology

3.1. Research context

This study is situated within the context of rapid digital transformation in the Vietnamese banking sector, where financial institutions are increasingly shifting from traditional branch-based models to technology-driven service ecosystems. In recent years, banks in Vietnam have actively invested in digital platforms, including mobile banking applications, automated transaction systems, and AI-based customer services, in response to the growing demand for convenience, speed, and personalization. Within this landscape, TPBank, as a pioneer in digital banking with its LiveBank system and integrated platforms, provides a suitable setting to examine the

impact of digital brand equity on customer behavior.

The study adopts a mixed-method approach, including a qualitative phase to develop the theoretical framework and refine measurement scales, and a quantitative phase based on survey data collected from 384 respondents, of which 300 valid observations are retained after data screening. This sample size meets standard requirements for multivariate analysis, ensuring the reliability and robustness of the empirical results.

3.2. Measurement and empirical strategy

All constructs are operationalized using measurement scales adapted from prior studies and adjusted to reflect the digital banking context. A five-point Likert scale is employed to capture respondents' perceptions. Customer Behavior (HV) is specified as the dependent variable, while Brand Engagement (ENG), LiveBank Convenience (CONV), Brand Trust (TRU), LiveBank Experience Quality (LVE), and Personalization (PER) are treated as independent variables representing key dimensions of digital brand equity. The empirical analysis follows a structured procedure. Descriptive statistics are used to summarize sample characteristics. The reliability of the measurement scales is assessed using Cronbach's Alpha, followed by Exploratory Factor Analysis (EFA) to validate the factor structure. Pearson correlation analysis is conducted to examine relationships among variables and detect potential multicollinearity. Finally, multiple linear regression analysis is employed to test the proposed hypotheses and evaluate the relative impact of each factor on customer behavior.

The adequacy of the sample size is consistent with the recommendations of Hair et al. (2010), while also satisfying the criteria proposed by Tabachnick and Fidell (2007) for regression analysis, thereby ensuring the robustness and reliability of the empirical results.

4. Result and discussion

4.1. Regression results

In the context of rapid digital transformation in Vietnam's banking sector, the empirical results clearly reflect a shift in how brand equity influences customer behavior, with technology-driven factors becoming dominant. The regression model demonstrates strong explanatory power (Adjusted $R^2 = 0.62$), indicating that customer behavior is largely

shaped by the five proposed dimensions of digital brand equity.

Notably, LiveBank Experience Quality (LVE) emerges as the most influential factor, highlighting that customers currently prioritize system performance, reliability, speed, and ease of use when evaluating digital banking services ($\beta = 0.38$), showing that customers prioritize system performance, reliability, and usability. Brand Trust (TRU) ranks second ($\beta = 0.27$), emphasizing the importance of security and credibility in reducing perceived risk. LiveBank Convenience (CONV) also has a notable effect ($\beta = 0.19$), reflecting the value of accessibility and time efficiency.

All five hypotheses are accepted, confirming that both traditional and digital dimensions of brand equity have positive effects on customer behavior toward TPBank's services. Among these factors, functional attributes such as LiveBank Experience Quality, Brand Trust, and Convenience play a more dominant role, indicating that customers prioritize efficiency, reliability, and ease of use in digital banking. These

findings suggest that enhancing digital experience while maintaining trust and engagement is essential for strengthening customer behavioral intentions.

4.2. Discussion of findings

The findings highlight that in digital banking, brand equity is increasingly shaped by technological factors, with digital experience playing a central role in influencing customer behavior. In particular, LiveBank Experience Quality has the strongest impact, indicating that customers prioritize functional aspects such as efficiency and reliability over emotional attributes. Brand Trust also plays a critical role by reducing perceived risk and enhancing confidence in digital services. Meanwhile, Personalization has a weaker effect, suggesting that in emerging markets like Vietnam, customers are still more focused on basic service quality, although its importance may increase as digital banking continues to develop.

The relatively low impact of Personalization (PER) on customer behavior in the Vietnamese banking market can be explained by a combination of customer perception and technological factors.

Table 1. Results of hypothesis testing

Hypothesis	Result	Implication
H1: Brand Engagement has a positive impact on customer behavior in Hanoi toward services at TPBank.	Accepted	The higher the level of customers' engagement with the TPBank brand, the greater their behavioral intention to use the bank's services.
H2: LiveBank Convenience has a positive impact on customer behavior in Hanoi toward services at TPBank.	Accepted	When the convenience of TPBank's LiveBank system increases, customers are more likely to trust and prioritize the use of the bank's services.
H3: Brand Trust has a positive impact on customer behavior in Hanoi toward services at TPBank.	Accepted	When customers have greater trust in TPBank's products and services, their intention and decision to use the bank's services increase accordingly.
H4: LiveBank Experience Quality has a positive impact on customer behavior in Hanoi toward services at TPBank.	Accepted	When customers have positive experiences with the quality of TPBank's products and services, their decision and intention to use the bank's services increase accordingly.
H5: Personalization has a positive impact on customer behavior in Hanoi toward services at TPBank.	Accepted	When customers perceive that TPBank's products and services are personalized and tailored to their individual needs and characteristics, their intention and decision to use the bank's services increase accordingly.

Source: The research results

- Many Vietnamese banking customers still prioritize basic functional attributes, such as transaction speed, reliability, and convenience, over personalized features. Even when banks provide services tailored to individual needs-such as customized product recommendations, personalized notifications, or tailored financial insights-customers may not yet perceive these as highly valuable or different from standard services. This lack of perceived differentiation reduces the influence of personalization on their behavioral intentions.

- Although TPBank and other digital banks in Vietnam have deployed AI-driven personalization, these systems may not yet be fully optimized. Limitations in data collection, algorithmic accuracy, and the user interface can prevent the AI from delivering truly relevant or impactful personalized experiences. For example, recommendations may be too general, or interface features may not clearly communicate the benefits of personalization, reducing its effectiveness in shaping customer behavior.

From a managerial perspective, the findings suggest that banks should prioritize investments in digital infrastructure and user experience to enhance brand equity and customer behavior. Specifically, improving system stability, transaction speed, and interface design should be a strategic focus. In addition, strengthening security measures and communication transparency is essential for building and maintaining customer trust. Banks should also continue to enhance convenience by optimizing digital channels and ensuring seamless service accessibility. While personalization has a relatively smaller impact, it remains an important factor for differentiation in the long term. Therefore, banks should leverage data analytics and artificial intelligence to develop more tailored services as customer expectations evolve.

The SWOT analysis shows that TPBank has strong advantages in digital banking through its integrated ecosystem, solid financial capacity, diversified income structure, and advanced risk management. However, key weaknesses include limited personalization, high credit risk provisioning costs, and over-reliance on younger customer segments. To address these issues, TPBank should enhance data analytics and AI-driven personalization

while expanding its target customer base. At the same time, TPBank benefits from opportunities such as strategic partnerships, ecosystem expansion, and the growth of cashless payments. Nevertheless, it faces threats from intense competition, macroeconomic instability, and cybersecurity risks. Therefore, strengthening cybersecurity systems, improving data protection, and maintaining transparent communication are essential to build customer trust and sustain competitive advantage.

5. Conclusion and implications

5.1. Conclusion and managerial implications

This study highlights that in the current digital banking context, brand equity remains a critical driver of customer behavior; however, its structure has significantly evolved toward technology-driven dimensions. Empirical findings from TPBank show that all components of digital brand equity positively influence customer behavior, with LiveBank Experience Quality (LVE) emerging as the most dominant factor. This reflects the current reality in emerging markets, where customers prioritize system reliability, speed, and usability over traditional branding elements. Brand Trust (TRU) and Convenience (CONV) also play essential roles, indicating that security, transparency, and ease of access are key determinants of customer adoption and continued usage.

In contrast, Engagement (ENG) and Personalization (PER) have relatively weaker effects, suggesting that emotional connection and customized services are not yet primary decision drivers in the current stage of digital banking development. These findings imply that banks must reposition their strategies by prioritizing technological capabilities and digital experience as core sources of competitive advantage. Specifically, banks should focus on enhancing digital infrastructure to ensure system stability, speed, and seamless omni-channel integration, as inconsistencies across platforms may weaken overall customer experience. Strengthening customer trust through robust cybersecurity systems, transparent communication, and reliable service delivery is equally critical, given its strong impact on behavior.

Additionally, improving convenience by simplifying user journeys and optimizing UI/UX

design can significantly increase customer engagement and retention. Although personalization currently shows limited impact, it represents a key area for long-term development; therefore, banks should invest in advanced data analytics and AI-driven solutions to deliver more tailored financial services.

5.2. Limitations and future direction

Despite its contributions, this study has several limitations. First, the use of a convenience sampling method may limit the generalizability of the findings, as the sample may not fully represent the broader population of banking customers. Second, the study focuses on a single bank, which may restrict the applicability of the results to other institutions with different strategic orientations or levels of digital

maturity. In addition, the use of multiple linear regression analysis primarily captures direct relationships between variables and may not fully reflect more complex interactions or mediating effects.

Future research could address these limitations by expanding the sample to include multiple banks and adopting more advanced analytical techniques such as Structural Equation Modeling (SEM) to provide a more comprehensive understanding of the relationships among variables. Furthermore, future studies could explore additional dimensions of digital brand equity, such as perceived innovation, omnichannel integration, or customer journey experience, to better capture the evolving nature of customer behavior in digital banking environments ■

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TÁC ĐỘNG CỦA GIÁ TRỊ THƯƠNG HIỆU ĐẾN HÀNH VI KHÁCH HÀNG: NGHIÊN CỨU TRƯỜNG HỢP NGÂN HÀNG THƯƠNG MẠI CỔ PHẦN TIỀN PHONG (TPBANK) TRONG BỐI CẢNH SỐ HÓA NGÂN HÀNG

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TÓM TẮT:

Trong bối cảnh chuyển đổi số nhanh chóng, ngành ngân hàng đang trải qua những thay đổi đáng kể do đổi mới công nghệ và kỳ vọng ngày càng cao của khách hàng. Nghiên cứu này điều tra tác động của giá trị thương hiệu đến hành vi khách hàng, tập trung cụ thể vào Ngân hàng Thương mại Cổ phần Tiên Phong (TPBank) tại Việt Nam. Nghiên cứu nhằm mục đích đánh giá các yếu tố liên quan đến kỹ thuật số của giá trị thương hiệu ảnh hưởng như thế nào đến hành vi khách hàng trong môi trường ngân hàng cạnh tranh cao. Phương pháp nghiên cứu hỗn hợp được sử dụng, kết hợp giữa phân tích định tính và định lượng. Dữ liệu được thu thập từ 300 khách hàng đã có kinh nghiệm sử dụng các dịch vụ kỹ thuật số của TPBank, bao gồm LiveBank và ứng dụng ngân hàng di động. Nghiên cứu áp dụng các kỹ thuật thống kê như hệ số Cronbach's Alpha, Phân tích nhân tố khám phá (EFA) và phân tích hồi quy đa biến để đánh giá mối quan hệ giữa các biến số. Kết quả cho thấy 05 yếu tố: Sự gắn kết thương hiệu, Sự tiện lợi của LiveBank, Niềm tin thương hiệu, Chất lượng trải nghiệm LiveBank và Cá nhân hóa có tác động tích cực đáng kể đến hành vi khách hàng. Trong số các yếu tố này, chất lượng trải nghiệm kỹ thuật số được xác định là yếu tố có ảnh hưởng nhất, trong khi cá nhân hóa cho thấy tác động tương đối yếu hơn. Nghiên cứu đóng góp vào tài liệu hiện có bằng cách mở rộng các mô hình giá trị thương hiệu truyền thống để kết hợp các yếu tố ngân hàng kỹ thuật số. Nghiên cứu cũng cung cấp những hàm ý thực tiễn cho các ngân hàng trong việc tăng cường sự gắn kết và lòng trung thành của khách hàng thông qua đổi mới công nghệ và cải thiện chất lượng dịch vụ kỹ thuật số.

Từ khóa: giá trị thương hiệu, hành vi khách hàng, ngân hàng kỹ thuật số, TPBank, LiveBank, trải nghiệm kỹ thuật số.