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WILL DIGITAL BANKING TRANSFORMATION AFFECT CONSUMER BEHAVIOR IN THE FINANCIAL SECTOR?

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ABSTRACT

This study aims to examine how customer communication, trustworthiness, transparency, and innovation influence the transformation of digital banking. It also investigates the impact of digital banking transformation on customers' financial behavior. Data were collected using a well-structured questionnaire and distributed to digital bank customers of ten banks in Indonesia. A total of 187 digital bank customers participated in this study. For data analysis, we employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using WarpPLS 6.0. The results show that customer communication, trust, transparency, and innovation positively affect digital banking transformation. It also indicates that the digital banking transformation positively impacts customer financial behavior. This study highlights previously unexplored aspects, particularly the role of digital banking transformation as a stimulant that encourages consumers to actively manage, plan, and invest their funds, which can significantly influence their financial decision-making behavior. The findings of this study highlight the importance of providing customers with a comprehensive understanding of the presence of digital banks. The advent of digital banks is expected to alter financial behaviors in the consumer decision-making process. Additionally, the government may safeguard and reassure individuals about the use of digital banking. By accelerating the pace of digital transformation and enacting appropriate regulations, Indonesia is poised to fulfill its mission of becoming a developed nation.

Keywords: *Communication, Trustworthiness, Transparency, Innovation, Digital Transformation, Customers' Behavior*

INTRODUCTION

The COVID-19 pandemic, which happened three years ago in many countries, including Indonesia, caused recessions in several sectors, such as tourism, transportation, hotels, and others (Zhang, 2023). The result of the situation has a significant impact on the Indonesian economy, including changes in the international supply chain and a decline in foreign investment in Indonesia. At the beginning, economic growth experienced a downward trend of 2.97% in 2020 from 5.02% in 2019, and in prior years it was still stable at 5% (Suryahadi et al., 2020). People's lifestyles since the pandemic have unexpectedly transformed with the increased usage of the digital economy. The outcome is an endeavor to expedite digital economic transformation, which may be utilized as a highly effective strategy to ensure that the economic sector continues to function to support economic development in Indonesia.

Digital transformation substantially increases the performance or achievements of enterprises and also the banking sector (Shanti et al., 2023). Moreover, digitalization has become a core issue in banking as it has the potential to reach customers without a direct interface in branch office, create marketing distinction among competitors, and give extra-operational cost efficiency. Digital transformation is a progressive development and upgrade for operations, skills, activities, and competencies to obtain benefits from the transition to the existing e-technologies that notably influence society (Novira, 2023).

The advent of the Internet and the ownership of mobile phones or smartphones are regarded as the primary reasons for the widespread adoption of digital commerce and banking services (Harahap et al., 2023; Ulici et al., 2023). Indonesia experienced a surge in the number of internet users by 215.6 million in 2023, which exceeded the pre-pandemic peak of 196.7 million in 2019. The surge in internet usage has also been observed in the East Ventures-Digital Competitiveness Index (EV-DCI) 2023, which showed a constant improvement in the overall score of 38.5 with an increase of 3.3 points from the previous year (Khan & Khattak, 2024).This indicates the explosive development of digital access.

The shift in society's predisposition to utilize digital services, particularly banking, implies the digital banking industry has the potential to become more advanced and responsive to technological advancements. If we proceed more thoroughly, there are still lots of Indonesians who are not yet touched by conventional banking services (unbanked) (Verhoef et al., 2021). The number of unbanked people in Indonesia exceeded 97.7 million people, or approximately 48 percent of the total population (Nasrul, 2024). This is a possibility for digital banking platforms because their offerings can foster higher literacy and monetary inclusion in Indonesia. Digital banks are easy to access for unbanked people or those living in remote areas (Dewantara & Sitorus, 2022).

Conducting research on digital transformation is relevant, considering the escalating progress of digital transformation in digital banking. This is distinct from other previous research that examined digital transformation in parts of higher education (Abitia & Correa, 2021; Gkrimpizi et al., 2023), the creative sector (Sheth, 2020), MSMEs(Ahmad et al., 2022; Stich et al., 2020), entrepreneurial programs (Nambisan et al., 2019), and tourism (Filipiak et al., 2023). Previous research has mostly concentrated on the business model agenda within the banking sector, with less attention given to the influence of customer financial behavior on digital banks. It is essential to remember that financial behavior encompasses the way individuals' approach, manage, and utilize their financial assets (Prosad et al., 2015). The digital banks provide individuals and society with financial management solutions (Hanelt et al., 2021; Nadkarni & Prugl, 2021).

The elevated level of public trust in Indonesian digital banking can be seen by the upsurge in the number of digital transactions while ATM usage drops (Rusliana et al., 2023). In the third quarter of 2023, BI recorded the digital banking transaction value reached IDR 15,148.71 trillion, expanding 12.83 percent. By September 2023, the number of transactions made using ATM cards and debit cards was 619.73 million, showing a monthly decrease of 2.34 percent and an annual decrease of 3.22 percent (Nasrul, 2024). This indicates that the financial management of the finance communities is good. The digital bank transformation applied to business models in banking is considered compatible with the changing individual financial behavior in the process of decision-making (Kraus et al., 2022; Suriani, 2022). Interestingly, there is an absence of studies that examine the influence of digital bank transformation on customer financial behavior. Recently, several studies have emphasized two key features of consumer financial behavior: digital financial inclusion (Sufyati & Alvi, 2022) and digital financial literacy (Dewmini et al., 2023; Gosal & Nainggolan, 2023; Muat & Sari, 2024; Rahayu et al., 2022). In fact, customer financial behavior can be investigated across various domains, one of which is the availability of a digital bank business model.

Furthermore, digital bank transformation is also addressed based on the consumers' communication, trustworthiness, transparency, and innovation, as variables, which develop the existence of digital banks. Considering that digital banking is the latest business model, communication with customers is essential. The objective of this communication is to find out the current needs (Sirucek & Galecka, 2021); this is also an opportunity for digital banks to be trustworthy. The trust developed by consumers will be one of the aspects that may impact the longevity of a business (Bai & Sarkis, 2020; Oldeweme et al., 2021).

Then, trust can be developed based on transparency (Wanner et al., 2022), because transparency is part of trust (Oldeweme et al., 2021). Digital transformation must also foster innovation (Nylen & Holmstrom, 2015). One thing a bank can do is provide immediate and rapid transactions (Parida et al., 2019) and deliver full digitalization services in banking (Zhghenti & Chkareuli, 2021). Due to that, there is a continuous need for digital transformation strategies that consider consumers' future needs.

Therefore, this research intends to investigate the influence of the digital banking transition on customers' financial behavior in the banking business. As well as analyzing whether the existence of digital banks is founded on customers' communication, trustworthiness, transparency, and innovation. This research has the following objectives: (1) determining the factors that have an influence on digital bank transformation; (2) finding out whether digital bank transformation affects consumer behavior in the financial sector; and (3) finding out how much influence digital bank transformation has on consumer behavior in the financial sector.

This paper is divided into five sections. First, we investigate the context of the research. Then, we analyze the literature and develop hypotheses. Furthermore, we address empirical approaches. Then, we review the data analysis and discuss the relevant topics. Finally, we draw conclusions and recommendations.

THEORETICAL FOUNDATION AND HYPOTHESES DEVELOPMENT

Background Theory

Our research is grounded in the theoretical framework of financial behavior. The behavioral finance theory aims to elucidate and enhance comprehension of the patterns within an individual's rationales, encompassing emotional factors and the extent to which these factors impact the process of decision-making (Prosad et al., 2015). Byrne & Gifford (2008) assert that behavioral finance endeavors to address the fundamental inquiries pertaining to nature (what), rationale (why), and mechanisms (how) the finance with a specific emphasis on the human viewpoint.

Financial behavior relates to the way individuals handle, control, and utilize their financial assets. Individuals who are responsible for it will employ money efficiently through the practices of budgeting, saving, managing expenses, investing, and punctually repaying debt (Suriani, 2022).In light of the preceding elucidation of financial behavior, the financial behavior aspect is predicated upon the financial choices undertaken to ensure effective financial management. Furthermore, Rahayu et al. (2022) describes family or individual financial behavior to manage financial resources, which includes planning, savings budgets, insurance, and investment. In this scenario, financial behavior has numerous implications that assist each other in attaining financial goals. Additionally, financial behavior is something that is apparent in the usage of money; therefore, it gives a chance to examine why someone behaves financially differently from others.

The existence of digital banks provides financial management solutions to individuals and society. Because banking is now expected to not only provide savings and loan services but also interactive personal experiences, such as financial management, investment, and financial services, wrapped in the latest e-platforms (Hanelt et al., 2021; Nadkarni & Prugl, 2021).

The correlation of behavioral finance theory with research variables, such as digital bank transformation, which is a stimulant to make people and society engaged with managing, planning, and investing their finances properly, is expected to affect consumer financial behavior in making decisions (Kraus et al., 2022). Apart from that, digital bank transformation is also addressed based on the factors of customers' communication, trustworthiness, transparency, and innovation that develop the existence of digital banks.

Developing a digital bank business model requires communication with customers to determine their needs (Kusa et al., 2020); this is also a chance for digital banks to be trustworthy. Referring to Oldeweme et al. (2021), trust established by consumers will be one of the factors that can influence a business sustainability. Additionally, trust can also be appealed based on transparency (Wanner et al., 2022), because transparency is part of trust (Oldeweme et al., 2021). Digital transformation must also create innovation (Nylen & Holmstrom, 2015). One thing bank can do is provide instantaneous and fast transactions (Parida et al., 2019), providing digitalization services in banking (Zhghenti & Chkareuli, 2021).

Customers' Communication

Communication is a social activity that happens between at least two individuals where a person sends signs to another (Kusa et al., 2020). Meanwhile, according to Parida et al. (2019), customer communication is the process of providing satisfaction to themselves. Therefore, customer communication is defined as an activity to convey messages to consumers using various media and channels that are available with the hope that four steps of change will occur, namely: changes in attitudes, knowledge, and desired to take actions, and understanding customer needs (Kaur et al., 2021). Communication with customers allows companies to learn and attempt to adapt to customers (Kotarba, 2018; Kusa et al., 2020).

Trustworthiness

Trust is defined as customer belief in a product or service provider to meet their long-term necessities (Wanner et al., 2022). In any form of business, building trust is the key to attaining success. For example, by establishing consumer trust, they will be pleased to use the services or products offered (Oldeweme et al., 2021). Referring to Kusa et al. (2020), consumer trust encompasses the knowledge that consumers have and every determination that consumers make about objects, attributes, and benefits. Objects can be products, people, businesses, and all that an individual has as beliefs and attitudes.

Transparency

According to Bai & Sarkis (2020), transparency is sincerity in terms of providing information without the company keeping any secrets. Transparency is one of the responsibilities that companies must fulfil when doing business. Transparency in conveying information additionally implies that the information expressed must be complete, correct, and readily accessible to all audiences (Udokwu et al., 2021; Wanner et al., 2022). A company that carries out transparency adequately also develops a high level of trust in its company or the business it is conducting.

Innovation

Innovation in this broad concept is not just exclusive to products. Innovation can be concepts, methodologies, or objects that are perceived by someone as something new (Nylen & Holmstrom, 2015). Innovation is also often used to refer to alterations that are perceived as novel by the people experiencing them. However, in the marketing context and consumer behavior setting, innovation has to do with products or services that are innovative (Setzke et al., 2023). According to Nambisan et al. (2019) the innovation is seen as an indicator for start-ups to increase their competitiveness in products and services. Innovation, creation, and value proposition have an impact on the use of recent digital technologies and new opportunities to work with prospective collaborators to amend company workflows.

Digital Banking Transformation

The transformation of banking into a digital bank is a combination of online banking services and mobile banking in one application system, all of which are accessed by smartphone (Osei et al., 2023). Additionally, online banking pertains to all the features of accessing banking services through the bank's website. Digital banks can offer a variety of products and features that make it easy for customers to access assets, apply for loans, and invest for the future with their smartphones (Schmidt et al., 2017). In addition, digital banks can reach more consumers by partnering with e-commerce and peer-to-peer (P2P) digital lending to establish a digital financial ecosystem. Then digital banks do not need many ATM devices because all transactions happen online and in a system that may minimize administrative expenses (Gkrimpizi et al., 2023; Ulici et al., 2023).

Customers' Financial Behavior

Consumer financial behavior is the way a person manages their finances. Based on Suriani (2022), consumer financial behavior is a method that describes how individuals invest or interact with finances, which is impacted by psychological variables. Consumer financial behavior is incorporated as a result of the organization of many sciences. The first scientific structure is psychology, which investigates behavioral and mental processes and the way these psychological processes are impacted by the human's physical and external environment. The following scientific structure is finance, covering the shape of the financial system, allocation, and application of resources. The last scientific structure is systematic sociology, which entails individual or group behavior and places greater emphasis on the effect of social ties on people's attitudes and behaviors (Sufyati & Alvi, 2022).

HYPOTHESES DEVELOPMENT

Customers' Communication on Digital Bank Transformation

Customer communication is an activity to convey information from sellers or service providers to customers to preserve existing relationships (Osei et al., 2023). If the relationship remains, customers can continue to place orders, so the influence on sales rises. Therefore, it is critical to acknowledge that consumer interaction allows the firm to know and react to its clients. To captivate consumers' attention and retain it, we can do something straightforward, that is, provide messages through effective communication to customers (Chipana, 2019).

Engaging with customers will help organizations know and react to them. Communication with consumers has been highlighted in studies in relation to marketing tactics that concentrate on customer loyalty. Most previous research on the results of communication between customers implies that current consumer demands focus on financial services that can be accessible anywhere at any time without visiting a physical location(Khan & Khattak, 2024; Kontic &Vidicki, 2018), because this will disturb activities(Gkrimpizi et al., 2023). So digital banking transformation in the form of a digital bank can satisfy customer demands.

H1: Customer communication is positively related to digital banking transformation.

Trustworthiness on Digital Bank Transformation

In the present era of more intense competition in the banking sector, customer trust is one of the most important aspects to keep and enhance for a viable firm. Customer trust is now an essential component of a company's development. To obtain, retain, and grow consumer trust is something that is highly expensive, and to get it calls for a lot of effort (Sawmar & Mohammed, 2021). A number of scholars considered trustworthiness to be a significant aspect in determining the effectiveness of marketing relationships (Kusa et al., 2020; Wijayanti et al., 2024). Trustworthiness is a highly critical characteristic in developing and upholding management relationships with consumers (Cantalejo, 2020). Consumer trust is also part of the faith that consumers have that service providers can be relied on to fulfill their promises.

Trust can also be obtained by doing the best for another party through a relationship (Sirucek & Galecka, 2021). Digital bank transformation is also related to effective management practices by consumers. Digital banks have significant degrees of uncertainty since the people engaged in the transaction are not in the same territory. So, it is important to develop high regard for customers so that digital banks function according to their targets. A previous study indicated that the success of digital transformation was supported by the trust given by consumers (Gefen et al., 2003; Zhghenti & Chkareuli, 2021). When banks gain customer trust using digital banking technologies, they can also evolve into digital banks. Therefore, the hypothesis is as follows:

H2: Trust is positively related to digital banking transformation.

Transparency on Digital Bank Transformation

Transparency is a highly essential concept and is becoming more crucial as the urge to continue growing digital banking gets more extensive. Transparency is a notion that enables everyone to quickly receive information regarding organizational administration (Burlakov, 2021). So, watching system behavior has a profound connection to transparency, which plays a fundamental role. Transparency can enhance awareness based on trust in the system. Transparency can be considered one of the standards that companies have to follow in business. Having transparency in information signifies that the information communicated must be comprehensive, correct, and timely for people (Udokwu et al., 2021; Wanner et al., 2022). Furthermore, the transparency system is expected to have an actual impact on digital transformation adoption (Wanner et al., 2022).

Several studies have proved that openness is an influential factor in the adoption of technological systems (Bai & Sarkis, 2020; Oldeweme et al., 2021). In dominating the digital banking market, they must have openness towards clients, because it plays a role in executing business activities successfully (Oldeweme et al., 2021). The more accessible banks are when it comes to reporting and conveying information, the easier it will be to transition to a digital bank. So, the hypothesis is:

H3: Transparency is positively related to digital banking transformation.

Innovation on Digital Bank Transformation

Product innovation plays a significant role in the community, where constant improvement and the creation of new services provide enormous progress to enterprises and societies (Setzke et al., 2023). Then, innovation is the development or alteration of a product or process done by an organization or company, which helps them reconsider their strategies and attain their goals with competitive advantages. One of the competitive advantages is the digital transformation itself. Some earlier studies have emphasized the unique nature of digital transformation, which enables new sorts of innovation processes that are substantially different from the equivalent innovation processes of digital industrial era (Hanelt et al., 2021; Nylen & Holmstrom, 2015).

Product innovation is the latest concept that provides additional value and has a beneficial influence on human life. Therefore, this product innovation frequently corresponds to technology.Innovation is seen as a standard for new companies to use to improve the competitiveness of their services and products. Through innovation, creation, and value offerings, including utilizing new digital technologies, it will bring new possibilities to work with new business partners and lead to more decent business flows (Schmidt et al., 2017). Digital banks are a form of modern technology that is now prevalent. The business model that is extremely popular with customers is a business plan that fosters product innovation (Hanelt et al., 2021). So, the hypotheses as follows:

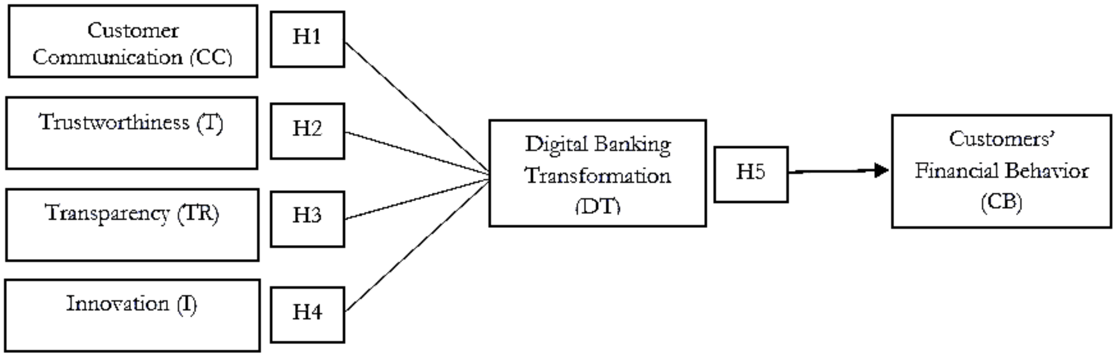
H4: Innovation is positively related to digital banking transformation.

Digital Banking Transformation on Consumer Behavior in the Financial Sector

Digital transformation is a critical component of the entire company's transformation plan. The appropriate technology, coupled with people, processes, and operations, offers companies the flexibility to respond swiftly to challenges and opportunities, meeting new consumer requirements, continually developing, and driving future growth and innovation. Transformation on digital banking can be regarded as a sociocultural process. It is a constant change in the culture, organization, and operations of an industry, organization, or ecosystem through the intelligent integration of technology, processes, and digital competences at all levels and functions (Gkrimpizi et al., 2023). It can also influence people, processes, strategies, structures, and competitive dynamics (Nambisan et al., 2019), involving revolution and holistic change in organizations by merging digital technologies and going beyond the only advanced digital technologies adoption (Kontic & Vidicki, 2018). The transformation of banking into a digital bank is a mix of online banking services and mobile banking on one application device, all of which are accessed through mobile phones (Osei et al., 2023).

Previous studies concur that transformation significantly affects general social behavior, both strategic and prioritized, owing to present and future changes for a settlement or decision-making process (Bukrarlakov, 2021; Hanelt et al., 2021). With the digital bank changes, business models can modify individual financial behavior to make decisions (Kraus et al., 2022). Financial behavior relates to the manner in which individuals handle, control, and utilize their financial assets. Individuals who are responsible for it will employ money efficiently through the practices of budgeting, saving, managing expenses, investing, and punctually repaying debt (Suriani, 2022). The existence of the digital banking revolution is projected to affect customers' financial behavior and help them manage money more effectively, including budgeting, savings budgets, insurance, and investments (Gao, 2023). So, the hypothesis as follow:

H5: Digital banking transformation is positively related to consumer behavior in the financial sector.



Note CC= Customer Communication, T= Trustworthiness, TR= Transparency, I= Innovation, DT= Digital Banking Transformation, CB= Customers' Financial Behavior.

Figure 1. Research Model

METHODS

Research Design and Sample

We conducted quantitative research through field surveys to collect data from digital bank users. Our research targeted customers from the top 10 digital banks frequently downloaded in Indonesia, according to Anggreani (2023). We employed purposive sampling, focusing exclusively on digital bank users. Data collection involved distributing a questionnaire link via WhatsApp groups and promoting it through sponsored Instagram ads, a technique effectively reaching our target audience (Amira & Nurhayati, 2019). Respondents completed the survey through a Google Form from October to December 2023.A total of 187 respondents across Indonesia participated in this study. This sample size, ranging between 167 and 300, is appropriate for research utilizing structural equation models (Memon et al., 2020).

Research Instrument

This research implemented a survey questionnaire consisting of two parts of demographic factors (genders, age, education, occupations, monthly incomes, and digital banking types) and latent constructs (customer communication, trust, transparency, innovation, digital bank transformation, and customer financial behavior).

The customer communication scale consists of four statement items, namely understanding, attitude, pleasure, improved relationships (Kusa et al., 2020; Uribe et al., 2023). Customer communication is an activity of sending messages to consumers using various available media and channels (Kaur et al., 2021). For item instance: "I get the best service solution in banking." The scale was found to have a Cronbach's alpha of 0.719 in research done by Uribe et al. (2023).

Trust has four statements originating from sincerity, ability, integrity, and willingness to depend on (Gefen et al., 2003). Trust is defined as customer belief in a product or service provider to meet their long-term necessities (Wanner et al., 2022). One of the items such as: "I trust doing transactions in banks". The internal consistency (Cronbach's alpha) of the scale was 0.861 in previous research by Wanner et al. (2022).

Transparency has four statements derived from indicators of document availability and accessibility, completeness and clarity of information, process transparency, and a regulatory framework to guarantee the transparency (Kopits & Craig, 1998). Transparency is sincerity in terms of providing information without the company keeping any secrets (Bai & Sarkis, 2020).

For example, "I trust every report provided by banks." The Cronbach Alpha value is reported with a value of 0,821 (Oldeweme et al., 2021).

Furthermore, innovation has four statements: relative advantage, compatibility, divisibility, and communicability (Holak & Lehmann, 1990). Innovation has to do with products or services that are innovative (Setzke et al., 2023). The internal consistency (Cronbach's alpha) of the scale was 0.823 referring to previous work published by Uribe et al. (2023).

The transformation of banking into a digital bank is essentially a combination of online banking services and mobile banking in one application system, all of which are accessed by smartphone (Osei et al., 2023). There are only 4 statements on the digital banking transformation scale, namely, digital mindset, practice, and data access integration (Kontic & Vidicki, 2018). Such an item: "Digital transformation can optimize banking development." Setzke et al. (2023) stated the Cronbach Alpha value at 0,818.

The consumer behavior scale is measured using three statement items originating from the cognitive component, affective component, and behavioral components (Wardhana, 2023). According to Suriani (2022), consumer financial behavior is an approach that elucidates how individuals invest or engage in finances, which is impacted by psychological variables. One of the items: "Banking development affects individual finances" Sufyati & Alvi (2022) reported Cronbach's alpha of 0.781 for the scale in their study.

Prior to completing the questionnaire, researchers provided respondents with specific instructions on how to input personal information and reply to statement items. Participants were given explicit instructions to utilize a Likert-type scale containing five points, ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement), to evaluate the statement items.

DATA ANALYSIS AND RESULTS

Model Estimation

We used a Partial Least Squares (PLS) path modeling to analyze the data. This method is particularly effective for complex models with mediators. The SEM approach, compared to CB SEM, is better suited for this study for several reasons: it allows for theory prediction and development, works well with small datasets, fits both formative and reflective indicators in a model, and does not need normally distributed data (Ramayah et al., 2018). Warp PLS 6.0 was the tool used for data estimation (Memon et al., 2021).

Respondents

Table 1 reveals that the majority of participants were women, 54.01%. Respondents' age was mostly 18–25 years (44.39%). Respondents with first-degree education dominate by as much as 42.25% compared to other education. Furthermore, respondents had a variety of occupation histories, such that 41.18% were found in other categories of employment. For monthly income, the majority of participants reported an income of around 3.100.000–4.000.000, or 46.52%. Because this research focuses on digital banks, we also provide various digital banks in Indonesia. Genius online banking services are the most frequently used by participants, with a value of 18.18% compared to other digital banks.

Table 1: Respondent Demographics

Characteristic		Frequency	Percentage (%)
Genders			
Males		86	45,99
Females		101	54,01
	Total	*187*	*100*
Age			
18 – 25		83	44,39
26 – 35		67	35,83
36 – 45		29	15,51
Above 46		8	4,28
	Total	*187*	*100*
Education			
Primary to High Schools		23	12,30
Bachelor's degree		79	42,25
Master's degree		54	28,88
Doctoral Degree (PhD)		24	12,83
Other Degree		7	3,74
	Total	*187*	*100*
Occupations			
BUMN Employee		27	14,44
Civil Servants		30	16,04
College Students		19	10,16
Self-employments		34	18,18
Other Occupations		77	41,18
	Total	*187*	*100*
Income (Month)			
1.000.000 – 2.000.000		4	2,14
2.100.000 – 3.000.000		44	23,53
3.100.000 – 4.000.000		87	46,52
Above 4.100.000		52	27,81
	Total	*187*	*100*

Evaluation of the Measurement Model (Outer model)

The measurement model is applied to validity and reliability testing in research. Validity and reliability tests are conducted to verify that each instrument used to assess respondents' responses is in accordance with the study results and can be generalized (Wijayanti et al., 2024). Validity testing needs to be completed to ensure that the instrument used for measuring the parameter is correct, and reliability verifies the precision of the instrument. There are two kinds of validity in PLS SEM, namely convergent validity and discriminant validity. The convergent validity indicates that a group of indicators reflects one latent variable and is the basis for that latent variable (Hair et al., 2017).

An indication is considered legitimate if the overall indicator fits the criteria with the loading value is higher than 0.7 and the AVE value is over 0.5 (Kock, 2010). Overall loading levels over 0.7 (>0.7) and AVE above 0.5 (>0.5) are susceptible (0.606 to 0.702). An indicator is deemed trustworthy if the construct reliability value is > 0.7 and Cronbach's alpha is > 0.6. The composite reliability findings for each variable have satisfied the standards, namely larger than 0.7 (>0.7) susceptible (0.817 to 0.900), and the Cronbach's alpha value has met the requirements, namely greater than 0.5 (>0.5) susceptible (0.783 to 0.876).

Thediscriminant validity is the second type of validity found in PLS SEM, used to assure that each concept from each latent model is distinct from other variables (Hair et al., 2017). Discriminant validity was examined by evaluating the Heterotrait-Monotrait Ratio (HTMT). A concept is termed discriminant validity if the HTMT ratio is less than 0.9 (HTMT < 0.9) (Henseler et al., 2016). The aggregate HTMT value is less than 0.9; therefore, it can be inferred that the concept in this research met the criteria.

Evaluation of Structural Models (Inner models)

After evaluating the validity and reliability of the latent construct, the second step of PLS path modelling involves looking at the structural model. The structural model was assessed through examining potential common method bias, coefficient of determination (R2), and predictive relevance (Q2). Regarding testing for common method bias, Hair et al. (2017) recommend using the complete collinearity variance inflation factor (FCVIF) to determine the presence of lateral and vertical collinearity. The maximum allowable value for FCVIF is 3.30, as stated (Chin, 1998).

Examination of the coefficient of determination (R^2) attempts to show the accuracy of model predictions. The R^2 value for digital bank transformation has a value of 0.69 or 69%; the remaining 0.31 or 31% are additional variables that are not included in customers' communication: trustworthiness, transparency, and innovation to develop the presence of digital bank transformation. Then R^2 of consumer financial behavior is 0.57 or 57%, and the remaining 0.43 or 43% is other variables. Both R^2 values fall into the medium group because they are within the range of 0.33-0.67 (Chin, 1998).

The predictive relevance test (Q^2) establishes the amount of value assigned to the attention model and parameter estimations (Henseler et al., 2016). Q2 score > 0 (zero) implies the model has very high predictive relevance. Digital bank transformation (Q2 = 0.69) and consumer financial behavior (Q2 = 0.57) meet the necessary criteria for predictive relevance.

Hypothesis testing is performed by examining the result of the relationship between constructs, as assessed by the path coefficient and the significance obtained. The significant threshold applied by researchers in this research is 5%, or 0.05. Research is supported when the P value is below 0.05 (<0.05) (Ascarya & Tekdogen, 2022; Hair et al., 2017). The research results specify the aggregate P value is below 0.05 (<0.05), providing convincing proof for H1, H2, H3, H4, and H5.

DISCUSSION

Our research attempts to investigate the leading causes of digitalization in banking, examines the impact of that transformation on consumer behavior, and assesses how much digital bank transformation impacts consumer behavior in the financial sector. Customer communication shows a positive value in advancements in digital bank transformation (H1 is accepted). Digital banking facilities are a business transformation model (Parida et al., 2019), that primary purpose is to be promoted and accepted by customers. A solid relationship with customers also makes it easier to promote the business you wish to operate (Cantalejo, 2020).

Table 2: Measurement Model Assessment

Latent Construct	Code	Loadings
Customer Communication (CR= 0.831 CA=0.725 and AVE= 0.659)		
I understand the explanation of using digital bank features	CC.1	0.814
I have always been good at using digital banks	CC.2	0.715
I feel happy with digital banking services	CC.3	0.850
I feel that digital banks are the best solution in providing banking services.	CC.4	0.767
Trustworthiness (CR= 0.860 CA=0.783 and AVE= 0.606)		
I entrust every transaction using digital banking	T.1	0.770
I have the ability to operate digital banking services	T.2	0.787
I am committed to using digital banking services for every transaction	T.3	0.799
I tend to depend on using digital banks	T.4	0.758
Transparency (CR= 0.900 CA=0.852 and AVE= 0.692)		
I find access to digital banking services very easy	TR.1	0.832
Digital banks always provide comprehensive information for users	TR.2	0.859
Digital banks are open in service to every user	TR.3	0.822
I trust every report provided by digital banks	TR.4	0.815
Innovation (CR= 0.881 CA=0.817 and AVE= 0.651)		
Digital banks always provide advantages	I.1	0.752
Digital banks adapt to user needs	I.2	0.830
Digital banks always provide periodic innovations	I.3	0.889
Digital banks build customer communication	I.4	0.837
Digital Banking Transformation (CR= 0.876 CA=0.787 and AVE= 0.702)		
Digital banks prioritize digitalization to optimize financial sector products	DT.1	0.876
All digital bank transaction activities are conducted online	DT.2	0.821
Digital banks have integrated financial data	DT.3	0.816
Customer Financial Behavior (CR= 0.856 CA=0.745 and AVE= 0.666)		
I have a positive attitude towards using digital banks	CB.1	0.865
I feel helped by the presence of digital banks	CB.2	0.867
I think digital banks are one of the breakthroughs in decent banking services	CB.3	0.804

Note CC= Customer Communication, T= Trustworthiness, TR= Transparency, I= Innovation, DT= Digital Banking Transformation, CB= Customers' Financial Behavior, CR= Composite Reliability, CA= Cronbach's Alpha, AVE= Average Variance Extracted.

Table 3. Discriminant Validity (HTMT)

	CC	**T**	**TR**	**I**	**DT**	**CB**
CC						
T	0.743					
TR	0.725	0.843				
I	0.713	0.817	0.822			
DT	0.697	0.801	0.813	0.880		
CB	0.682	0.780	0.800	0.872	0.883	

Note CC= Customer Communication, T= Trustworthiness, TR= Transparency, I= Innovation, DT= Digital Banking Transformation, CB= Customers' Financial Behavior

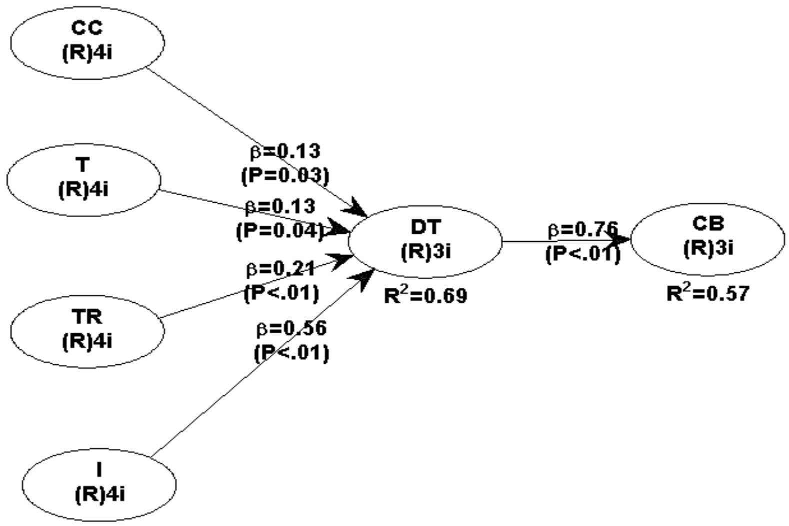


Figure 2: Structural Model

Table 4: Assessment of Structural Model

Path	Path Coefficients	P-values	Information
H1(CC>DT)	0.131	0.033	Supported
H2(T>DT)	0.129	0.036	Supported
H3(TR>DT)	0.213	0.001	Supported
H4(I>DT)	0.559	<0.001	Supported
H5(DT>CB)	0.758	<0.001	Supported
H1(CC>DT)	0.131	0.033	Supported

Note CC= Customer Communication, T= Trustworthiness, TR= Transparency, I= Innovation, DT= Digital Banking Transformation, CB= Customers' Financial Behavior

By connecting closer with consumers, organizations will better grasp the primary concerns confronting customers. Previous studies also show that modern customer demands focus on financial services that can be accessible anywhere at any time without visiting an actual location (Khan & Khattak, 2024; Kontic & Vidicki, 2018). Nowadays, with digital banks, banking operations have become more feasible. With the support of the internet and smartphones, people can immediately do transactions in a single application, such as transfers both to each other and between banks, payments via QRIS, transfers of up to hundreds of millions, Top Up E-money, and even investments (Harahap et al., 2023). The result remains pertinent to the research conducted by Kaur et al. (2021), which affirms that customer communication influences the formulation of the company model.

Furthermore, trust positively affects digital bank transformation (H2 is accepted). In the banking and financial sector, especially digitalization, it is mandatory to show that the business model being built has a sense of security and little risk so that users of digital transformation changes can accept digitalization. Trust in terms of technology acceptance has been widely practiced; research findings show that trust is a form of success in conducting relationship marketing (Kusa et al., 2020; Wijayanti et al., 2024). Individuals have the perception and confidence that digital bank transformation service providers will not disappoint and work hard to meet their interests. Instilling trust in customers is important. One of the main priorities of digital banking is ensuring trust in the benefits and security of digital (Sirucek & Galecka, 2021). Studies have proven that trust can serve as a foundation for customers to accept new (Kusa et al., 2020; Wanner et al., 2022). In these days of intense competition in the banking industry, customer trust is one of the most important aspects to maintain and enhance for a viable company. Customer trust is now an essential requirement for company development. A company requires a lot of effort to obtain, retain, and build trust itself, which is a precious variable. Trust is an important dimension in developing and maintaining management relationships with customers (Cantalejo, 2020). Moreover, digital banks have high levels of uncertainty because the parties involved in the transaction are not in the same place. So, it is necessary to build good customer trust so that digital banks run according to their goals (Gefen et al., 2003; Zhghenti & Chkareuli, 2021).

Then, the third assortment of statistical data indicates that transparency has a positive impact on digital bank transformation (H3 is accepted), which corresponds with previous studies on transparency being an influential factor in the application of technological systems (Bai & Sarkis, 2020; Oldeweme et al., 2021). However, the research conducted by Matheus et al. (2023) indicated that transparency does not have an impact on customers' adoption of technology but is just a component of necessity. Transparency of a system has become the key support of system interpretability and is automatically increasingly included in technology acceptance assessments (Wanner et al., 2022). In the digital banking system context, the researchers define transparency as the system's capacity to explain and reveal all programs in the system and later influence each customer's decision to use a digital bank and transition to all digital bank transformation services. So, we see that system behavior connected to transparency plays a significant role. Transparency can enhance awareness based on trust in the system. Several studies have also proved it is a main reason for technological system adoptions (Bai & Sarkis, 2020; Oldeweme et al., 2021). Transparency means elucidating the intentions of a digital bank's business model and delivering what customers expect.

Innovation has a positive impact on digital bank transformation (H4 is accepted). The research result complements previous research, which suggested that innovation is one of the criteria for customers embracing technology (Nylen & Holmstrom, 2015). If banks do not innovate according to the future and customer needs, then they will lose customers (Nambisan et al., 2019). Digital innovation is a novel method of employing digital technologies. One strategy to confront the issues encountered by corporations is to create new business models (Nylen & Holmstrom, 2015). Establishing a digital bank will provide various issues for banks, while managing digital innovation will generate new and better change (Hanelt et al., 2021; Nylen & Holmstrom, 2015). Digital banking must be able to offer the tremendous complexity and digital innovation processes that clients need. Digital banking is a new and growing technology currently in the 4.0 revolution. One strategy to stimulate public interest in using digital banks is to generate product improvements for the banking and financial sectors. In brief, this means that banks must continually innovate and leverage modern technology to acquire competitive advantages that make them stand out (Nadkarni & Prugl, 2021).

Then, digital banking transformation can influence the behavior of financial sector customers (H5 is accepted). The results of this research demonstrate that digitalization technology implemented in business models enables an organization to become more competitive. Digital transformation has become a trend in the financial sector. The introduction of this concept intends to enhance the capacity of financial sector organizations or companies to achieve significant advancements in their productivity and clients' perceived responsiveness. Digital banking transformation has a tremendous influence on organizational priorities both present changes and the future of the business (Burlakov, 2021; Hanelt et al., 2021). With the change in digital banking, business models tend to be able to change individual financial behavior when making decisions (Kraus et al., 2022). Suriani (2022) stated that financial behavior is related to the way individuals manage, control, and utilize their financial holdings. Responsible people will allocate money efficiently through the habits of budgeting, saving, controlling costs, investing, and paying obligations on time. Being aware of the digital bank transformation can affect consumer financial behavior and help them manage money more efficiently, including budgeting, savings budgets, insurance, and investments (Gao, 2023).

Theoretical Implications

This research examines how customer communication, trust, transparency, and innovation variables contribute to the use of digital banks. In addition, digital bank transformation can influence customer financial behavior. First, the results of this research found that communication carried out by customers had an impact on digital bank transformation. Establishing effective communication with banking customers can help them understand the main problems they face. In this way, banks can provide the best solutions to the problems they face, including providing digital banking services. Second, digital banks must establish a sense of trust in each of their consumers. Moreover, trust is deemed crucial in light of the intensifying rivalry within the banking sector right now. Customer trust is one of the most crucial factors in preserving and increasing the company's continuity. Then, digital banks must also prioritize transparency, because it can be considered one of the standards that must be followed by companies in business, especially banking. Information transparency means that the information communicated must be comprehensive, correct, and timely for the public regarding digital banking. Fourth, innovation must continue to be offered by digital banks because banks must be able to supply the enormous complexity and digital innovation processes customers require. Fifth, digital banking transformation can influence customers' financial behavior and help them manage their money more efficiently, including planning and budgeting for savings, insurance, and investments.

Practical Implications

This research has several practical implications, particularly for banking and governments. The research reveals that the digital bank business model, prior to undergoing a shift, aimed to create an effective interaction with consumers. The purpose is to help them understand the main barriers they experience. The current societal need is for financial access that can be conveniently obtained without the necessity of visiting a branch in person. Due to that, banks can effectively address today's needs and difficulties by transitioning to digital banking. Banks may effectively address the difficulties that come up by offering digital banking services to provide optimal solutions. In addition, it is suggested that banking institutions establish a 24-hour call center to respond to any issues experienced by consumers at any given moment.

Banks have a duty to build trust with every consumer. Digital banks are still relatively new; this can both be an opportunity and a challenge to win market competitiveness. Customer trust is a critical aspect of maintaining and improving a company's survival. In order to be able to compete, banks must immediately change and improve their services to gain customers' trust. It is advised that digital banks be able to develop trust by offering service users a lot of attention. In addition, considering the high probability of fraud, it will certainly pose a challenge for customers; therefore, the government is urged to develop legislative laws pertaining to customer protection for digital bank electronic services. This relies on the concept of fostering confidence that consumer loyalty and satisfaction are the spearheads of business success in banking.

Apart from building trust, digital banks should be able to prioritize transparency. Banks that aspire to become digital banks have to provide information that emphasizes consumer security and convenience. It is suggested that banks continue to favor transparency by providing transparent transactions, being aware that digital banks do not have branch offices.

Digital banks must continue to provide innovation in every banking service. With technological advances, digital banking innovations in Indonesia must continue to emerge to improve the customer experience and bank operational efficiency. When banking wants to transform, digital banks must adapt and innovate quickly to provide the best financial solutions, services, and user experience for customers. This is what banks must implement. One form of innovation that digital banks can carry out is to provide operational service features.

Finally, changing consumer financial behavior through good financial management requires banks to have different skills. The digital bank business model presented by banking should prioritize skills such as continuous change in organizational culture and the operation of an organizational industry or ecosystem through the integration of intelligent technological processes and digital competence at all levels and functions. A digital bank transformation can automatically change customer financial behavior.

Limitations and Future Directions

This research has several limitations: First, the respondents are exclusively digital bank customers from the 10 most popular digital banks in Indonesia. Second, the research focuses entirely on customer communication, trust, transparency, and service innovation to evaluate the presence of digital banks. We employed a sample of just 187 respondents, selected through random sampling. Therefore, future researchers might be eager to conduct more in-depth studies on digital bank customers, especially since the expansion of digital banks in Indonesia has reached 15 banks. Future research should also aim to uncover or strengthen the connections between variables such as customer communication, trust, transparency, and service innovation in relation to digital bank transformation. Additionally, moderating the impact of digital bank transitions on consumer financial behavior and exploring new elements as innovations could be considered. Future researchers could use probability sampling approaches to ensure representative data from each province in Indonesia regarding the use of digital banking. Finally, our research encourages future researchers to continue exploring issues related to similar banking transformations to identify more factors associated with the ongoing digitalization in the banking industry. Our study specifically addresses the evolution of digital banks, which may influence the behavior of financial sector customers. It is plausible that this research will become a benchmark for examining models and interests in utilizing digital banks, particularly as the market share of the digital economy is expected to reach Rp. 1,738 trillion by 2025.

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