

Employee Perceptions and Competences in Batam City Private Companies Facing Digital Finance Development

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ABSTRACT

The transformation and development of digital finance have become an important issue in today's business world. Private companies in Batam City are also experiencing the impact of this transformation. This study aims to analyze employee perceptions and competencies in dealing with the transformation and development of digital finance in private companies in Batam City. This research focuses on understanding how employees perceive digital financial transformation and to what extent they have the necessary competencies to adapt to these changes. This study interviews and observes Batam City private company employees for qualitative data analysis. The systematic analysis was analyzed the data. This study found that most employees see digital finance transition positively. Digital finance may improve efficiency, engagement, and financial information accessibility. This research also finds different employee challenges in digital finance transformation. One is a need for digital technology and financial competence. Employees need help to adapt and maximize digital finance's potential. Thus, employee proficiency in digital financial transformation requires training and skills development. This study offers light on Batam City private company employees' views of digital finance's evolution. Positive impressions suggest digital finance can boost employee productivity and participation in firm financial tasks. However, training and skills development must overcome competency issues. Thus, organizations must focus on personnel development throughout digital financial transformation to ensure business success and continuity.

1. Introduction

Digital transformation is a strategic process in which companies use advanced information and communication technologies to transform and improve how they operate, do business, and interact with customers and business partners[1]. Digital transformation involves the application of advanced information and communication technologies, such as artificial intelligence (AI), big data, cloud computing, and the Internet of Things (IoT), to increase companies' efficiency, productivity, and competitiveness [2]. In a business context, digital transformation involves various aspects, including operational processes, data management, marketing, sales, customer service, and supply chain management. Companies use digital technology to accelerate, automate, and simplify business processes, increase visibility, and optimize decision-making (Zeng et al., 2022).

Digital transformation and the development of digital finance have significantly changed the business landscape worldwide[4]. As part of the rapidly growing business sector, private companies in Batam City are also not spared from the influence of this transformation. The development of digital finance has also had a significant impact on private companies in Batam

City. Digital finance involves using digital technologies in financial activities, such as electronic payments, online fund transfers, e-wallets, and other financial platforms[5]. Digital finance has accelerated and simplified the process of financial transactions, thus providing benefits in terms of efficiency, speed, and accessibility for companies. The growth of digital finance can contribute positively to overall economic growth.

Digital finance provides consumers convenience, flexibility, and convenience in conducting financial transactions[6]. For businesses, this can expand markets, increase competitiveness, and provide more diverse payment methods for customers. However, the development of digital finance also raises challenges, such as data security and privacy, reliable digital infrastructure, and the public's need for education and financial literacy[7]. Governments, regulators, and industry actors must work together to create a safe, trusted, and inclusive digital financial environment for all parties involved [8].

In this context, employee perceptions and experiences facing digital transformation and digital financial developments are critical factors that must be understood. Employees are an essential element in the company's application and use of digital technology [9]. Their perception of digital transformation and finance will influence their acceptance and adaptation to these changes. Employee experience in using digital technology will also contribute to successfully implementing this transformation.

This research is analyzed with the theoretical foundation of the Technology Acceptance Model (TAM) that can be applied in the context of digital finance in Batam City to understand the factors that influence the acceptance and use of digital finance by individuals in private companies. This theory states that the acceptance and use of technology are influenced by individual perceptions of perceived benefits, ease of use, social factors, and organizational context[10]. In the context of this study, the Technology Acceptance Model can be used to understand the factors that influence employee perceptions of digital financial developments and employees' adoption of digital financial technology.

Technology Acceptance Model is based on two primary constructs: Perceived Ease of Use and Perceived Usefulness[11]. The perception of ease of use reflects the extent to which individuals perceive that using technology is accessible [12]. If people feel that technology is simple, they are more likely to accept and use it. Factors influencing perceived ease of use include the interface's intuitive appearance, the technology's complexity, and the level of support provided[13]. In addition, the perception of benefits reflects how individuals perceive that using such technology will provide benefits or added value in their lives or work[14]. If people feel the technology is valuable and will improve their performance or effectiveness, they are more likely to accept and use it. Factors influencing the perception of benefits include clarity, relevance to the task or job, and individual needs

Other constructs associated with Technology Acceptance Model are Attitude towards Using and Behavioral Intention to Use [15]. Attitudes toward use include an individual's evaluation of the technology, while intent to use reflects an individual's desire to use the technology actively [16]. TAM has become a popular and widely used framework in research to understand the acceptance and adoption of technology, including applications in areas such as digital finance[17]. By understanding the factors influencing perceptions of ease of use and benefits, organizations can design more effective strategies to promote adoption and increase technology use among individuals.

The focus of this research was conducted on private companies in Batam City. Batam City has unique business characteristics and dynamics, including particular economic policies, a thriving manufacturing industry, and multinational companies operating in the region[18]. Batam City has diverse industries, including manufacturing, electronics, logistics, tourism, and other service

sectors[19]. By choosing a private company in Batam City, researchers can explore the experiences and perceptions of employees from various sectors and types of organizations. This helps broaden the generalizability of research and understand the differences that may exist in the face of digital transformation and digital finance developments between different industries and organizations. Some of the previous research done by [2], [3], [6], [20], [21], Concerning digital transformation and the development of digital finance is dominant in the small and medium enterprise sector. Thus, this study looks at the perspective of digital transformation and the development of digital finance in private industry sector employees. In addition, it allows researchers to explore specific issues and challenges employees face in the face of digital transformation and digital financial developments in the local context.

Although digital transformation and the development of digital finance are growing in Batam City, there still needs to be more research that focuses on employee perceptions and experiences in private companies in the region[22], [23]. This research novelty in combining two important aspects, include, digital transformation and the development of digital finance. Previous studies have tended to separate the two, whereas this study can explore the relationship between digital transformation readiness and digital finance adoption in the context of employees of private companies in Batam City. This study investigates how demographic factors such as age, education level, or length of work in the company affect employee perceptions and experiences in developing digital finance. This research answers the formulation of the problem, do younger employees with higher education tend to have a more positive perception of digital finance? How does digital transformation affect their work, their role in financial activities, and their relationships with colleagues or company management? Therefore, this study aims to fill this knowledge gap and provide more specific insights into employee perceptions and experiences facing digital transformation and digital financial developments in private companies in Batam City.

As a central manufacturing hub, Batam City faces stiff international competition. Batam City's private businesses must innovate and adopt new technologies to keep up in today's market[24]. Companies may optimize employee potential in the face of global difficulties and competition with the help of this research by better understanding how their employees feel about digital transformation and digital financial advancements[23]. This study aims to learn more about the perspectives and experiences of workers in private firms in Batam City during this transition. Using this study's findings, private businesses in Batam City will be better able to optimize their usage of digital finance, encourage greater employee involvement, and boost overall productivity

2. Method

This study aims to understand employee perceptions and experiences in facing the development of digital finance in private companies in Batam City. This study uses a qualitative data analysis approach to understand and analyze the qualitative data obtained. Qualitative Data Analysis (QDA) is an analytical method used to process and understand qualitative data in research[25]. This approach systematically analyzes text, audio, or visual data to gain insight and deeply understand the research topic[26]. This approach allows researchers to explore a deep understanding of individual perspectives and experiences in the context of research[27]. This study adopts a qualitative descriptive research design. This design allows researchers to explore the understanding of employee perceptions and experiences related to the development of digital finance by describing and analyzing the qualitative data obtained.

This research was conducted in Batam City, one of the cities in Indonesia with a relatively high industrial growth rate compared to other cities[28]. The participants of this study were employees of several private companies in Batam City involved in digital financial management. Participants will be selected using a cluster sampling technique. This technique divides the population into clusters, and several clusters are randomly selected to be sampled[29]. The author randomly selected several private companies in Batam City as clusters, then selected respondents

from each selected cluster. This study was conducted with a time series period of three months, namely from January 2023 to April 2023.

Table 1. Cluster Sampling of Private Companies in Batam City

Private Industry	Head of Department	Manager Department	Staff	Total
PT. Panasonic Gobel Energy New Zealand	3	3	9	15
PT. Infineon Technologies Batam	1	3	11	15
PT. Flextronics Batam	0	2	13	15
PT. Siemens Indonesia Batam	1	2	12	15
PT. Amtek Engineering Batam	0	4	11	15
PT. OSRAM Indonesia Batam	0	0	15	15
PT. Nippon Steel Batam	2	1	12	15
PT. Visteon Indonesia Batam	1	1	13	15
PT. Astra Otoparts Tbk Batam	2	3	10	15
PT. Chevron Pacific Indonesia Batam	0	2	13	15
Total	10 (6,67%)	21(14%)	119(79,3)	150 (100%)

Table 1 is a list of private companies in Batam City that were randomly sampled with cluster sampling techniques; there were ten companies, with 15 people sampled in each company. Researchers conducted in-depth interviews with participants using structured interview guides. The interview will cover topics related to employee perceptions and experiences in dealing with the development of digital finance. The interview will be recorded with the participant's permission and then transcribed for further analysis. In addition to conducting interviews, the authors made observations in assessing employee interactions with the development of digital finance in the work environment. Observations were made to understand how employees adapt to these changes and use digital financial technology in their daily work. Data will also be collected by reviewing documents and archives related to digital finance that already exist in the company. This will provide a broader context on using digital finance in companies. The stages of the research process to be carried out can be seen in Figure 1.

Figure 1 shows the flow or process of research carried out with the QDA approach, which is divided into three main processes: design and develop theory (research framework), data preparation and collection, and analysis and conclusion. A qualitative data analysis (QDA) approach will be used to analyze the collected data. This study also used Nvivo 12 Plus Software to assist research analysis using the QDA approach. The first stage of QDA in research is by analyzing transcripts; recorded interviews will be transcribed in full to facilitate further analysis [30]. The second stage is coding; data will be coded to identify themes, concepts, and patterns from interviews, observations, and document reviews. Next to categorization, the codes that have been identified will be grouped into broader categories to understand the main themes that appear[31]. The third stage is data interpretation. The grouped data will be interpreted comprehensively to describe employee perceptions and experiences of digital financial developments[27]. The findings will be linked to relevant theories and literature. To ensure the validity and validity of the study,

some of the steps to be taken include triangulation of data through the use of different data collection methods, an extension of observation time to gain a deeper understanding, asking participants to provide feedback on initial findings, and involving other researchers in the analysis process to gain different perspectives.

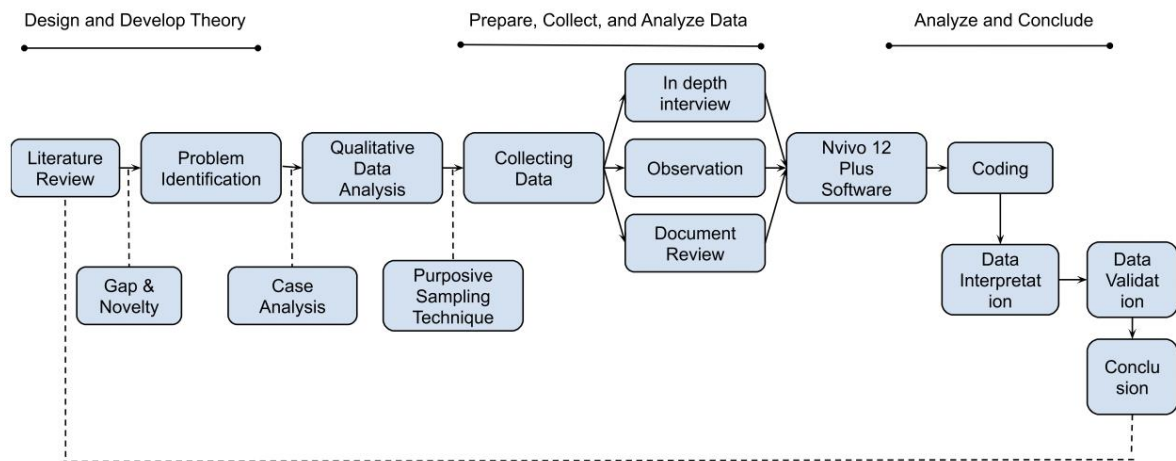


Fig 1. Research Method Flow

3. Results and Discussion

3.1. Digital Financial Transformation Trends

Digital transformation refers to the widespread adoption and application of digital technology in various aspects of life, including the financial industry[3]. The concept involves using digital technology to transform how customers work, operate, and experience the financial industry. The development of digital finance refers to the evolution and innovation of technology that changes how humans interact with financial services. This covers various aspects such as digital payments, online banking, digital investment, online insurance, peer-to-peer lending, and other financial technologies(Zhao et al., 2022). These developments provide ease, efficiency, accessibility, and a better experience managing personal and business finances[4].

Digital transformation in digital finance involves using technologies such as artificial intelligence, blockchain, data analytics, big data, the Internet of Things (IoT), and cloud computing to create more innovative, efficient, and personalized financial services[33]. This transformation involves changes in operational processes, business models, customer experience, and engagement with digital technologies. The development of digital finance plays an important role in accelerating digital transformation in the financial industry. In this development, traditional financial companies are adapting to digital technology and providing more efficient and responsive online services[34]. On the other hand, fintech startups and other technology companies are creating innovations and disrupting existing business models.

The trend of transformation and development of digital finance has changed the financial industry landscape significantly in recent years. Digital payments have become the dominant trend in digital finance[7]. Mobile payment apps, digital wallets, and online payment methods have increased tremendously. Near Field Communication (NFC) and Quick Response (QR) Code enable faster, safer, and more manageable payments[2]. Digital finance provides benefits such as ease of access, fast response times, lower costs, transparency, and personalization[35]. This allows

individuals and businesses to manage their finances more effectively, conduct transactions efficiently, and gain access to financial services that were previously unavailable.

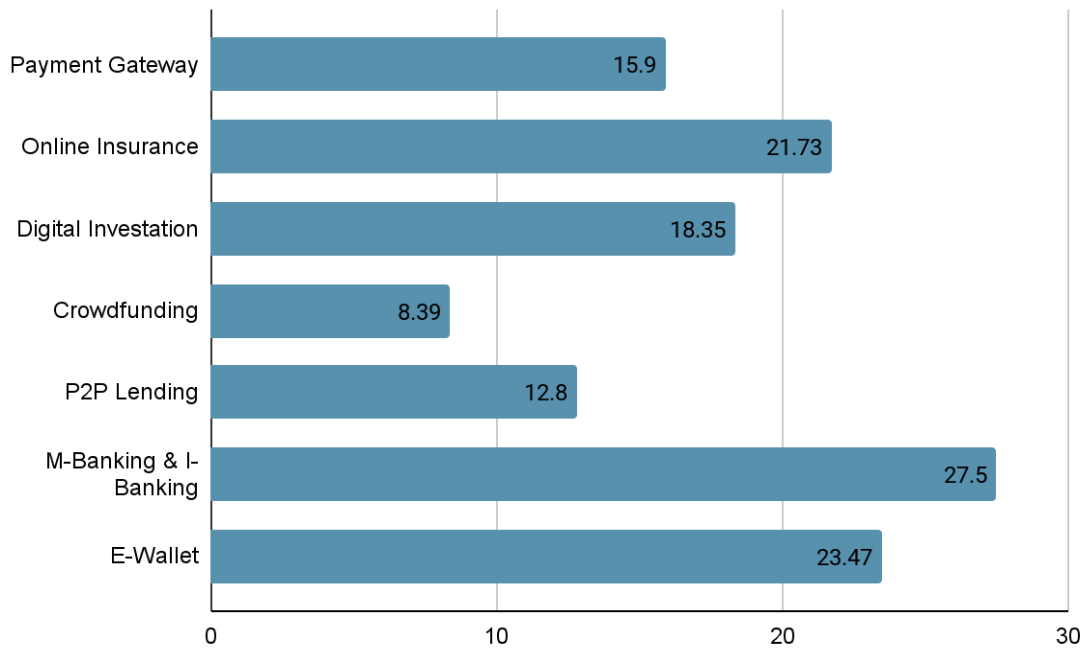


Fig 2. Trends in the Use of Digital Finance in Batam City

The author researched trends in digital finance use by employees of private companies in Batam City, shown in Figure 2. The results showed that most employees in private companies in Batam City predominantly use mobile banking and Internet banking, with a value of 27.6 percent. The use of E-Wallets such as OVO, Dana, and others occupies the second position at 23.47 percent. Using digital wallets and digital financial transformation in banking provides convenience in accessing and managing employee finances. In addition to digital financial transformation in the banking sector and digital wallets (E-Wallet), digital financial developments occur in online insurance, Digital Investment, Payment Gateway, Peer to Peer (P2P) Lending, and Crowdfunding[35]. Technological developments and innovations in the digital financial industry continue, opening up new potential to improve efficiency, accessibility, and ease of managing finances[36]. The development of digital financial technology encourages innovation in various economic sectors, thus implications for better economic growth.

Figure 3 shows a significant increase in economic growth in 2022 compared to the previous few years. The increase in economic growth in Batam City reached 6.84 percent in 2022. This shows that digital transformation affects the economic growth of a region. Digital transformation significantly influences economic growth, including the development of digital finance. The development of digital finance provides various benefits for individuals and businesses[24], [38]. This increases ease of access and transaction speed, reduces administrative costs, and improves operational efficiency.

In the context of this study, the trend of using digital finance in private industry employees in Batam City has become a user preference that impacts long-term economic growth [23]. Using digital finance by private industry employees can improve the operational efficiency of companies[39]. With the adoption of digital financial technology, payment processing, financial management, and other transactions can be carried out quickly and efficiently. This can reduce administrative costs, increase productivity, and provide a competitive advantage for the company.

The increasing use of digital finance by private industry employees in Batam City has implications for faster economic growth. Through digital financial technology, more economic transactions can be conducted electronically, which speeds up the velocity of money and increases overall economic activity[18]. This can help create new jobs, increase people's incomes, and drive business growth.

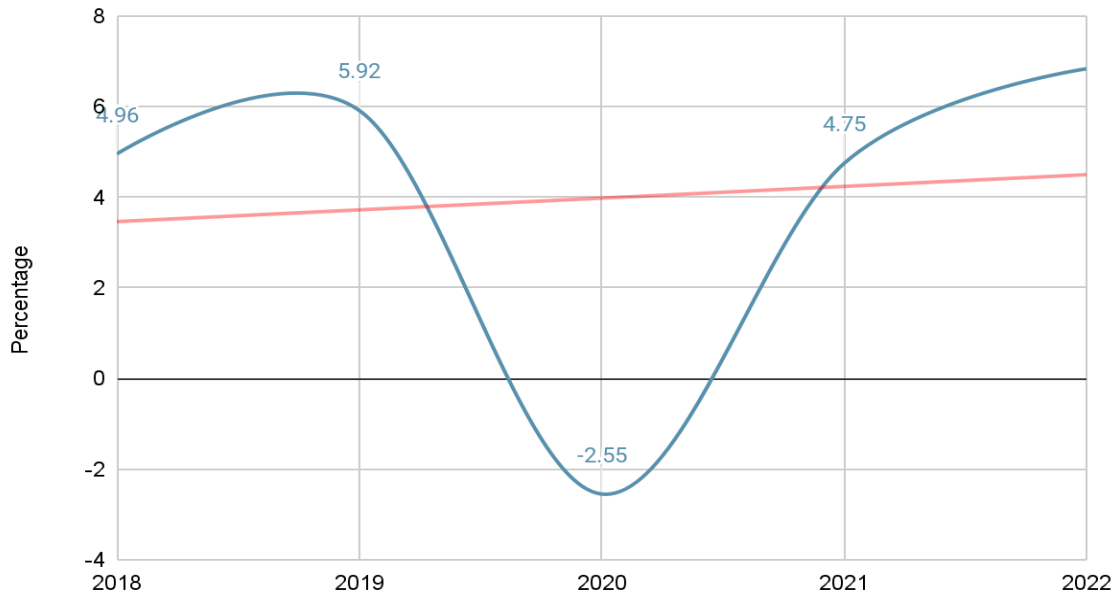


Fig 3. Batam City Economic Growth in 2019-2022

Source: (Efriyenty, 2022)

The use of digital finance can expand financial inclusion in Batam City. Digital financial services can be accessed by more employees, including those who were previously difficult to reach through conventional financial services. With access to digital financial services, employees can better manage their finances, save and invest money, and improve their overall financial well-being. However, the development and transformation of digital finance also bring challenges, including data security and privacy, inequality of access to technology, changes in workforce expertise, and appropriate regulatory arrangements. Therefore, in the face of this trend, companies, governments, and relevant stakeholders must work together to create an environment supporting innovation, security, and inclusivity in digital finance.

3.2. Employee Perceptions and Competences on Information Technology Developments.

The study analyzes how demographic parameters such as age, education level, or company service length affect employees' perspectives and experiences in dealing with digital financial advancements. These demographic elements include age, education level, and company service length. This research answers the question posed in the problem statement: do younger or more highly educated employees tend to have a better opinion of digital finance? As well as how the transformation brought about by digital technologies affects their work, their involvement in the company's financial activities, and their relationships with colleagues and company management.

The author analyzes the perception of employees of private companies in Batam City towards the transformation and development of digital finance using the Theory Acceptance Model (TAM). In this theory, there are four indicators to assess employee perceptions and experiences of digital financial transformation and development in this study. The results of the research analysis show the following;

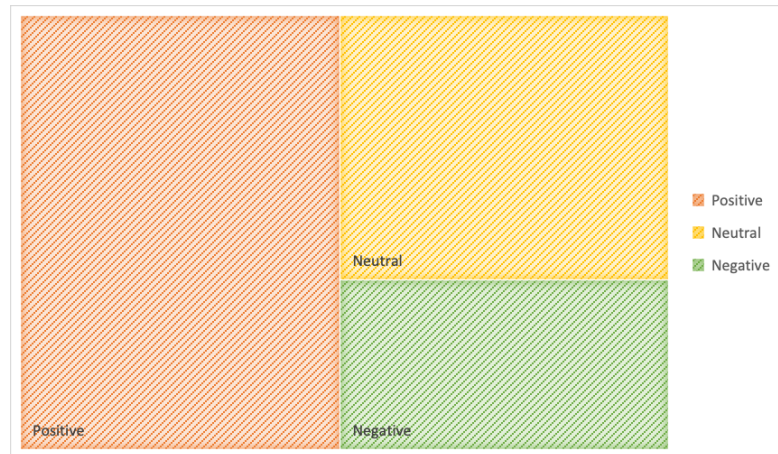


Fig 4. Response to Digital Financial Transformation and Development

Figure 4 shows the response of employees in private companies in Batam City to digital financial transformation, which shows more dominant positive responses compared to neutral and negative responses. This shows that digital financial transformation and its development significantly influence people's lives. Many employees respond positively to the development of digital finance because they appreciate the convenience and convenience offered. They can see digital financial technology as a tool that makes it easier to make payments, transfer money, or access financial information quickly and easily.[40] Some employees respond to the development of digital finance with enthusiasm and acceptance. They see the value and benefits of using digital financial technology to manage their finances. The development of digital finance helps ease access, transaction efficiency, and new features offered. The enthusiasm and acceptance of this technology show the attitude towards using employees.

The results of the crosstab analysis in Figures 5 (a) and (b) of the perceptions and experiences of employees of private companies in Batam City show that younger employees or those with higher education tend to have a better opinion of digital finance. Employees with higher education tend to have a better understanding of technological developments and the potential of digital finance. They have a broader knowledge of finance, the role of technology in the financial industry, and the benefits that digital finance may offer. Younger employees or those with higher education tend to be more flexible and open to change. They tend to have a more positive attitude towards technological innovation and are more willing to adopt digital finance to make their lives easier. Nearly 47% of younger staff and higher education are taking advantage of digital financial transformation through E-Wallet, M-Banking/I-Banking, and digital investment.

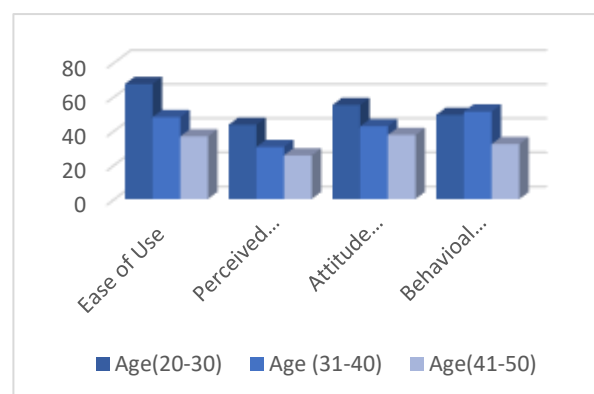


Fig 5. Crosstab Analysis by Age

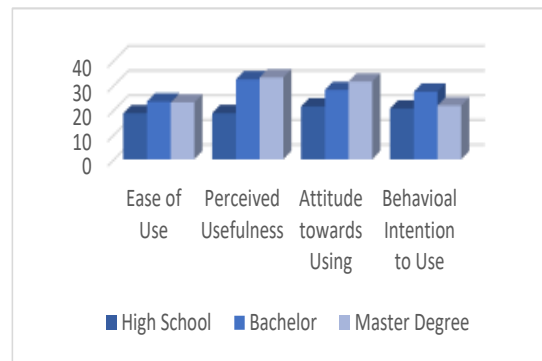


Fig 6. Crosstab Analysis by Education Level

Although the development of digital finance provides benefits, some employees respond negatively to the development of digital finance. Adopting digital finance requires new adaptations and learnings for employees, especially employees who tend to be older, with an age range of 41-50 years and a low education level. Some employees need help to learn and adapt to this new technology. Changes in work routines and the need to master new skills can be complex for some individuals. The results also show the experience of employees who have experienced various fraud cases and are entangled with online loans. Digital finance involves using sensitive data such as personal or business financial information. Cyber security is a concern for most employees to become more closed to digital financial transformation. This is shown by Indonesia's low cyber security index as the third lowest rank (38.96 points) in G20 countries as red remarks on the development of digital technology in Indonesia, especially Batam City, as a representation of case studies in this study[41].

3.3. The Role and Implications of Digital Finance Development

The digital financial transformation brought about by digital technology significantly impacts employees' work, their involvement in the company's financial activities, and their relationships with colleagues and company management[24]. Digital technology allows the automation of various financial tasks that were previously done manually. This transformation occurs in payment processing mechanisms, transaction recording, and financial reporting can be done automatically using digital financial software. This reduces the burden of routine work and allows employees to focus on more complex and value-added tasks. With the adoption of digital finance, employees have real-time access to company financial information. They can view up-to-date financial data, including financial statements, balance sheets, and cash flow. This allows employees to understand the company's financial condition better and make faster and more informed decisions.

Digital technology in finance allows employees to engage in strategic decision-making. With access to more in-depth financial data and analysis, employees can contribute more to financial planning, business strategy determination, and risk management. This can increase the role and involvement of employees in the company's financial activities. Digital financial transformation facilitates better collaboration and communication between employees, colleagues, and company management. Employees can share information, collaborate on financial projects, and communicate efficiently through digital platforms, such as collaboration apps or project management tools. This increases the effectiveness of teamwork, coordination between departments, and knowledge exchange. This transformation is not only beneficial for individuals but also for the management of a company. Employees are required to understand digital financial technology, data analysis, information security, and deeper financial understanding. Companies need to provide the necessary training and support so that employees can develop these skills and adapt to technological changes.

An employee's competence in dealing with digital finance developments can vary depending on a number of factors, including previous work competence, training provided, and

support received from the organization. Previous work competence can influence how employees adapt to digital financial changes. Employees who have had competence with technology before tend to be faster in understanding and mastering new tools and systems. They may be more attuned to change and have the ability to adjust quickly. On the other hand, employees who are not yet familiar with technology face challenges in learning and adapting to such changes.

The digital financial transformation has significant implications and challenges for employees of private companies in Batam City. Digital financial transformation requires employees to develop new skills appropriate to digital technology. Employees need to learn and master new tools and systems and understand data analytics, cybersecurity, and digital finance in general. The challenge for employees is to adopt and update their skills according to the ever-changing technological developments. Digital financial transformation can affect the roles and responsibilities of employees. Some routine tasks can be automated, allowing employees to focus on more complex and value-added tasks. However, it also means that employees must change their roles, acquire new knowledge, and adapt to possible task changes.

In digital financial transformation, data security and privacy are significant concerns. Employees need to understand the importance of keeping company data secure, protecting sensitive information, and complying with applicable policies and regulations regarding data privacy. The challenge for employees is raising awareness about digital security threats and implementing appropriate practices to protect data. Companies may be faced with system integration challenges and technological complexity when undertaking digital financial transformation. Existing systems may need to be fully compatible or integrated with the new technology required. Companies need to overcome these barriers by conducting in-depth analysis, designing sound integration plans, and selecting the right technology solutions to ensure a smooth transformation. Digital financial transformation requires significant financial investment. Companies need to allocate adequate budgets to adopt new technologies, train employees, and build the necessary infrastructure. Planning well, conducting a cost-benefit analysis, and identifying appropriate funding sources, such as loans, financing, or cooperation with third parties, can overcome these challenges. In the face of these implications and challenges, companies can play an important role by providing appropriate training and education, clearly communicating change, and facilitating the adoption of digital financial technologies through ongoing support to employees.

4. Conclusion

Using digital tools and platforms allows for faster and more efficient communication between employees, co-workers, and company management. Digital transformation also occurs in the financial sector, which has implications for the financial system's effectiveness, efficiency, and transparency and impacts a region's economic growth. The results of research on employee perceptions and competences in private companies in Batam City show that employees tend to have a positive perception of digital financial transformation and development. They see digital finance as a tool that can increase efficiency, involvement in financial activities, and ease of access to financial information. Meanwhile, employee competence in facing digital financial transformation varies. Employees who are younger or have a higher level of education tend to have a better understanding and competence in using digital technology. They are more adaptable to change and can leverage digital finance in their work.

The role of companies in supporting employees in facing digital financial transformation is significant. Training initiatives, mentoring, technology resources, organizational policies, and cultures that support adopting and adapting digital financial technologies are critical success factors in addressing these changes. Digital financial transformation can affect employee duties and responsibilities. Some tasks can be automated, while more complex and value-added tasks become more important. Employees need to adapt to these changes and develop new skills relevant to digital technology. Digital financial transformation also affects employees, co-workers, and company management relationships. Communication and collaboration can become more efficient

through digital tools and platforms. However, these changes also require adjustments in social interactions and more virtual work relationships.

In conclusion, employee perceptions and competences in private companies in Batam City towards the transformation and development of digital finance are generally positive. Organizational support and employee adaptation to these changes are crucial to success in facing digital financial transformation. Companies need to provide training, resources, and policies that support adopting and adapting digital financial technologies to optimize the benefits offered by this transformation.

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