The Effect of Banking Automation Perception on Customer Satisfaction in the Banking Sector of UAE

Kesan Persepsi Automasi Perbankan terhadap Kepuasan Pelanggan dalam Sektor Perbankan UAE

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Abstract: Automation is becoming an integral part of banking services all around the world. Modern banking is increasingly relying on automation to improve customer service and gather feedback via automated techniques. The literature reported lots of evidence on the great advantages of automation for banks and how it improves customer satisfaction. However, banking automation could raise job insecurity among the employees of the banks and increase the fear of downsizing due to the redundancy of the workforce which may affect their behavior with customers and reduces their satisfaction. Prior studies did not provide evidence on how to maintain customer satisfaction due to automated banking services while keeping a low level of job insecurity, particularly in the UAE banking industry. Therefore, the aim of this paper is to identify the impact of banking automation perception of bank staff on customer satisfaction in the United Arab Emirates (UAE). The finding of this study showed that the banking industry is embracing automation to improve overall performance and satisfy customers. The adoption of automation in the banking sector in the UAE has helped banks reduce overall costs while improving client satisfaction. Employees who develop a positive perception of banking automation as a tool that improves their ability to serve clients effectively should contribute to higher levels of customer satisfaction but there is a concern about job security. Therefore, understanding and managing employee perception of banking automation is critical for banks to provide great client experiences and preserve human resources from downsizing and lay-offs.

Keywords: Banking Automation Perception, Customer Satisfaction, Financial Services;

Abstrak: Hari ini, automasi menjadi sebahagian daripada perkhidmatan perbankan di seluruh dunia. Perbankan moden semakin bergantung pada automasi untuk meningkatkan perkhidmatan pelanggan dan mengumpul maklum balas melalui teknik automatik. Literatur melaporkan banyak bukti tentang kelebihan besar automasi untuk bank dan cara ia meningkatkan kepuasan pelanggan. Walau bagaimanapun, automasi perbankan boleh menimbulkan ketidakamanan pekerjaan di kalangan pekerja bank dan meningkatkan ketakutan untuk mengecilkan saiz kerana lebihan tenaga kerja yang boleh menjejaskan tingkah laku mereka dengan pelanggan dan mengurangkan kepuasan mereka. Kajian terdahulu tidak memberikan bukti tentang cara mengekalkan kepuasan pelanggan yang tinggi disebabkan

perkhidmatan perbankan automatik sambil mengekalkan tahap ketidakamanan pekerjaan yang rendah, terutamanya dalam industri perbankan UAE. Oleh itu, matlamat kertas kerja ini adalah mengenal pasti kesan persepsi automasi perbankan kakitangan bank terhadap kepuasan pelanggan di Emiriah Arab Bersatu (UAE). Dapatan kajian ini menunjukkan bahawa industri perbankan menerima automasi untuk meningkatkan prestasi keseluruhan dan memuaskan hati pelanggan. Penggunaan automasi dalam sektor perbankan di UAE telah membantu bank mengurangkan kos keseluruhan sambil meningkatkan kepuasan pelanggan. Pekerja yang membangunkan persepsi positif terhadap automasi perbankan sebagai alat yang meningkatkan keupayaan mereka untuk memberi perkhidmatan kepada pelanggan dengan berkesan seharusnya menyumbang kepada tahap kepuasan pelanggan yang lebih tinggi tetapi terdapat kebimbangan mengenai keselamatan pekerjaan. Oleh itu, memahami dan mengurus persepsi pekerja terhadap automasi perbankan adalah penting bagi bank untuk menyediakan pengalaman pelanggan yang hebat dan memelihara sumber manusia daripada pengecilan saiz dan pemberhentian pekerja.

Kata kunci: Persepsi Automasi Perbankan, Kepuasan Pelanggan, Perkhidmatan Kewangan;

Introduction

Automation has grown into an essential component of financial services all around the world. Automation helps banks by providing automatic completion of banking functions with the assistance of AI and machines. It is increasingly being used in modern banking to improve customer service and generate feedback from customers (Lu et al., 2020). Additionally, it has assisted banks in lowering overall operational costs while enhancing client satisfaction. To that end, automation has revolutionized financial services substantially in recent decades due to rapid advancements in information technology. The introduction of new technologies to the market, such as smartphones, paves the way for automation via mobile apps that deliver automated banking services at any time during the day (Glover, 2021). Despite the numerous benefits of banking automation, the reports revealed undesirable outcomes such as job insecurity among the employees of the bank. According to a study by Boston Consulting Group in 2022, more adoption of automated banking services has raised the anxiety of bank employees, who are concerned that automation will eliminate their work or at least shift their jobs. This consequence has negatively affected the behavior of the workforce in the banking sector, especially those who are in direct touch with the customers (Batiz-Lazo et al., 2022; Masad et al., 2023). However, automation remains the favorite strategy for almost all banks at the present time all over the world. Automated technology improvement cannot be isolated from competitiveness among banking; so they must deploy the best-automated systems in the financial market. Doing so will attract loyal customers by delivering services that are comfortable, convenient, and satisfying (Rigawa & Afriyeni (2019). Based on these arguments, this paper will highlight the importance of banking automation in UAE banks and analyze the relationship between the perception of employees of the bank towards automation on customer satisfaction, while considering the impact of banking automation on job insecurity. The outcome of this study will provide an in-depth analysis of these questions and highlight the reality of automation in the UAE banking sector.

Banking Automation

Automation is a technique or system for executing or regulating automated tools' processes with electronic devices to reduce the need for human interference (Dietzmann *et al.*, 2023). The mechanical creation and use of equipment paired with automated surveillance systems is referred to as automation. Automation has changed the financial and banking industries on a global scale (Singh, 2023). Banking automation refers to tasks performed by automated tellers without direct interference by a bank's employees so that financial transactions are completely automated (Villar & Khan, 2021). Automation is the product of the third industrial revolution, which refers to the transition from analog electronic and mechanical devices then to the digital

technology of today (Aulia & Tampubolon, 2022). The adoption of automated banking allows the teller to focus on high-value duties, while also providing the customer with a smooth, satisfactory banking service. AI, robotic systems, the Internet of Things, and cloud computing enable smarter decision-making in digital operations, all these technologies are the product of the fourth industrial revolution. To that end, banking automation involves a wide spectrum of AI applications and cognitive computing technology to automate most processes at the bank (Madakam *et al.*, 2022).

There are three forms of automation: (1) fixed automation, (2) programmable automation, and (3) flexible automation. All these forms helped banks to serve customers in a short time and efficiently, e.g., banking automation reinforces existing cybersecurity and identity protection protocols for financial transactions while adding extra processes as needed. Moreover, automated banks can freeze compromised accounts in seconds and expedite human steps to simplify fraud investigations (Singh, 2023). Although the revolution of information technology in recent years provided many new opportunities, the workforce all over the world was not prepared for it (Yunos, 2019). Automation also includes the replacement of human labor with techniques or systems that automatically govern processes as the foundation for the development and use of instruments derived from technological breakthroughs, which are used in all industries, including banks (Saidakhmedovna, 2023). FinTech companies for example are a significant result of banking automation through the combination of financial services with digitalization (Aulia & Tampubolon, 2022). Banking automation may not be fully automated, e.g., some bank provides a single off-site banker available via FaceTime to answer queries. These banking automation examples show a few automation operations, but automation revolutionizes the way banks do business without limits (Oberle, 2023).

Almost all banks in the UAE adopted automation on a large scale to serve their customers. The adoption of automated financial services helped banks in the UAE to enhance their communications with their clients and improve bank performance. The advancements in robotic technology in the financial market motivate banks in the UAE to integrate automation technology into their present and future plans (Kothari & Seetharaman, 2022). For example, in Dubai, the role of automation, e.g., ATMs and other forms of electronic banking services, largely reduces the role played by humans or bank tellers in connection with simple banking functions like withdrawals or deposits. Complicated transactions such as opening accounts and helping customers manage multiple transactions continued to be performed by tellers. Hence, the role of employees remains important

and has a fair influence on customer satisfaction (Shedid, 2019). Nevertheless, the rapid advancement of technologies for financial services may automate these services for the customers and eliminate the role of employees. In sum, banking automation decreases human errors and the time required to execute these processes, maximizing cost savings and making clients grateful for these advantages. Banking automation has become one of the most accessible and economical ways for clients, thanks to significant advancements in information technology and artificial intelligence. However, there is a gap in the literature concerning the impact of automation on customer satisfaction while keeping a low level of job insecurity, particularly in the UAE banking industry. As a result, the purpose of this study is to investigate the interrelationships between these variables and to give recommendations for future research in this domain.

The Challenges of Banking Automation

Understanding the challenges of banking automation and its perception of customer satisfaction in the banking sector is crucial for several reasons. Firstly, with the rapid advancements in technology, more and more banks are turning to automation to streamline their operations and improve efficiency. However, if customers perceive these automated systems negatively, it could have a detrimental impact on their overall satisfaction with the bank. Additionally, by studying this relationship, banks can identify areas for improvement and tailor their automation strategies to better meet the needs and preferences of their customers. This, in turn, can help enhance customer satisfaction levels and ultimately drive loyalty and retention in the long run. By understanding how customers interact with automated systems and addressing any negative perceptions, banks can ensure that the benefits of automation are fully realized. By providing a seamless and user-friendly experience, banks can build trust and loyalty with their customers, leading to long-term relationships and increased customer retention. Overall, the successful integration of automation in banking operations can result in improved customer satisfaction, increased efficiency, and ultimately, a competitive edge in the industry.

The challenges of automation have been threatening jobs for decades, beginning with repetitive work in the manufacturing, industrial, and even agricultural sectors. In the banking industry, automation has exacerbated widespread job security concerns and raised fears among employees worldwide about their jobs. According to a study by Boston Consulting Group and Bayt.com in 2022, more adoption of automated banking services has raised the anxiety of bank employees, who are concerned

that automation will eliminate their work or at least shift their jobs. This consequence has negatively affected the behavior of the workforce in the banking sector, especially those who are in direct touch with the customers (Batiz-Lazo et al., 2022; Masad et al., 2023). While the workforce around the world today faces increasing uncertainty due to transformative technological changes. As such stability and predictability have been replaced by job insecurity (Karumban *et al.*, 2023; Nazareno & Schiff, 2021). According to PwC research, one-third of all jobs will be at risk of being automated by the mid-2030s as shown in Figure 1. Individuals with a low level of education are the most vulnerable workforce segment. Anxiety about job losses caused by increased machine use has existed for centuries. With each breakthrough, someone's livelihood or quality of life was jeopardized indefinitely.

Figure 1. The percentage of a wave of risks on jobs due to automation
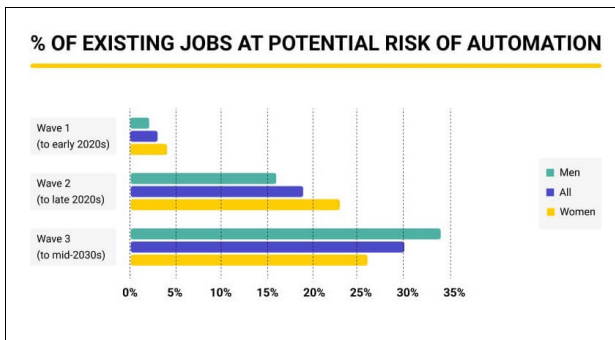
Despite these reports, the study of McKinsey Global Institute predicts that this automation in this region will accelerate between the present time and 2030 with 45 percent of existing work in the Middle East potentially being automated. At the same time, countries in the Middle East region are also poised to enjoy growth and increased productivity if artificial intelligence (AI) and automation are embraced and the workforce is prepared with the right skill sets to take advantage of this transformation. However, this analysis forecasts that employment in the Middle East region is more likely to be displaced by automation. More than 60 percent of the workforce in some industries such as services, government, administration, manufacturing, and even construction could see their jobs terminated by automation. Those working in service sectors where less human interaction is necessary like banks will face a high degree of job insecurity, while other industries that need considerable human interaction, including the entertainment, arts, recreation, education, and healthcare will see a slower shift of job towards automation and less dramatic replacement with machines (Jan *et al.*, 2018). while few occupations are fully automatable, 60 percent

of all occupations have at least 30 percent technically automatable activities as shown in Figure 2.

Figure 2. Automation potential based on demonstrated technology of occupation titles in 6 Middle East countries (McKinsey Global Institute analysis)
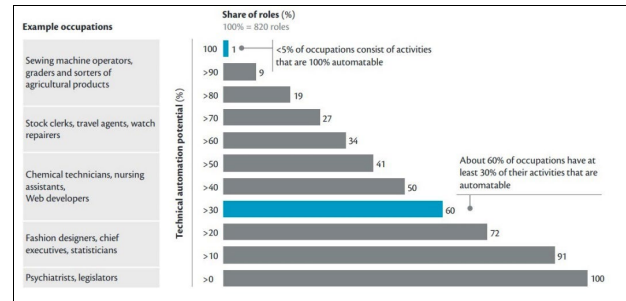
It is evident that the businesses and service organizations in the Middle East region have quickly adapted to technological progress, which has aided bank customers and financial providers by cutting the cost of operations through automation (Bandara *et al.*, 2019), all these factors contributed to job insecurity in UAE. According to the 2021 Cigna 360 Wellbeing Survey, the UAE labor is among the most stressed in the world, the survey also revealed that about 50% of UAE workers confirm job insecurity and have expressed interest in changing their job in the very near future, compared to the global average of 31%. The previous arguments show that automation become part of the banking industry around the world, the banking industry is embracing automation to improve overall work performance, as well as helping the banks to reduce overall operational costs while enhancing customer satisfaction. It has also been observed that, as technology advances, the banking sector anticipates accepting more automated procedures in the future. On the contrary, the adoption of automation increased anxiety among the employees of banks, today automation through AI and machines is one of the reasons for leaving the jobs in banks due to a high degree of job insecurity. the impact of automation employment cannot be ignored (Katz *et al.*, 2021; Lima *et al.*, 2021; Nazareno & Schiff, 2021). The escalating concerns have been reported that automation would eliminate most jobs in banks in the near future on a global scale (Vermeulen *et al.*, 2018; Ramos *et al.*, 2022; Mondolo, 2022). As a result, the aim of this research is to determine how banking automation promotes customer satisfaction and controls job insecurity in the UAE. In other words, while automation in the workplace is likely to enhance the satisfaction of banks' customers, automation is likely to cause a significant shift in employment in the near future., to understand whether automation may create more jobs than it terminates or shifting the occupational role of

workforce and lead to truculence in job mobility inside UAE banks.

Literature Review

Automation Perception

The perception of employees towards banking automation can vary greatly depending on their individual experiences and perspectives. Some employees may perceive automation as a threat to their job security, fearing that machines will replace human workers and render their skills obsolete (Boustani, 2022). Others, however, may embrace automation as a way to streamline processes, increase efficiency, and free up their time for more value-added tasks (Kitsios et al., 2021). Additionally, employees who have seen the benefits of banking automation may feel more empowered and competent in their roles. They recognize that automation can provide benefits and eliminate monotonous activities, allowing them to concentrate on more strategic and creative parts of their work (Rogers, 2003; Kaur, 2015). Those who are reluctant to change, on the other hand, may see automation as a disturbance and struggle to adapt to new technologies. Employee perceptions of banking automation are clearly influenced by a combination of job security worries, past experiences, and a desire to accept technology improvements.

Employees' perceptions of banking automation vary tremendously based on their personal experiences and opinions. Some employees may perceive automation as a threat to their job security, believing that machines and technology would replace them and render them obsolete (Batiz-Lazo et al., 2022; Masad et al., 2023). Tellers, for example, who are used to manually processing transactions and engaging with customers may be concerned about the increased usage of self-service kiosks and online banking platforms. These tellers may be concerned that their skills and knowledge would no longer be appreciated or required, potentially resulting in job cuts or downsizing (Karumban et al., 2023; Nazareno & Schiff, 2021). Employees who embrace automation, on the other hand, may see it as an opportunity to improve their talents and take on more strategic jobs inside the bank, such as financial advisors or technology specialists. Understanding the impact of technology on the workforce requires investigating employee attitudes regarding banking automation. The banking business has seen major changes in the way operations are performed as a result of improvements in automation and artificial intelligence (Eneizan et al. 2018). However, the success and acceptance of these technical developments are strongly dependent on the perceptions and attitudes of the people who interface directly with these automated systems. Organizations can identify potential problems and possibilities in introducing automation by studying their perspectives, and build plans to enable a smooth transition for both staff and customers (Murari & Tater, 2014). Certain characteristics, such as relative benefit, employee convenience, operational efficiency, and technical support, can be utilized to assess employees' perceptions of automated banking services (Kaur & Ali, 2021).

Customer Satisfaction

Customer satisfaction is an assessment of how well an organization's services or goods meet or exceed the expectations of its customers. Pre-evaluation of the product and service and satisfying that assessment with expectations are the major factors that contribute to customer satisfaction (Lovelock & Wirtz, 2011). As a result, firms are expected to provide attractive goods and services that will lead to customer satisfaction (Anyadighibe et al., 2022). Customer satisfaction is also described as the alignment of prior and post-experience with a specific product or service. Banks that want to stay in the financial industry and attract loyal clients must keep customer satisfaction at an all-time high. As a result, banks who care about their clients will frequently ask them if they are satisfied or delighted with their service when conducting satisfaction surveys. Customer satisfaction is enhanced by contentment and joy, yet dissatisfaction happens when customers are not satisfied and delighted (Anyadighibe et al., 2022). More evidence supports that customer satisfaction in the banking industry is linked to automation, e.g., Iberahim et al. (2016) investigated the link between ATM dependability and responsiveness, customer satisfaction, and service enhancement factors. Malaysian researchers have conducted research. The findings demonstrated that three dimensions of service quality, namely stability, dependability, and punctuality, maximize customer satisfaction (Feng et al., 2021). Furthermore, Ling et al. 2016 investigated the factors that influence customer satisfaction in Malaysia. The findings of their study revealed that service quality, privacy and security, content and web design, speed, and accessibility all have an impact on customer satisfaction (Feng et al., 2021). If performance exceeds the anticipated rate, the comprehended quality will be above the satisfactory rate; so, customer satisfaction appears (Hussain et al., 2015). The banking business in the UAE has changed dramatically in terms of the services it offers to its consumers. Because customer satisfaction is dependent on customer-perceived service quality, which automation brings to UAE banks, customers believe in the efficiency of automated banking services (Jham, 2019). Banks in

the UAE are increasingly relying on fully automated banking to improve client satisfaction as banks and financial institutions engage in automation (Almasafri, 2022). This fact is seen in the widespread deployment of financial technology for the competitiveness and performance of UAE banks (Dwivedi et al.,2021). Furthermore, Emirates NBD is an example of a company that uses a humanoid robot named Pepper to communicate with consumers in both English and Arabic in order to better understand the market's demands and provide suitable advice, hence enhancing customer satisfaction (Dwivedi et al., 2021). Delivering cutting-edge quality services through technology in the banking industry boosts client satisfaction and retention (Anjalika & Priyanath, 2018). To that aim, automated banking services assist UAE banks in maintaining their competitiveness and increasing consumer satisfaction. Table 1 summarizes the findings from previous studies on the importance of customer satisfaction in the banking sector.

Table 1. Summary of reviewed articles on customer satisfaction

Authors	Objectives	Findings
Shahid Iqbal et al. 2018	Customer happiness, loyalty, and behavioral intentions are being investigated.	Understanding consumer attitudes and providing crucial insights in the literature in service marketing research
Sharma & Sharma, 2019	Investigating consumer satisfaction, loyalty, and behavioral intentions	Creating a deeper understanding of users compared to using mobile Banking, and increasing capability and smart design of applications
Chandra, 2023	Checking the current level of service quality of ATMs in Malaysian banks.	Helping the managers to improve automated services
Asadi et al. 2017	Using the TAM-DTM to address the knowledge gap in customers' perspectives for the adoption of cloud computing in the banking sector	Providing a paradigm of innovation for future research. Customer relationship management, human resource management, and financial management are all priorities.
Ayo et al. 2016	Providing a model for banking user behavior	Confirmation of the importance of service characteristics on customer satisfaction

Authors	Objectives	Findings
Ling et al. 2016	Search and determine factors affecting customer satisfaction with Internet banking	Helping banking providers increase customer satisfaction
Ahmed et al. 2010	A critical review of previous researchers' studies	Increased client satisfaction progressively rising income and decreasing costs
Casalo et al. 2008	Investigating the role of satisfaction using a structural equation questionnaire	Increasing the usability of the influencer website to improve customer satisfaction
Mbukanma et al. 2020	Providing a framework of bank products and services knowledge towards improved customer electronic banking (e-banking)	By providing a complete framework, we can assist banks and their management in educating their consumers and bridging current knowledge gaps.
Shanmugam et al. 2014	Examining the elements that influence technology acceptability in the mobile banking framework	Increasing user satisfaction with system and mobile banking usage

The review of the literature reveals certain gaps related to the role of automation in the financial market, whereas the previous studies did not provide evidence or empirical reports about the impact of automation on customer satisfaction while maintaining job insecurity at a low level, especially in the banking sector. In addition, to the present, the literature did not report evidence of the interrelationship between banking automation and customer satisfaction from the perspective of job insecurity, especially in the UAE banking sector. Therefore, further academic work is required to fill the gap in the literature and provide new evidence why customer satisfaction is not only influenced by the automated banking service, but also the impact of automation could have a negative effect on the employment rate and thus raise job insecurity, which in turn affect customer satisfaction.

Methodology

The study employed a content analytic approach to collect qualitative data, using an inductive strategy to track and gather important materials related to the concept of automation perception in the banking industry and customer satisfaction with automated banking. A

diverse range of sources was employed, encompassing papers, academic journals, articles, and material sourced from the internet. The researcher performed a comprehensive examination of existing literature and scrutinized the viewpoints of scholars, researchers, and journalists in order to get valuable insights and cultivate a comprehension of automation in the banking sector.

The Relationship between Banking Automation Perception and Customer Satisfaction

The literature reveals lots of reports on the relationship between banking automation and customer satisfaction in the banking sector. For example, Zouari and Abdelhedi (2021) found a positive and substantial association between the main aspects of Islamic banks' automated customer service quality and customer satisfaction. Similarly, Aslam et al. (2019) investigated the impact of automated teller machine (ATM) service quality on customer satisfaction and customer loyalty in Pakistani banks. Banking is no exception to the trend of innovation through automated banking services. Whether it is a private or public sector bank, technological advancement is opening up new paths of achievement. Innovative banking instruments resulted in automated financial transactions and other banking services in the banking business. Working in public sector banks is changing nowadays, and clients are sensing the surge of innovation through banking automation (Sharma, 2022). Likewise, Ijeoma et al. (2020) investigated the impact of electronic banking on customer satisfaction in commercial banks in the same environment. Their research found a link between automated banking services including ATMs and mobile banking and client satisfaction at United Bank for Africa. Similarly, the impact of automated banking on customer satisfaction in Nepalese commercial banks has been documented (Joshi, 2019). Furthermore, process automation has been shown to have a substantial impact on competitiveness in Kenyan commercial banks due to increased customer satisfaction (Kemunto & Kagiri, 2018). Similarly, Lu et al. (2020) stated that the use of automation has enhanced banking productivity, acquiring and retaining customers, improving statistics, introducing fresh solutions, and increasing customer satisfaction.

Customer satisfaction is critical in shaping the quality of service in a firm, such as one in the banking industry. When banks try to attract and keep clients, the default is to add technology services, even though recent research has revealed that bank tellers have the greatest impact on total customer satisfaction (Christina et al., 2022). In this regard, the study of Aulia and Tampubolon (2022) discovered that after the bank implemented automation

service facilities, customer satisfaction in the usage of BCA bank in Indonesia increased. In conclusion, employee impression of banking automation can have a major impact on client satisfaction. When employees perceive automation as a threat to their jobs or a barrier to providing personalized customer service, it can create a negative climate that harms the entire customer experience. Employees who accept automation as a tool for improving their capacity to service clients efficiently and effectively may enjoy better levels of customer satisfaction. Understanding and managing staff perceptions of banking automation is therefore crucial for banks to provide excellent customer service while maintaining a competitive edge in the sector. After effectively managing staff perceptions of automation, a bank, for example, can integrate chatbots into its customer assistance system. Employees regard chatbots as a useful tool that handles simple inquiries, allowing them to focus on more complex customer concerns and provide specialized assistance when needed. This not only enhances productivity and reduces client wait times, but it also empowers employees to give exceptional service, which leads to higher customer satisfaction and loyalty.

Conclusions

The concepts of banking automation and customer satisfaction have been analyzed in this paper, and the relationship between them has been identified and discussed. According to the literature review, the banking industry is embracing automation in order to improve overall performance and please clients. The implementation of automation in the banking sector has assisted banks in lowering overall costs while increasing customer satisfaction. It has also been discovered that the advancement of automation has negative implications such as job insecurity. This circumstance has had a negative impact on the behavior of bank personnel, particularly those who have direct contact with consumers. As more automated financial services are implemented, so is the worry of bank personnel, who are anxious that automation may remove or shift their employment. While workplace automation and digitalization are projected to increase further, automation is unlikely to result in a large shift in employment in the near future, but more layoffs are highly anticipated. Government policy may encourage automation while also preparing people for the change in order for them to keep their jobs by learning more about banking tasks. In conclusion, prior research and reports provide a broad overview of the influence of automation on the banking business. This paper confirmed the significant benefits of automation for banks and how it enhances customer satisfaction. The research also finds

that banking automation has lowered employee work pressure while potentially increasing job instability. However, prior studies did not provide evidence on how to maintain customer satisfaction due to automated banking services while keeping a low level of job insecurity, particularly in the UAE banking industry. Therefore, future studies should investigate these relationships from various perspectives to provide a bigger picture of the reality of banking automation in the UAE.

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