Research Paper

Digital Customer Experiences: A Multiple Case Study Approach of Malaysia Financial Institutions

Azira Ab Aziz *

Peter Charles Woods **

ABSTRACT

This study presents evidence on the initiatives and transformation model in Malaysia Financial Institutions. Offers a case analysis of Digital Transformation (DT) from a financial institution's perspective and considers the annual reports of eight local banks published by Bursa Malaysia (Malaysian Stock Exchange) that define their digital customer experience plans. The study applies qualitative analysis, purposive sampling, and case analysis using a text-mining method to the annual reports. In assessing the initiatives, customers emphasize the bank practices focusing on understanding and delivering value-in-use.

Keywords: Case analysis, Customer Experience, Digital Banking Transformation, Malaysian Stock Exchange.

* University of Ha'il, Ha'il, Kingdom of Saudi Arabia. Email: az.abaziz@uoh.edu.sa
* * Multimedia University, Selangor, Malaysia. Email: p.woods@mmu.edu.my

1. INTRODUCTION

Organizations have begun to reorient their strategies around Digital Transformation (DT), which has become a phenomenon (Vial, 2019; Faisal et al., 2021). A DT is "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies" (Vial, 2019). As Vial (2019) mentioned, most recent studies have a better grasp to improve our knowledge of Digital Transformation (DT) phenomena. Recently, the epidemic has accelerated the transition process (Kaur et al., 2021). This disruption is even more visible in financial services provision, as banks are transitioning from conventional to more contemporary service delivery methods (Abdulquadri et al., 2021). Digital Transformation (DT) offers the potential for a shift in business model, explicitly improving customer experience (Abdulquadri et al., 2021).

Scholars (Vial, 2019; Westerman et al., 2011; Breuer et al., 2019) illuminate organizations to embark on their DT framework initiatives. Past results on IT-enabled transformation research have revealed that technology is only one component of the complex problem that must be solved for organizations to stay competitive in a digital environment (Vial, 2019).

The fundamental issue in the organization is a little conceptual and empirical investigation on a digital transformation strategy (Faisal et al., 2021; Ivančić, 2019; Warner & Wäger, 2019). Abdul Halim et al. (2023) mentioned a significant gap in Malaysian retail banking performance, including their models and services, due to the adoption of digitalization. Kannan & Garad (2021) highlighted that lack of focus on technology adoption is the central issue in digital transformation in financial services.

In addition, there needs to be more research in Malaysia's context discussing the impact of digital transformation on customer experience. Malaysia's banking sector is regarded as stable, yet it is still expanding and dealing with rapidly changing market challenges (Aziz & Long, 2023). To remain competitive, banks try to provide clients with innovative products/services (e.g., mobile payment and facial recognition) and implement organizational changes that improve value

creation and customer experience optimization (Cegarra-Navarro et al., 2019). The impact of organizational change is crucial and must be examined.

Furthermore, more consensus between scholars and banks needs to be reached on a rating to measure customer satisfaction. For instance, Holmlund et al. (2020) suggest that Customer Satisfaction (CSAT) or Net Promoter Score (NPS) metrics are the most common forms of CX data. However, a comprehensive measurement scale consisting of the SERVQUAL dimension model is believed can measure service quality and customer satisfaction (Muhammad & Ali Raza (2017) and a similar evaluation recommended by Baber (2019). Hence, the rating applied in Malaysia's banks to measure customer satisfaction could be explored in this study.

Thus, we undertake a review guided by the following two research questions:

1. What are the digital transformation strategies applied in Malaysian financial institutions?

2. How has digital transformation impacted the Customer Experience (CX) in financial institutions?

3. What are the initiatives and ratings related to customer experience strategy?

The study aims to present evidence on the initiatives and transformation model. This study offers a case analysis of DT from a financial institution's perspective. The Banking sector is a champion in CX transformation initiatives (CXNetwork, 2019). We provide evidence for the relationship based on the document analysis result. The annual report provided comprehensive initiatives and ratings related to customer experience strategy. A summary of those initiatives was formulated by synthesizing a report into a table.

The outcome of this research is comparing Malaysian banks' digital business initiatives. The case study presented three categories based on the framework Breuer et al. (2019) developed and utilized by large companies during the digital transformation.

Based on these findings, we discuss the novelty of each case initiative in all eight banks. Although not all cases have the same evaluation or rating of the customer satisfaction index, the studies indicated that the customer journey is one of the banks' top concerns. These findings are relevant to governments and banks worldwide, particularly in Malaysia, that could enable Governments to create a platform for banks for the Digital Transformation of Customer Experience.

2. LITERATURE REVIEW

According to a survey conducted by the World Bank in 2021, most commercial banks have made digital transformation a strategic priority (Xuanli Xie, Shihui Wang, 2023). The findings indicate that banks' digital transformation can increase bank performance, mitigate the negative impact of new technology entrants on bank performance, and encourage the change of bank offline channels. These emerging innovations have promoted banks to enhance their competitiveness and customer service through digital transformation (Cappa et al., 2020; Liang et al., 2022).

Digital transformation changes the way of value creation and creates new business models (Chen et al., 2020; Xie et al., 2020; Chen & Wang, 2021; Hansen & Sia, 2015). However, existing research on how banks use digital technology to realize digital transformation and the value of digital transformation is still dominated by theoretical discussions (Stulz, 2019).

Vial (2019) in his paper has summarized 20 definitions of DT from various authors. Among those definitions, some authors emphasize the words customer experience such as (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014), (Liere-Netheler, Packmohr, & Vogelsang, 2018), (Piccinini, Hanelt, Gregory, & Kolbe, 2015), Horlacher et. Al (2016) , Singh and Hess (2017), Morakanyane et al. (2017) & Paavola et al. (2017). For example, "the use of new digital technologies (social media, mobile, analytics, or embedded devices) to enable major business improvements (such as enhancing customer experience, streamlining operations or creating new business models)" (Fitzgerald et al., 2014; Liere-Ntheler et al., 2018). These definitions have comprehensively covered the main component of transforming companies' strategies.

Researchers used several frameworks for Digital Transformation strategies. For instance, according to Xuanli Xie, Shihui Wang (2023), strategy transformation, business transformation, and management transformation are the three dimensions of digital transformation. Suppose banks give more attention to digital technology, hence a higher level of strategy change. Business transformation focuses on how much digital technology is incorporated into banking services, such as mobile banking Apps and e-commerce. Management transformation emphasizes the level to which digital technology is integrated into bank governance structures and organizational management. Vial (2019) presented a DT process through 8 components of building blocks: "Disruptions, Strategic Responses, Use of Digital Technologies, Changes in value creation paths, Structural changes, Organizational barriers, and Positive and Negative

impacts on the organization." One of the components is the disruption of customer behavior and expectations, whose impact is enormous.

Similarly, Westerman et al. (2011) elaborated that the basis of companies' DT is rooted in three primary areas: consumer know-how, organizational processes, and the business model. The understanding of consumers is divided into consumer awareness, development, and touchpoints. Westerman et al. (2011) draw a wider image by incorporating apps about rationalizing sales, enhancing marketing processes, digital consumer awareness, and unpredictable behaviors, as shown in Figure 1.
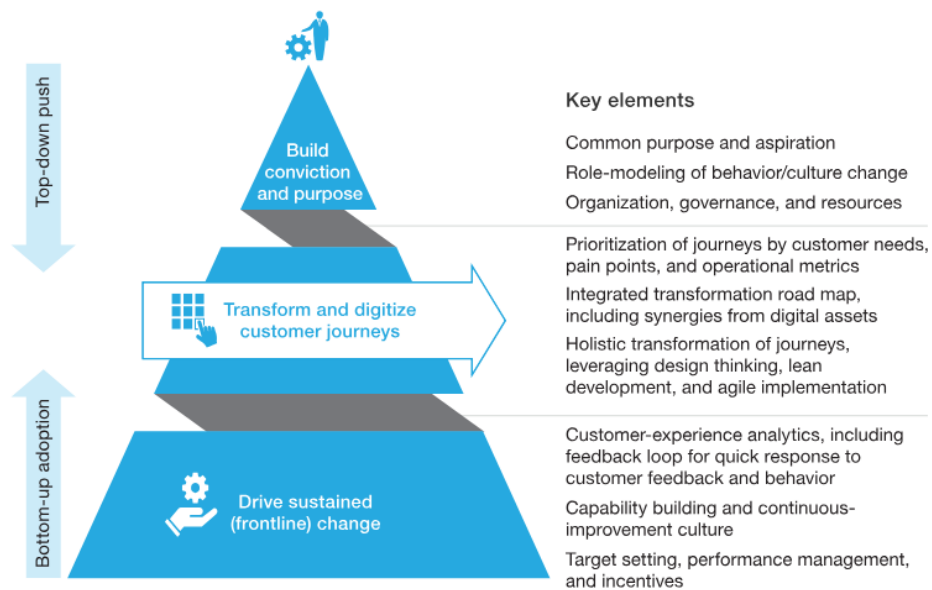

Figure 1. Frameworks used by large companies in the digital transformation process. (Breuer et al., 2019)

2.1 Customer experience focuses on digital transformation.

Customer Experience (CX) often refers to a complex of experiences involving communities, technologies, people, and even nature (Razek et al., 2018). In other words, it is a situation that encompasses all the interactions a person has with a brand. The overall experience measures the experience, the likelihood to continue using the brand, and recommending the brand to others (Chao, 2016). CX refers to how users perceive a customer experience, advertising, brand reputation, sales process, fairness of pricing, product delivery, and each product's User Experience (UX) (Chao, 2016). CX is determined by functional clues (functional quality, trust, and convenience), mechanic clues (website attributes, website design, perceived usability), and humanistic clues (customer complaint handling) (Chauhan, 2022).

Mapping CX is challenging due to the complexity that could prevail in giving value to the company (Komulainen & Saraniemi, 2019; Varnali, 2019). Experiences through various touchpoints should be carefully designed so customers can have a good experience with the company. Touchpoints like customer service, retailers, delivery, and the website should attract customers.

A touchpoint is anyway a consumer can interact with a business, whether person-to-person, through a website, an app, or any form of communication (Maechler et al., 2016). When consumers contact these touchpoints, they can compare their prior perceptions of the business and form an opinion (Stein & Ramaseshan, 2016).

Many tend to refer to UX terminology as CX, which differs conceptually. It is helpful to consider the aspects of UX first; as stated in the International Organization for Standardization (ISO), referred to as ISO 9241-210, UX is "a person's perceptions and responses that result from the use or anticipated use of a product, system, or service" (ISO, 2009). UX deals with people interacting with products and the experience they receive from that interaction. UX is measured with metrics such as the success rate, the error rate, the abandonment rate, the time to complete tasks, and the number of 'clicks' to completion (Sunjeewa, 2018).

CX incorporates many aspects of UX but is expanded to include organizational aspects beyond UX. CX is a multidimensional concept encompassing many aspects, such as cognitive, emotional, physical, sensory, and social responses evoked by a set of market actors (De Keyser et al., 2015). The following Figure 2 summarizes the relations between the two aspects.
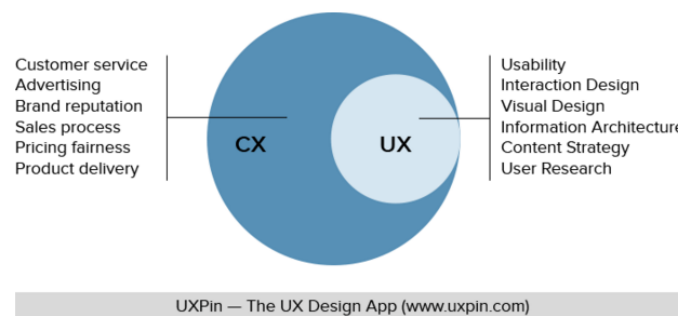

Figure 2. Relationship between CX and UX adopted from (Chao, 2016)

According to Forrester, a global research company, about 63% of business leaders in South-East Asia aim to improve customer experience as their top business priority (Dhesi, 2018). Whether

the core business is a service or is product based, an appropriate approach toward developing a CX strategy could help an organization to have a competitive advantage over its rivals. Customers indirectly conduct research about products, review them, decide to buy, recommend to others, and become loyal customers. Without knowing, they potentially become 'stealth agents' for companies for free. Hence, mapping their experience could provide an opportunity to expand the market.

2.2 Digital Transformation of customer experience in Malaysia

The Director of the Data Ecosystem Development Division from the Malaysia Digital Economy Corporation, in a keynote speech at the Digital Transformation Day 2020 in Malaysia, emphasized the vital importance of data for the digital economy. He stated, "*As a country, Malaysia truly believes in the power of the digital economy as a key driver in our nation's socio-economic growth*" (Ng, 2020).

He elaborated that data comprises market behavior, consumer experience, and purchasing habits. It has been demonstrated that many companies built a digital roadmap seeking the best approaches to align company strategy for capturing customer behavior and attitudinal data (Ng, 2020).

In Malaysia, the Star Newspaper 2016 wrote, "Majority of Malaysian banking consumers do not have a strong sense of loyalty -Gallop Report" (Dhesi, 2016). This article summarized some of Gallop Inc.'s 2016 Malaysian Retail Banking Customer Engagement Report findings. The following are findings as reported in the Star article.

60% of retail bank customers were indifferent to, or uninterested in, their primary bank, apart from the necessary and everyday banking transactions. 28% were fully engaged and had positive feelings. 64% of users aged 25 to 29 were indifferent. The report also suggested that fully engaged customers generated 37% more revenue for the primary bank.

3. RESEARCH METHODS

The previous studies classified the digital transformation systemic process into three types: case studies, survey studies, and quantitative studies (Xie & Wang, 2023). Research studies require an in-depth investigation of digital transformation employing the case base method, either single or muti-case methods. Survey methods that use questionnaires provide a brief description of digital transformation, but it has limitations regarding sample size, representativeness, and the difficulty

of conducting panel studies. A quantitative study used archival data to examine firms' digital transformation, such as annual reports, earnings transcripts, and registration information. This method adapts text analysis to measure digital transformation objectively. However, there are limitations. Text analysis is limited when identifying integration between digital technologies and organizations. Since CX is mainly applied in large organizations in Malaysia, aiming to solve the problems, this study chooses a multi-case research approach on the principles proposed by Yin (2009). A comparison of findings is made in a table form guided by the framework. Table analysis can help researchers to conclude. As illustrated in prior research (Pramanik et al., 2019), case studies are appropriate because a digital transformation of CX is still embryonic, and there is limited knowledge of financial institutions' digital initiatives. This study examines the initiatives by financial institutions to enhance their CX where information is accessible in the financial institutions' certified annual reports. All publicly listed companies must report their digital initiatives and achievements, making it possible for a meaningful comparison. However, no part of this study comparison could be made with other sectors providing similar data.

The data validity and reliability concerns can be addressed using published annual reports. The benefits of case studies are usually promoted as the richness of information and the ability to ask 'how and why' questions (Eisenhardt, 1989; Ellram, 1996; Yin, 2009). The analysis and interpretation of selected financial institutions' annual reports (refer to Section 3.1) were conducted using a text-mining method (voyant-tools.org) (Miller, 2018). The Voyant Tool is an open-source text-mining option that offers a visualized output when interpreting various aspects of the business (Hetenyi et al., 2019). The text-mining process applied keywords such as CX, contact volume, Satisfaction Index, Net Promoter Score (NPS), customer pain points, customer journey, and analytics when extracting companies' statements.

3.1 Case selection

There are 26 banks listed with the Central Bank of Malaysia. Eight banks are local, and eighteen are foreign-owned commercial banks (Malaysia, 2020), as shown in Table 1.

Table 1. Banks listed with the Central Bank of Malaysia (Malaysia, 2020)

No.	Name	Ownership *
1	Affin Bank Berhad	L
2	Alliance Bank Malaysia Berhad	L
3	AmBank (M) Berhad	L
4	BNP Paribas Malaysia Berhad	F
5	Bangkok Bank Berhad	F
6	Bank of America Malaysia Berhad	F
7	Bank of China (Malaysia) Berhad	F
8	CIMB Bank Berhad	L
9	China Construction Bank (Malaysia) Berhad	F
10	Citibank Berhad	F
11	Deutsche Bank (Malaysia) Berhad	F
12	HSBC Bank Malaysia Berhad	F
13	Hong Leong Bank Berhad	L
14	India International Bank (Malaysia) Berhad	F
15	Industrial and Commercial Bank of China (Malaysia) Berhad	F
16	J.P. Morgan Chase Bank Berhad	F
17	MUFG Bank (Malaysia) Berhad	F
18	Malayan Banking Berhad	L
19	Mizuho Bank (Malaysia) Berhad	F
20	OCBC Bank (Malaysia) Berhad	F
21	Public Bank Berhad	L
22	RHB Bank Berhad	L
23	Standard Chartered Bank Malaysia Berhad	F
24	Sumitomo Mitsui Banking Corporation Malaysia Berhad	F
25	The Bank of Nova Scotia Berhad	F
26	United Overseas Bank (Malaysia) Berhad.	F

*Ownership: Local (L) and Foreign (F)

The CX initiatives of eight local banks in Malaysia were chosen to align with the objective of this study. The CX digital transformation initiatives in Malaysian banks are required only from local publicly listed companies. Case studies included the banks' demographics, behaviors, and techniques. Three Malaysian banks (RHB, Maybank, and CIMB) were among the CX Asia Excellence Awards 2019 winners. These awards recognized their CX initiatives.

3.2 Data analysis

A DT framework (Breuer et al., 2019) used a comparison approach to extract the data. Results, as shown in Tables 3, 4, and 5, demonstrated a comprehensive list of the initiatives conducted by these banks. To do in-case analysis, case profiles were first developed.

4. RESULTS

This section concentrates on the data analysis by the research framework described in Figure 1. Table 2 provides overall demographic information of the eight financial institutions.

Table 2. Case study demographic information for the fiscal year 2019

Num	Name	Total Assets (RM)	Net Profit (RM)	Total Employees	Contact Volume By E-Channel	Customer Satisfaction Index	Net Promoter Score
1	Affin Bank Berhad	23.2 Billion	1.9 Million	6,463	▪ 787,632 users- AffinOnline.	NA	NA
2	Alliance Bank Malaysia Berhad	56, 521 Million	537.6 Million	3,590	▪ >52,000 allianceonline Mobile	NA	Contact center = +26 Complaint = +7
3	AmBank (M) Berhad	158,793 Million	1,505.3 Million	NA	▪ 2.5 times - AmOnline Web. ▪ Approximately 150 times- AmOnline Mobile App	60% (CSAT)	−21
4	CIMB Bank Berhad	573.2 Billion	4.56 Billion	35,265	▪ 1.9 Million users – CIMB Clicks. ▪ 2.6 Million users- Mobile App	NA	Top 48%
5	Hong Leong Bank Berhad	207.4 Billion	2,665 Million	7, 958	Connect app user base - 2 million users (accounting for 81% of all banking transactions)	4.0 (over a 5-point scale)	NA
6	Malayan Banking Berhad	834.4 Billion	8.20 Billion	> 43,000	8.68 billion - M2U Transactions	NA	+26
7	Public Bank Berhad	419.69 Billion	5.59 Billion	18,500	▪ 2,388,364 new users – Internet banking ▪ 1,089,162 new users- Mobile Banking	90% rated Frontline services as Excellant and Good	NA
8	RHB Bank Berhad	257.6 Billion	2.5 Billion	14,345	▪ 1.86 Miliion users – Internet banking ▪ 302,112 users users- Mobile Banking	97.4% (SLA Target)	9

4.1 Top-down push -Build conviction and purpose

Examples of initiatives conducted at the top management level are numerous: be it from their purpose and aspiration, role-model behavior/cultural change, organization, governance, and resources. As Hoyer et al. (2020) stated, management and organizational science are crucial for digitalization. It can require structural, organizational reform, re-alignment of incentives, and the continual introduction of new technologies. Albukhitan (2020) stated that objectives and vision should be clearly defined to achieve a successful DT. These aspects will require the companies to implement a holistic approach for the whole organization. In addition, Behare et al. (2018)

suggested significant changes in organizational culture to enable a conducive atmosphere for customers.

Companies should define their aims and vision through DT. All eight banks published their desire to have an excellent customer experience across all channels while improving their digital products and services to meet customer expectations, as shown in Table 3.

Table 3. Examples of initiatives related to building conviction and purposes

No.	Name	Common purpose and aspiration	Role-modeling of behavior/culture change	Organization, governance, & resources
1	Affin Bank Berhad	▪ World-class user experience across all digital touchpoints. ▪ Coupled with data analytics to offer right product, at the right time, using the right channel. ▪ Simplicity at its best	▪ Encourage employees to be more customer-centric & promote Customer First Culture & behavior ▪ Streamlining and transforming operations with focus on being a customer centric insurer	▪ Instill customers' trust and confidence and safeguard stakeholders' data and information adopt a BNM's Risk Management in Technology (RMIT) framework to increase resiliency and minimize cyber threats
2	Alliance Bank Malaysia Berhad	▪ Providing excellent and consistent customer service ▪ Migrate customers from traditional over-the-counter transactions to digital channels	▪ Focus on service rituals (e.g., daily briefings and staff coaching) ▪ Introduced the Branch Recognition Program to embed the delivery of excellent customer experience in their daily engagements with customers.	▪ Customer Data Privacy is in compliance with prevailing legislation (e.g., Personal Data Protection Act (PDPA) 2010. ▪ Upgraded Cyber protection systems.
3	AmBank (M) Berhad	▪ Meet robust consumer needs by delivering simple, seamless, convenient, and holistic financial services and solutions ▪ Provide exceptional customer experience at every touchpoint.	▪ Transforming each employee to become digital ambassador; ▪ Embedding digitalization into corporate DNA ▪ Aligning employees' digital 'customer experience' ("CX") with the expectations of our customers.	Protect the confidentiality of all AmBank Group's customer information (past, present and prospective) by complying with the relevant privacy laws and regulations (e.g., Personal Data Protection Act 2010).
4	CIMB Bank Berhad	▪ Personalized banking experience through tailored products, services, and offers ▪ The basis of 3Es promise to customers, making banking Easy, Efficient, and always going the Extra Miles.	Customer Day Campaign -empower staff on the ground to WOW customers (e.g., giving rewards, gifts, and thank you notes) and proactively gather candid feedback on improvement areas.	Embed Treating Customers Fairly (TCF) standards when handling our day-to-day operations (e.g., policies, guidelines, and governance to ensure TCF compliance.
5	Hong Leong Bank Berhad	▪ Focus on delivering products and services that are relevant to customers' needs.	Empowering customer-centric culture to tailor the right solutions for their clients, (e.g., reorganizing some of	Protect organization and customer data from unauthorized access or attacks aimed to exploit such information.

		▪ Strive to create positive customer experiences in all of banking operations. (e.g., innovative digital banking services.)	the workforce away from support and branch operations roles to higher value add roles)	(e.g., prevent, identify and address vulnerabilities and threats to personal and confidential customer data)
6	Malayan Banking Berhad	Improving customer experience and engagement through a rollout of innovative digital products and services that are safe, secure, and convenient	Place great importance on upskilling workforce with digital capabilities, while improving processes, and infrastructure to enhance customer experience and operational efficiencies	Drive awareness on cyber security to prevent possible attacks such as phishing and malware, and enhance data security
7	Public Bank Berhad	Superior customer experience in order to deepen customer engagement and forge enduring relationships.	▪ "Service Ambassadors" are stationed at branches to provide face-to-face service to customers. ▪ Branch leadership has line-of-sight on lead generation activities to review the timeliness and quality of customer follow-ups ▪ To create role models for replication, success stories, and best practices are regularly shared with staff.	▪ PB ISO 9001:2015 certification for the "Provision of Customer Service at the Front Office" and "Provision of Customer Service in Loan Delivery" were reaffirmed by SIRIM for another three years to 2020
8	RHB Bank Berhad	▪ Customer Service Charter and strive to gain the trust and confidence ▪ Innovative financial solutions ▪ Digital innovations(simple, fast, and seamless experience)	Promotes deep knowledge of the customers in a local community (e.g., Branch Manager is in-charge of transforming the customer experience)	

An example of their statement is:

"World-class user experience across all digital touchpoints." (Affin)

"Provide exceptional customer experience at every touchpoint." (Ambank)

"Improving customer experience and engagement through a rollout of innovative digital products and services that are safe, secure, and convenient." (Maybank)

Role-model behavior or cultural change is essential in the employees' work culture. Employees must be digital agents for the company to empower a customer-centric culture for transformation. Among the reported initiatives are a Branch Recognition Program (Alliance), a Customer Day Campaign (CIMB), and Service Ambassadors (Public Bank).

Governance is about protecting the confidentiality of all customer information. All eight banks show their commitment to addressing customer concerns.

"Instill customers' trust and confidence and safeguard stakeholders' data and information adopt a BNM's Risk Management in Technology (RMIT) framework to increase resiliency and minimize cyber threats." (Affin Bank)

"Customer Data Privacy complies with prevailing legislation (e.g., Personal Data Protection Act (PDPA) 2010." (Alliance Bank)

"Embed Treating Customers Fairly (TCF) standards when handling our day-to-day operations (e.g., policies, guidelines, and governance to ensure TCF compliance." (CIMB)

"Protect organization and customer data from unauthorized access or attacks aimed to exploit such İnformation (e.g., prevent, identify, and address vulnerabilities and threats to personal and confidential customer data." (Hong Leong Bank)

4.1 Bottom-up adoption- Drive sustained (frontline) change

From a bottom-up adoption perspective, three key elements drive a change for the frontline: CX analytics (customer feedback), a continuous-improvement culture and performance, and incentives. Holmlund et al. (2020) described that Customer Satisfaction (CSAT) or Net Promoter Score (NPS) metrics are the most common forms of CX data. The collected data is structured and numerical. They could invest in predictive text mining if the data is unstructured textual data (e.g., NPS open question).

A tracking system such as the NPS (conducted by Alliance Bank, Ambank, CIMB, RHB, and MayBank) and CSAT (conducted by Affin Bank, Ambank, CIMB, and Hong Leong) was used to gather and measure the information from customers. These tracking systems can provide indexes of satisfaction and loyalty, allowing banks to act based on accurate data for a quick response to customers. The NPS score measures the tendency of customers' loyalty to the bank. For example, Maybank and Alliance scored +26, which is considered good.

The CSAT score measures customer satisfaction with the banks' products or services. The reports indicate that two banks have high CSAT scores, 90% (Public Bank) and 97.4% (RHB). All eight cases show capability in building a continuous-improvement culture, as shown in Table 4.

Table 4. Cases that show capability in building a continuous-improvement culture

No.	Name	Drive sustained (frontline)change		
		CX analytics, including feedback loop for quick response to customer feedback and behavior	**Capability building and continues-improvement culture**	**Target-setting, performance management, and incentives**
1	Affin Bank Berhad	▪ Consolidate & manage client data rapidly in a secured & structured manner ▪ Leveraging on social media to reach to customers ▪ Customer Satisfaction Surveys	▪ Continue to evaluate future branch network rollout plans to position in strategic locations ▪ Developing long-lasting sustainable relationships with the communities	▪ Periodic review and close-gap through tracking of Voice-of-Customer dashboard. ▪ Implemented service excellence awards to promote customer first behavior among frontliners
2	Alliance Bank Malaysia Berhad	Tracking Net Promoter Score (NPS) across nine touch points on a monthly basis.	▪ Training and development programs focus on enhancing relationship managers' capabilities in delivering brand promise such as the Wealth Academy, Alliance SME Way, and ALIF training.	▪ Rewards and recognition programs to motivate employees to create great customer experience ▪ Setting up the Branch Service Council to review and identify action plans on branch issues to close the service gap.
3	AmBank (M) Berhad	▪ All-new AmOnline experience that is analytics backed to deliver tailored products and services. ▪ Net Promoter Score ("NPS") and Customer Satisfaction ("CSAT") surveys through IPSOS. Baseline NPS is -21 and CSAT is 60%.	Nationwide customer experience ("CX") awareness tour entitled CX Unity Tour	The Happy To Help Program features service attributes of warmth, attentiveness, and helpfulness. Frontline staff also underwent AmBank@BEST training to build excellent service talent. More than 1,380 AmBankers were trained.
4	CIMB Bank Berhad	▪ Track service experience at key channels ▪ Perform in-house research/surveys to embed customer view-points during decision-making e.g., Voice-of-Customer (VoC) insights ▪ NPS Top 48% ▪ ICSS ▪ CSAT @Channerls	Re-built measurement ecosystem by determining key metrics that are vital to customers and further augmented all this data through research and Voice-of-Customer (VoC) surveys to discern customer behavior and preferences.	▪ Activate the Group-wide CX Recognition Reward for demonstration of Customer-Obsessed behaviors.
5	Hong Leong Bank Berhad	▪ Running quantitative and qualitative research studies at scale, leveraging market research and industry data, harnessing big data (e.g., customer transactional behaviors) as well as performing UI/ UX usability tests ▪ Achieved Customer Satisfaction Index target of 4.0 (over a 5-point scale) across touchpoints and product experiences	Innovating new customer experiences within the CX Lab (a collaborative space to help re-imagine banking and customer Journeys)	Developing design thinking talent and competencies across the bank (e.g., 1,000 employees across the bank trained in design thinking concepts)
6	Malayan Banking	▪ Leverage data analytics capabilities to provide the	Enhancing customer experience competencies of our frontliners	Provide multiple platforms for employees to increase their digital

	Berhad	right solutions that meet their needs ■ 97% of complaints resolved within 48 hours for fourconsecutive years	to provide our customers with quality, relevant advice, and assistance in a professional manner by developing their communication skills and industry competency	literacy including regular communications called Future-Ready Bytes
7	Public Bank Berhad	■ Conducts regular Customer Feedback Questionnaire - 90% were satisfied ■ Launched Customer Engagement Campaign – "PB Listens and Rewards" - to acquire key insights on customer behavior and expectations (gained 66,000 responses)	■ Actively engaged staff through campaigns such as "Mad4Ideas" for creative ideas on how to improve work processes and elevate service delivery. ■ Regular briefings are also conducted by branch leaders to align with the branch's goals.	■ Invested RM52.0 million on employee training to keep everyone's skills current and future proof. ■ Workshop on design thinking, business innovation, and strategic thinking for employees (e.g focused creative solutions that meet and exceed business and customer needs)
8	RHB Bank Berhad	■ Achieved 97.4% of SLA target for timeliness in providing complaints resolution ■ Achieved a score of 9 points in the Net Promoter Score (NPS)	Driving service excellence through the RHB Way Service Culture initiative	■ Develop talent and drive a high performance culture that focuses on attraction, retention, mobility, performance management, and workplace flexibility. ■ Invested significantly in enhancing and building digital capabilities (e.g., In 2019, more than 400 RHBians received training to be Digital Leaders in order to future-proof employees. To ensure workforce is future-ready

For example, CX awareness programs, CX Lab collaborations, creative campaigns, and training programs.

"Nationwide customer experience ("CX") awareness tour entitled CX Unity Tour." (Ambank)

"Innovating new customer experiences within the CX Lab (a collaborative space to help re-imagine banking and customer Journeys)." (Hong Leong)

"Actively engaged staff through campaigns such as "Mad4Ideas" for creative ideas on how to improve work processes and elevate service delivery." (Public Bank)

Other elements focus on target-setting, performance management, and incentives. These elements are the basis to drive the frontline, meeting the expectations of the banks. Initiatives are demonstrated below:

"Periodic review and close-gap through tracking of Voice-of-Customer dashboard." (Affin Bank)

"Rewards and recognition programs to motivate employees to create great customer Experience."(Alliance)

"Activate the Group-wide CX Recognition Reward for demonstration of Customer-Obsessed behaviors." (CIMB)

4.2 Leveraging the push from top and bottom - Transform and digitize customers' journeys.

The core process in the digital transformation framework is the customer's journey. Elements of transformation include (1) prioritization of journeys by customer needs, pain points, and operational metrics, (2) integration of the road map, and (3) transforming journeys and leveraging design thinking, lean development, and agile implementation. The following anecdotal comments in the reports align with prior research (McColl-Kennedy et al., 2018; Behare et al., 2018; Hoyer et al., 2020). McColl-Kennedy et al. (2018) stated that firms should adopt a customer-centric conceptual framework that incorporates prior CX research and acknowledges that customers create value with a firm by leveraging resources at multiple touchpoints through activities and interactions. Hoyer et al. (2020) emphasized that transforming the customer experience through new technologies has additional critical managerial implications. Companies need to be one step ahead by predicting their customer's needs. Their customer-centric policy and agility to act is the right path for digital transformation (Behare et al., 2018).

The reports confirmed that emphasis on the customer's journey is among the banks' top priorities, as shown in Table 5.

Table 5. Cases that show their initiatives to transform and digitize customer journeys

No.	Name	Prioritization of journeys by customer needs, pain points, and operational metrics	Integrated transformation road map, including synergies from digital assets	Holistically transform journeys leveraging design thinking, lean development and agile implementation
1	Affin Bank Berhad	▪ End to-end customer journey and feedback were reviewed ▪ Identification of 'pain points' and opportunity to improve industry practice	• Policies & frameworks in regards to monitoring & managing customers' satisfaction (e.g., Affin Digital roadmap) • Regular engagement with customers	▪ Consistent customer experience across all channels. Start Digital End Traditional or Start Traditional End Digital. ▪ Genius Pocket, AXA Travel Insurance Claims Journey
2	Alliance Bank Malaysia Berhad	Responding to customer enquiries and complaints in a timely manner through our Voice of Customers (VoC) initiatives.	Comprehensive internal communication system with a defined set of service rituals that would help to deliver excellent customer service.	Digitization initiatives such as automation are executed to improve customer experience by offering quicker service with a shorter turnaround time.
3	AmBank (M) Berhad	▪ Customer Pain Point workshops were held, in conjunction with the CX Unity Tours. Issues identified were addressed through Six Sigma Green Belt Projects.	▪ Group-wide digital roadmap to integrate and innovate products and services ▪ Recreates AmBank Group's digital interface for a new	▪ AmDigital aims to enhance digital capabilities to simplify customer experience by leveraging on the power of data, redefine AmBank Group's operating model and

			virtual banking experience that is convenient, instant, ever-ready and secure (known as 'Bank in the Sky')	• advance AmBank Group as a digital-driven organization • Established Customer Innovation Lab (Digital Garage) to improve customer experience with innovations solutions and enhanced processes.
4	CIMB Bank Berhad	• Complaints Analysis Framework, Focus on customer pain points that are most frequent and high in volume and deploy analytics to identify trends and process solutions.	Introduced Customer Experience (CX) measurement ecosystem model. This model drives internal synergies via best-in-class practices across the region.	• Transformed seven customer journeys across key markets, where all projects anchored on Lean Six Sigma (LSS) and human-centric design-thinking approach • 'CIMB BEATS', a 5-step guide on best practices when engaging with customers to deliver signature experiences.
5	Hong Leong Bank Berhad	In the last 12 months, worked with over 30 FinTechs/ startups and interacted directly with over 3,500 customers to better understand their requirements, and used the insights gained to co-create solutions that reflect and meet their needs	Developed several real time customer experience digital dashboards for management and on-the-ground teams to keep them informed of the state of customer	Use Design thinking and customer co-creation to design new customer journeys and experiences
6	Malayan Banking Berhad	Take a measured approach in digital investments and develop innovations in-house through Technology team	• Enhance our digital propositions as well as internal functions and processes to improve customers experience through easier and faster transactions • Restructure SME Client Engagement Model to encourage continuous engagements with SME clients throughout the customers' life cycle.	• 20 customer journey improvement initiatives (e.g., streamlining queue management process to improve efficiency in the management of queues and waiting time for customers. • Embarked Voice of Customers garnered from the External Customer Engagement Survey (ECES)
7	Public Bank Berhad	• Guided by the Customer Service Charter (e.g standard waiting time, customer complaint) • The customer complaint resolution system includes a maximum 10-day benchmark for all customer complaints to be acknowledged and resolved.	A 3-year Digital Roadmap enhance customers' experience by making banking easier, faster and more reliable through the Group's digital touch points.	• Leverages on big data analytics to uncover trends and meaningful insights in order to improve understanding of customers' lifestyle preferences. • Upgrade the Customer Relationship Management Application tool and enhance customer experience
8	RHB Bank Berhad	Solving the right problems Empathizing with customers and challenging existing assumptions (e.g, Develop Hypotheses on Pain Points and Customer Needs)	Digital Transformation Program ("DTP"). DTP, which is part of FIT22 strategic roadmap	Design Thinking and a Minimum Viable Product ("MVP") approach that completely and quickly addresses customer needs

These banks implemented workshops, projects, and systems to receive complaints from customers, such as:

"Customer Pain Point workshops were held, in conjunction with the CX Unity Tours. Issues identified were addressed through Six Sigma Green Belt Projects." (Ambank)

"Complaints Analysis Framework, Focus on customer pain points that are most frequent and high in volume and deploy analytics to identify trends and process solutions." (CIMB)

"The customer complaint resolution system includes a maximum 10-day benchmark for all customer complaints to be acknowledged and resolved." (Public Bank)

"Empathizing with customers and challenging existing assumptions (e.g., Develop Hypotheses on Pain Points and Customer Needs)." (RHB Bank)

All eight banks demonstrated their efforts to have an integrated transformation roadmap.

"Policies & frameworks in regards to monitoring & managing customers' satisfaction (e.g., Affin Digital roadmap)." (Affin Bank)

"Introduced Customer Experience (CX) measurement ecosystem model. This model drives internal synergies via best-in-class practices across the region." (CIMB Bank)

"A 3-year Digital Roadmap enhances customers' experience by making banking easier, faster, and more reliable through the Group's digital touch points." (Public Bank)

"Digital Transformation Program ("DTP"). DTP, which is part of FIT22 strategic roadmap." (RHB Bank)

Another element is the banks' effort to leverage design thinking, lean development, and agile implementation. It is apparent in their annual report statement such as:

"20 customer journey improvement initiatives (e.g., streamlining queue management process to improve efficiency in managing queues and waiting time for customers." (Maybank)

"Design Thinking and a Minimum Viable Product ("MVP") approach that completely and quickly addresses customer needs". (RHB Bank)

"Leverages on big data analytics to uncover trends and meaningful insights in order to improve understanding of customers' lifestyle preferences" (Public Bank)

"Transformed seven customer journeys across key markets, where all projects anchored on Lean Six Sigma (LSS) and human-centric design-thinking approach" (CIMB Bank)

5. DISCUSSION

This study investigates the comparison between Malaysian banks' digital business initiatives. Digitization in banking has become crucial, especially with the current pandemic. Based on our data, the three research questions were explained in detail.

5.1 The digital transformation strategies applied in Malaysian banks digital initiatives

The digital transformation strategies applied in Malaysian banks' digital initiatives are categorized into three categories. Large companies use the framework by Breuer et al. (2019) in the digital transformation process.

The first category relating to *Top-down push - Build conviction and purpose* is analyzed from an annual report. The instance illustrated that organizations set their goals and visions in line with DT. All eight banks aimed to provide an exceptional client experience across all channels while enhancing their digital goods and services to match consumer expectations. According to research by Diener & Spacek (2021), banks must overcome the most significant hurdle associated with strategic management. The management viewpoint on digitization must be evident, and they must take the initiative for future development. From their perspective, digitalization will contribute to process optimization and automation in the future. Banks are thought to be on the right road, but only a tiny portion of what is feasible has been implemented thus far (Diener & Spacek, 2021). Supported by Abdulquadri et. al. (2021) study on Nigeria Financial Services that digital disruption is even more visible, as banks are transitioning from conventional techniques that are less effective and efficient to a contemporary and more effective method of delivering their services to their target audiences (Abdulquadri et al., 2021).

Bottom-up adoption - Drive long-term (frontline) transformation is the second category. This category emphasizes (1) Customer-experience analytics, including a feedback loop for quick response to culture, customer feedback, and behavior. (2) Capability building and continuous-improvement culture. (3) Target setting, performance management, and incentives. All eight cases demonstrate the ability to create a culture of continuous improvement. All eight banks demonstrate the existence of CX analytics (customer feedback), a culture of continuous improvement and performance, and rewards. The most popular types of CX data are Customer Satisfaction (CSAT) or Net Promoter Score (NPS) measures in each case study. Supported by Diener & Spacek (2021), the bank's corporate "change culture" is critical since staff must be willing to be guided by specialists and managers and should not be wholly hostile to new

techniques and changes. Similarly, research conducted by (Buchwald & Lorenz, 2020; Kaur et al., 2021) proposed that the requirement for change management inside the company relates to forming cross-functional teams comprised of business and IT executives. The scope of the effort is influenced by dependent factors such as company size, past experiences with digitalization projects, fragmentation, organizational culture, and cross-functional collaboration. (Buchwald & Lorenz, 2020). It was suggested that the use of emerging digital transformation which recognizes the role of big data/analytics (Abdulquadri et al., 2021).

The third category explained *Leveraging top-down and bottom-up push - Transform and digitize customer journeys*. The customer's journey is the core process in the digital transformation framework, which includes (1) prioritizing journeys based on customer needs, pain points, and operational metrics, (2) integrating the road map, and (3) transforming journeys to leverage design thinking, lean development, and agile implementation. The reports' anecdotal comments are consistent with previous studies. Banks are under tremendous pressure to stay competitive to change their tactics and business models to be more customer-centric (Diener & Spacek, 2021). According to the report by (Kaur, Kiran, & Rupeika-Apoga, 2021), the capabilities of a bank to offer the appropriate material to the right people at the right time is critical to customer satisfaction; for instance, banks use touch points such as social media and other channels to interact with consumers and new clients. They must increase their effort to develop new approaches to fulfill client requirements. All banks should provide accurate, trustworthy information, timely updates, account management, and error-free transactions in their digital banking services. In addition, to improve tangibility and responsiveness, banks must also strive to deliver simple, convenient, and aesthetically attractive services with error-free transactions. (Kaur, et al., 2021).

5.2 The impact of digital transformation on the Customer Experience (CX)

Digital transformation has disrupted customer experience. The findings demonstrated that Malaysian banks have transformed and digitized customers' journeys, such as personalized digital customer experience, embracing automation, and creating a multi-channel customer experience. For example, embracing automation via improvement on the queue system, design thinking for quickly addressing customer needs, big analytics to uncover the trends of customer lifestyle preferences, and transforming customer journey through Lean Six Sigma.

The impact for Malaysian banks was not merely temporary; they built a roadmap to enhance customer experiences, such as Affin Digital Roadmap, Customer Experience measurement ecosystem model, and a 3-year Digital Roadmap focusing on digital touch points under Digital Transformation Program. These efforts demonstrated the impacts of digital transformation on customer experience.

The finding supports the study conducted by Baber (2019) evaluating the online tools performance of Islamic Banks in Malaysia using the e-SERVQUAL model. They found that it has a positive impact on customer satisfaction. Similarly, Aziz and Long (2023) mentioned that banks are more likely to grow their profitability by targeting the right consumers, improving customer experience, maintaining solid customer relationships, and lowering customer acquisition/retention costs.

5.3 The initiatives and rating related to customer experience strategy

The study confirmed the description by Holmlund et al. (2020) that Customer Satisfaction (CSAT) or Net Promoter Score (NPS) metrics are the most common forms of CX data. This score measures the level of satisfaction with banks' products or services.

Five banks (Alliance Bank, Ambank, CIMB, RHB, and MayBank) implemented a tracking system like the NPS. Four banks (Bank, Ambank, CIMB, & Leong) used a CSAT. Scores such as Maybank and Alliance (+26), CSAT scores of about 90% (Public Bank), and 97.4% (RHB) is considered high rating.

However, the results did not align with the study from (Ali & Raza (2017) & Baber (2019) banks that use the measurement or rating based on SERVQUAL dimensions. It shows that the data analytics used in the banks are based on the common forms of CX data.

6. CONCLUSION

To conclude, the abovementioned comparison between the Malaysian banks shows that initiative exists in all eight banks. The evaluation of the digital transformation framework makes the following contributions. Firstly, the case study verified the existence of three categories of digital transformation framework. These categories are (1) *Top-down push - Build conviction and purpose, (2) Bottom-up adoption - Drive long-term (frontline) transformation,* and *(3) Leveraging top-down and bottom-up push - Transform and digitize customer journey.* Secondly, this article's author incorporates manually coded information on customer experience initiatives

such as CX Analytics, road maps, incentives, and culture. As a result, it can more thoroughly depict the digital transformation process than previous literature. Thirdly, the framework can provide references for digital transformation in other industries. Overall, the framework has high internal and external validity, providing an essential tool for qualitative research on the digital economy.

These results could be of interest to governments and banks, especially in Malaysia but also in other developed countries. Governments must consider providing a platform for local Malaysian banks toward the DT of CX. It will be apparent in another year whether the forced increase in digital engagement has provided an opportunity, whether grasped or spurned. Customers may have higher expectations for the ease of use and functionality of digital banking when switching from face-to-face channels. Therefore, banks must be aware of this. For banks with legacy channels and conservative cultures, this might be a difficulty. For example, an in-house paper by the Financial Services Strategy Director, PwC Malaysia entitled, "Digital Banking in Malaysia: Are incumbent banks the real winners of the COVID-19 digital revolution?" (Francis, 2020) made the following observations:

"COVID-19 has been an important catalyst and has done more than any other event to drive digital usage in Malaysia. ... individuals and businesses have had to replace face-to-face interaction with remote and digital channels ...it is clear that things are not going back to the way they were before...".

Although the study was well designed, executed, and produced useful information and insights, it has limitations that require more investigation. When evaluating the results, these constraints should be taken into account. To begin with, the findings may not be universally applicable because the study focused just on Malaysian banks and may not represent other rising businesses and institutions. Future studies might examine how banks in other nations react to digital transformation. Second, the annual report was gathered in 2020, and a current annual report may have further information before publishing this paper; nonetheless, an insight into Malaysian banks' usage of digital transformation has been revealed. Third, the influences of digital transformation initiatives on the macroeconomic environment shall be discussed to understand their implications.

REFERENCES

Abdul Halim, N. H. A., Azlan, M. A. M., Nor Adzhar, M. N. A., & Hussein, N. (2023). Accelerating digital talent readiness in Malaysian banking sector: A study on technology adoption through the intention to use customer-focused digital solutions. *Information Management and Business Review*, 15 (1(I)SI), 164-175.

Aziz, N.A. & Long, F. (2023) Examining the relationship between extensive data analytics capabilities and organizational ambidexterity in the Malaysian banking sector. *Front. Big Data*, 6, doi: 10.3389/data.2023.1036174

Abdel Razek, A. R., Pallot, M., van Husen, C., & Richir, S. (2018). Service Prototyping Experience. Proceeding of the *24th ICE/IEEE International Technology Management Conference.* Stuttgart, Germany.

Abdulquadri, A., Mogaji, E., Kieu, T., & Nguyen, N. (2021). Digital transformation in financial services provision: a Nigerian perspective to adopting chatbot. *Journal of Enterprising Communities: People and Places in the Global Economy, 15(2),* 258-281.

Albukhitan, S. (2020). Developing Digital Transformation Strategy for Manufacturing. *Procedia Computer Science,170*, 664-671.

Baber, H. (2019). E-SERVQUAL and Its Impact on the Performance of Islamic Banks in Malaysia from the Customer's Perspective. The Journal of Asian Finance, Economics and Business, 6(1), 169–175.

Behare, N., Waghulkar, S., Shah, S., & Meghe, R. (2018). A theoretical perspective on Customer Experience (CX) in Digital Business Strategy, *IEEE Explore*.

Breuer, R., Härtl, D., Maechler, N., & Stegeman, U. (2019, January 28). *Customer experience as a value driver in German retail banking.* Retrieved June 11, 2020, from McKinsey & Company:https://www.mckinsey.com/industries/financial-services/our-insights/customer-experience-as-a-value-driver-in-german-retail-banking

Buchwald, A., & Lorenz, F. (2020). Who is in Charge of Digital Transformation? The Birth and Rise of the Chief Digital Officer. *Academy of Management Proceedings*, 1-33. https://doi.org/10.5465/AMBPP.2020.14317abstract

Cappa F. , Oriani R. , Peruffo, E. et al., (2020). Big data for creating and capturing value in the digitalized environment: unpacking the effects of volume, variety, and veracity on firm performance, *Journal of Product Innovation Management,* 38 (1) 49-67.

Cegarra-Navarro, J. G., Jiménez-Jiménez, D., & García-Pérez, A. (2019. An integrative view of knowledge processes and a learning culture for ambidexterity: toward improved organizational performance in the banking sector. *IEEE Trans. Eng. Manag*. 68, 408–417.

Chao, J. (2016). *Customer Experience vs. User Experience: Why the Difference Matters*. https://www.uxpin.com/studio/blog/customer-experience-vs-user-experience-why-the-difference-matters/

Chauhan, S., Akhtar, A. & Gupta, A. (2022). Customer experience in digital banking: a review and future research directions, *International Journal of Quality and Service Sciences,* Vol. 14 No. 2, 311–348.

Chen J., Huang S., & Liu Y. (2020). Operations management in the digitization era: from empowering to enabling, *Journal Management World*, 2 (2020), 123-134

Chen W., & Wang J. (2021). Platform-dependent upgrade: digital transformation strategy of complements in the platform-based ecosystem, *J. Manag. World.*, 10 (2021), 215-234

CXNetwork. (2019). *CX Asia Excellence Awards*. Retrieved April 1, 2020, from CX Network, IQPC: https://www.cxnetwork.com/events-customerexperienceasia/landing/cx-asia-excellence-awards-announcement-of-winners

De Keyser, A., Lemon, K. N., Klaus, P., & Keiningham, T. L. (2015). A framework for understanding and managing the customer experience. *Marketing Science Institute Working Paper Series, 15(121)*, 1-48.

Dhesi, D. (2016). *Majority of Malaysian banking consumers need a strong sense of loyalty.* Malaysia: Gallup report, The Star.

Dhesi, D. (2018). *Customers at the core of digital transformation.* Malaysia: The Star.

Diener, F., & Spacek, M. (2021). Digital Transformation in Banking: A Managerial Perspective on Barriers to Change. *Sustainability (13)* 10.3390/su13042032, 1–26.

Eisenhardt, K. M. (1989). Building theories from case study research. *The Academy of Management Review, 14 (4)*, 532-550.

Ellram, L. M. (1996). The use of the case study method in logistics research. *Journal of Business Logistics, 17 (2)*, 93-138.

Faisal, I., Khuram, S., Aurangzeab, B., & Jussi, K. (2021). Digital Transformation of Industrial Organizations: Toward an Integrated Framework, *Journal of Change Management, 21(4),* 451–479.

Francis, P. (2020, June). *PwC.* https://www.pwc.com/my/en/perspective/digital/200626-pwc-blog-digital-banking-in-malaysia.html)

Hansen R., & Sia, S.K. (2015). Hummel's digital transformation toward omnichannel retailing: critical lessons learned, *MIS Q. Exec*., 14

Hetenyi, G., Lengyel, A., & Szilasi, M. (2019). Quantitative analysis of qualitative data: Using voyant tools to investigate the sales-marketing interface. *Journal of Industrial Engineering and Management,* 12 (3), 393-404.

Holmlund, M. & Vaerenbergh, Y. V.; Ciuchita, R.; Ravald, A.; Sarantopoulos, P.; Ordenes, F. V. & Mohamed, Z. (2020). Customer experience management in the age of big data analytics: A strategic framework. *Journal of Business Research*. 116. 10.1016/j.jbusres.2020.01.022.

Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the Customer Experience Through New Technologies. *Journal of Interactive Marketing*, 51 (1), 57-71.

ISO, I. (2009). Retrieved June 1, 2020, from Ergonomics of human-system interaction - Part 210: Human-centered design for interactive systems (formerly known as 13407). ISO F±DIS 9241-210:2009.

I   vančić, L. V. (2019). Mastering the digital transformation process: Business practices and lessons learned. *Technology Innovation Management Review, 9 (2),* 36–50.

Kannan, K.S.P.N. and Garad, A. (2021). "Competencies of quality professionals in the era of industry 4.0: A case study of electronics manufacturer from Malaysia", *International Journal of Quality & Reliability Management*, 38(3), 839–871. https://doi.org/10.1108/IJQRM-04-2019-0124

Kaur, B., Kiran, S., Grima, S., & Rupeika-Apoga, R. (2021,9). Digital Banking in Northern India: The Risks on Customer Satisfaction. *Risks*, 9 (11), 209. https://doi.org/10.3390/risks9110209

Komulainen, H., & Saraniemi, S. (2019). Customer centricity in mobile banking: a customer experience perspective. *International Journal of Bank Marketing, 37(5)*, 1082-1102. https://doi.org/10.1108/IJBM-11-2017-0245

Liang F, Zhao P., & Huang Z. (2023). Financial technology, macroeconomic uncertainty, and commercial bank risk-taking. *China Economic Quarterly International*, 3(2), 77–87, https://doi.org/10.1016/j.ceqi.2023.04.001.

Maechler N., Neher K., & Park R. (2016). *From touchpoints to journey: Seeing the World as customers do*. https://www.mckinsey.com/business-functions/growth-marketing-and-sales/our-insights/from-touchpoints-to-journeys-seeing-the-world-as-customers-do

Malaysia, C. B. (2020, May 30). *Commercial Banks*. https://www.bnm.gov.my/index.php?ch=li&cat=banking&type=CB&fund=0&cu=0

Muhammad, A. & Syed, A. R. (2017). Service quality perception and customer satisfaction in Islamic banks of Pakistan: the modified SERVQUAL model, *Total Quality Management & Business Excellence*, 28:5-6, 559–577.

McColl-Kennedy, J., Zaki, M., Lemon, K., Urmetzer, F., & Neely, A. (2018). Gaining Customer Experience Insights That Matter. *Journal of Service Research*, 22(1), 8–26. https://doi.org/10.1177/1094670518812182

Miller, A. (2018). Text Mining Digital Humanities Projects: Assessing Content Analysis Capabilities of Voyant Tools, *Journal of Web Librarianship, 12 (3)*, 169–197.

Ng, K. (2020, February 12). *Digital Transformation Day 2020 Malaysia*. https://www.abeam.com/my/en/topics/events/dtdmy2020

Pramanik, H. S., Kirtania, M., & Pani, A. K. (2019). The essence of digital transformation-Manifestations at large financial institutions from North America. *Future Generation Computer Systems, 95*, 323–343.

Stein, A., & Ramaseshan, B. (2016). Towards the identification of customer experience touch point elements. *Journal of Retailing and Consumer Services. 30,* 8-19.

Stulz R. M. (2019), Fintech, bigtech, and the future of banks, *Journal of Applied Corporate Finance*, 31 (4), 106-117.

Sunjeewa, I. (2018). Jan 15). *What's the Dif? UX vs. CX*. om https://medium.com/@ineedspd/whats-the-dif-ux-vs-cx-5c65be4f33e1

Varnali, K. (2019). Understanding customer journey from the lenses of complexity theory, *The Service Industries Journal, 39, 11–12.*

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. Journal of Strategic Information Systems, 28 *(2),* 118–144.

Warner, K. S., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning, 52(3),* 326–349.

Westerman, G., Calméjane, C., Bonnet, D., Ferraris, P., & McAfee, A. (2011). *Digital Transformation: A Roadmap for Billion-Dollar Organizations.* MIT Center for Digital Business and Capgemini Consulting.

Xie K., Xia Z., & Xiao J. (2020). The enterprise realization mechanism of big data becoming a real production factor: from the product innovation perspective, *China Industrial Econ*, 5, 44-62.

Xuanli, X., & Shihui, W. (2023). Digital transformation of commercial banks in China: Measurement, progress, and impact, *China Economic Quarterly International*, Volume 3, Issue 1, 35–45.

Yin, R. (2009). *Case Study Research: Design and Methods, 4th ed.*, Sage Publications, Thousand Oaks, p. 240.

How to cite this article:

Aziz, A. A.; & Woods, P. C. (2023). Digital Customer Experiences: A Multiple Case Study Approach of Malaysia Financial Institutions, *International Journal of Marketing, Communication and New Media*, Special Issue on Services Marketing, June 2023, 29–55.