

## Switching Behaviour in Using Islamic Digital Banks in Indonesia: Push-Pull Mooring Model

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### Abstract

This study aims to analyse the factors influencing customers' switching behaviour in the use of digital banking from the perspective of the PPM model. A self-administered questionnaire was used to collect the data. PLS-SEM was used to analyse the data. The results showed that alternative attractiveness, response to service failure, and push factors positively influence switching intention behaviour. Switching cost as a mooring factor positively influences switching intention behaviour. Meanwhile, switching intention influences switching behaviour. However, alternative attractiveness and involuntary switching as pull factors negatively affect switching intention behaviour. Several studies have been conducted on switching intention behaviour in the use of digital banking products and services. However, studies on the switching intention behaviour of Islamic digital bank products and services are scarce. This study contributes to the literature on switching behaviour in the use of Islamic digital banks.

**Keywords** push-pull mooring, switching intention behavior, Islamic Digital banks

### INTRODUCTION

The development of digitalisation has shifted the business landscape from traditional to digital-based in all sectors, including the financial sector. Hence, in the financial sector, the banking industry is one of the financial institutions significantly affected by the emergence of technology in recent decades (Son, Kwon, Tayi, & Oh, 2020). Automatic teller machines, electronic fund transfers, electronic data transfers, Internet banking, and mobile banking are digital banking products in conventional and Islamic banks. In addition, digital banking is adopted by the banking industry in developed and developing countries, including Indonesia.

The Islamic banking industry is rapidly growing in Indonesia. According to the Financial Service Authorities (OJK), the total assets of Islamic banks in October 2021 grew by 9,7% compared with October 2020. This indicates that even in the pandemic era, Islamic banks grew significantly during the national economic downturn caused by the global pandemic. Hence, like their counterparts, Islamic banks in Indonesia also developed digital-based products and services to fulfil customers' post-pandemic needs and respond to the 4.0 era.

On the other hand, digitalisation during and after the pandemic has increased, especially the use of digital-based banks by customers (C.-L. Lin, Jin, Zhao, Yu, & Su, 2021; Nayak, Bhattacharyya, Goswami, & Thakre, 2022). Lockdown policy restricting activities forced customers to use digital-based financial needs (Moşteanu, Faccia, Cavaliere, & Bhatia, 2020). Indonesia has become one of the most death-confirmed cases in ASEAN (WHO, 2022). Thus, the use of digital banking during and after the pandemic has increased significantly in Indonesia. According to Bank Indonesia, in 2020, the transaction volume of digital banking will increase by 41,53% year on year, while the number of digital banking transactions will reach IDR 2.775,5 trillion or grows 3,91% year on year (OJK, 2022). Furthermore, along with the spread of Internet penetration in significant areas in Indonesia, the pandemic era has boosted the use of digital banking. It switches customer behaviour from traditional transactions to digital transactions (APJII, 2020; Santoso, Trinugroho, & Risfandy, 2020).

The shift from traditional to digital transactions is also known as migration in the theory of human behaviour (Lee, 1966). According to Moon (1995), the switching behaviour of a person is caused by three determinant factors: negative factors from the original influence, the first. The second factor was influenced by positive factors from the new destination. Their social environment influenced the third group. Hence, it is also called the push-pull mooring model. The PPM model explains that the switching behaviour of a person is influenced by push factors, such as bad sentiments of previous products; pull factors, such as the good sentiments of new products that attract the person; and mooring factors, such as the social influence of customers' circles (Bansal, Taylor, & James, 2005; Handarkho & Harjoseputro, 2019; Zhang et al., 2014).

Numerous studies have been conducted on switching behaviour using the PPM model, such as switching membership cards to mobile applications (Li, 2018), social media discontinuation (Chang, Liu, & Chen, 2014; Fu, Li, & Liu, 2021), and switching behaviour to online learning (L. Lin et al., 2021), mobile payment (Handarkho & Harjoseputro, 2019; Loh, Lee, Tan, Ooi, & Dwivedi, 2020; Yoon & Lim, 2021; Yusfiarto, Sunarsih, & Darmawan, 2021), consumer loyalty of mobile services (Zhang et al., 2014), switching behaviour in the airline industry (Jung, Han, & Oh, 2017), switching behaviour of mobile instant messaging applications (Sun et al., 2017), switching behaviour in the on internet-only bank (Yoon & Lim, 2021). Most studies in the literature have shown that the PPM model is used to explain the switching behaviour of a person in a digital area. Moreover, either the results or the antecedents of previous studies varied depending on the objects of the research.

This study aims to analyse the factors influencing customers' switching behaviour in the use of digital banking from the perspective of the PPM model. Furthermore, this study has several

practical implications for policymakers, bankers, and academics. For policymakers, digital banking hastens economic transactions and has lower costs. Thus, appropriate policies should be applied to develop Internet penetration and any required infrastructure. For bankers, the findings of this study could be the fundamental bank policy to enhance their digital banking and features to meet customers' needs. For academics, these results could be a guide for future research. Nonetheless, the study's results could also be a lesson learned for other developing countries with similar economic, geographic, and demographic situations.

## **LITERATURE REVIEW**

### **Push-pull mooring model**

The push-pull mooring theory is derived from the migration theory of human behaviour introduced by Lee (1966). The theory explains that the factors that influence the switching behaviour of customers are the negative aspects of the original product (the push factor), the positive aspects of the new product (the pull factors), and the social circle of customers (mooring factors) (Moon, 1995). Hence, according to Li (2018), the push-pull mooring model is the best predictor of switching behaviour. Furthermore, push pool mooring theory is also used in any field of study related to the switching behaviour of customers (Fu et al., 2021). Meanwhile, the latent variables used in the PPM model vary depending on the recent study.

### **The push factors (involuntary switching and price)**

The push factor is defined as the negative feeling of the customer toward the product (Moon, 1995). In this context, the negative feeling of the customer in the traditional transaction of finance or paying cash in any transactions, such as paying monthly electricity, phone, and Internet bills. However, all traditional transactions have consequences, such as price. Price is a process of comparing cost and value (Sarwar, Awang, Habib, Nasir, & Hussain, 2022). In the customer cognitive conception, prices result from obtaining certain products and services (Ghasrodashti, 2018). Hence, digitalisation in the banking industry offers efficiency and has a lower price than traditional ones (Pio et al., 2020). Customers choose the value for the money of products and services. According to Sarwar et al. (2020), price negatively influences repurchase intentions. Several studies have found that price influences customer switching behaviour (Clemes, Gan, & Zhang, 2010; Jung et al., 2017; Kordi Ghasrodashti, 2018). However, the person with high intensity of the use of technology is usually less sensitive to price (Natarajan, Balasubramanian, & Kasilingam, 2017). However, as their counterpart, Islamic banks have developed digital banking products to respond to digitalisation in the banking industry and fulfil the financial needs of customers.

Meanwhile, involuntary switching is the factor that influences customers' switching behaviour beyond the control of the company and customer (Keaveney, 1995). Customers may switch unintentionally to a new destination beyond the control of the customers themselves; thus, they could determine even satisfied customers (Clemes et al., 2010). In the digital era, along with Internet penetration, digital banking is a trend (Fang & Tang, 2017). The switching behaviour of customers from traditional transactions to digital transactions may be beyond the control of banks and customers. Numerous studies have found that involuntary switching influences customer switching behaviour (Clemes et al., 2010; Fang & Tang, 2017; Keaveney, 1995; Tomasino et al., 2014). In summary, the hypotheses are as follows.

H1: the price has positive influences on the switching behaviour

H2: involuntary switching has positive influences on the switching behaviour

**The pull factors (alternative attractiveness, response to service failure)**

Pull factors refer to positive things about a new destination (Moon, 1995). Customers migrate from previous products and services attracted by new products. This is also known as the alternative attractiveness of a product (Fu et al., 2021; C. Liao, Lin, Luo, & Chea, 2017). The alternatives available in the market encourage customers to switch to a new model (Handarkho & Harjoseputro, 2019). In the context of this study, digital transactions are one of the best alternatives for customers to fulfil their financial needs in the post-pandemic era. Studies have shown that alternative attractiveness pushes customers to switch their behaviour from traditional to digital (Handarkho & Harjoseputro, 2019; Li, 2018; Sun et al., 2017).

However, other pull factors encourage human migration in response to service failures. Response to service failure refers to a negative response during service delivery. Hence, service failure leads to customer dissatisfaction (Gerrard & Barton Cunningham, 2004). Traditional transactions have a greater possibility for employees to respond to service failure. Thus, traditional transactions involve numerous human resources and lengthy processes. For instance, when the customer wants to transfer money, the customer should come to the bank office, take the queue number, and wait for the customer service call. Service failure can occur during the service-delivery process. Hence, the response to service failure could influence customer switching behaviour (Hedrick, Beverland, & Minahan, 2007; Jean Harrison-Walker, 2012; W.-B. Lin, 2010; Thaichon, Quach, Bavalur, & Nair, 2017). Digitalisation in the banking industry minimises service failures during transactions. Therefore, the response to service failure encourages switching to digital bank transactions. In summary, the hypotheses are as follows.

H3: alternative attractiveness has positive influences on switching behaviour

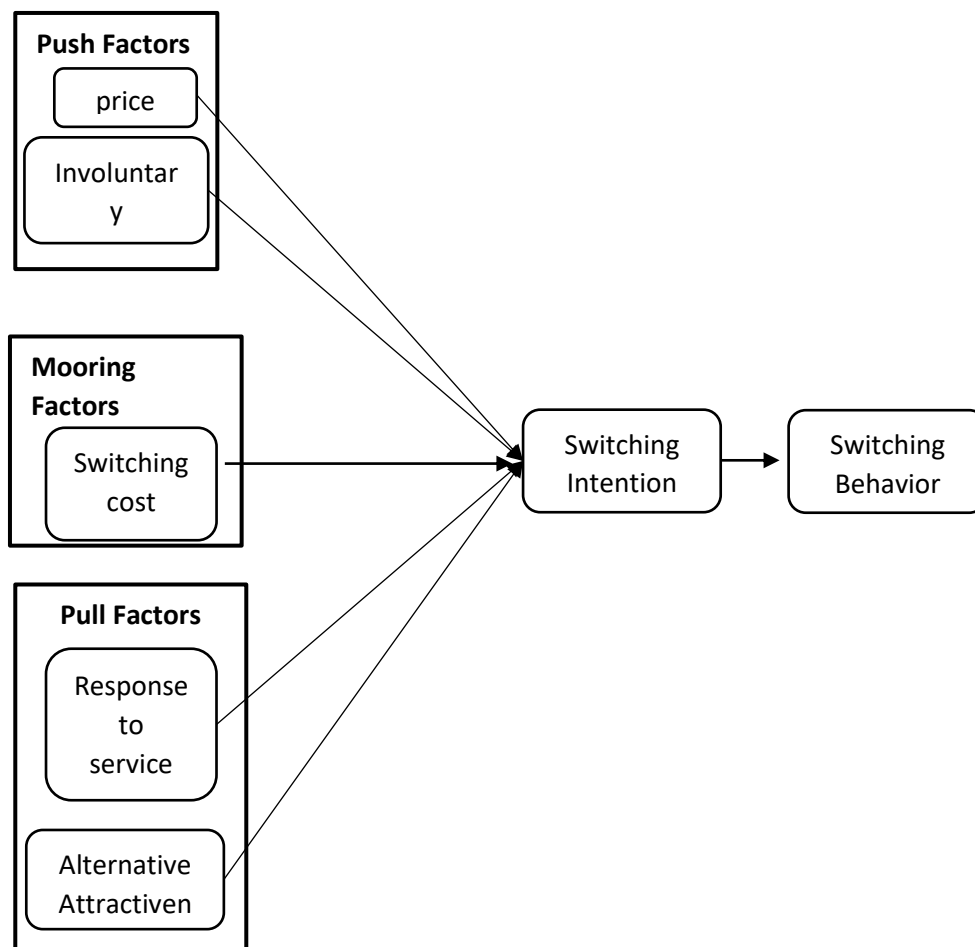
H4: response to service failure has positive influences on switching behaviour

### Mooring factors (switching cost)

The mooring factor defines the social and environmental factors that influence a person's decision making (Lee, 1966; Moon, 1995). Hence, current research on the PPM model, the mooring factor, focuses on cognitive-based factors such as switching costs (Cheng, Lee, & Choi, 2019). Switching costs play a crucial role in switching behaviour (Calvo-Porrá, Faña-Medín, & Nieto-Mengotti, 2017; J. Liao, Li, Wei, & Tong, 2021). Switching cost refers to a personal sacrifice in finance, time, and psychology (Chen & Keng, 2019; Chuah, Marimuthu, Kandampully, & Bilgihan, 2017; Singh & Rosengren, 2020). In addition, switching costs become the berries of a person switching from one place to another (Ghasrodashti, 2018). Digitalisation in the banking industry can reduce transaction costs. For example, if the customer uses a traditional transaction to withdraw money from the bank account, it would incur a higher cost. Customers should consider costs such as transportation costs, time spent, and queue number. Meanwhile, if a customer withdraws money through digital banking, it could be costless. The hypotheses are as follows:

H5: switching cost has positive influences on the switching behaviour

**Picture 1. Conceptual Framework**



## **METHOD**

In this study, we analyse the determinant factors of customers' switching behaviour from traditional banking transactions to Islamic digital banking transactions from the perspective of the push-pull mooring framework. The primary data were collected using a self-administered questionnaire. The questionnaire was divided into two sections. The first contained the demographic respondents. The second questionnaire contained 27 questions related to the constructs. Hence, the Likert scale measures indicators from 1 (strongly disagree) to 4 (strongly agree). Therefore, we used a purposive sampling technique to determine the sample. The criteria for the sample were as follows: First, the respondents were customers of Islamic banks. Second, customers have switched from traditional transactions to digital transactions. We shared 120 questionnaires with respondents. Moreover, the response rate for data collection was 84,4%.

Moreover, partial least squares structural equation modelling (PLS-SEM) estimates the structural model once the data are gathered. PLS-SEM is usually used when facing non-normal data, small sample sizes, and formatively measured constructs (Hair et al. 2021; Hair, Sarstedt, Hopkins, et al. 2014). In addition, PLS-SEM has two measurements; the first is the inner model, and the second is the outer model. We applied smartPLS 3.0 application to analyse the data.

The reliability and validity of the constructs were estimated in the outer model. The reliability of the variables was measured by composite reliability and Cronbach's alpha. The constructs are considered reliable when the composite reliability value is higher than 0.70, and the value of Cronbach's alpha is higher than 0.60. Meanwhile, the constructs are valid when the value of the AVE (Average Variance Extracted (AVE) is higher than  $>0,5$ , and the value of outer loading is higher than  $>0,7$  (Joe F. Hair, Ringle, & Sarstedt, 2011; Joseph F. Hair et al., 2021).

In the inner model, we performed structural modelling. We estimate the goodness of fit of the model using the  $R^2$  values in structural modelling. Simultaneously,  $R^2$  indicates the predictive accuracy of the constructs. Hence,  $R^2$  results of 0.75, 0.50, 0,25 respectively describe substantial, moderate, and weak levels of predictive accuracy among the constructs. (Joseph F Hair et al., 2014). We then calculated hypothesis testing. The hypotheses are accepted if the t-value is higher than the t-value (t-value  $> 1.98$ ) and p-value is lower than 0.05 (p-value  $\leq 0.05$ ), and vice versa (Hair et al., 2011; Joseph F. Hair et al., 2021).

## **RESULT**

This study used two data measurements. The first is the outer model and the second is the inner model. In the outer model, we calculated the validity and reliability tests. In the inner model, we measure  $R^2$  and test the hypotheses. In this section, the results of the study begin with

demographic respondents, followed by the outer model and the inner model. The respondents' demographics are shown in the table below.

**Table 1. Demographic Respondents**

Demographic Respondents		Total
<b>Gender</b>	Male	11
	Female	89
<b>Age</b>	< 20 years	12
	21 – 25 years	68
	26 – 30 years	18
	> 31 years	2
<b>Job</b>	Students	60
	Civil Servants	2
	Employee	16
	Entrepreneur	8
	Others	14
<b>Islamic Digital Banking products used</b>	Automatic Teller (ATM)	29
	Electronic Data Capture (EDC)	2
	Mobile Banking	57
	SMS Banking	1
	Internet Banking	9
	Lain-lain	2
<b>Income</b>	< Rp 1.500.000	73
	Rp. 1.500.000 - Rp. 5.000.000	24
	Rp. 5.000.000 - Rp. 10.000.000	3
	Rp. 10.000.000 - Rp. 15.000.000	0
	> Rp. 15.000.000	0

The table above explains that the respondents of this study were dominated by females, 21 to 25 years old, as the students as their job. Hence, most respondents used Islamic mobile banking as an Islamic digital banking product. Moreover, the income of the respondents was below Rp1,5 million.

### The outer model

In the outer model, we tested the construct's validity and reliability. The AVE value measures the validity of the data (Average Variance Extracted) and value loading factors. The value of AVE should be higher than 0,5, and the value of the loading factors should be higher than 0,7 to be validated. The outer model is presented in the table below.

**Table 2. Validity and Reliability**

Variable	Loading Factor	(AVE)	Cronbach's Alpha	Composite Reliability
<b>Switching cost</b>		0,756	0,839	0,903
Switching from traditional to digital has low cost	0,814			
Switching from traditional to digital has less time to sacrifice	0,913			

Switching from traditional to digital is effortless	0,879		
<b>Response to service failure</b>		0,674	0,840
Digital banking services respond to the demand on time	0,832		0,892
Digital banking services respond to the demand faster	0,812		
Digital banking service help me to finish many financial needs	0,842		
Digital banking service help me to finish many financial needs at once	0,798		
<b>Alternative attractiveness</b>		0,861	0,838
Digital banking is more valuable than traditional bank	0,931		0,925
Digital banking is more attractive than traditional bank	0,925		
<b>Switching intention</b>		0,623	0,842
I want to switch to digital banking	0,853		0,889
I will switch to digital banking	0,849		
I have the plan to switch to digital banking	0,859		
I consider switching to digital banking	0,509		
I hope that digital banking become my primary transactions tool	0,813		
<b>Price</b>		0,827	0,896
Traditional transactions administration's cost is high	0,921		0,935
Traditional transactions service's cost is high	0,917		
Traditional transactions cost is prohibitive	0,891		
<b>Involuntary Switching</b>		0,744	0,861
The bank office around my home is closed	0,928		0,897
The bank office around my home have difficult access	0,845		
The bank office is far from my home	0,810		
<b>Switching Behavior</b>		0,696	0,779
I switch from a traditional bank to a digital bank	0,889		0,872
I will continuously use the digital banking	0,831		
Recently, I have switched from a traditional bank to a digital bank	0,779		



The table above shows that all the constructs are valid and reliable. All indicators have loading factor values higher than 0,7, and the value of AVE is higher than 0,5. Composite reliability and Cronbach's alpha values were used to measure the reliability of the constructs. The table above shows that all the constructs have a Cronbach's alpha higher than 0,6 and a composite reliability higher than 0,7. The results indicate that all the constructs are reliable.

### The Inner Model

Meanwhile, we tested the model's goodness and hypothesis testing in the inner model. The goodness of the model is measured by the value of  $R^2$ , while the value of the alpha statistic measures the hypothesis testing. The inner model is presented in the table below.

**Table 3. The goodness of the model**

	R Square	Category
Switching intention	0,531	Moderate
Switching behaviour	0,471	Weak

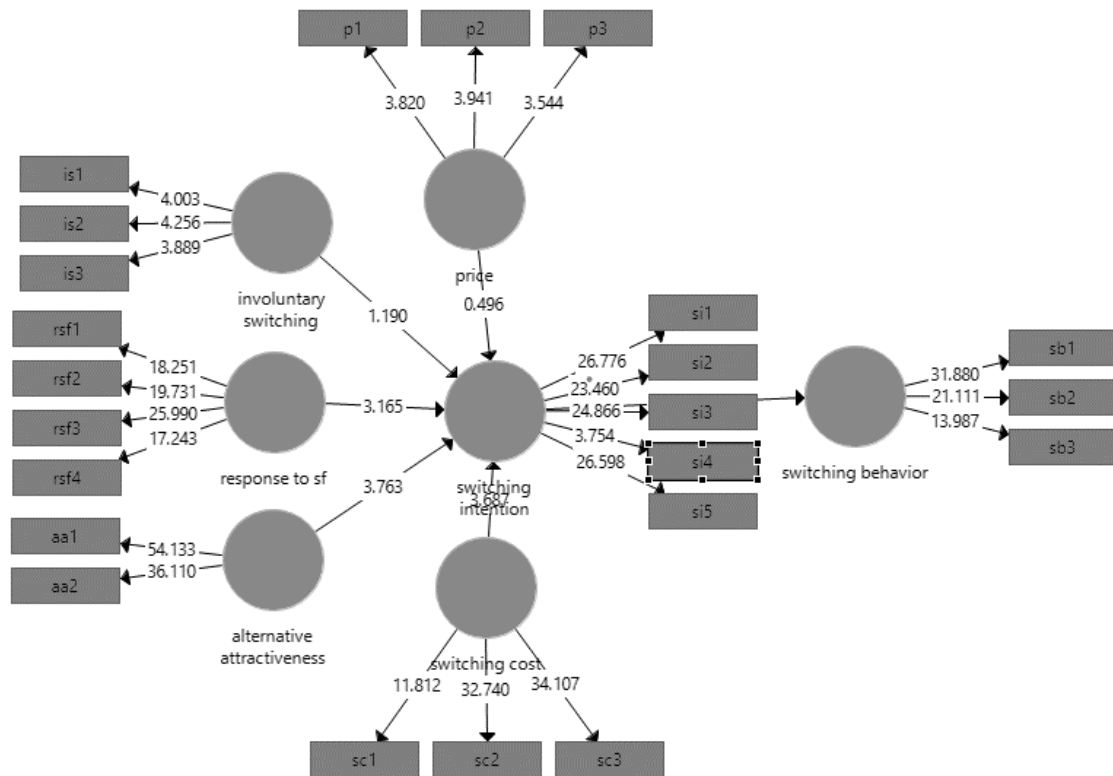
Table 4.3 describes the value of the R-squared, which indicates the predictive accuracy. The  $R^2$  value of switching intention was 0,531 (53,1%) and had a moderate level of predictive accuracy. Meanwhile, the  $R^2$  value of the switching behaviour of 0,471 (47,1%) had a weak level of predictive accuracy. According to Hair et al. (2014), the  $R^2$  value is 0,25, 0,5, and 0,75, respectively, describing substantial, moderate, or weak levels of predictive accuracy, respectively.

**Table 4. The Hypotheses Testing**

Constructs	Original Sample	T Statistic	P Value	Explanations
Price->switching intention	-0,043	0,477	0,633	Rejected
Involuntary switching->switching intention	-0,107	1,172	0,242	Rejected
Alternative attractiveness->switching intention	0,336	3,629	0,000***	Accepted
Response to service failure->switching intention	0,295	3,083	0,002***	Accepted
Switching cost->switching intention	0,263	3,512	0,000***	Accepted
Switching intention -> switching behavior	0,686	10,949	0,000***	Accepted

indicates the level of significant \* (10%), \*\* (5%), \*\*\* (1%)

Picture 2. PLS-SEM Path Model



The results showed (see Table 4) that price and involuntary switching have insignificant negative influences on switching intention behaviour (P-value 0,633>0,05 and P-value 0,242>0,05). Meanwhile, alternative attractiveness and the response to service failure significantly influenced switching intention behaviour (P-value 0,000<0,05 and P-value 0,002<0,05). Hence, switching cost significantly influences switching intention behaviour (P-value 0,000<0,05). Moreover, switching intention behaviour positively influences switching behaviour (P-value 0,000<0,05).

The findings of this study indicate that the switching behaviour of customers is influenced by alternative attractiveness and response to service failure. The switching cost, as the mooring factor, succeeded in influencing customers' switching behaviour. Hence, customers' switching intention behaviour to use digital banking products and services influences their switching behaviour. This indicates that when customers intend to switch from traditional transactions to digital transactions, switching behaviour occurs even though price and involuntary switching fail to pull customers on switching behaviour from traditional banking transactions to digital banking transactions.

## DISCUSSION

As mentioned in the previous section, this study aims to analyse the determinant factors of customers' switching behaviour from traditional transactions to Islamic digital transactions in the

push-pull mooring framework. The results showed that alternative attractiveness and response to service failure had significant positive influences on customers' switching intention behaviour. This result is in line with Handarkho and Harjoseputro (2019), Hedrick et al. (2007), and Harrison–Walker (2012), Lin (2010), Sun et al., 2017, Thaichon et al., 2017).

In the context of this study, alternative attractiveness has successfully become the push factor for human migration behaviour from traditional to digital. Digitalisation in the banking industry attracts customers to migrate from traditional banking transactions, including Islamic digital bank services. Hence, digitalisation in the banking industry is quickly adopted by a young age (see Table 1). Along with Internet penetration, limited movement due to the pandemic, on the one hand, pushes customers to switch from traditional to digital transactions. Especially the young generation which have more vulnerable to switching from one place to the other place (Charm, Coggins, Robinson, & Wilkie, 2020). Adding new features, ease of use, and updated security could attract young customers to migrate to digital-based transactions. Moreover, giving the discount price to those who use digital transactions attracts new young customers to migrate.

On the other hand, digitalisation reduces the service failure of the bank's employees to handle complaints and fulfil customer needs. Thus, the response to service failure also pushes customers to switch from traditional transactions to digital transactions. Through digitalisation, customers change their behaviour from being serviced by an employee who is vulnerable to feeling dissatisfied, and then switch to self-service.

The switching behaviour of customers is determined by switching costs. This result was consistent with that (Calvo-Porrall et al., 2017; J. Liao et al., 2021). Hence, cost is one of the barriers to customers switching from one product to another (Ghasrodashti, 2018). Digitalisation offers efficiency and reduces costs. Moreover, digitalisation reduces customer costs in the banking industry, including Islamic banks. For instance, it reduces the transportation cost for the customer to go to the bank's office, reduces the time spent by customers to stand in the queue line, and makes it more effortless for customers to have a transaction in any place or time.

By contrast, price and involuntary switching negatively influence customers' switching behaviour. This result is consistent with that of Jünger and Mietzner (2019). Natarajan et al. (2017) argued that highly innovative customers who have a higher intention to adopt technology are less sensitive to price. Thus, relating to the demographic respondents, the customers who have switched to the digital transaction of Islamic banks' services and products do not matter in terms of price.

Moreover, customers' switching behaviour is not determined by something beyond their control (Fang & Tang, 2017). This result is contrary to that of Clemes et al. (2010), who find that

involuntary switching influences switching behaviour in the banking industry. Furthermore, in this study's context, customers' switching behaviour from traditional to digital transactions occurred because digital transactions are more attractive and cost less than traditional transactions. Especially for the young generation, switching behaviour is also influenced by their circle, such as friends and family (Wei, Luh, Huang, & Chang, 2021).

This study has several practical implications for the Islamic banking industry and academia. The Islamic banking industry should understand that providing digital products and services is crucial to gaining new customers and maintaining loyal customers in the age of digitalisation. Adding new features to digital products and services such as the zakat calculator, Qibla direction, and Islamic financial planning literation could enhance the use of digital products and services of Islamic banks. Moreover, the Islamic banking industry could develop the right marketing strategy to attract new young customers. Furthermore, updating the security patch of digital banking is crucial for avoiding data breaches or digital crimes. For academics, this study contributes to the work works of literature on customer behaviour which is still limited, especially among younger generations. However, this study has limitations such as the small sample size, broad topic, and lack of observed constructs. Thus, more comprehensive research is critical to obtain a complete result.

## **CONCLUSION**

The rapid growth of Internet penetration, along with the global pandemic, has boosted the use of technology adoption among societies. On the other hand, digitalisation has changed the business landscape from traditional to digital-based transactions, including the banking industry. With the fastest growth in the financial industry, Islamic banking should take part in this era of digitalisation. Nowadays, customers switch their behaviour from traditional transactions to digital transactions. This study aims to investigate the determinant factors of the switching behaviour of Islamic banking customers from traditional transactions to digital transactions in the post-pandemic era using the push-pull mooring model.

The results showed that alternative attractiveness, response to service failure, and push factors positively influence switching intention behaviour. Switching cost as a mooring factor positively influences switching intention behaviour. Meanwhile, switching intention influences switching behaviour. However, alternative attractiveness and involuntary switching as pull factors negatively affect switching intention behaviour. This finding implies that the switching behaviour of customers of Islamic banks is caused by the pull and mooring factors. Hence, this indicates that the positive sentiments of products and services will influence customers' behaviour decisions, especially those of Islamic banks. Nonetheless, this research has several limitations, including the

small sample size, broad topic, and lack of observed constructs. Thus, more comprehensive research is critical to obtain a complete result.

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