MZ 세대의 디지털 결제 서비스의 결정요인*

조 윤 정'·오 상 균**

How to Foster Digital Payment Service for Millennials and Generation Z?

Cho Yooncheong · Oh Sanggune

- <Abstract> -

The purpose of this study is to explore factors that affect millennials and generation Z customers' perception on intention to recommend to use the digital payment services and invesetigate factors that affect perception on sustainable growth of the digital payment services. This study applied the following research questions: i) how perceived brand value, easy to use, personalization, open to public, and social value affect intention to recommend to use the digital payment services and ii) how perceived public policy, promotional strategy, and prspects affect intention to recommend to use the digital payment services to others. This study conducted an online survey. This study applied factor, ANOVA, and regression analysis to test hypotheses. The results of this study found that effects of personalization, open to public, and social value on intention to recommend the service showed significance in the case of millennials, while effects of brand value, easy to use, and open to publis on intention to recommend the service showed significance in the case of generation Z. The results provide managerial and policy implications on how to apply better strategies and pepare policies to enhance adoption of the digital payment service in cases of millennials and generation Z.

Key Words: Digital Payment Service, Intention to Recommend, Sustainable Growth, Millennials, Generation Z

I. Introduction

After the presence of the internet, positive aspects and concerns of customers' perception on online transaction systems have been paid attention.

With the development of the 4th industrial revolution, how customers transact in the online environment has been changed rapidly. Diverse digital payment services have been introduced by changing customer perception toward online transactions. A study by [1] addressed that the digital economy, electronic commerce, and electronic banking are now being used by the new

^{*} Professor, KDI School of Public Policy and Management (Corresponding Author)

^{**} Graduate, KDI School of Public Policy and Management

technologies and the wide global network, especially internet, within and outwardly. A study by [2] explored that the era of Information and Communication Technology (ICT) and digital innovation lead to dynamic change in the business environment, where business transactions continue shift from cash-based transactions electronic-based transactions. A study by [3] explored that the proliferation of mobile simple payment services has been increasingly affecting people's lives and the continuous development of simple mobile payment services will be significantly important in the future. According to [4], despite its growth potential, until now there is a lack of research providing a comprehensive synthesis and analysis of factors affecting the use, adoption, and acceptance of digital payment methods.

The purpose of this study is to explore factors that affect millennials and generation Z customers' perception of intention to recommend using the simple payment services and investigate factors that affect millennials and generation Z customers' perception on sustainable growth of the simple payment services. By classifying millennials and generation Z, This study applied the following research questions: i) how perceived brand value, easy to use, personalization, open to public, and social value affect intention to recommend to use the simple payment services and ii) how perceived public policy, promotional strategy, and prospects affect intention to recommend to use the simple payment services to others. The results of this study provides policy and managerial implications on how to foster the adoption and usage of the simple payment service. Previous studies have examined determinants on willingness to use digital payment services particularly in the case of millennials [5], while there are lack of research on comparisons between millennials and generation Z.

II. Literature Review

2.1 Definition of Digital Payment System

A study by [6] defined that the digital payments system (also referred to as "fintech"), coincided with the 4th industrial revolution, is a technologically advanced payment system that enables individuals, businesses, and nations to become self-sufficient, contactless, and tap-less when conducting transactions. According to previous studies [1, 7], a digital payment, also known as an electric payment, is the transfer of value from one payment to another using a digital device such as a mobile phone, POS, or computer as well as a digital communication channel such as mobile wireless data or Society for the Worldwide Interbank Financial. A study by [2] defined that electronic payment systems is inter-organizational information related to transaction systems linking various associations that need for complex integration and linking to individual clients. The term Fintech payment service (e.g., [8]) is also applied in various studies. According to [8], Fintech payment service enables users who are using a specific financial institution to use an independent customized payment service that is not dependent on the payment service of the financial institution but that is tailored to the convenience of the user.

2.2 Development of Digital Payment System

According to [9], the development of the Internet and the arrival of e-commerce fostered digitalization in the payment processes by providing a variety of electronic payment options including payment cards, digital and mobile wallets, electronic cash, contactless payment methods, etc. a study by [10] discussed that recognizing the growing importance of digital payments both the government and private service providers have seized the opportunity and embraced the change as they recognize the growing relevance of digital payments. A study by [11] addressed that the centrality of data in the digital economy has enabled the entry into financial services and rapid growth of big tech firms that have existing businesses in e-commerce and social media, among others, from which they can expand into finance. A study by [8] investigated that the need for mobile Fintech payment service that enables easy online and offline payment has increased due to the rapidly growing online market and supply of mobile devices. A study by [4] addressed that the omnipresent penetration of mobile devices, along with unambiguous developments in wireless telecommunication, has fueled widespread adoption of mobile technology and a significant boost to e-commerce, mainly e-commerce through mobile devices or mobile commerce.

A research by [12] examined that the development of internet access and smart phones led to a profound transformation of the habits and preferences of consumers for making digital payments. By using the term, smart card-based e-payment systems, a study by [13] addressed understanding of user adoption behavior of e-payment systems that employ smart card

technology that are receiving increasing attention as the number of implementations is witnessed on the rise globally. A research by [5] investigated the impact of changes in transaction styles in the 4.0 era with more depth, how consumers from various level start to use technology in ease of everyday life and consumer choices in the use of applications and their willingness to pay for the transaction fee by considering effectiveness, security, and public enthusiasm with technology. payment In South particularly, the term, simple payment service is widely used and based on portable devices like smartphones that are composed of the most growth potential fintech service [14]. A research by [15] investigated that generality which defines regardless of which provided services, is a more powerful factor adopting simple payment services even on the security factor.

Previous studies also researched the development of financial inclusion. According to [16], fintech has been driven by the need for development and the inefficiencies in the existing financial system, combined with the rapid introduction and reach of new particularly mobile technology, communications. According to the [17], financial inclusion starts with payments that serve as a gateway to other financial services, such as savings, credit and insurance. A study by [18] explored that payment systems and remittances are considered the backbone of the financial sector, fostering economic growth and financial development by reducing systemic and settlement risks, facilitating proper liquidity management, and central importance for supporting financial inclusion; a transaction account allows people to make and receive payments in a cost-effective way. A research by [2] addressed that the online payment system has many financial risks that may occur during the transaction process and negative impacts of online payment can occur because of the nature of the internet such as authenticity and security issues.

2.3 Millennials and Generation Z

KPMG[19] addressed that millennials are broadly individuals born between mid-1980s to 2000 and have been shaped by the technology revolution that saw computeres, tables, and the Web become central to work and life, while generation Z are hailed are the first tribe of true digital natives or screenagers. [20] explored that technology, in particular the rapid evolution of how people communicate and interact, is generation-shaping consideration with an example saying that millennials came of age during the internet explosion. According to [21], generation Y, so called millennials are impatient as they were raised in a world of technology and instant gratification, therefore, marketers need to reach them digitally with websites and web marketing, etc., while generation Z will likely continue trends in increased technology use and is influenced by new media, virtual friends, and the power that comes with technology. While millennials and generation Z have similar characteristics such as digital natives [22], a study by [23] addressed that differences between generations are confounded with changes due to ageing, experience, life stage and career stage.

The term MZ generation is applied as a combination of millennials and generation Z, particularly in S. Korea [24], as both generations have

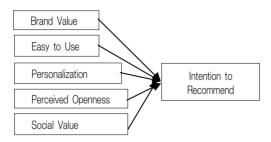
experienced smiliar environment such as the internet environment and have characteristics such as open-mindedness, prefer to explore new products/services and environment, while they are sensitive to economic consumption activities [25] that are different from older generations such as generation X and babyboomers.

III. Hypotheses Development

According to [26], the main driver for adopting a new payment method was either the new method was the option they could use in a certain situation or customers changing shopping behavior. A study by [10] investigated functional quality, perceived value, trust, perceived risk, and service quality on satisfaction toward digital payments. This study investigated how customers perceive factors that affect intention to recommend the digital payment service (Study 1) and how customers perceive sustainable growth of digital payment service (Study 2). For study 1, this study proposed factors including perceived brand value, easy to use, personalization, openness, and social value on intention to recommend the digital payment service. For study 2, this study proposed factors including public policy, promotional strategy, and prospects on intention to recommend the digital payment service.

3.1 Study 1: How Customers Perceive Factors that Affect Intention to Recommend the Digital Payment Service?

A research by [27] investigated the impact of customer brand value dimensions on relationship



<Figure 1> Effects of Proposed Factors on Intention to Recommend

marketing dimensions through consumer hope in the context of digital payment applications services and considered the role of consumer engagement by applying customer perceived value. A study by [28] stated that people who prefer to use simple digital payment service feel more familiar with being serviced by the same platform. Therefore, perceived brand value will help enhance the usage of digital payment services. Based on the consideration, this study hypothesized the effects of customers' perceived brand value on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z. This study applied "a" in the case of millennials and "b" in the case of generation Z.

H1a~b: Perceived brand value affects intention to recommend the simple digital payment service.

H1c: Effects of brand value on intention to recommend the digital payment service differ based on millennials and generation Z.

A study by [29] examined that many people feel helped by the existence of digital payments because with the existence of digital payments the public feel easier in making transactions. A research by [23] addressed that digital payments allow for services to afford greater scalability and greater ease of access. A

study by [31] addressed that the characteristic of easy to use simple mobile payment impacts on the perceived usefulness. Based on the consideration, this study hypothesized the effects of customers' perceived easy to use on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

H2a~b: Perceived easy to use affects intention to recommend the simple digital payment service.

H2c: Effects of easy to use on intention to recommend the digital payment service differ based on millennials and generation Z.

A research by [32] addressed that users who download payment applications to pay using simple payment service prefer simple payment service because of analyzing their consumption patterns based on their records on their application card. A study by [33] investigated that innovating business models to flourish quality of lifestyle, personalization serviced by the characteristics of smart technology provides a unique customer experience. Based on consideration, this study hypothesized the effects of customers' perceived personalization on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

H3a~b: Perceived personalization affects intention to recommend the simple digital payment service.

H3c: Effects of personalization on intention to recommend the digital payment service differ based on millennials and generation Z.

A study by [34] examined that the degree of openness to the platform differentiates from the growth potential to sustain in the future. According to [35], the fiscal

incentive to adopt POS terminals for merchants and consumers will help to make opportunities open to public to meet more digital payment services to achieve financial inclusion using digital payment. Based on the consideration, this study hypothesized the effects of customers' perceived openness on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

H4a~b: Perceived openness to the public affects intention to recommend the simple digital payment service.

H4c: Effects of perceived openness to the public on intention to recommend the digital payment service differ based on millennials and generation Z.

A study by [36] addressed that the more digitized banking sectors work like financial intermediation with deposit or lending, the more rising the transformation of liquidity to the public. According to [37], even users who prefer to use simple payment services consider the privacy risk of using digital payment methods, they already choose simple payment services rather than traditional payment services because of the experience of the user's convenience and effectiveness matured on social value. A research by [26] examined that brand social value influences consumer hope toward digital payment app services. Based on the consideration, this study hypothesized the effects of customers' perceived social value on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

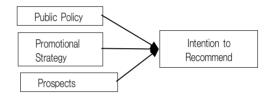
H5a~b: Perceived social value affects intention to recommend the simple digital payment service.

H5c: Effects of social value on intention to

recommend the digital payment service differ based on millennials and generation Z.

3.2 Study 2: How Customers Perceive Sustainable Growth of Digital Payment Service?

A study by [6] found that policy makers need to be informed about the design of digital payment systems, policy initiatives, and other policy measures related to digital payment systems. A research by [28] also addressed that initiatives taken by the government have created a catalytic environment for the greater proliferation and growth of digital payments.



<Figure 2> Effects of Sustainable Growth of Digital Payment System on Intention to Recommend

A study by [6] found that policy makers need to be informed about the design of digital payment systems, policy initiatives, and other policy measures related to digital payment systems. A research by [28] also addressed that initiatives taken by the government have created a catalytic environment for the greater proliferation and growth of digital payments. According to [17], transaction accounts operated by a regulated payment service provider are at the heart of retail payment services and need to enable end users to meet most, if not all, of their payment needs and to safely store some value for financial inclusion

improving. Therefore, preparation of better policy will help enhance the usage of digital payment services. Based on the consideration, this study hypothesized the effects of customers' perceived public policy on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z. This study applied "a" in the case of millennials and "b" in the case of generation Z.

H6a~b: Perceived public policy affects intention to recommend the digital payment service.

H6c: Effects of perceived public policy on intention to recommend the digital payment service differ based on millennials and generation Z.

A research by [38] addressed that promoters of digital financial services, managers of telecommunication companies, and financial inclusion advocates should consider strengthening the existing digital consumer protection laws on the mobile money platform and applying collaborative approaches between the mobile network operators, financial institutions, and regulators. Big techs can establish a substantial presence in financial services very quickly through the "data-network-activities" (DNA) loop that the greater user activity generates yet more data, reinforcing the advantages that come from network effects [11]. This study posits that preparation of better promotional strategy will help enhance the usage of digital payment services. Based on the consideration, this study hypothesized the effects of customers' perceived promotional strategy on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

H7a~b: Perceived promotional strategy affects

intention to recommend the simple digital payment service.

H7c: Effects of promotional strategy on intention to recommend the digital payment service differ based on millennials and generation Z.

A research by [28] addressed that digital payments can enable greater economic growth, growth in international e-commerce, and aid in social and financial inclusion. According to [39], rapid advances in financial technology are transforming the economic financial landscape, offering wide-ranging opportunities while raising potential risks and Fintech can support potential growth and poverty reduction by strengthening financial development, inclusion, and efficiency. A study by [40] found that an emerging mobile payment method has an effect on rural household consumption and verified the benefits of mobile payment in improving financial inclusion and convenience of consumption activities for rural areas. By enabling consumers to make and receive payments more safely, cheaply, and efficiently, payment inclusion may allow consumers to participate in the economy more fully and enhance their economic well-being [41]. Therefore, perceived prospects will help enhance the usage of digital payment services. Based on the consideration, this study hypothesized the effects of customers' perceived prospects on intention to recommend the digital payment service. This study also hypothesized that the effect might differ based on millennials and generation Z.

H8a~b: Perceived prospect affects intention to recommend the simple digital payment service.

H8c: Effects of perceived prospect on intention to recommend the digital payment service differ based on millennials and generation Z.

IV. Methodology

This study conducted an online survey. The questionnaire consisted of major questions with warm up and demographic questions. Major questions

<Table 1> Demographics of Respondents

	%	%
	(Millennials	(Gen Z)
Gender		
Male	55.7	42.1
Female	44.3	57.9
Age		
20-24 years old		29.1
25-29 years old	_	70.9
30-34 years old	72.7	-
35-39 years old	16.2	_
40-44 years old	11.1	_
	11.1	
Jobs	0.0	0
Employee in the Educational Institution	8.9	0
Employee in the Public Sector	13.9	5.3
Employee in the Profit Sector	16.5	28.9
Employee in the Research Institution Public Officer	12.7 7.6	21.1 5.3
Self-employed	7.6	-
Housewife	1.3	_
Student	34.2	34.2
Others	5.1	5.3
	5.1	0.0
Education	2.0	2.6
High School Graduate	3.8	2.6
Bachelor's Degree	75.9	71.1
Master's Degree (Included MBA) Ph.D.	19.0 1.3	26.3 0
	1.3	0
Annual Salary	_,	
Below KRW 10,000,000	7.6	5.3
More or equal to KRW 10,000,000 ~	13.9	10.5
below KRW 20,000,000	40.5	40.0
More or equal to KRW 20,000,000 ~	12.7	13.2
below KRW 30,000,000	35.4	26.0
More or equal to KRW 30,000,000 ~ below KRW 40,000,000	33.4	36.8
	8.9	7.9
More or equal to KRW 40,000,000 ~ below KRW 50,000,000	0.9	/.9
More or equal to KRW 50,000,000 ~	3.8	2.6
below KRW 60,000,000	J.0	2.0
More or equal to KRW 60,000,000 ~	1.3	0
below KRW 70,000,000	1.0	
More or equal to KRW 70,000,000	16.5	23.7
	20.0	

included questionnaire items based on proposed factors that affect intention to recommend the simple digital payment service. The study applied 5-point Likert scales for major questionnaire items. This study applied stratified sampling by considering demographics, such as age for generation, gender, education, etc. The survey was distributed via SNSs including KakaoTtalk, Whatsapps, etc. The survey was developed in English and translated to Korean. Back translation will be applied to check reliability of original and translated versions. The survey was collected anonymously and voluntarily with agreement. The data was stored confidentially and for the research purposes only. This study applied factor analysis, ANOVA, and multiple regression analysis to test main hypotheses. A total of eighty millennials and sixty generation Z answered the survey. Table summarized demographics of respondents. Regarding the age classification for millennials and generation Z, this study followed applied previous research [35~37] stating that millennials are born early 1980 and mid-1990 and generation Z are born after mid-1990.

V. Data Analysis

5.1 Perceived Customer Awareness of the Digital Payment System

Among respondents, 95.7% (94.9% in the case of millennials and 97.4% in the case of generation Z) answered that they are aware of the simple digital payment system, while 4.3% are not aware of the digital payment system. 94.9% (93.7% in the case of millennials and 97.4% in the case of generation Z) of

respondents answered that they currently use the simple digital payment system, while 5.1% answered that they do not use the simple digital payment system. Approximately 82.3% respondents in the case of millennials and 84.2% respondents in the case of generation Z stated that the motivation to use the simply digital payment system is to purchase products from e-commerce service, 12.7% respondents in the case of millennials and 23.7% respondents in the case of generation Z stated that they use the simply digital payment system to purchase products from offline payment settlement, 11.4% respondents in the case of millennials and 7.9% respondents in the case of generation Z use the simply digital payment system for remittance, 1.3% respondents in the case of millennials and 2.6% respondents in the case of generation Z use the simply digital payment system for deferred payment. The results of independent samples t-test found that the mean value of motivation stated "as an early adopter, I enjoy using new technology and service" differs based on millennials and generation Z. Table 2 summarized motivations for

<Table 2> Summary of Motivations

		Agree (%)		Strongly agree (%)	
		М	Z	М	Z
1	As an early adopter, I enjoy using new technology and service.	22.8	42.1	20.3	5.3
2	From my friends, relatives, or colleague's recommendation.	19.0	5.3	5.1	10.5
3	The simple payment methods are related on my work.	5.1	5.3	1.3	0
4	I used the other corporation's service before, so I trusted the service providing on using platform.	62.0	34.2	16.5	44.7

^{*} M: Millennials, Z: Generation Z

the usage of simple payment service in both cases of millennials and generation Z.

5.2 Hypotheses Testing - Study 1

This study also conducted Cronbach alpha to check reliability. The results of Cronbach alpha in the case of millennials include the following: 0.686 for brand value, 0.691 for easy to use, 0.770 for personalization, 0.627 for open to public, and 0.669 for social value. The results of Cronbach alpha in the case of generation Z include the following: 0.685 for brand value, 0.854 for easy to use, 0.658 for personalization, 0.662 for open to public, and 0.556 for social value. This study conducted factor analysis. Scale items were extracted by the constructs by applying factor analysis. Principal component analysis was applied as the method for extraction with maximum iterations for convergence and factors' eigenvalue was greater than 1 are extracted. VARIMAX with Kaiser Normalization was applied as the rotation method with maximum iterations for convergence. Table 3~4 summarized component matrix including factor loadings. Questionnaire items applied in this study as follows: i) for brand value, items include perceived experience of simple digital payment service on building brand value on platform's corporation, platform's brand value if the platform provides good simple digital payment service, and confidence about the brand value of the platform that has competitiveness on simple digital payment service; ii) for easy to use, items include preference to use simply digital payment service because of easy to use than other methods, perceived saving time to purchase product and use services by using simple payment service, and importance of convenient use of simply digital payment service; iii) for personalization, items include individualized recommended promotional services through transaction records and trust the recommended customized services; iv) for open to

⟨Table 3⟩ Component Matrix for Brand Value, Easy to Use, Personalization, Open to Public, & Social Value (Millennials)

	Component				
	1	2	3	4	5
BV4 BV3 BV1	.816 .776 .744				
EU1 EU3 EU2		.853 .852 .638			
PE2 PE1			.905 .904		
OP1 OP2 OP3				.837 .723 .710	
SV2 SV1					.792 .791

^{*} BV: Brand Value; EU: Easy to Use; PE: Personalization; OP: Openness to Public; SV: Social Value

<Table 4> Component Matrix for Brand Value, Easy to Use, Personalization, Open to Public, & Social Value (Generation Z)

resonantential, open to rushe, a social value (deficitation 2)					
	Component				
	1	2	3	4	5
BV4 BV1 BV3	.859 .730 .660				
EU3 EU1 EU2		.942 .926 .776			
PE2 PE1			.835 .834		
OP3 OP2 OP1				.711 .710 .665	
SV1 SV2					.711 .710

^{*} BV: Brand Value; EU: Easy to Use; PE: Personalization; OP: Openness to Public; SV: Social Value

public, items include compatibleness of simple digital payment services with integrated services, adoption of the new technology system to develop better financial services, and coexistence with incumbent payment services; v) for social value, items include accessibility without restriction of places and time and likelihood of using simple payment service due to sharing experience with friends and co-workers.

This study conducted multiple regression analysis to test hypotheses. Factor scores were used for regression analysis. This study applied effects of brand value, easy to use, personalization, openness to the public, and social value on the intention to recommend the simple payment service by classifying millennials and generation Z. The results of ANOVA showed that the overall model is significant at 0.01% with F = 10.692(R-square = 0.513) in the case of millennials and F = 14.808 (R-square = 0.776) in the case of generation Z. As shown in Table 5, the results of this study found that effects of personalization, open to public, and social value on intention to recommend the service showed significance in the case of millennials, while effects of brand value, easy to use, and openness to public on intention to recommend the service showed significance in the case of generation Z. Therefore, hypothesis 1b, 2b, 3a, 4a, 4b, and 5a were accepted. Regarding the effect size, this study found that effect size of social value on intention to recommend the service was stronger than other factors, followed by personalization and open to public in the case of millennials, while the effects of easy to use on the intention to recommend the service was stronger than, followed by brand value and open to public in the case of generation Z. For both generations, the effect of open to the public on the intention to recommend the service showed significance, while the effect size was higher with millennials rather than generation Z. Therefore, hypothesis 4c was accepted as both groups show significance but with different effect size. The results do not show multi-collinearity as values of VIF were lower than 10.

<Table 5> Effects of Proposed Factors on Intention to Recommend

Independent Variables ⇒ Dependent variable	Standardized Coefficient (t-value/sig) Millennials	Standardized Coefficient (t-value/sig) Generation Z
Brand Value ⇒ Intention to Recommend	.065(.418)	.331(2.332**)
Easy to Use ⇒ Intention to Recommend	.189(1.293)	.773(3.949***)
Personalization ⇒ Intention to Recommend	.317(2.212**)	.064(.649)
Openness to Public ⇒ Intention to Recommend	.290 (2.136**)	.261 (1.704*)
Social Value ⇒ Intention to Recommend	.337(2.166**)	.125(1.023)

^{***} p < 0.01; ** p < 0.05; ** p < 0.10 denotes statistical significance

5.3 Hypotheses Testing - Study 2

This study also conducted Cronbach alpha to check reliability. The results of Cronbach alpha in the case of millennials include the following: 0.649 for public policy, 0.59 for promotional strategy, and 0.765 for prospect. The results of Cronbach alpha in the case of generation Z include the following: 0.621 for public policy, 0.519 for promotional strategy, and 0.722 for prospect. This study conducted factor analysis. Table 6~7 summarized component matrix including factor loadings. Questionnaire items applied in study 2 include as follows: i) for public policy, items include necessity of regulation policy for the big tech

company's simply payment services, policy preparation for facilitation of simple payment services, and government-led policy to increase the diversity of payment methods so that government agencies can increase the acceptance of simply digital payment services; ii) for corporate's promotion strategy, items include development of affiliated services for better usage of simple payment services, more rewards or discount promotions through simply digital payment services for market participants including customers and merchants, and promotion using social network systems for accelerating the use of simple digital payment services; and iii) for prospect, items include

⟨Table 6⟩ Component Matrix for Public Policy, Promotional Strategy, & Prospect (Millennials)

~		our acces,	a rrospect	(1.11110111110
		Component		
		1	2	3
	PP2	.904		
	PP3	.875		
	PP1	.676		
	PS2		.840	
	PS1		.708	
	PS3		.660	
	PR2			.903
	PR1			.870
	PR3			.687

* PP: Public Policy; PS: Promotional Strategy; PR: Prospect

⟨Table 7⟩ Component Matrix for Public Policy, Promotional Strategy, & Prospect (Generation Z)

	Component		
	1	2	3
PP2	.897		
PP3	.894		
PS3		.883	
PS2		.641	
PR2			.934
PR1			.908
PR3			.676

* PP: Public Policy; PS: Promotional Strategy; PR: Prospect

perceived continue to grow, contribution to the development of platform-based financial economy, and importance of simple digital payment service for future customers.

This study conducted multiple regression analysis to test hypotheses. Factor scores were used for regression analysis. This study applied effects of public policy, corporate promotional strategy, and prospect of digital payment service on intention to recommend the service by classifying millennials and generation Z. The results of ANOVA showed that the overall model is significant at 0.01% with F = 38.857 (R-square = 0.609) in the case of millennials and F = 38.857 (R-square = 0.335) in the case of generation Z. As shown in Table 8, the results of this study found that effects of perceived public policy, promotional strategy, and prospect on intention to recommend the service showed significance in the case of millennials, while effects of perceived public policy and prospect on recommend the service significance in the case of generation Z. Therefore, hypothesis 6a, 6b, 7a, 8a, and 8b were accepted. Regarding the effect size, the results of this study found that the effects of corporate's promotional strategy on intention to recommend the service was stronger than other factors, followed by prospect and public policy in the case of millennials, while the effects of prospect on the intention to recommend the service was stronger than effects of public policy. The effect of corporate's promotional strategy on intention to recommend the service was not significant in the case of generation Z. Therefore, hypothesis 6c and 8c were accepted as both groups show significance but with different effect size. The results do not show multi-collinearity as values of VIF were less than 10.

<Table 8> Effects of Proposed Factors on Intention to Recommend

recommend				
Independent Variables ⇒ Dependent variable	Standardized Coefficient (t-value/sig) Millennials	Standardized Coefficient (t-value/sig) Generation Z		
Public Policy ⇒ Intention to Recommend	.198 (2.450**)	.321 (2.121**)		
Promotional Strategy ⇒ Intention to Recommend	.372 (2.656***)	.124 (.813)		
Prospect ⇒ Intention to Recommend	.348 (2.645***)	.340 (2.315**)		

^{***} p < 0.01; ** p < 0.05 denotes statistical significance

VI. Conclusion

The purpose of this study is to explore factors that affect millennials and generation Z customers' perception of intention to recommend using the simple payment services and investigate factors that affect millennials and generation Z customers' perception on sustainable growth of the simple payment services. By classifying millennials and generation Z, This study applied the following research questions: i) how perceived brand value, easy to use, personalization, open to public, and social value affect intention to recommend to use the simple payment services and ii) how perceived public policy, promotional strategy, and prospects affect intention to recommend to use the simple payment services to others.

The results of this study found that effects of perceived personalization, open to public, and social value on intention to recommend digital payment service showed significance in the case of millennials, while effects of perceived brand value, easy to use, and open to public on intention to recommend digital payment service showed significance in the case of

generation Z. Therefore, factors that affect intention to recommend digital payment service differ based on millennials and generation Z except effects of open to public. This study also found that effects of open to public on intention to recommend digital payment service were higher with millennials rather than generation Z. From study 1, generation Z perceives that the experience of the digital payment service effects on building brand image on the platform's corporation and positive image on the platform's brand image is significant for the usage of the digital payment service. Generation Z prefers to use the digital payment service because it is easier to use and convenient than any other methods and saves time to purchase products and use services. Millennials perceive customized recommendations commercials enhance to use of the digital payment services and experiences of friends and co-workers made them more likely to use the digital payment services.

From study 2, this study found that factors including perceived policy and prospects on intention to recommend the digital payment service showed significance in both groups of millennials and generation Z, while the effect of promotional strategy on intention to recommend the digital payment service showed significance in the case of millennials. The results of this study provide managerial and policy implications. The results of this study implied that generation Z consider brand value and easy to use the digital payment service important, while millennials consider personalized service and social value related to the digital payment service important. Both generations of millennials and generation Z perceive that better public policy related to the digital payment

service should be prepared and perceive that digital payment service will grow and contribute to the development of platform-based economy. generations of millennials and generation Z perceive that big tech companies' digital payment services require proper government relations, government should create policies to further encourage the use of digital payment services, and government-driven policy is needed related to increased acceptance of diverse methods. Millennials perceive corporations need to provide better promotional strategies related to the digital payment service such as more rewards or discount promotions to accelerate the use of digital payment service. The results of this study show how to apply better strategies related to the digital payment service for customer relationship management.

This study has limitations and provides implications on future studies. The sample size will be increased in future study. Future study might consider comparison analysis by including older generations such as generation X. Cross cultural analysis might also be considered in the future study.

References

- [1] M. Prakash, "A Study on Consumer Perception towards Digital Payment," East Asian Journal of Multidisciplinary Research, Vol.1, No.6, 2022, pp.1033-1044.
- [2] S. Fatonah, A. Yulandari, and F. W. Wiboro, "A Review of E-Payment System in E-Commerce," Journal of Physics Conference Series, 1140, 2018, pp.1-8.

- [3] J. Ke, D. Yoon, and J. Ahn, "Exploratory Analysis of Consumer Responses to Korea-China Mobile Payment Service using Keyword Analysis - Focus on Kakao Pay and Alipay," Journal of the Korea Academia-Industrial Cooperation Society, Vol.22, No.6, 2021, pp.514-523.
- [4] A. M. Sahi, H. Khalid, A. F. Abbas, and S. F. A. Khatib, "The Evolving Research of Customer Adoption of Digital Payment: Learning from Content and Statistical Analysis of the Literature," Journal of Open Innovation: Technology, Marketing, and Complexity, Vol.72, No.230, 2021, pp.1-25.
- [5] Kamal, I., Rizki, R. N., and Aulia, M. R., "The Enthusiasm of Digital Payment Services and Millennials Consumer Behaviour in Indonesia," International Journal of Business Science and Applied Management, Vol.8, No.2, 2023, pp.1-16.
- [6] V. Kesavan and K. S. Srinivasan, "Present State and Future Directions of Digital Payments System: A Historical and Bibliographic Examination," International Journal of Professional Business Review, Vol.8, No.6, 2023, pp.1-29.
- [7] S. K. Pandey, "A Study on Digital Payments System & Consumer Perception: An Empirical Study," Journal of Positive School Psychology, Vol.6, No.3, 2022, pp.10121-10131.
- [8] J. Kang, "Mobile Payment in Fintech Environment Trends, Security Challenges, and Services," Human-centric Computing and Information Sciences, Vol.8, 2018, pp.1-16.
- [9] Z. Bezhovski, "The Future of the Mobile Payment as Electronic Payment System," European Journal of Business and Management, Vol.8, No.8, 2016, pp.1-6.

- [10] S. Agarwal, P. Malik, and S. Gautam, "Analysis of Customer Satisfaction and the Customer Experience in Digital Payments: A Meta-Analysis Review," International Journal of Business Science and Applied Management, Vol. 18, No.1, 2023, pp.1-18.
- [11] A. Carstens, S. Claessens, F. Restoy, and H. S. Shin, "Regulating Big Techs in Finance," Bank for International Settlement (BIS) Bulletin, No.45, Basel, Switzerland, 2021.
- [12] D. Beura, L. Naveen, S. K. Prusty, A. P. Nanda, and C. K. Rout, "Digital Payment Continuance Intention Using MECM: The Role of Perceived Experience," International Journal of Business Science and Applied Management, Vol.8, No.6, 2023, pp.1-27.
- [13] C. K. Lok, "Adoption of Smart Card-Based E-Payment System for Retailing in Hong Kong Using an Extended Technology Acceptance Model," E-Services Adoption: Processes by Firms in Developing Nations (Advances in Business Marketing and Purchasing), Vol 23B, Emerald Group Publishing Limited, Bingley, 2015, pp. 255-466.
- [14] W. Kim and J. Oh, "A Study of Current Trends and Future Prospects in Mobile Simple Payment Services," The Journal of Internet Electronic Commerce Research, Vol.18, No.5, 2018, pp.103-120.
- [15] H. Jung and B. Lee, "A Study on the Competency Assessment for Smart Phone Based Simple Payment," Journal of Korean Society for Internet Information, Vol.20, No.3, 2019, pp.111-117.
- [16] D. W. Arner, J. Barberis, and R. P. Buckley, "The Evolution of FinTech: A New Post-Crisis Paradigm," Georgetown Journal of International

- Law, Vol.47, No.4, 2016, pp.1271-1320.
- [17] Bank for International Settlement & World Bank Group, "Payment Aspects of Financial Inclusion in the Fintech Era," Committee on Payments and Market Infrastructure (CPMI), April, Basel, Switzerland, Washington DC, US, 2020.
- [18] X. Cai, M. Milojevic, D. Syromyatnikov, A. Kurilova, and B. Slusarczyk, "Mathematical Interpretation of Global Competition between Payment Systems," Mathematics, Vol.17, 2021, No.9, pp.1-18.
- [19] KPMG, Meet the Millennials. KPMG LLP, UK, 2017.
- [20] M. Dimock, Defining Generations: Where Millennials End and Generation Z begins. Pew Research Center, Washington, DC, US, 2019.
- [21] K. C. Williams and R. A. Page, "Marketing to the Generations," Journal of Behavioral Studies in Business, Vol. 3, No.1, 2011, pp.37-53.
- [22] N. Dries, R. Pepermans, and E. De Kerpel, "Exploring Four Generations Beliefs about Career is "Satisfied" the New "Successful"?" Journal of Managerial Psychology, Vol.23, No.8, 2008, pp.908-928.
- [23] L. Cennamo and D. Gardner, D. "Generational Differences in Work Values, Outcomes, and Person-Organization Values Fit," Journal of Managerial Psychology, Vol. 23, No.8, 2008, pp.891-906.
- [24] Y. Cho, "How Millennials and Generation Z Perceive Sustainable Growth of Accommodation Sharing Platform Business?" Journal of Industrial Distribution & Business, Vol.14, No.2, 2023, pp.35-44.
- [25] J. Yang, "The Effect of MZ Generation

- Characteristics on Need Solving and Satisfaction," The Korea Academy Society of Tourism and Leisure, Vol. 34, No.9, 2022, pp.145-159.
- [26] European Central Bank (ECB), "Study on New Digital Payment Methods," March, pp.1-169, 2022.
- [27] D. Bapat and R. Khandelwal, "Antecedents and Consequences of Consumer Hope for Digital Payment Apps Services," Journal of Services Marketing, Vol.37, No.1, 2022, pp.110-127.
- [28] M. Kang, "A Study on Switching Intention to Platform-Based Simple Payment Service: Focusing on PPM Model," Korean Strategic Marketing Association, Vol.30, No.4, 2022, pp.51-81.
- [29] B. Kurniawan, S. F. Wahyuni, and T. Valentina, "The Influence of Digital Payments on Public Spending Patterns," Journal of Physics Conference Series, Vol.1402, 2019, pp.1-5.
- [30] Z. A. Shah, "Digital Payment System: Problems and Prospects," EPRA International Journal of Economic and Business Review, Vol.5, No.8, 2017, pp. 194-201.
- [31] J. Eun and S. Kim, "Effect of Mobile Payment Service Characteristics on Continuous Use Intention: Moderating Effect of the Status Quo," Korea Internet E-Commerce Association, Vol. 18. No.3, 2018, pp.19-39.
- [32] K. Lee and S. Kim, "Usability Evaluation for Simple Payment Service Based on Mobile Application - Focused on Shinhan and Samsung," Journal of Digital Convergence, Vol.16, No.9, 2018, pp.421-426.
- [33] S. Shang and L. Chiu, "Leveraging Smart Technology for User Experience Personalization -A Comparative Case Study of Innovative Payment Systems," Pacific Asia Journal of the Association

- for Information Systems, Vol.14, No.1, 2022, pp.105-125.
- [34] J. Ondrus, A. Gannamaneni, and K. Lyytinen, "The Impact of Openness on the Market Potential of Multi-sided Platforms: A Case Study of Mobile Payment Platforms," Journal of Information Technology, Vol.30, No.3, 2015, pp.260-275.
- [35] J. Allen, S. Carbo-Valverde, S. Chakravorti, F. Rodriguez-Fernandez, and O. Pinar Ardic, "Assessing Incentives to Increase Digital Payment Acceptance and Usage: A Machine Learning Approach," PLoS ONE, Vol. 17, No.11, 2022, pp.1-29.
- [36] D. Broby, "Financial Technology and The Future of Banking," Financial Innovation, Vol.7, No.1, 2021, pp.1-19.
- [37] Y. Cho, "The Influence of Simple Payment Service's Privacy Concern on Use Intention: Focusing on Mediating Effect of Innovation Resistance," The e-Business Studies, Vol.23, No.5, 2022, pp.25-37.
- [38] G. O. C. Bongomin and J. M. Ntayi, "Mobile Money Adoption and Usage and Financial Inclusion: Mediating Effect of Digital Consumer Protection," Digital Policy, Regulation and Governance, Vol.22, No.3, 2020, pp.157-176.
- [39] International Monetary Fund, "The Bali Fintech Agenda: A Blueprint for Successfully Harnessing Fintech's Opportunities." IMF Policy Papers, October, Washington DC, US, 2018.
- [40] J. Zhang, H. Zhang, and X. Gong, "Mobile payment and rural household consumption: Evidence from China," Telecommunications Policy, Vol.46, No. 3, 2022, pp.1-19.
- [41] Y. L. Toh, "Promoting Payment Inclusion in the

United States," Payments System Research Briefing, Federal Reserve Bank of Kansas City, Denver, Oklahoma City, Omaha, US, 2022.

■ 저자소개 ■



조 윤 정 (Cho Yooncheong)

Professor, KDI School of Public Policy and Management

May 2002, Rutgers University (Ph.D. in Management)

May 1995, Cornell University (MBA)

Fields of Interest: E-Commerce Marketing, Customer Relationship Management

E-mail : yoonji22e@gmail.com



오 상 균 (Oh Sanggune)

Graduate, KDI School of Public Policy and Management

Fields of Interest : Digital Finance E-mail : saintjames39@gmail.com

논문접수일: 2023년 8월 8일 수정접수일: 2023년 8월 29일 게재확정일: 2023년 9월 4일