Transformation electronic payment system as predictor on financial satisfaction

Andro Agil Nur Rakhmad ^{(a)*} Dediek Tri Kurniawan ^(b) Yesiana Ihda Kusnayain ^(c)

^(a,b,c) Researcher, Department of Management, Universitas Negeri Malang, Jl Semarang No 5 Lowokwaru, Malang, 65145, Indonesia

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ABSTRACT

Digitalization in Indonesia has entered a new phase, the development of technology that makes several services run more efficiently and more flexible. Digital services that are quite complex are financial services such as electronic payment systems. Currently the payment system is able to increase the overall satisfaction of the individual. This study examines the role of using an electronic payment system and the determinants of individual financial satisfaction as a whole. This study uses structural equation modeling (SEM) to test hypotheses regarding financial satisfaction. The results of this study prove that financial capability is able to increase financial satisfaction. However, different results show that the use of an electronic payment system does not affect financial satisfaction. This finding can expand the literature review on digital awareness, satisfaction and behavior in addressing individual financial satisfaction.

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Introduction

The development of the digital world that is increasingly advanced encourages the development of buying and selling transaction behavior. Various kinds of electronic commerce services (e-commerce) make it easier for consumers to transact online (Hossain, Xi, Nurunnabi, & Hussain, 2020). This makes the right momentum for the development of EPS (Kim, Tao, Shin, & K.-S. Kim, 2010). Electronic Payment System (EPS) is one of the cores of electronic trading that can be a successful implementation of new business models and financial services (Kousaridas, Parissis, & Apostolopoulos, 2008).

EPS can increase effectiveness and convenience and reduce operational costs. Therefore, it can be financial satisfaction or financial satisfaction of a person (Khurram & Mohammed, 2020). Financial satisfaction can be defined as perceived satisfaction based on one's opinion, the ability to handle emergencies, meet basic needs and future needs as well as life goals (Hira & Mugenda, 1998). An individual in achieving financial satisfaction is required to achieve overall life satisfaction (Michalos & Orlando, 2017; Xiao, Tang, & Shim, 2009). Financial satisfaction is an integral component of life satisfaction and overall well-being (Plagnol, 2011). According to Xiao & O'Neill (2018) financial satisfaction is also a subjective measure of financial well-being and a state of happiness with available economic resources.

Changes in lifestyle and lifestyle in transactions are also felt in Indonesia. Bank Indonesia as a central bank together with related agencies launched the National Non-Cash Movement or "Gerakan Nasional Non-Tunai (GNNT)" on August 14, 2014. This movement aims to invite and encourage the public to conduct cashless transactions through various instruments used in accordance with their functions and uses. The development of financial technology or commonly referred to as *fintech* in Indonesia is very rapid, until August 2020 based on data from the Financial Services Authority or Otoritas Jasa Keuangan (OJK) in 2020 noting that there

* Corresponding author. ORCID ID: 0000-0003-2629-6105

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are 158 companies registered and have permission to operate. Fintech companies in Indonesia are divided into several sectors, namely financial planning, payment, crowdfunding, aggregator, lending, and other fintech. Data compiled from CNBC Indonesia in 2018 showed that of the four sectors, the percentage of payment sector (39%) was highest among other sectors: lending (24%), Aggregator (11%), crowdfunding (8%), personal/financial planning (7%) and other (11%).

This paper aims to examine the role of using an electronic payment system and the determinants of individual financial satisfaction as a whole. In this study, a structural equation modeling (SEM) has been used to test hypotheses regarding financial satisfaction.

Literature Review

Empirical Review and Hypothesis Development

Electronic Payment System & Financial Satisfaction

Electronic payment systems can be divided into online credit card payments, electronic cash, electronic checks, and small payments, due to differences in payment method types and transaction environments (Khan & Akhtar, 2020). In similar types of electronic payment systems, the encoding and decoding mechanisms of individual payment systems follow different procedures (Yu et al., 2002). In the world of e-commerce EPS is crucial in the trading transaction system because of the *accessibilities* of this payment method. This is something that is very important in the transaction process in the era of digital transformation. EPS is a new payment system that can conduct financial transactions more securely from one organization or other individual over the internet (Hezlin Harris et al., 2011). Ease, accuracy, and speed are the advantages and conveniences of using EPS rather than traditional banking system use (Sumanjeet, 2009) the existence of EPS in the *payment* process is an innovation in serving customers in a faster and more efficient way. Plagnol (2011) states that financial satisfaction is a combined component of life satisfaction and well-being. According to Joo (2008) financial satisfaction describes the financial condition of individuals who are healthy, happy, and without worries. The main determinant of financial satisfaction is the behavior of individuals in managing finances. The ability to manage money becomes important in the effort to achieve success in life (Falahati et al., 2012). In addition, financial satisfaction globally can define a condition of a person who is satisfied from an income, the ability to manage finances in times of *emergency*, able to meet basic needs and manage their obligations (Hira and Mugenda, 1998).

Life satisfaction is a "*term*" that leads to subjective well-being so that it refers to Quality of Life (QoL). According to Diener (2000) subjective well-being (SWB) is a cognitive assessment of people that leads to their lives as a whole. *Subjective well-being* includes satisfaction, happiness, overall life satisfaction, and positive effects (Diener, 1984). So that this *theory is able to explain and become the basis of this research, namely financial satisfaction*.

The effect of EPS on financial satisfaction can be achieved through increased financial capability. Financial capability can be understood as a person's technical knowledge and how well one can manage resources in a variety of situations. Previous research on the effect of EPS on financial satisfaction states that the use of EPS direct affects financial satisfaction (Khurram & Mohammed, 2020). These results are also supported by other studies related to the use of EPS in various forms and different sectors such as banking, online shopping shows a positive relationship with financial satisfaction (Ghani, Rahi, & Yasin, 2017; Wang, Zha, Bi, & Chen, 2018). The use of EPS for consumers for financial transactions increases financial satisfaction, this can happen due to the development and benefits of digitization, which includes costs, time, security, and others (Mushkudiani, 2019).

Based on the empirical review the following hypothesis have been developed.

Hypothesis:

H1: Financial Advice positively effect toward financial capability

H2: Financial capability positively effect toward Electronic Payment System

H3: Financial Advice positively effect toward electronic payment system

H4: Electronic payment system positively effect toward financial satisfaction

H5: Financial Capability positively effect toward financial satisfaction

Research and Methodology

Sample and Procedure

This study examined the structural relationship between financial capability, Financial Risk advice, Electronic Payment System and Financial Satisfaction to millennials who use payment *systems*. Researchers used online questionnaires that were socialized to respondents from October 1, 2021 to October 18, 2021. In the process of determining samples, researchers used purposive sampling methods where the researcher provides criteria in determining target respondents. As for the criteria (1) Respondents must be aged 17-25 years and (2) Use payment system applications, and (3) ever transact using online payment applications.

Questionnaire questions were created using Indonesian and adapted from several previous studies that were adjusted based on the object of the study. This study used structural equation modeling (SEM) *methods* in analyzing.

Research Model

Figure 1 illustrates the research model.

Figure 1: Research Model

Measurement

The items and variables in this study were adopted from previous research related to the topic of financial satisfaction. Following previous research, measurements of financial satisfaction variables researchers developed scales from Hira and Mugenda (1998) and Lown and Ju (1992) using indicators (1) monetary savings, (2) current debt levels, (3) family's current financial satisfaction, (4) ability to meet long term financial goals, (5) ability to meet financial emergencies, and (6) Money management skill. Furthermore, measurement 4 items from financial capability adopted from NFCS (2012) example items such as *"I have enough funds to survive for 3 months without a fixed income"*.

Financial advice measurements were also adopted by NFCS (2012) with its example item *"I think financial advice is very helpful"*. In addition, the measuring instrument used to measure financial capability was adopted from C. Kim, Tao, Shin (2010) consisted of 7 question items with his item *"I see a secure electronic payment system"*. All items for this questionnaire used a six-point Likert scale from (1) "strongly disagree" to (5) "strongly agree".

Analysis and Findings

Respondent Demographics

The demographics of respondents received 202 total respondents. The average respondent was 67.8% female while the male was 32.2%. Most of 59,1% of respondents are 21-30 years old, 34,2% of respondents are under 20 years old, and 7% from respondent are ranging 31-40 year. Respondents in this study spread in several education background in Indonesia but dominated by Graduated SMA by 54.5% followed by graduated student of Master degree as much as 23,8%.

Confirmatory Factor Analysis

Table 1 illustrated a validity and reliability were used by Confirmatory Factor Analysis (CFA). According to (Hair et al., 2018), an item is significant if the loading factor is more than 0.5. Assess validity by testing indicators of loading. The loading factor of items were statistically significant value (>0.5), but items FS2, EPS1, EPS2, EPS3, and FC3 in this construct were removed because they did not meet the minimum requirement of 0.5 (Hair et al., 2018). In this test, the reliability (Construct Reliability and Variance Extracted) all variables had met the construct reliability (>0.7) (Hair et al., 2018).

All variable in this research fulfills the reliability test criteria.

Table 1: Confirmatory Factor Analysis (CFA)

Construct/Item	standardized solution (>0,50)	Variance Error (Unstandardized solution)	Construct reliability	Variance Extracted
Financial Satisfaction			0.83	0.511
FS1	0,53	0,72		
FS3	0,59	0,65		
FS4	0,8	0,36		
FS5	0,86	0,26		
FS6	0,74	0,45		
Electronic Payment System			0.88	0,63
EPS4	0,78	0,39		
EPS5	0,77	0,41		
EPS6	0,83	0,31		
EPS7	0,81	0,34		
Financial Advice			0.89	0.57
FA1	0,69	0,52		
FA2	0,73	0,47		
FA3	0,8	0,36		
FA4	0,63	0,60		
FA5	0,85	0,28		
FA6	0,81	0,34		
Financial capability			0.8	0.58
FC1	0,69	0,31		
FC2	0,66	0,34		
FC4	0,66	0,34		

Sources: Data Processed by AMOS

Descriptive Statistic

Descriptive statistics are used to convey data information that will be used in this study. Descriptive statistics contains analysis of the presentation value and compilation of the collected statistical data by providing a general description of the characteristics of each research respondent consisting of the Mean (average), Max, Min, and Standard Deviation values as described in the following descriptive statistics table.

Table 2: Statistic Descriptive

	Mean	Max.	Min.	Stand. Dev
EPS	4,1202	5,00	1,00	0,68556
FS	3,8375	5,00	1,67	0,68596
RL	4,7640	5,00	1,00	0,44285
FA	4,0899	5,00	1,33	0,68428
FC	3,5941	5,00	1,50	0,78888

Sources: Data Processed by AMOS

The table above shows that the average data that has been filled in for the EPS variable is 4.1202. It can be said that it is around 4.1 with a maximum measurement of 5.00 and a minimum of 1.00 and a standard deviation of 0.68556. The FS variable has an average of 3.8375 from the maximum measurement limit of 5.00 and a minimum of 1.67 and a standard deviation of 0.68596. The RL variable has an average of 4.7640 from the maximum measurement limit of 5.00 and a minimum of 1.00 and a standard deviation of 0.44285. The FA variable has a mean of 4.0899 from a maximum measurement limit of 5.00 and a minimum of 1.33 and a standard deviation of 0.68428. As for the FC variable, the average assessment of 202 respondents, the data entered is 3.6, which shows the maximum measurement limit of 5.00 and a minimum of 1.50.

Goodness of fit

This study uses structural equation modeling. Essentially, the use of SEM looked at the value of Goodness of Fit models (GoF) for estimating fit models in a construct. SEM has criteria in GoF as a condition that a model is said to be fit. Table 3 presented the results from Goodness of Fit model in this construct, a model can be said to be fit if it meets at least 4-5 indicators of goodness of fit.

According to GoF result, all indicator consists of absolute fit, incremental fit, and parsimonious fit looked fit. Likewise, the goodness of fit is accepted.

Table 3: Goodness of Fit

	Goodness of fit Index	Cut-off value	Result	Decision
Absolute fit measures	χ^2 – Chi-square (df = 110, p = 0.077)	≤ 131.756	48.883	Fit
	Sig. Probability	≥ 0.05	0.077	Fit
	df	>0	110	Fit
	RMSEA	≤ 0.08	0.031	Fit
	GFI	≥ 0.90	0.935	Fit
Incremental fit measure	AGFI	≥ 0.90	0.941	Fit
	TLI/NNFI	≥ 0.90	0.983	Fit
	NFI	≥ 0.90	0.932	Fit
	IFI	≥ 0.90	0.988	Fit
	CFI	≥ 0.90	0.988	Fit
Parsimonious fit measure	PNFI	Suggestion in high score	0.670	Fit
	PGFI	Suggestion in high score	0.602	Fit

Sources: Data Processed by AMOS

Hypothesis testing

The Path analysis result shown in Table 3 which described the value of this research, statistical testing of structural models as a whole obtained results chi-square= 48.883, p-value= 0.077, CFI= 0.988, GFI= 0.935; TLI= 0.983, so that the full model had met the criteria of goodness of fit model. Hypotheses could be accepted if P-value less than 0.05 and t-value more than 1.645. The Relationship of Financial Advice ($\beta = 0.268$, t-value (3.844) ≥ 1.645 ; $p < 0.05$) has significant effect toward financial capability. Moreover, Financial capability ($\beta = 0.445$, t-value (3.073) ≥ 1.645 ; $p < 0.05$) has significant effect toward EPS use. In Contrary, Financial Advice Financial Advisor ($\beta = 0.132$, t-value (1.331) < 1.645 ; $p < 0.05$) did not affect toward EPS Use. Besides, Financial Advice ($\beta = 0.020$, t-value (0.435) < 1.645 ; $p < 0.05$) and EPS ($\beta = -0.015$, t-value (-0.367) < 1.645 ; $p < 0.05$) did not affect toward Financial Satisfaction. In Addition, Financial Capability ($\beta = 0.445$, t-value (3.073) < 1.645 ; $p < 0.05$) has positive significant effect toward financial satisfaction.

Table 4: Path analysis

Path	Estimate	Critical Ratio	P-Value	Decision
FA-FC	0.268	3.844	****	S
FA-EPS	0.132	1.331	0.183	NS
FC-EPS	0.445	3.073	0.002	S
EPS-FS	-0.015	-0.367	0.713	NS
FC-FS	0.619	5.630	****	S
FA-FS	0.020	0.435	0.664	NS

Sources: Data Processed by AMOS

Figure 2: The Final Model

Discussion

The Research aims to answer hypotheses about the factors that affect financial satisfaction. First, financial advice can affect the use of electronic payment system and financial satisfaction? This study found that financial advice is able to affect the financial satisfaction of a person, this becomes the basis that the advice given will increase satisfaction due to the consideration factors that form of mitigation of a risk (Khan & Akhtar, 2020). Different things happen that financial advice has no effect on the use of electronic payment system, this indicates that the existence of financial advice in fact does not have a significant impact on EPS use. If we look at the characteristics of respondents who are average millennials and post millennials, this happens because they are actually a tech-savvy who without a advice they will tend to use a technology in their lives. This characteristic makes digital awareness already part of behavior.

Undeniable, the use of technology is part of financial inclusion (Khan & Akhtar, 2020) that can improve the ability of individuals to manage their financial cycles more simply so as to avoid uncertainty and future risks. Research on the role of EPS use is very limited, not many researchers focus on digital behavior in a person, sometimes the importance of digital behavior knowledge can be a benchmark of one's overall satisfaction. Further findings explain that financial capability is able to influence EPS use, this means that financial ability will increase intentions in using a technology. Financial ability focuses on security, privacy, flexibility, and data management considerations (Hezlin Harris et al., 2011), the indicator is owned by the electronic payment system. Previous research also provides an explanation that financial capability is able to affect online shopping (Çera, Phan, Androniceanu, & Çera, 2020) which explains empowering people in using a financial service (Mazambani, Rushwaya, & Mutambara, 2018).

Individual welfare standards are certainly different, these differences are based on the scale of priorities and needs of each individual. This standard makes individual financial perspectives very different from each other, the role of financial consultants becomes important in increasing financial capability. Previous study found the fact that enhancing financial capability leads to reduce of debt burden, poverty and stress level (Taylor et al., 2011). Financial advice can improve financial capabilities that will later make financial decisions wiser. The results of this study are supported by (Khan & Akhtar, 2020) which states financial inclusion and financial advice are positively allied with financial capability (Johnson & Sherraden, 2007; Sherraden, 2013b; Khan & Akhtar, 2020).

Furthermore, financial capability plays importance role to increase well being especially in financial satisfaction. Financial capability does not about financial management but plays the role of decisions making, its essential thing to reach satisfaction in the future. Financial capability reflects proper financial knowledge and the ability to manage complex saving and investment decisions (Taylor, 2011; Shkvarchuk & Slav'yuk, 2019; Căra et al., 2020b). Therefore, financial capability will empower individuals to make themselves capable of understanding, visualising and protecting their finances in the volatile financial environment, which ultimately leads to financial satisfaction. This finding answers that financial capability positively effect toward financial satisfaction, it proves that people who is able to manage their finance will reach financial satisfaction.

Conclusions

This study found that financial advice can affect the financial satisfaction of a person. The advice given will increase satisfaction due to the consideration factors that mitigate risk. On the other hand, it did not affect the use of electronic payment systems. This study found that financial capability affects the electronic financial system and financial satisfaction. Financial capability plays an essential role in increasing well-being, especially financial satisfaction. In addition, the electronic payment system cannot act as a predictor of financial satisfaction. Not all researchers focus on digital behavior in a person; sometimes, the importance of digital behavior knowledge can be a benchmark of one's overall satisfaction. This standard makes individual financial perspectives very different from each other. The role of financial consultants becomes important in increasing financial capability. A previous study found that enhancing financial capability reduces debt burden, poverty, and stress level.

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Conflicts of Interest: The authors declare no conflict of interest.

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