

# **THE USE OF NON-CASH TRANSACTIONS AMONG BATIK SMES: AN EMPIRICAL REVIEW FROM INDONESIA**

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## **ABSTRACT**

The aim of this study is to determine the effect of different aspects, in terms of the theory of interpersonal behavior, on the adoption of non-cash transactions among batik small and medium-sized enterprises (SMEs) in Pekalongan, Indonesia. Partial least squares analysis results show that financial literacy has a positive influence on non-cash transaction attitudes. The attitudes in turn have a positive influence on the intention in non-cash transactions. Furthermore, repetitive behavior has a positive influence on non-cash transaction habits. The repetitive use of non-cash transactions by batik SMEs is driven by a motive to maintain acceptable business relations when related parties require cashless payments. The findings also imply that financial literacy is a relevant component in adopting the use of non-cash payments among batik SMEs.

**Keywords:** Non-cash transaction; Financial literacy; Theory of interpersonal behavior (TIB)

## **1. INTRODUCTION**

According to a World Bank survey (2014), bank account ownership in Indonesia is only 36.1%, while other Association of Southeast Asian Nations (ASEAN) countries have higher rates of ownership, such as Malaysia at 80.7%, Thailand at 78.1%, and Singapore at 96.4%. The data show that Indonesia is one of the countries with the lowest level of bank account ownership in Southeast Asia, and most of the bank account owners are urban residents. In fact, 50.21% of Indonesians in 2010 live in the countryside, but the percentage decreases by 2.51% in 2015 to 47.7% (Statistical Center Bureau, 2010, 2015). This decrease in the number of people living in the countryside is assumed to be related to the low level of facilities and accessibility to banks in such geographic areas.

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The community's low level of accessibility to bank loans (19.5% of the total population of Indonesia) has encouraged banks to strive for financial inclusion by increasing the banking dissemination range to rural areas and providing public educational activities about finance, which creates financial literacy (Supartoyo and Kasmiasi, 2013). According to Setyani (2013), the financial inclusion is an attempt to make the financial system accessible to all levels of society, thereby promoting quality economic growth while addressing poverty. Furthermore, financial inclusion aims to eliminate all forms of barriers to public access by using financial services supported by the existing infrastructure. Based on data from the Indonesian Financial Services Authority, in 2016 the financial inclusion of the Indonesian community is 67.83%, but financial literacy is only 29.66%.

Branchless banking is one form of positive financial inclusion initiatives to promote a country's economy by increasing public access to bank services. This is supported by the government with the non-cash national movement (NCNM, or *Gerakan Nasional Non Tunai* (GNNT)). On August 14, 2014, Bank Indonesia and the government launched the NCNM to encourage communities to use the payment system and the instrument of non-cash payment in payment transactions. This non-cash transaction method is also intended to reduce cash circulation and create a less-cash society. According to Stapleton (2013), branchless banking has the potential to revolutionize the payment system in emerging markets, to extend formal financial services toward non-bank-office services, and to provide a platform that connects small and medium-sized enterprises (SMEs) to the global economy.

Currently, the Indonesian central bank (Bank Indonesia) continues to improve the electronics of the payment system and the payment system infrastructure. Therefore, a less-cash society is expected to be actualized in the near future. According to the Financial Service Authority, by June 2017, the primary activities of non-cash payment consist of financial technology (40%), cryptocurrency (5%), crowdfunding (25%), peer-to-peer lending (20%), and aggregator and investment management (10%). Under Bank Indonesia as the regulator of payment systems, electronic cash payments are card-payment-based instruments, e-money, telco-money, blockchain/bitcoin, and national payment gateways. Bank Indonesia Regulation No: 11/12 / PBI / 2009, Article 1, paragraph (2), explains that electronic transactions are legal actions completed by using computers, computer networks, and/or other electronic media. Electronic money transactions involve the use of computer networks such as digital price storage systems (e.g., electronic fund transfer (EFT)).

Based on data from Bank Indonesia, the trend in electronic money usage in Indonesia is growing fast and the increase in the amount of non-cash transactions will be able to substitute for cash transactions in the upcoming years. The total amount of electronic money transactions in Indonesia in 2014 is Rp 9.1 billion per day, and in the following year it increases to Rp 14.5 billion per day. In 2016, the amount reaches Rp 19.3 billion per day.

Various government policies in Indonesia, both central and local, have been implemented to establish a non-cash era. For example, Bank Indonesia (BI) Representative Office of East Kalimantan Province required 250 SME stalls participating in the 2016 East Kalimantan NCNM Festival to transact sales and purchases using non-cash transactions. Such activities are conducted to socialize and familiarize the society with non-cash transactions (Kontan, December 3, 2016).

The Pekalongan local government has also intervened. In the seventh Batik Week of 2015, the Pekalongan city government held the Pantura Culinary Festival. The intervention not to apply cash was initiated by the representative of Bank Indonesia in Tegal. Visitors who wanted to buy food had to use non-cash payments or electronic money (e-money). The e-money products used at the Pantura Culinary Festival were e-money from Bank Mandiri, Flazz from Bank BCA, and Tapcash from BNI. The effort was aimed at introducing and socializing the general public in Pekalongan to the use of non-cash payment tools. In addition, conducting the Pantura Culinary Festival with non-cash payments was expected to actualize a less-cash society that provided benefits in terms of security, convenience, easy access, and higher efficiency (Suara Merdeka, August 1, 2015).

Indonesia has various kinds of SMEs, one of which is the batik SME. Batik was selected as a cultural heritage of Indonesia on October 2, 2009, by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the World Education, Science and Culture Organization. The batik industry plays an important role in Indonesian economic growth. The industry, which is dominated by SMEs, contributes significantly to Indonesian foreign exchange reserves. Batik exports in 2015 accounted for USD 156 million. Data from the Ministry of Industry 2009 show that the number of batik SMEs in Indonesia has reached 47,755 units with 199,444 employees. Based on observations, a number of batik SMEs in Pekalongan have applied non-cash transactions, including electronic data capture (EDC) machines, internet banking, and mobile banking.

Pekalongan is a city located in the province of Central Java, which is nicknamed Batik City, with city branding as the World's City of Batik. For this reason, the city was included in the network of UNESCO's creative cities in the category of crafts and folk art at the end of 2014. In this category, Pekalongan is side by side with the city of Kingdezhen (China), Nassau (Bahama), Suzhou (China), and Jacmel (Haiti). As a batik city, Pekalongan is considered successful in encouraging the advancement of batik home industry, maintaining cultural sustainability, and promoting more environmentally friendly batik processing.

Pekalongan is known as the center for batik production, which has grown since the 19th century. In the 2000s, approximately 70% of Indonesia's batik supply came from Pekalongan. Batik businesses in the city contribute significantly to the welfare of the community, provide work opportunities, and reduce the unemployment rate (CNN Indonesia, 2015). The magnitude of batik businesses in Pekalongan is due to the existence of productive socio-cultural capital in the community. The social capital includes creativity and economic innovation supported by technology and arts in sustaining the batik business development ([ugm.ac.id](http://ugm.ac.id), 2016).

According to 2017 data from the Pekalongan Cooperative Office and SMEs, 43,000 Pekalongan citizens work in the batik industrial sector and have made considerable product innovation contributions in the 1,081 batik SMEs. Furthermore, 51.85% of the total investment in the batik industrial sector in Central Java still centers in the city of Pekalongan. This offers an opportunity for the government to enlarge the Pekalongan batik market.

The growing application of non-cash transactions among Pekalongan batik SMEs is an interesting topic for research, considering that previous studies on batik SMEs focus on the growth and sustainability of batik SMEs but do not examine the behavior of SMEs in non-cash transactions (Pinasti and Adawiyah, 2016; Purwaningsih, Susanto, and Yudha, 2016). On the other hand,

research into non-cash transactions (Kumar, 2015; Ramya et al., 2017) has not examined the effect of intentions and habits on non-cash transaction behavior, notwithstanding that the two are thought to enable the formation of behavior in non-cash transactions. Although previous research by Kusakristie (2016) considers the important role of intentions and habits in non-cash transaction behavior, the sample does not address SMEs. The study also does not consider the influence of financial literacy in the forming of an individual's attitude toward non-cash transactions despite individuals' financial literacy being expected to affect their attitude when using non-cash transactions.

The aim of this study is to investigate the influence of financial literacy on the forming of an attitude (i.e., influence of attitudes, social factors, and effect), intention, and the influence of frequency of past behavior in the forming of past habits. This study also aims to determine how non-cash transactions form the behavior of SME traders of batik in Pekalongan, based on the intentions and habits with the facilitating condition as the moderator. This study uses the theory of interpersonal behavior proposed by Triandis (1977) with financial literacy as the additional variable. This research is expected to be useful to the banking industry to provide an overview of the extent to which the introduction, understanding, and mastery of the society toward non-cash transactions has been successful.

## **2. LITERATURE REVIEW**

### **2.1. *Theory of Interpersonal Behavior***

The theory of interpersonal behavior (TIB) proposed by Triandis (1977) is a theoretical alternative to the theory of reasoned action (TRA) and the theory of planned behavior (TPB). Triandis argues that TRA and TPB contain weaknesses that are overcome by TIB. TRA and TPB focus on predicting behavior related to the intention in performing certain behaviors. This intention is predicted by individual beliefs about behavior and subjective norms that are relevant to behavior. TIB includes TRA and the concept of TPB (i.e., attitudes, social influences, and intentions). New factors are also included in this context, namely, emotional factors, habits, and various sources of social influence (Moody and Siponen, 2013).

The behavior in non-cash transactions of Pekalongan SMEs will be examined using TIB because it overcomes weaknesses in TRA and TPB. Woon and Pee (2004) argue that TIB is more comprehensive than TPB because TIB contains all TPB components and also includes two additional aspects: habits and affect. Specifically, researchers (Bamberg and Schmidt, 2003) have found that inclusion of habit increases the predictive power of TIB compared to TPB. In TIB, an individual's behavior is formed by intentions and habits along with facilitating conditions acting as moderators. Intention is influenced by attitudes, social factors, and affect. This study adds financial literacy as an aspect that influences attitudes. Habits are formed based on the frequency of past behaviors.

### **2.2.1. *The Influence of Financial Literacy on Attitude***

According to Chen and Volpe (1998) and Harli et al. (2015), financial literacy is individuals' knowledge and ability to understand how to manage finances. Lusardi and Mitchell (2010) define financial literacy as financial knowledge and the ability to apply it. Financial literacy on non-cash transactions in this study is defined as knowledge of the benefits and costs of non-cash transactions as well as payment technology or other methods of non-cash transactions. Hilgert (2003) shows that individuals with higher literacy scores are more likely to have positive financial behavior. It appears that financial literacy affects attitudes.

Financial literacy of individuals in the form of knowledge about the benefits and costs of non-cash transactions, as well as knowledge of payment technology or non-cash transaction methods, influences the attitude toward using non-cash transactions. Based on this background, the following hypothesis is formed:

H1: The financial literacy of batik SMEs in Pekalongan has a significantly positive influence on attitudes toward non-cash transactions.

### **2.2.2. *The Influence of Attitude on Intention***

Tsang (2015) defines attitudes as an individual's trust/perception toward a relationship between what he or she does and the result of what is done. According to Pennington, Wilcox, and Grover (2003), intention can be defined as an individual's prominent belief about the consequences of behavior. Attitude refers to positive or negative knowledge and feelings about an object or activity (Friedrich, 2009). Fathia (2012) states that attitudes influence the individual's intention to use credit cards through a combination of the theory of acceptance model and the theory of personal behavior. In line with research by Fatmasari and Wulandari (2016), attitudes have a significant influence on intention in the use of card-payment-based instruments, or Alat Pembayaran Menggunakan Kartu (APMK).

Lee (2009) shows that the perception of usefulness has a positive influence on an individual's intention to perform an online trade in Taiwan. Based on this definition, individuals who have a positive attitude in the form of perception or expectation that non-cash transactions will be beneficial are expected to influence intention in performing non-cash transactions. On that basis, the following hypothesis is formed:

H2: The attitude of batik SME actors in Pekalongan toward non-cash transactions has a significantly positive influence on their intention to use non-cash transactions.

### **2.2.3. *The Influence of Social Factors on Intention***

Triandis (1980) defines a social factor as an individual's interpersonal agreement with a community he or she embraces in a particular social environment. One form of social factors is the acceptance of central and regional government regulations. An intervention of the central government (e.g., Bank Indonesia, Financial Services Authority, local government of Pekalongan) is suspected to be from important parties and becomes a consideration to the batik SME actors in Pekalongan in forming intentions in non-cash transactions.

In addition, social factors can come from the environment around individuals. Previous research into intention on illegal downloads by Phau, Teah, and Lwin (2009) report that social factors catalyze and improve the individual's positive attitude toward downloads if they are considered to be socially acceptable. The positive environment in the form of support, family background, education, and employment can influence a person's mind and life. Batik SME actors in Pekalongan have a kinship system that tends to be communal, so the system becomes a social factor that influences the intention toward non-cash transaction behavior. Based on this, the following hypothesis is formed:

H3: Social factors of batik SMEs in Pekalongan have a significant positive influence on intention in non-cash transactions.

#### ***2.2.4. The Influence of Affect on Intention***

According to Triandis (1980), affect is a direct emotional response to the thought of a particular behavior. Triandis argues that an individual's decisions not only focus on the cognitive aspect of a situation, but also rely on the individual's feelings. Affect refers to an emotional interpretation of perception, information, or knowledge. This is generally related to a person's bond (positive or negative) to people, things, and ideas (Saade and Kira, 2009). Based on this understanding, the level of emotional intelligence can help batik SMEs in Pekalongan think and control feelings in such a way to lead the intention in a particular choice toward something desired. Based on this, the following hypothesis is formed:

H4: The emotional factor (affect) of batik SME actors in Pekalongan has a positive influence on intention in non-cash transactions.

#### ***2.2.5. The Influence of Intention on Behavior***

Shrestha et al. (2012) explain intention as a conscious plan or decision made by an individual to show a certain behavior. Individuals who show a positive attitude of perception or expectation that non-cash transactions are beneficial influence their intention in the application of non-cash transactions, so that a decision is made and applied in their behavior in non-cash transactions. Intention is determined by the extent to which batik SMEs in Pekalongan have a positive attitude toward the behavior of non-cash transactions. Based on this, the following hypothesis is formed:

H5: The intention of batik SME actors in Pekalongan has a significant positive influence on their behavior in non-cash transactions.

#### ***2.2.6. The Influence of Frequency of Past Behavior on Habit***

TRA and TPB assume that intention shapes a behavior without realizing that the behavior may have been performed repeatedly in the past. The frequency of past behavior refers to behavior that has been performed repetitively but does not consciously form an individual's habit (Bamberg and Schmidt, 2003).

Moody and Siponen (2013) describe behavior that is repeatedly and frequently performed as automatic. Frequency of past behavior is an indicator of strength in a habit. When a behavior is performed, it must be accompanied by an extra effort to repeat the behavior until it becomes a habit. Based on this, the following hypothesis is formed:

H6: The frequency of past behavior of batik SME actors in Pekalongan has a significantly positive influence on the formation of non-cash transaction habits.

### **2.2.7. *The Influence of Habit on Behavior***

Triandis (1980) explains that habit is an automated behavior in a given situation. Habit is defined as a series of learned actions which become automatic responses to certain cues and function in obtaining aims or final conditions (Verplanken and Aarts, 1999). Furthermore, Verplanken and Orbell (2003) describe a habit as a psychological construct, and not just the frequency of a previous behavior. Based on field observations, most batik SME actors in Pekalongan have applied non-cash transactions, and it is assumed that doing so establishes a behavior of applying non-cash transactions. Based on this, the following hypothesis is formed:

H7: The habit of batik SME actors in Pekalongan has a significantly positive influence in shaping their behavior in non-cash transactions.

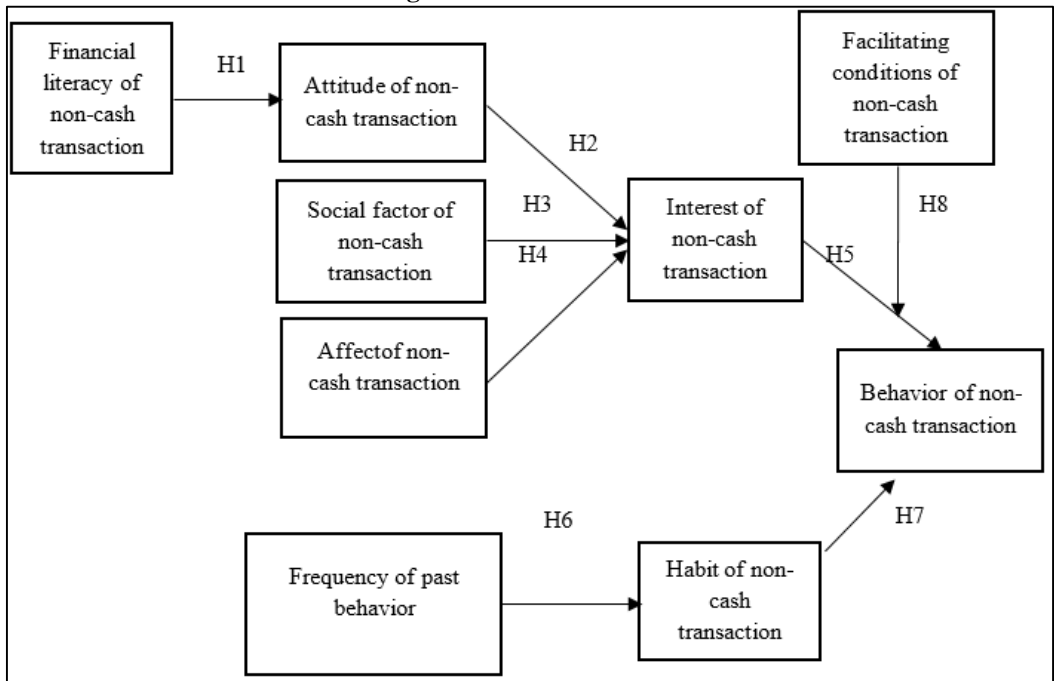
### **2.2.8 *The Influence of Facilitating Conditions on Behavior***

According to Triandis (1980), facilitating conditions are objective factors in an environment that can facilitate or complicate a behavior to be performed, based on the assessment of each individual. Yu (2012) finds that the individual behavior in using mobile banking is strongly influenced by the intentions and facilitating conditions. The availability of adequate facilities makes it easier for batik SMEs in Pekalongan to make a decision. This refers to the ease of access of batik SMEs in Pekalongan to technology resources and infrastructure, such as the software and hardware needed in non-cash transactions. The facilitating conditions, such as the ease of access for batik SMEs in Pekalongan in non-cash transactions, may affect their behavior in using non-cash payment instruments. Based on this, the following hypothesis is formed:

H8: The facilitating conditions of batik SME actors in Pekalongan have a positive influence on the decision-making process of non-cash transaction behavior.

## **2.3 *Research Model***

Based on the hypotheses, the research model used in this research is shown in Figure 1.

**Figure 1: Research Model**

### 3. RESEARCH METHODS

This research is an empirical study on the analysis of non-cash transactions of batik SMEs in Pekalongan. The type of data used are primary data derived through direct interviews with respondents by using questionnaires.

#### 3.1. Population and Sample

The population of this study is the 861 batik SMEs in Pekalongan (Disperindagkop, 2017). The researchers choose this group of batik SMEs in Pekalongan as the population because Pekalongan has been crowned as one of the creative cities in the category of crafts and folk art by UNESCO (2014). The city government of Pekalongan has also supported the use of non-cash transactions by issuing regulations that encourage their use (e.g., the use of e-money at the Pantura Culinary Festival). The 110 samples of this research are selected by using a cluster sampling technique based on the criterion of batik SMEs in Pekalongan having used at least one kind of non-cash payment product issued by banks (i.e., debit card, credit card, internet banking, or other form of e-money). Samples are taken in batik centers at Kauman (28), Pesindon (21), Krapyak (31), and Medono (30), which are located in the Pekalongan area. The Kauman batik village is a batik center that utilizes modern management and technology, one of which is the application of digitalization through a Telkom Indonesia program, the Kampung UKM Digital. The Pesindon batik center is a batik center



supported by Bank BRI to apply non-cash transactions, while the Krapyak and Medono batik centers are the largest batik centers in Pekalongan (Disperindagkop, 2017). The final number of questionnaires that qualified to be processed is 99. Nugraha and Atahau (2018) state that according to Hair et al. (2010), the number of research samples to test hypotheses using structural equation modeling (SEM) is between 100 and 200, but for research using partial least squares, a smaller number of research samples is acceptable (Ghozali, 2011).

### 3.2. *Variable Measurement*

The dependent variables in this research include attitude in non-cash transactions, intention in the use of non-cash payment instruments, habit in applying financial transactions, and behavior of SMEs in Pekalongan in applying non-cash transactions, whereas the independent variables are financial literacy, social factors, affect, and frequency of past behavior. The moderator variable is the facilitating conditions in the application of non-cash transactions. These variables are measured using an interval scale of 5 Likert points (Jogiyanto, 2004). The average calculation scale or the mean is determined by the interval  $I = (\text{max} - \text{min}) / k$  formula, where I is the interval, max is the highest answer, min is the lowest answer, and K is the classification to be made. The research uses five classifications with the highest score of 5 and the lowest score of 1. Based on the formula, an interval 0.8 is found, as seen in Table 3.1.

**Table 3.1:** Answer Category Interval

Scale Level	Interval	Answer Category
1	1,00 – 1,80	Very low
2	1,81 – 2,60	Low
3	2,61 – 3,40	Medium
4	3,41 – 4,20	High
5	4,21 – 5,00	Very high

### 3.3. *Data Analysis Technique*

The collected data are analyzed in descriptive statistics and the analysis uses partial least squares (PLS) regression because it is consistent with the aim of this research, which is to predict the influence of the proposed variables (causal-predictive analysis). The application program used is SmartPLS v.3. Before testing the hypothesis in the PLS model, a test is conducted to check the quality of the measurement model through two test stages: the structural model test (inner model test) and the measurement model test (outer model test).

The inner model test is conducted by observing the coefficient of determination (R-square). The criterion for testing the outer model is convergent validity; discriminant validity is used to test the validity, and composite reliability is used for the reliability test. The model is claimed to have no reliability problems if it has a composite reliability value greater than 0.6. After performing the inner model and outer model tests, the goodness-of-fit test is conducted. Then, a model causality test is performed to determine the relationship between variables by looking at the t-statistic value

and its probability value with the bootstrapping procedure and the original sample value that reflects the path coefficient of the model (Ghozali, 2011; Tenenhaus et al., 2005).

## 4. FINDINGS AND DISCUSSION

### 4.1. Respondent Characteristics

Based on the data obtained in this study, the 99 respondents have the characteristics described in Table 4.1.

**Table 4.1:** Description of Respondent Characteristics

Characteristic	Total Respondents	Percentage (%)
<b>A. Age (Year)</b>		
20 – 25	7	7,1
26 – 30	21	21,2
31 – 35	16	16,2
36 – 40	16	16,2
> 40	39	39,3
Total	99	100,0
<b>B. Gender</b>		
Male	43	43,4
Female	56	56,6
Total	99	100,0
<b>C. Education</b>		
Junior High School	1	1,0
Senior High School	24	24,2
Diploma	16	16,2
Bachelor	55	55,6
Post Graduate	3	3,0
Total	99	100,0

*Source:* Primary Data, 2018

According to Table 4.1, most of the respondents, based on age, are older than 40 years (39.3%); based on sex, most are women (56.6%); and based on education, most have a bachelor's degree (55.6%). Those who are older than 40 years are included in the category of X generation with transition characteristics (digital immigrants) where the mechanical era begins to change into the digital era and this generation is categorized to be adaptive to change. The year 2018 marks the industrial revolution 4.0 characterized by a cyber-physical system, where the industry begins to touch the virtual world in the form of human connectivity, machines, and data. This is known as the internet of things (IoT). Supported by the high level of education, with most respondents having a bachelor's degree, it is suspected that many of the SME actors have used non-cash transactions.

### 4.2. Descriptive Statistics Analysis

Table 4.2 shows the descriptive statistics of variables in this study.

**Table 4.2:** Descriptive Statistics of Behavior Variable

<b>Empirical Indicator</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>	<b>Mean</b>
<b>Behavior</b>						
1. Using non-cash payment tools makes my work easier.	215	220	3	0	0	4.42
2. Using non-cash payment tools makes me feel more secure.	210	156	54	0	0	4.24
3. Using non-cash payment tools makes the payment process faster / shortens the time required.	215	216	6	0	0	4.41
						<b>4.36</b>
<b>Average of Behavior Category</b>						<b>Very High</b>
<b>Financial Literacy</b>						
1. Understand the payment method of non-cash transaction products.	155	256	12	0	0	4.27
2. Understand the implications of non-cash transactions costs.	140	152	96	4	0	3.94
3. Understand the benefits of non-cash transactions.	155	236	0	18	0	4.22
<b>Average of Financial Literacy Category</b>						<b>4.14 High</b>
<b>Attitude</b>						
1. Non-cash transactions increase the ability to manage SME financing.	70	220	90	0	0	3.84
2. The use of non-cash payment tools makes it easy to make buying and selling decisions.	105	264	36	0	0	4.09
3. The use of non-cash payment tools accelerates the process of making buying and selling decisions.	110	264	33	0	0	4.11
<b>Average of Attitude Category</b>						<b>4.01 High</b>
<b>Social Factor</b>						
1. Government issues regulations which encourage the use of non-cash transactions.	215	88	69	22	0	3.98
2. The use of non-cash transactions is suggested by co-workers.	5	84	105	84	0	2.81
3. The use of non-cash transactions is suggested by my colleagues / employers.	0	64	123	84	0	2.74
4. The use of non-cash transactions is suggested by the community I join.	0	72	117	84	0	2.76
<b>Average of Social Factor Category</b>						<b>3.07 Medium</b>
<b>Affect</b>						
1. Using non-cash payment tools creates a sense of practicality.	200	184	39	0	0	4.27
2. Using non-cash payment tools creates a sense of relaxation because they can transfer money at any time to co-workers in case of emergency.	170	192	51	0	0	4.17
3. Using non-cash payment tools does not create worries.	95	204	84	2	0	3.89
<b>Average of Affect Category</b>						<b>4.11 High</b>

<b>Empirical Indicator</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>	<b>Mean</b>
<b>Intention</b>						
1. There is a desire to use non-cash payment tools at work.	25	204	129	0	0	3.62
2. Trying to use non-cash transaction tools when there is an option to do so.	10	184	153	0	0	3.51
3. Trying to use non-cash transaction tools if there is a need that allows for non-cash payment.	15	232	114	0	0	3.65
<b>Average of Intention Category</b>						<b>3.59 High</b>
<b>Frequency of Past Behavior</b>						
1. Using non-cash transactions at work frequently.	20	220	120	0	0	3.64
2. Using non-cash transaction tools frequently when there is an option to pay in cash or non-cash.	20	156	168	0	0	3.47
3. Using non-cash transaction tools if there is a need that allows for non-cash payment.	15	192	141	2	0	3.54
<b>Average of Frequency of Past Behavior Category</b>						<b>3.55 High</b>
<b>Habit</b>						
1. Prioritizing the use of non-cash payment instruments (e.g., debit card, credit card, e-money) every time when making a payment.	15	76	225	4	0	3.23
2. Always using non-cash payment tools when there is an option for cash or non-cash transactions.	0	188	153	2	0	3.46
3. Preparing non-cash payment tools (e.g., debit card, credit card, e-money) in case it is possible to perform non-cash transactions.	45	168	141	2	0	3.60
<b>Average of Habit Category</b>						<b>3.43 High</b>
<b>Facilitating Condition</b>						
1. The availability of non-cash payment tools (e.g., debit card, credit card, e-money) can be found in the neighborhood.	195	220	15	0	0	4.34
2. The available communication network is stable when non-cash transactions are implemented.	110	136	114	10	0	3.74
3. Non-cash transaction tools can be owned under easy conditions to fulfill (internal).	180	236	12	0	0	4.32
4. Non-cash transaction tools are easy for users to use.	180	240	9	0	0	4.33
5. The network system to apply non-cash transactions is seldom interrupted.	10	52	207	30	0	3.02
<b>Average of Facilitating Condition Category</b>						<b>3.95 High</b>

### **4.3. Structural Model Test (Inner Model Test) and Measurement Model Test (Outer Model Test)**

The structural model test (inner model test) focuses on the coefficient of determination or R-square. The results of the tests conducted in this study are shown in Table 4.3.

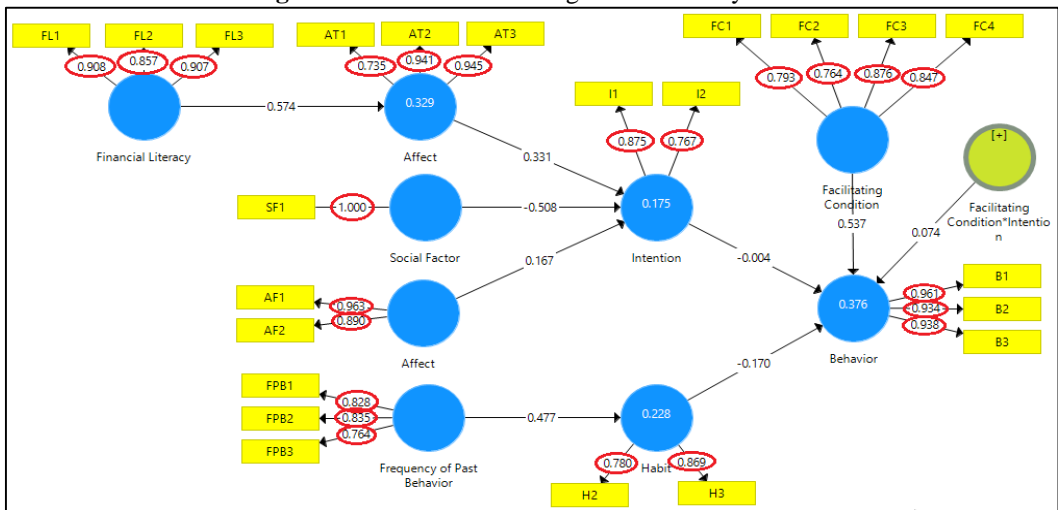
**Table 4.3:** Results of Structural Model Test Using R-Square

Variable	R-Square
Attitude	0,322
Intention	0,149
Habit	0,220
Behavior	0,350

Source : The output of primary data using SmartPLS-v.3, 2018.

The outer model test in Figure 4.1 shows that the loading-factor value for all indicators in this research model is greater than 0.7.

**Figure 4.1:** Result of PLS Algorithm Validity Test



Source : The output of primary data using SmartPLS-v.3, 2018.

Table 4.4 shows that the average variance extracted (AVE) value for all variables in the model is greater than 0.5.

**Table 4.4:** Result of Validity Test Using AVE

Variable	Average Variance Extracted
Financial Literacy	0,794
Attitude	0,773
Social Factor	1,000
Affect	0,860
Intention	0,677
Frequency of Past Behavior	0,656
Habit	0,682
Facilitating Condition	0,674
Condition*Intention	1,000
Behavior	0,892

Source : The output of primary data using SmartPLS-v.3, 2018.

Therefore, based on the results obtained from both the value of the loading factor and the AVE value, there is no convergent validity problem in this research model. Also, the result of reliability testing (Table 4.5) with composite reliability does not show any problem.

**Table 4.5:** Result of Reliability Test Using Composite Reliability

Variable	Composite Reliability
Financial Literacy	0,920
Behavior	0,910
Social Factor	1,000
Affect	0,924
Intention	0,807
Frequency of Past Behavior	0,851
Habit	0,810
Facilitating Condition	0,892
Condition*Intention	1,000
Behavior	0,961

*Source* : The output of primary data using SmartPLS-v.3, 2018.

#### 4.4. *Goodness-of-Fit Index Test*

The result of the goodness-of-fit index (GFI) calculation is shown in Table 4.6, indicating that the model belongs to a large category because it has a goodness-of-fit value of 0.46 which is greater than 0.36.

**Table 4.6:** Result of Goodness-of-Fit Index Test

Construct	R <sup>2</sup>	AVE
Financial Literacy		0,794
Attitude	0,322	0,773
Social Factor		1,000
Affect		0,860
Intention	0,149	0,677
Frequency of Past Behavior		0,656
Habit	0,220	0,682
Facilitating Condition		0,674
Condition*Intention		1,000
Behavior	0,350	0,892
<b>Goodness of Fit</b>		<b>0,46</b>

#### 4.5. *Model Causality Test*

A causality test was performed to understand the relationship between variables. The results are presented in Table 4.7.

**Table 4.7:** Causality Test Result

Hypothesis	Original Sample	T-statistics	P-value	Result
Attitude←Financial Literacy	0,574	9,271	0,000	Accepted
Intention←Attitude	0,331	2,326	0,000	Accepted
Intention←Social Factor	-0,508	4,044	0,000	Rejected
Intention←Affect	0,167	0,986	0,325	Rejected
Behavior←Intention	-0,004	0,042	0,996	Rejected
Habit←Frequency of Past Behavior	0,477	6,546	0,000	Accepted
Behavior←Habit	-0,170	1,577	0,115	Rejected
Behavior←Condition*Intention	0,074	1,282	1,200	Rejected

Source : The output of primary data using SmartPLS-v.3, 2018.

#### 4.6. Discussion

Financial literacy has a positive influence on attitudes in non-cash transactions. This indicates that users of non-cash transactions, that is, batik SME actors in Pekalongan who have financial literacy in the form of benefits and costs of non-cash transactions and payment technology or non-cash transactions, possess a positive attitude toward the use of non-cash transactions. This outcome supports a study by Hilgert (2003), which shows that individuals with higher scores at the level of financial literacy are more likely to engage in recommended financial practices. The results of this study are also supported by Borden et al.'s (2008) research stating that seminars on financial literacy not only improve financial knowledge, but also increase the attitude of responsibility and decrease avoidance attitude on a loan.

Attitude has a positive influence on intention in non-cash transactions. This shows that batik SME actors in Pekalongan have a positive attitude toward non-cash transactions, which in turn makes them intentioned in using non-cash transactions. The result of this study is in line with previous research conducted by Lee (2009), which shows that the perception of usefulness has a positive influence on individual intention to conduct online trading in Taiwan. Individuals who have a positive attitude of perception or expectation that non-cash transactions are beneficial have influenced their intention in engaging in non-cash transactions. The result of a study by Fatmasari and Wulandari (2016) also shows that attitude has a significant influence on intention in the use of card-based payment instruments (CBPIs).

Social factor has a negative influence on intention in non-cash transactions. Based on the descriptive statistics in Table 4.6 on social factor variables, the highest average value is the first indicator that respondents agree to the idea that the government issues a regulation encouraging the use of non-cash transactions. The stricter the government regulation, the less intentioned the SME actors in non-cash transactions. The intervention of government regulation to conduct non-cash transactions is suspected to be less effective to encourage the intention of SME actors in Pekalongan in performing non-cash transactions. The SME actors tend to be more focused on the continuity of their business in dealing with government regulations, so that their intention in using non-cash transactions is not necessarily caused by the government regulation, but more by economic considerations in business.

According to Triandis (1980), affect is a direct emotional response to the thought of a particular behavior. Affect refers to an emotional interpretation of perception, information, or knowledge. Based on the educational background, most of the SME actors are university graduates. The higher

level of education is assumed to make them more realistic in their way of thinking. This indicates that decision making by the batik SME actors is influenced by the cognitive aspect in controlling intention toward non-cash transactions. As most of the actors of SMEs are graduates, it is possible that this encourages them to think rationally in controlling intention in non-cash transactions.

Intention has no influence on behavior in non-cash transactions. According to Shrestha et al. (2012), intention is a conscious plan or decision taken by an individual to perform a certain behavior. Individuals who show a positive attitude of perception or expectation that non-cash transactions are beneficial influence their intention in applying non-cash transactions, so that the decision taken is implied within the behavior of non-cash transactions. However, in this study, it is possible that intention has been formed before because of their attitude of expectation in non-cash transactions, although the attitude is not yet formed. This is caused by the fact that the SME actors feel unsafe in conducting non-cash transactions and it is possible that there are no supporting facilities.

Frequency of past behavior has a positive influence on habit formation in non-cash transactions. This is supported by Bamberg and Schmidt (2003), who argue that the frequency of past behavior does not consciously form an individual's habit. The batik SME actors in Pekalongan who conduct non-cash transactions have repeatedly formed a habit in applying non-cash transactions. The repeated use of non-cash transactions is possible because it is related to technology adoption trends in transaction payments by business relations of SME businesses which are cashless, so that the adjustments are made by SME actors to maintain their business relations.

Habit has no influence on behavior in non-cash transactions. This is possible because of the unavailability of facilities such as EDC machines to sellers. It is also possible that the habit performed results from a demand from colleagues who only provide non-cash transactions, so that the habit is only for the continuity of business. Facilitating conditions have no influence on the behavior in non-cash transactions. This suggests that facilitating conditions are not a consideration to encourage non-cash transaction behavior.

## **5. CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS**

Based on the findings, those that are consistent with the hypotheses are the financial literacy variable, which has a positive influence on the attitude in non-cash transactions, attitude, which has a positive influence on intention in non-cash transactions, and frequency of past behavior, which provides a positive influence on habit in non-cash transactions, while the findings that are not consistent with the hypotheses are the social factor variables; affect does not influence the intention of non-cash transactions, intention and habit do not influence the behavior of non-cash transactions, and facilitating condition as the only moderator has no influence in the formation of intention in the behavior of non-cash transactions.

Frequency of past behavior has a positive influence on habit in non-cash transactions, but habit and intention in non-cash transactions have no influence on the behavior in non-cash transactions. This is possible because SME actors make non-cash transactions repeatedly; thus, doing so has become a habit because there is a demand from colleagues who require non-cash transactions. This study complements the previous research by Kusakristie (2016), which does not examine the influence of financial literacy on the attitude toward non-cash transactions. This present study proves that



financial literacy influences the attitude toward non-cash transactions. This means that users of non-cash transactions, that is, batik SME actors in Pekalongan who have financial literacy in the form of benefits and costs of non-cash transactions and payment technology for non-cash transactions, have a positive attitude toward the use of non-cash transactions.

Based on the conclusion of this theoretical research, its implication is developed to contribute to policy makers, especially in relation to financial transactions using non-cash transactions by SMEs and government as stakeholders in the formation of non-cash behavior in the society. Policy makers or controllers, in this case the government of Pekalongan, can be more active to encourage socialization of the benefits of non-cash transactions, such as advantages and security, to increase the financial literacy of SME actors in terms of non-cash transactions. Non-cash transactions are expected to become more widely known in the society, thus assisting the government in supporting the non-cash national movement.

This study has not proven whether the same results can be generated when the batik SME population is not located only in Pekalongan but rather also in other batik-producing cities, such as Surakarta and Yogyakarta. Further research can also be performed by using objects in other sectors. The sample of this study comprises only 99 respondents; thus, further research should use a sample of more than 100 respondents. In addition, this study has not seen the influence of financial literacy in forming intention directly as it might have. Further research is needed considering the variables of financial literacy that may influence intention. Also, this study does not use questionnaires with open-ended questions on perception; therefore, further research can use questionnaires that include open-ended questions to ensure consistency of respondents' answers.

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**Appendix 1: Variable Measurement**

<b>No.</b>	<b>Variable</b>	<b>Definition</b>	<b>Empirical Indicator</b>
1.	Behavior(B)	Action based on expectations to be gained (Darnton, 2008).	<ol style="list-style-type: none"> <li>1. Using a non-cash payment tool because it makes my work easier</li> <li>2. Using non-cash payment tools makes me feel more secure</li> <li>3. Using non-cash payment tools makes the payment process that I make faster / shorten the time</li> </ol>
2.	Financial Literacy(FL)	The knowledge and ability of individuals to understand how to manage finances (Chen and Volpe, 1998 and Harli et al, 2015).	<ol style="list-style-type: none"> <li>1. Understand the payment method of non-cash transaction products</li> <li>2. Understand the implications of non-cash transactions cost</li> <li>3. Understand the benefit of non-cash transaction</li> </ol>
3.	Attitude (A)	An individual's belief / perception of the relationship between what he/she does, with the result of what he/she has done (Tsang, 2015).	<ol style="list-style-type: none"> <li>1. Non-cash transaction increases the ability to manage SMEs financial</li> <li>2. The use of non-cash payment tools makes it easy to make buying and selling decision</li> <li>3. The use of non-cash payment tools accelerates in making buying and selling decisions</li> </ol>
4.	Social Factor(SF)	Interpersonal approval of an individual to the community he or she embraces in a particular social environment (Triandis, 1980).	<ol style="list-style-type: none"> <li>1. Government issues regulations which encourage the use of non-cash transactions</li> <li>2. The use of non-cash transactions is suggested by co-workers</li> <li>3. The use of non-cash transactions is suggested by my colleagues / employers</li> <li>4. The use of non-cash transactions is suggested by the community I join</li> </ol>
5.	Affect (A)	A direct emotional responses to a thought about a particular behavior (Triandis, 1980).	<ol style="list-style-type: none"> <li>1. Using non-cash payment tools create a sense of practical</li> <li>2. Using non-cash payment tools create a sense of relax because it can transfer money at anytime to co-workers in case of emergency</li> <li>3. Using non-cash payment tools does not create worries</li> </ol>
6.	Intention (I)	A conscious plan or decision taken by an individual to perform a	<ol style="list-style-type: none"> <li>1. There is a desire to use non-cash payment tools at work</li> </ol>

No.	Variable	Definition	Empirical Indicator
		behavior (Shrestha et al, 2012).	<ol style="list-style-type: none"> <li>2. Trying to use the non-cash transaction tool when there is an option to do it</li> <li>3. Trying to use a non-cash transaction tool if there is a need to be allowed to be paid non-cash</li> </ol>
7.	Frequency of Past Behavior (RB)	Repeated, unconscious behaviors forming an individual habit (Bamberg & Schmidt, 2003).	<ol style="list-style-type: none"> <li>1. Using non-cash transaction at work frequently</li> <li>2. Using non-cash transaction tools when there is an option to pay in cash or non-cash frequently</li> <li>3. Using non-cash transaction tool if there is a need that is allowed to be paid in non-cash</li> </ol>
8.	Habit (H)	Automated behavior in the given situation (Triandis, 1980).	<ol style="list-style-type: none"> <li>1. Prioritizing the use of non-cash payment instruments (debit card, credit card, <i>e-money</i>, etc.) everytime making a payment</li> <li>2. Always using non-cash payment tool when there is an option to do cash or non-cash transaction</li> <li>3. Preparing non-cash payment tool (debit card, credit card, <i>e-money</i>, etc.) in the cashier that is possible to do non-cash transaction</li> </ol>
9.	Facilitating Condition (FC)	Objective factors in an environment that can facilitate or complicate a behavior to be performed, based on the assessment of each individual (Triandis, 1980).	<ol style="list-style-type: none"> <li>1. The availability of non-cash payment tool (debit card, credit card, <i>e-money</i>, etc.) can be found in the neighborhood</li> <li>2. The available communication network is stable when non-cash transaction is implemented</li> <li>3. Non-cash transaction tools can be owned under easy conditions to be fulfilled (internal)</li> <li>4. Non-cash transaction tool is easy to used by user</li> <li>5. The network system to apply non-cash transaction is seldom interrupted.</li> </ol>

**Source:** Kusakristie, 2016 with adjustment