



A MIXED-METHODS STUDY TO EXPLORE STAGE OF READINESS AND INTENTION OF MICRO AND SMALL ENTERPRISES TO ADOPT MOBILE MONEY IN INDONESIA

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ABSTRACT

The objectives of this study are to understand the stage of readiness of micro and small entrepreneurs to adopt mobile money service, and to explore factors that influence mobile money acceptance in an Indonesia setting. Micro and small enterprises were expected to modify people behaviour, from cash oriented to digital. The authors implemented a mixed-methods study with the qualitative approach was in the first step. The qualitative data were collected in an industrial cluster of traditional batik textile in West Java Province, Indonesia. This first stage of study focussed on current financial transaction methods, attitude on mobile money, and intention to adopt mobile money. Thirty-one entrepreneurs participated in face-to-face interviews. Findings of the qualitative study were illustrated into the proposed model to be examined in the quantitative study. Indicators for the instrument were also taken and adapted from those findings. Furthermore, the quantitative study was conducted in Jakarta, attracting 181 micro and small entrepreneurs with various backgrounds of industries. The quantitative data were analysed using exploratory and confirmatory factor analyses. Four of eleven hypotheses were accepted. This study carried out findings that to predict intention in adopting mobile money, micro and small entrepreneurs were influenced by attitude and social influence whereas attitude was influenced by perceived credibility and perceived and usefulness.

Keywords: Mobile money, Theory of reasoned action, Technology of acceptance model, Micro and small enterprise.

Received: 20 November 2014/ **Revised:** 5 January 2015/ **Accepted:** 10 January 2015/ **Published:** 15 January 2015

Contribution/ Originality:

The current work documents behavioural intention relating mobile money among micro and small entrepreneurs in Indonesia using a mixed-methods approach and structural equation modelling for data analysis whereas others predominantly involve customers, using a qualitative approach

1. INTRODUCTION

Mobile money is a peer-to-peer financial service through SMS operated by telecommunication providers and mainly dedicated for low income and considered helping unbanked people to manage their own financial transactions and cash management (Dias and McKee, 2010; McKay and Pickens, 2010). Initiated in Kenya in 2007 later this service was applied in other developing countries across Africa, Asia, and South America (Mas and Morawczynski, 2009; Tarazi and Breloff, 2010). In 2009, mobile money was eventually introduced and legalised in Indonesia with banking and telecommunication providers as the operators (Zendehdel and Paim, 2013).

Regarding its population and number of phone users, Indonesia is considered a good market for mobile money services (International Finance Corporation, 2010). Further, mobile money operators in Indonesia may claim that they have succeeded introducing and attracting phone users applying mobile money (Maierbrugger, 2013). However, based on the authors' observation, mobile money penetration in Indonesia is considered slow and low. Besides, there are gaps of literature exploring stage of readiness and behavioural intention of non-users to accept mobile money technology and mobile money acceptance in general, particularly in Indonesia context. This study is expected to fill the gaps.

In this study, a sequential mixed-method approach was applied. As there is lack of study on mobile money in Indonesia, the authors initiated the qualitative study in the first place to understand the acceptance of mobile money concept among participants. Results of the qualitative study were used to conduct the quantitative study.

1.1. Objectives of the Study

This study has two objectives. Firstly is to explore the stage of readiness of micro and small enterprises (MSEs) – they could be an agent of change of low income people's behaviours in cash management – to adopt mobile money technology. Secondly is to explore factors that may influence mobile money technology acceptance.

2. LITERATURE REVIEW

This study focussed on consumer behaviour relating to mobile money. To obtain deeper and wider understanding, the authors explored not only literature on this area, but also from other mobile finance services, such as mobile payments and internet banking (please see Table 1).

2.1. Stage of Readiness

According to Prochaska (1994) stage of change or readiness consists of precontemplation, contemplation, preparation, action, and maintenance. This theory is mostly used in studies relating to behavioural change, particularly from unhealthy to healthy lives (Etter and Sutton, 2002; Nothwehr *et al.*, 2006) or in other topics, such as in tourism, volunteer and volunteer

tourism (Dinan and Sargeant, 2000; Boehm, 2009; Suhud, 2014). A study relating mobile money adoption, conducted by Davidson and McCarty (2011) illustrates a journey of mobile money adoption, consists of unaware, awareness, understanding, knowledge, trial, and regular use. This author relates the diagram with certain communication campaign to be addressed for certain audience in certain stage.

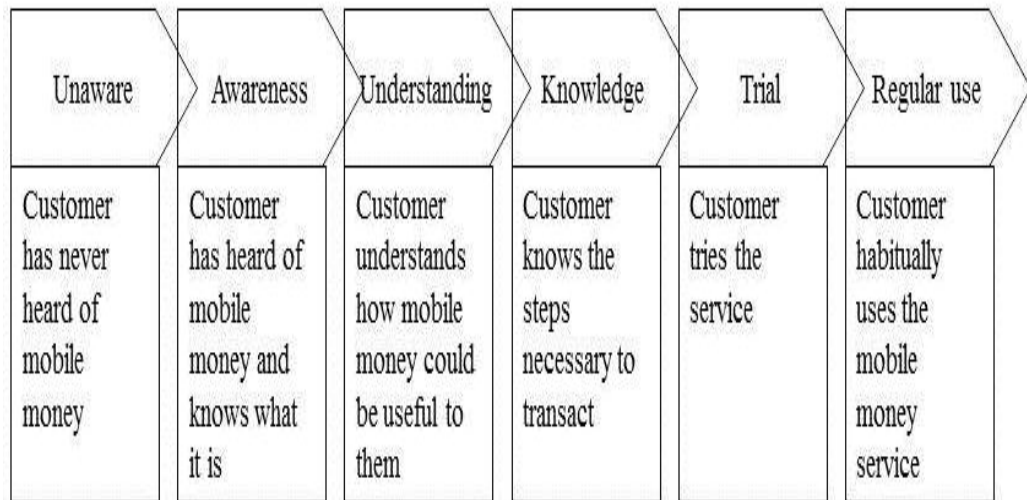


Figure-1. Stage of readiness to adopt mobile money service Davidson and McCarty (2011)

2.2. Variables Used in Mobile Financial Service

When researchers conduct a research on consumer behaviour relating to technology-based product and service, particularly in quantitative studies, the two most theories used are based on Technology Acceptance Model (TAM) (Davis, 1989) and Unified Theory and Acceptance and Use of Technology (UTAUT) (Venkatesh *et al.*, 2003). However, after reviewing literature, TAM is the most popular theory applied in mobile payments related topics. Dealing with TAM, the authors identified variables that may influence consumers' intention to adopt mobile money service: attitude, subjective norm or social influence, perceived ease of use, perceived usefulness, awareness, and trust or perceived credibility.

Table 1 helps the authors to identify those variables. To make a short list, some unpopular variables, as well as unrevealed in the findings of this study, are excluded. Based on the table below, to predict intention, the most frequent variables used by researchers are attitude, perceived credibility, perceived usefulness, and perceived ease of use. Further, as indicators found in the literature have same similarities and purposes, later the authors considered to combine subjective norm and social pressure, trust and perceived credibility, and awareness and advertising.

Table-1. List of quantitative studies in mobile financial services

Topics	Intention	Awareness	Advertising	Subjective norm/subjective Attitude	Perceived usefulness	Perceived ease of use	Perceived credibility	Trust	Sources
Mobile service	✓	✓	-	-	-	✓	✓	✓	Sun <i>et al.</i> (2010)
Mobile services	✓	-	-	✓	✓	✓	✓	-	Nysveen <i>et al.</i> (2005)
M-Banking	✓	-	-	✓	✓	✓	✓	✓	Lule <i>et al.</i> (2012)
M-Banking	✓	-	-	-	✓	✓	✓	-	Wessels and Drennan (2009)
Mobile payment	✓	-	-	-	-	✓	✓	-	Kim <i>et al.</i> (2010)
Mobile payment	✓	-	-	-	-	✓	✓	-	Pousttchi and Wiedemann (2007)
Mobile payment	✓	-	-	-	-	✓	✓	✓	Zhou (2011)
Mobile banking	✓	-	-	-	✓	✓	✓	✓	Crabbe <i>et al.</i> (2009)
Mobile banking	✓	-	-	-	-	✓	✓	✓	Jeong and Yoon (2013)
Mobile banking	✓	-	-	-	-	✓	✓	✓	Luarn and Lin (2005)
Mobile banking	✓	-	-	-	-	✓	✓	✓	Koenig-Lewis <i>et al.</i> (2010)
Mobile banking	✓	✓	-	-	-	✓	✓	✓	Daud <i>et al.</i> (2011)
Mobile banking	✓	-	-	✓	✓	✓	✓	-	Gilaninia <i>et al.</i> (2012)
Mobile banking	✓	-	✓	-	-	✓	✓	-	Yu (2009)

3. QUALITATIVE METHODS

At the beginning, during the preparation of the study, the authors observed up to 20 people whether they were aware of the term of mobile money. All of them admitted that they had not heard the term yet. Most of these people thought that mobile money equals to mobile banking or SMS banking. The qualitative data were collected in a traditional textile (*batik*) industrial area in Cirebon, West Java, Indonesia in August 2013, involving micro and small business owners. This area was chosen as there is a homogenous industry. It might help the authors to obtain a collective sense of responses.

Participants were approached conveniently. Thirty-one (12 male and 19 female) participants took part in face to face interviews. Participants' ranges of ages were between 23 and 67 years old with 19 of them were under 45 years old. The qualitative data were analysed using a manual content analysis.

Five main questions were addressed including (a) the current financial transaction services, whether cash, transfer, or both; (b) attitude towards mobile money. Participants were informed what mobile money is. "Mobile money is a financial service using mobile phone through SMS provided by telecommunication providers and/or bank to help low-income people in cash

management (Dias and McKee, 2010; McKay and Pickens, 2010)". Further, they were asked about their (c) attitudes on mobile money service for wage transferring; and (d) intention to adopt mobile money and the reasons.

4. QUALITATIVE DATA ANALYSIS AND FINDINGS

4.1. Current Financial Transaction Methods

The question for this matter was focussed on the method of wage payment. The findings showed that only two participants used bank transfer whereas the remaining participants preferred cash. The reasons for choosing cash are grouped into employee behaviour, bank related reasons, employee and social pressure, enterprise characteristics, employee characteristics, and attitude towards cash payment, including:

- Employee behaviour: "People can directly use the money", "It's waited by my people for daily needs. Once receiving the money, they spend for daily needs".
- Bank related reasons: "Bank transfer is impractical (administration procedure)", "Using bank transfer would be deducted for administration fee", and "They don't have any bank account/ATM card".
- Employee and social pressure: "The employees borrowed money for daily needs before the payday. Once the payday came, they only got little", "The employees asked for cash", "Generally, here (in the area) we (bosses) pay cash", and "Some of them have their own employees (sub-contractors). The money is to be paid to their employees who wait for the wage every day, by cash as well".
- Enterprise characteristics: "We are family business, still traditionally managed", "We have a little number of employees", and "Sometimes, we don't have enough money to pay the wage".
- Employee characteristics: "They are low-income people; They earned a little wage", "They are low-educated people, uncomforted by bank", "They are villagers", "Our people are leaving nearby", "They are local people", "They are neighbours", "We are family", "They are old", and "They are illiterate".
- Attitude towards cash payment: "Cash is flexible", "Cash is simple", "Cash is easy", "Cash is fast", "Cash is direct (from the boss to employee)", "Cash is direct to get the money", "Cash is practical: no need to transfer through bank/ATM", and "No need to queue for ATM".

Existing studies in mobile payments apparently did not have a concern on financial transaction methods and its reasons to choose such of those methods. These finding is one of the innovations carried out of this study. Additionally, these findings indicate that current financial transaction methods influences attitude.

4.2. Awareness on Mobile Money

Most respondents admitted that they have not heard the term of mobile money before. Only one of them was aware about a particular mobile money service provided by a private bank. However, she was not interested in the service.

4.3. Stage of Readiness

The finding indicates that only one respondent was aware on mobile money service whereas the 30 other respondents were unaware. It indicates that most of them were in pre-contemplation stage (Prochaska and DiClemente, 1983). The mobile money operators might claim that they have significant numbers of mobile money users (Maierbrugger, 2013), but this fact against their claims. Some articles mentioned that the mobile money operators in Indonesia piloted only particular areas within the nation (Joyce, 2013). Based on the result findings that the area where the authors studied was not the community the operators addressed.

4.4. Attitude towards Mobile Money Service

Responses of respondents are grouped into positive and negative attitudes: (a) Positive attitude towards mobile money service, including “This is good”, “This is simple”, and “This is practical”; (b) Negative attitude towards mobile money service, such as “(It’s not applicable because) this is home industry because the wage here is under the regional minimum payment”. These findings suggest to measure the attitude towards mobile money question in future quantitative study instrument is formulated with semantic bipolar scales, from negative to positive or vice versa. Furthermore, attitude on mobile money, based on the results were linked to current financial transaction methods, perceived ease of use, awareness, perceived credibility, and perceived usefulness.

4.4.1. Current Financial Transaction Methods

Current financial transaction methods influence attitude on mobile money as said by respondents: “They (employees) earn a little money. Once they get the money, directly they use it. If they get much more, probably they have a chance for saving” and “They work here. After working hour, they will come to me to ask the payment, cash. Instead of using it (mobile money), it would be impractical to go to Indomaret (a retail chain) somewhere to find cash”. As there is no study has included this variable, it can be considered as another innovation of this study.

H1: There is a positive link between current financial transaction methods and attitude towards mobile money service.

4.4.2. Perceived Ease of Use

Attitude may be influenced by perceived ease of use as findings revealed, both in positive and negative statements: “It’s not necessary because it would be difficult for employees as they are old. They don’t understand about SMS stuff” and “It’s not difficult to use”. Another respondent added: “Each of young employees has a mobile. But they might not understand how the system works”. According to the existing studies, perceived ease of use may influence attitude as studies carried out by Lule *et al.* (2012), Gilaninia *et al.* (2012), and Nysveen *et al.* (2005).

H2: There is a positive link between perceived ease of use and attitude on mobile money.

4.4.3. Awareness on Mobile Money Service

For most participants, mobile money was an unfamiliar term. Some responses relating participants' awareness on mobile money were documented, including: Knowledge: "I don't know. (I get) confused", "I don't understand the system", "What is that? I can't do it", and "People haven't understood. It needs dissemination" and Experience: "I haven't tried this kind of transaction".

Daud *et al.* (2011) included awareness in their studies to investigate the link between awareness and intention in mobile banking adoption. However, they excluded attitude. This study shows that awareness may influence attitude. It is one of the innovations of this study.

H3: *There is a positive link between awareness on mobile money and attitude on mobile money.*

4.4.4. Perceived Credibility

The findings related to trust and perceive credibility that influence attitude on mobile money include: "If (I) haven't understood, (I) won't try. Current frauds are sophisticated, aren't they? Using ATM card (for transaction) is safer", "(Using) SMS? Is it reliable?", "SMS would disappear after a while", and "Using ATM is safer. Does it (mobile money) have a receipt (after a transaction)?"

By far, in the fields of mobile payment, there is no study that shows a link between trust and attitude. However, if trust is replaced by perceived credibility it may work. Existing literature mentioned that perceived credibility influences attitude (Crabbe *et al.*, 2009; Lule *et al.*, 2012; Jeong and Yoon, 2013).

H4: *There is a positive link between perceived credibility and attitude on mobile money.*

4.4.5. Perceived Usefulness

Perceived usefulness influenced attitude as show by these answers: "(The salary is) low. (Mobile money) might proper only for big amount of salary", "It's suitable in big cities, not in small cities because the way we shop generally in traditional markets", and "People earn limited money so that they shop in simple places".

In quantitative studies, perceived usefulness may influence attitude as showed by previous studies conducted by, for example, Wessels and Drennan (2009), Lule *et al.* (2012), Crabbe *et al.* (2009), Nysveen *et al.* (2005).

H5: *There is a positive link between perceived usefulness and attitude on mobile money.*

4.5. Intention to Adopt Mobile Money

The qualitative study carries out some findings relating to determinant factors that influence intention to adopt mobile money, including attitude, awareness, perceived ease of usefulness, perceive ease of use, social pressure, trust or perceived credibility, and current financial transaction methods.

4.5.1. Perceived Ease of Use

Intention is influenced by perceived ease of use, for example: “If using a bank it is impractical. My employees won’t do that. Maybe if they take money from Indomaret (a retail chain), they would do” and “For me, there is no problem to get transferred through mobile money”.

This finding relates to studies taken, for example by Zhou (2011), Jeong and Yoon (2013), Pousttchi and Wiedemann (2007), Nysveen *et al.* (2005), and Yu (2009).

H6: *There is a positive link between perceived ease of use and intention to adopt mobile money.*

4.5.2. Awareness on Mobile Money

Intention is influenced by awareness: “For this (mobile money) it won’t happen. It needs dissemination (for people in this area)”. These findings corresponds with a study conducted by Daud *et al.* (2011).

H7: *There is a positive link between awareness on mobile money and intention to adopt mobile money.*

4.5.3. Perceived Credibility

Intention is influenced by trust or perceived credibility:

- “(It) depends on the agents. If the agent is individual person, I am afraid there would be a manipulation. I don’t trust people (resellers) in this area, for example, they took merchandise from me. They are difficult to pay. It’s a big risk. The agent should be a big name, has a good credibility. It should be like Alfamart (a big chain of retailers), has branches everywhere” and
- “If it goes through a store as an agent, how if it was misused?”

Intention is influenced by trust as documented by Zhou (2011). Further, if the findings are considered as representative of perceived credibility, these correspondent with findings resulted by Luarn and Lin (2005), Daud *et al.* (2011), and Sun *et al.* (2010).

H8: *There is a positive link between perceived credibility and intention to adopt mobile money.*

4.5.4. Perceived of Usefulness

Intention is influenced by perceived of usefulness, for example:

- “For example if we would transfer during weekend, holiday, or after office hour when bank closed, we still could use it (mobile money)”,
- “If there was no money in our bank account and we had just cash money, we could go to agents (it might open for 24 hour and everywhere around the house) to deposit some money and transfer (to our employees in different city)”, and
- “Wait and see. If it (mobile money) is not good, why it should be used? If (its objective to encourage employee is) for saving, but all money go, (that would be) a problem. That’s why my employees want in cash; they want to spend directly (for daily needs)”.

These findings – perceived of usefulness influence intention – correspondents with studies undertaken, for example, by Wessels and Drennan (2009), Sun *et al.* (2010), Kim *et al.* (2010), Koenig-Lewis *et al.* (2010), and Zhou (2011).

H9: *There is a positive link between perceived usefulness and intention to adopt mobile money.*

4.5.5. Attitude towards Mobile Money Service

Some respondents mentioned that they had an intention to adopt mobile money, their responses indicated attitude: “It’s good” and “It’s accessible in 24 hours”. Some others said that they had no intention to adopt mobile money and revealed: “The (mobile money) system is impractical”, “It’s not safe yet”, “Is it safe?”, “It’s not applicable”, “It hasn’t been a culture”, “It’s not real”, and “It’s not necessary”.

Studies in mobile finance payment conducted by Nysveen *et al.* (2005), Gilaninia *et al.* (2012), and Crabbe *et al.* (2009) support the finding about a link between attitude and intention.

H10: *There is a positive link between attitude on mobile money and intention to adopt mobile money.*

4.5.6. Social Influence

Some SME owners refused to use mobile money for their businesses, some others agreed with some conditions. For those who agreed, they referred to what other people do. For example, a respondent agreed to adopt mobile money for financial transaction, but not for paying wages. He would provide mobile money only for customers who came and bought textile from his boutique, with a condition: “If mobile money becomes popular and other businesses around use it too.” He worried that if he did not follow what other shop owners do, “I would be out of date and people would not come to shop at my boutique”.

Another respondent thought if mobile money becomes popular, it would be important for her business and she would consider adopting it. “If we don’t use, the boutique would have no visitors”. He added that mobile money would work if many shops and boutiques in that area use it to welcome visitors paying with it as well. However, He hesitated if mobile money should be applied for his crafters. “That will be better using cash.”

Other findings include: “Here (the payment) is still completely manual. It would be depend on the employees. We run the business by the family system, not by rigid management. Boss cannot impose a system without acceptance from the employee”, “It hasn’t been popular here. I won’t use it”, “Here (mobile money) hasn’t been a culture”, and “It depends on the employee. If in other companies, most of their employees are young, having a mobile phone, (it would work). But in my place, they are old. Besides, Sometimes I’m late to pay the salary (they don’t complain, because the company is managed using a family system)”. This finding relates to a study undertaken by Nysveen *et al.* (2005).

H11: *There is a positive link between social influence and intention to adopt mobile money.*

4.6. The Qualitative Findings and the Quantitative Proposed Model

This study carries out some innovations, for example: motivation to use a cash payment, a link between awareness and attitude, and a link between trust and attitude on mobile money. Besides, study on this topic in Indonesia setting is very limited. Both the innovations and other findings that support existing results documented by other researchers are illustrated in Figure 2. As this study was planned to be the first stage of a sequential research project which was using a mixed-methods approached, the author used existing quantitative studies to support the findings. Further, conclusion of this qualitative study is presented in a diagram of a research model as follows:

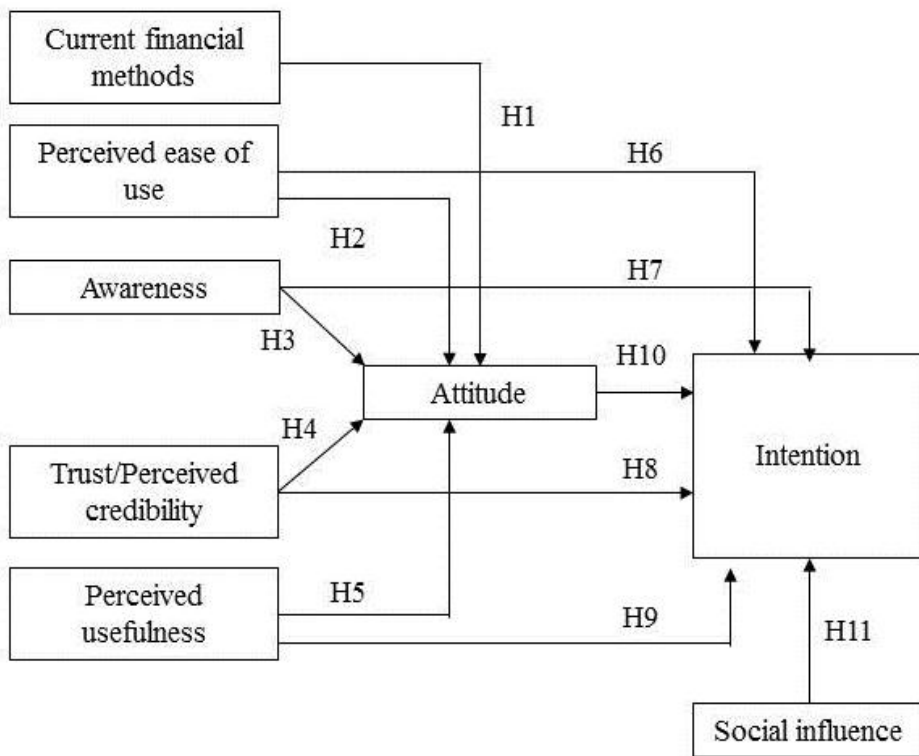


Figure-2. The proposed model to be tested in the quantitative study based on the qualitative findings

Figure 2 above is the proposed model to be tested in the quantitative stage: attitude is influenced by three variables: first, perceived ease of use and perceived usefulness are linked to attitude. The relationship of these two variables corresponds with studies conducted by Gilaninia *et al.* (2012). Second, social influence is linked to attitude and it was supported by Lule *et al.* (2012). Third, that current financial behaviour (method wage payment) is linked to attitude. Further, intention was influenced by attitude Gilaninia *et al.* (2012), perceived usefulness and perceived ease of use (Yulhasri Islam and Daud, 2011), awareness (Daud *et al.*, 2011), subjective norm (Anderson *et al.*, 2004), and current financial transaction methods.

5. QUANTITATIVE STUDY METHODS

The authors chose owners of a micro or small enterprise in the Great Jakarta area as participants of this study. They were approached door to door, using convenience and snowball sampling methods. Another effort was to benefit a meeting of micro enterprise owners that attended by 89 participants to distribute the questionnaires. Unfortunately, this massive recruitment risked the responses. Forty eight returned questionnaires were uncompleted and unusable. Some others were usable but with some missing information.

In total, there were 181 usable questionnaires with 60 females and 74 males, and 47 participants did not indicate their sex. For marital status, about 55% of respondents were married/de facto, whereas 38% of them were single, and the rest were separated or widow/widower. Further, over 50% of respondents completed a second degree and about 30% completed a third degree of education. As the questionnaire also attracted young entrepreneurs in high schools, the remaining respondents completed a first degree (about 10%) including other level of education.

Further, findings of the qualitative study were considered to be adapted and used in the instrument development as well as indicators taken from the literature on mobile payments. These were including studies undertaken by Raleting and Nel (2011), Zhou (2011), Yu (2009), Koenig-Lewis *et al.* (2010), Sun *et al.* (2010), Luarn and Lin (2005), and Nysveen *et al.* (2005).

5.1. Quantitative Study Findings

5.1.1. Respondents Profile

Predominant respondents indicated that over 30% were male (60), around 40% were female (74), around 25% were unidentified. Further, most of them were young: under 20 (about 20%), followed by 26-30 (about 14%), and the rest were older than 36.

About marital status, over 50% of respondents (100) were married and almost 40% of them were singles (67), and the rest were separated or widows/widowers. Furthermore, around 50% of respondents graduated from high school (91) and around 30% of them were bachelors. Additionally, rest of them came from various background of educational level, such as junior high school and post-graduate. Around 70% of respondents claimed they had 1-5 full time employees (120) and around 60% of them had no part-time employees (110), followed by 30% claimed hiring 1-5 employees (56). Only small numbers of them had full time and part time employee more than six people. Furthermore, over 70% of respondents (131) said that they used cash method for wage payments and the rest used bank transfer (12), combination of cash and bank transfer (14), and other form of payments (24).

5.1.2. Stage of Readiness

The table below showed participants' stage of readiness to adopt mobile money. As indicated, over 50% of participants had never heard the term of mobile money whereas about 20% of them had heard and had interest in trying, and 15% of them had heard but had no interest in trying.

Table-2. Stage of readiness to adopt mobile money

Stages	Frequency	%
Never heard mobile money before.	99	54.7
Ever heard, interested in trying.	35	19.3
Ever heard, but uninterested in trying.	27	14.9
Currently searching for information about mobile money.	10	5.5
Currently is using.	6	3.3
I have installed mobile money application/feature on my mobile phone, but have not use it.	1	0.6
Currently is using and would keep using.	1	0.6
Have used, but had no intention to continue.	1	0.6
Total	180	99.4
Missing	1	0.6
Total	181	100.0

According to Davidson and McCarty (2011), predominantly, respondents' stage of readiness to adopt mobile money technology in this study indicated in the first stage, which was unaware. Even in the precontemplation stage as they also refused this service (Prochaska, 1994).

5.1.3. Exploratory Factor Analysis

5.1.3.1. Perceived Ease of Use

Six indicators survived during EFA testing and produced two factors: The factor loadings of Factor 1 ranging from 0.85 to 0.90. This first factor was reliable for CFA testing. Further, the factor loadings of Factor 2 were 0.95 for each indicator. The second factor had Cronbach's alpha of 0.93. This was very reliable for further analysis. The indicators of perceived ease of use were adapted from Raeting and Nel (2011), Zhou (2011), Yu (2009), and Koenig-Lewis *et al.* (2010).

Table-3. Factor analysis of perceived of use

Indicators		Factor 1	Factor 2
PEOU-3	It would be easy for me to become skilful at using mobile money.	0.90	
PEOU-4	It would be easy for my employees to become skilful at using mobile money.	0.86	
PEOU-2	Learning to use mobile money would be easy for me.	0.85	
	Cronbach's alpha	0.86	
PEOU-6	The use of mobile phone for mobile money service would not sacrifice my employees' feelings.		0.95
PEOU-5	The use of mobile phone for mobile money service would not sacrifice my feelings.		0.95
	Cronbach's alpha		0.93

5.1.3.2. Perceived Credibility

Perceived credibility had four indicators and all of them survived in EFA with factor loadings ranging from 0.73 to 0.91. This variable was reliable as it had Cronbach's alpha of 0.86. These indicators were adapted from studies conducted by Sun *et al.* (2010), Koenig-Lewis *et al.* (2010), and Luarn and Lin (2005).

Table-4. Factor analysis of perceived credibility

Indicators		Factor loading
PC-4	Mobile money is safe to be used.	0.91
PC3	I believe in the mobile money ability to protect my personal information.	0.89
PC-2	I think that doing online transactions through mobile money would avoid unexpected problems.	0.84
PC1	Using mobile money service would not divulge my personal information.	0.73
	Cronbach's alpha	0.86

5.1.3.3. Perceived Usefulness

All five indicators of perceived usefulness retained in EFA process with factor loadings ranging from 0.85 to 0.93. The Cronbach's alpha of this variable was considered very high with a score of 0.94 (Table 4). These indicators were adapted from studies undertaken by Raleting and Nel (2011) and Nysveen *et al.* (2005).

Table-5. Factor analysis of perceived usefulness

Indicators		Factor loadings
PU-4	Using mobile money would improve efficiency.	0.93
PU-3	In general, mobile money is useful.	0.92
PU-2	Mobile money would increase my effectiveness in financial transactions.	0.90
PU-1	Using mobile money will save me time.	0.88
PU-5	Using mobile money would ease my jobs.	0.85
	Cronbach's alpha	0.94

5.1.3.4. Attitude towards Mobile Money Service

Attitude variable was factor analysed and ten indicators were retained. It forms a factor, ranging from -0.52 to 0.86 with Cronbach's alpha of 0.86. It shows that this variable is highly reliable. The indicators were adapted from a study conducted by Nysveen *et al.* (2005) and qualitative study findings.

Table-6. Factor Loadings of Attitude

Indicators		Factor loading
At_13	Saving effort-Wasteful effort	0.86
At_12	Flexible time-Not flexible time	0.86
At_9	Cost effective-Wasteful expenses	0.81
At_11	Worth a try-Not worth a try	0.80
At_6	Practical-Impractical	0.79
At_7	Save time-Not save time	0.77
At_4	Interesting-Not interesting	0.75
At_10	Easy to use-Difficult to use	0.74
At_8	Safe-Not safe	0.66
At_14	Make life harder-Make life easier	-0.52
	Cronbach's Alpha	.86

5.1.3.5. Social Influence

The entire four indicators of social influence variable survived in FCA and formed a single factor with factor loadings ranging from 0.87 to 0.92. The Cronbach's alpha was of 0.92, indicated that this variable was very reliable to be included in the proposed model testing.

Table-7. Factor Analysis of Social Influence

Indicators		Factor loading
SI-3	My employees would support if I use mobile money.	0.92
SI-2	My business partner would support if I use mobile money.	0.91
SI-1	Suppliers would support if I use mobile money.	0.88
SI-4	My friends, micro and small entrepreneurs, would support if I use mobile money.	0.87
	Cronbach's alpha	0.92

5.1.3.6. Intention to Adopt Mobile Money

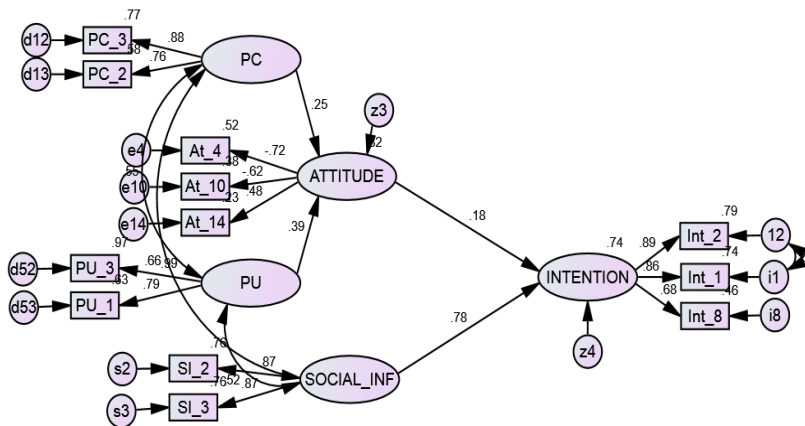
One factor resulted from EFA of intention with eight indicators retained. The factor loading ranging from 0.71 to 0.91, with Cronbach's alpha of 0.94 that showed that this variable is very reliable. The indicators used were adapted from the qualitative findings as well as from Zhou (2011), Yu (2009), and Nasri (2011).

Table-8. Factor Analysis of Intention

Indicators		Factor loadings
Int_3	I would use mobile money in a regular basis.	0.91
Int_4	I would suggest my employees to use mobile money.	0.89
Int_2	I would suggest mobile money to other business owners.	0.88
Int_7	If possible, I would try to use mobile money.	0.87
Int_6	I plan to use mobile money in the future.	0.87
Int_1	I would use mobile money as soon as possible.	0.86
Int_8	I would try to use mobile money if I consider that it is necessary.	0.78
Int_5	I would oblige my employees to use mobile money.	0.71
	Cronbach's alpha	0.94

5.2. The Proposed Model Testing

The author could not obtain a fitted model based on the model proposed. Due to insignificance, current financial methods, awareness, and perceived ease of use variables were dropped. However, the fitted model to predict micro and small enterprises to adopt mobile money could be achieved with four retained variables – perceived ease of use, attitude, perceived usefulness, and social influence. All these variables retained had a direct link to intention. The fitted model shows that perceived credibility and perceived usefulness had a direct link to attitude whereas attitude and social influence had a direct link to intention. The model had probability score of 0.40, CMIN/DF of 1.04, CFI of 1.00, and RMSEA of 0.02.



Criteria	P	CMIN/DF	CFI	RMSEA
Cut-off	> 0.05	< 3.00	> 0.95	≤ 0.05
Results	0.40	1.04	1.00	0.02

Figure-9. The Tested Model to Predict Micro and Small Enterprises to Adopt Mobile Money

6. DISCUSSION AND CONCLUSION

The first objective of this study is to explore stage of readiness of micro and small enterprises. As revealed by the findings of both qualitative and quantitative studies, predominant respondents were unaware of service and term of mobile money. It indicates that they were in precontemplation stage and it may be far away from taking action to adopt mobile money (Prochaska and Norcross, 2001; Davidson and McCarty, 2011). Daud *et al.* (2011) stated that awareness influenced intention. To raise awareness and attract people to be involved and increase perceived of usefulness of mobile finance payment (Yu, 2009), promotion activities are needed, for example, advertising (Davidson and McCarty, 2011).

The qualitative study findings also revealed that predominant respondents had no intention to adopt mobile money service. However, intention was influenced by perceived ease of use, awareness, perceived credibility, perceived usefulness, attitude, and social influence whereas attitude was influenced by current financial payment methods, perceived ease of use, awareness,

perceived credibility, and perceived usefulness. In the further sequent, the authors tested these findings through a quantitative approach. The second objective of this study is to explore factors that may influence mobile money technology acceptance. Predominant participants of both studies – qualitative and quantitative – preferred cash for wage payments. Current payment method was considered insignificant variable in the quantitative analysis. Therefore, it was dropped during the structural equation model calculation, along with perceived ease of use, and awareness by the same reason. As a consequent, H1, H2, H3, H6, and H7 were rejected.

In the qualitative study, perceived credibility and perceived usefulness had a direct link to intention. After examination, these variables retained, but they linked indirectly with intention as mediated by attitude. It caused H8 and H9 were rejected. As a result, there were four predicting variables including attitude, perceived credibility, perceived usefulness, and social influence, retained in confirmatory factor analysis. As a consequence, four of 11 hypotheses were accepted (see the table below): H4 (the influence of perceived credibility on attitude) is accepted and it relates to prior studies undertaken by [Crabbe et al. \(2009\)](#), [Jeong and Yoon \(2013\)](#), and [Lule et al. \(2012\)](#); H5 (the influence of perceived usefulness on attitude) is accepted and it relates to prior studies conducted by [Crabbe et al. \(2009\)](#), [Wessels and Drennan \(2009\)](#), [Nysveen et al. \(2005\)](#), [Lule et al. \(2012\)](#), and [Wessels and Drennan \(2009\)](#); H10 (the influence of attitude on intention) is accepted and it correlates with prior studies, such as [Crabbe et al. \(2009\)](#), [Gilaninia et al. \(2012\)](#), and [Nysveen et al. \(2005\)](#); and H11 (the influence of social influence on intention) is accepted and it correspondent with a study conducted by [Nysveen et al. \(2005\)](#).

Table-9. Summary of Hypotheses Testing

Hypothesis	Independent variable	Dependent variable	t-value	Standardised total effect	Effect interpretation	Results
H1	Current financial methods	Attitude	-	-	-	Insignificant
H2	Perceived ease of use	Attitude	-	-	-	Insignificant
H3	Awareness	Intention		-	-	Insignificant
H4	Perceived credibility	Attitude	2.06	0.25	Moderate	Significant
H5	Perceived usefulness	Attitude	3.07	0.39	Moderate	Significant
H6	Perceived ease of use	Intention	-	-	-	Insignificant
H7	Awareness	Attitude	-	-	-	Insignificant
H8	Perceived credibility	Intention	-	-	-	Insignificant
H9	Perceived usefulness	Intention	-	-	-	Insignificant
H10	Attitude	Intention	2.31	0.39	Moderate	Significant
H11	Social influence	Intention	7.59	0.78	Strong	Significant
*						

Note: PC=perceived credibility; SI=social influence; Int=intention; *New relation, was not included in hypothesis development.

This study combined two prominent behavioural theories to predict intention: firstly, the theory of reasoned action (Ajzen, 2002). In this theory, variables of attitude and subjective norm (in this case, the author used the term of social influence) were included; Secondly, technology acceptance model (Davis, 1989). This study included perceived ease of use, perceived usefulness, and perceived credibility. Prior researchers, such as Crabbe *et al.* (2009), Gilaninia *et al.* (2012), Lule *et al.* (2012), and Nysveen *et al.* (2005), had used this combination in their studies on mobile service and m-banking.

In the qualitative stage, the authors included only entrepreneurs in textile industry whereas in the quantitative stage, as the authors needed a big number of participants, the samples were entrepreneurs in various industries. Besides, both places of setting were also different: one was in West Java province and another one was in the Greater Jakarta. These differences should be considered as the limitations of this study. Therefore, for future study, type of industry and place setting may be important aspects for considerations.

7. ACKNOWLEDGEMENT

This study is funded by the Ministry of Education and Culture, the Republic of Indonesia. We thank to the Faculty of Economics, Universitas Negeri Jakarta for all supports.

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