

Sunthan Chayanon¹
Wijittra Srisorn
Tikhamporn Punluekdej

Article info:

Received 10.08.2019
Accepted 20.11.2019

UDC – 314.18
DOI – 10.24874/IJQR14.01-01



THE INNOVATION OF E-MONEY VIA SSRU SMART PURSE IN PURCHASING PRODUCTS, FOOD AND BEVERAGES OF STUDENTS AT SUAN SUNANDHA RAJABHAT UNIVERSITY

Abstract: *The research on “The Innovation of e-Money via SSRU Smart Purse in Purchasing Products, Food and Beverages of Students at Suan Sunandha Rajabhat University (SSRU)” has objectives to 1) study the use of the innovation of e-Money via SSRU Smart Purse in purchasing products, food and beverages of students at Suan Sunandha Rajabhat University, and 2) study the relationship between demographic factors of students at SSRU and the innovation of e-money via SSRU Smart Purse in buying products, food and drinks at SSRU. The purposive sample size of 379 samples is derived to collect the data. The descriptive data include frequency, percentage, mean, and standards deviation. The data was also analyzed by using SPSS program.*

Keywords: *E-money; Innovation; Suan Sunandha Rajabhat University (SSRU)*

1. Introduction

Electronic money or e-money has an increasing role in the daily life of Thai people. It replaces the use of cash in buying things in a convenient store, paying bus fares, including buying various products and services through the online channel. The entrepreneurs of various businesses have acknowledged electronic money technology or e-money in order to please the customers, make shopping experiences much more convenient and easier, and at the same time to increase the efficiency in buying and selling system in terms of speed and accuracy.

Electronic money or e-money is an amount of money stored in electronic media such as chip in a plastic card, mobile phone, or Internet network in which the users have pre-paid money to the e-money service providers in paying for expenses of goods and services at

the participated stores. E-money can be divided into 2 categories: first, card-based e-money with a chip of information on the card, such as Rabbit Card in paying for a ride of BTS sky-train, and Smart Purse used in 7-11 stores, and network-based e-money that stores information in the network such as PayPal AIS and True Money.

Nowadays, technology has a great impact on our daily life as well as the way the business is conducted. This phenomenon can be seen in forms of mobile phone, Android operating system or iOS operating system in which they are connected through Internet network and can rapidly and effectively communicate among each other for the following reasons.

- 1) Smartphones are developed in order to serve mobile Internet
- 2) The price of the supported devices that can be used with high speed Internet becomes lower.

¹ Corresponding author: Sunthan Chayanon
Email: sunthan.ch@ssru.ac.th

3) New forms of Widget/Gadget are coming out and create an alertness in using new applications that require high speed Internet.

4) The popularity in using social network such as Facebook, Twitter and/or LINE application with high quality and effectiveness in providing a real-time experience together with an improved visualization technology such as online 3D games or social network games that require high speed Internet with a lower price and can communicate both on individual and group basis.

Moreover, the ease of conducting various transactions through mobile phones, and any other communication devices via Internet have become increasingly well accepted and earned credibility among users. This incident can be seen in an increasing number of financial transactions being done through the Internet and by mobile phones. These transactions include the payment of goods and services, or the transfer of money between the banks for goods and services being bought, the use of debit cards and credit cards, or even the transfer of cash into electronic purse for paying the debts. All of these transactions are involved with the commercial banks.

The researcher is interested in the innovation of e-money via SSRU Smart Purse in purchasing products, food and beverages of students at Suan Sunandha Rajabhat University (SSRU)" in terms of using motivation, obstacles in using the new technology as an innovation. The payment made by utilizing e-money reflects the governmental policy on Thailand 4.0 and a push forward into a cashless society in Thailand (Nattapong Kariyapol, 2017).

2. Research Objectives

Research objectives are:

- To study the electronic money via Smart Purse in buying goods, food, and beverages by students at Suan

Sunandha Rajabhat University (SSRU).

- To study the relationship between demographic factors of students at SSRU and an innovation of e-money via Smart Purse in buying goods, food, and soft-drinks.

3. Research Methodology

This research is considered as a quantitative research.

The population is students at Suan Sunandha Rajabhat University with the total number of 30,549 persons (Suan Sunandha Rajabhat University, 2019). By using a sample size of the population formulated table, the sample size is derived at 379 person (Narong Srisawad).

The descriptive data include frequency, percentage, mean, and standard deviation. The data is also analyzed by using SPSS program.

4. Related Theories

4.1. Theory of Reasoned Action and Technology Acceptance Model

The Theory of Reasoned Action (ToRA or TRA) aims to explain the relationship between attitudes and behaviors within human action. It is mainly used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. An individual's decision to engage in a particular behavior is based on the outcomes the individual expects will come as a result of performing the behavior. Developed by Martin Fishbein and Icek Ajzen in 1967, the theory derived from previous research in social psychology, persuasion models, and attitude theories. Fishbein's theories suggested a relationship between attitude and behaviors (the A-B relationship). However, critics estimated that attitude theories were not proving to be good indicators of human behavior. The ToRA was later revised and

expanded by the two theorists in the following decades to overcome any discrepancies in the A-B relationship with the Theory of Planned Behavior (TPB) and Reasoned Action Approach (RAA). The theory is also used in communication discourse as a theory of understanding (Gillmore et al., 2002).

The primary purpose of the TRA is to understand an individual’s voluntary behavior by examining the underlying basic motivation to perform an action (Doswell et al., 2011). ToRA states that a person’s intention to perform a behavior is the main predictor of whether or not they actually perform that behavior (Glanz et al., 2015). Additionally, the normative components (i.e. social norms surrounding the act) also contributes to whether or not the person will actually perform the behavior. According to the theory, intention to perform a certain behavior precedes the actual behavior (Azjen & Madden, 1986). This intention is known as behavioral intention and comes as a result of a belief that performing the behavior will lead to a specific outcome. Behavioral intention is important to the theory because these intentions “are determined by attitudes to behaviors and subjective norms (Colman, 2015).” The theory of reasoned action suggests that stronger intentions lead to increased effort to perform the behavior, which also increases the likelihood for the behavior to be performed.

The technology acceptance model (TAM) is an information systems theory that models

how users come to accept and use a technology (Davis et al., 1989). The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

- Perceived usefulness (PU) – This was defined by Fred Davis as “the degree to which a person believes that using a particular system would enhance his or her job performance.”
- Perceived ease-of-use (PEOU) – Davis defined this as “the degree to which a person believes that using a particular system would be free from effort (Davis, 1989).”

The TAM has been continuously studied and expand—the two major upgrades being the TAM2 (Venkatesh & Davis, 2000; Venkatesh, 2000) and the Unified Theory of Acceptance and Use of Technology (or UTAUT, Venkatesh et al., 2003). A TAM3 has also been proposed in the context of e-commerce with an inclusion of the efforts of trust and perceived risk on system use (Venkatesh & Bala, 2008). Tawil Tarapoch argued that the intention to express a behavior of a person is a result of his or her attitude or belief toward a particular thing and his or her performance is associated with behavioral factors.

Figure 1 shows the Technology Acceptance Model, version 1.

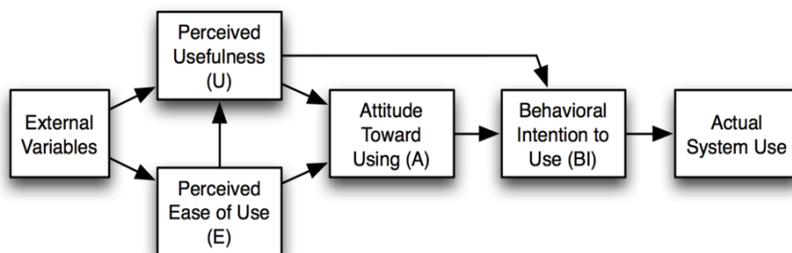


Figure 1. The Technology Acceptance Model, version 1
Adapted from: Davis et al., 1989

4.2. Perceived Usefulness

Perception (from the Latin perception) is the organization, identification, and interpretation of sensory information in order to represent and understand the presented information, or the environment (Schacter, 2011). All perception involves signals that go through the nervous system, which in turn result from physical or chemical stimulation of the sensory system (Goldstein, 2017). For example, vision involves light striking the retina of the eye, smell is mediated by odor molecules, and hearing involves pressure waves. Perception is not only the passive receipt of these signals, but it's also shaped by the recipient's learning, memory, expectation, and attention (Gregory, 1987; Bernstein, 2010).

Perception can be split into two processes,

- Processing the sensory input, which transforms these low-level information to higher-level information (e.g., extracts shapes for object recognition);
- Processing which is connected with a person's concepts and expectations (or knowledge), restorative and selective mechanisms (such as attention) that influence perception.

Perception depends on complex functions of the nervous system, but subjectively seems mostly effortless because this processing happens outside conscious awareness (Goldstein, 2017).

The importance of perceived usefulness has been widely recognized in the field of electronic banking (Guriting & Ndubisi, 2006; Jaruwachirathanakul & Fink, 2005; Eriksson et al., 2005; Laforet & Li, 2005; Polatoglu & Ekin, 2001; Liao & Cheung, 2002). According to these authors, usefulness is the subjective probability that using the technology would improve the way a user could complete a given task. Based on theories in social psychology, such as the theory of reasoned action, (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and

the theory of planned behavior (TPB) (Ajzen, 1985), the technology acceptance model (TAM) has been validated as a powerful and parsimonious framework (Davis, 1989; Davis et al., 1989). According to TAM, perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance. According to Davis et al. (1992), perceived usefulness refers to consumers' perceptions regarding the outcome of the experience. Davis (1993) defined perceived usefulness as the individual's perception that using the new technology will enhance or improve his/her performance. Similarly, Mathwick et al. (2001), defined perceived usefulness as the extent to which a person deems a particular system to boost his or her job performance.

Pikkarainen et al. (2004) applied TAM in Finland and they found perceived usefulness as a determinant of actual behavior which encouraged the user of the twenty-first century banking to use more innovative and user-friendly self-service technologies that give them greater autonomy in performing banking transactions, in obtaining information on financial advices, and in purchasing other financial products. However, Gerrard and Cunningham (2003) noted that the perceived usefulness depends on the banking services offered such as checking bank balances, applying for a loan, paying utility bills, transferring money abroad, and obtaining information on mutual funds.

There are extensive evidences proving the significance of effect of perceived usefulness on adaptation intention (Chen & Barnes, 2007; Guriting & Ndubisi, 2006; Jarawachirathanakul & Fink, 2005; Eriksson et al., 2005; Hu et al., 1999; Venkatesh, 200; Venkatesh & Davis, 1996; Venkatesh & Morris, 1996). Tan and Teo (2000) suggested that the perceived usefulness is an important factor in determining adaptation of innovations. As a consequences, the greater the perceived usefulness of using electronic banking services, the more likely that electronic banking will be adopted (Polatoglu

& Ekin, 2001; Jaruwachirathanakul & Fink, 2005).

4.3. Perceived Ease of Use

Researchers argued that perceived ease of use is the extent to which a person accepts as true that using an exacting method would be at no cost to that individual (Davis et al., 1989; Mathieson, 1991; Gefen & Straub, 2000; Gahtani, 2001). At first, Roger (1962) affirmed perceived ease of use is the term that represents the degree to which an innovation is perceived not to be difficult to understand, learn or operate. He further stated the perceived ease of use is the degree to which consumers perceive a new product or service as better than its substitutes (Roger, 1983). Similarly, Zeithaml et al. (2002) stated that the degree to which an innovation is easy to understand or use could be considered as perceived ease of use.

According to Mathieson (1991), the perceived ease of use is the consumer's perception that banking on the internet will involve a minimum of effort. Similarly, Consult AC Nielsen (2002) noted that perceived ease of use refers to the ability of consumers to experiment with a new innovation and evaluate its benefits easily. He also affirmed that the drivers of growth in electronic banking are determined by the perceived ease of use which is a combination of convenience provided to those with easy internet access, the availability of secure, high standard electronic banking functionality, and the necessity of banking services.

Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention, either directly or indirectly (Hernandez & Mazzon, 2007; Guriting & Ndubisi, 2006; Eriksson, 2005; Wang et al., 2003; Venkatesh & Morris, 2000). Early in 1962, Rogers noted that understanding the technology leads to adaption of innovative service/product by customers is known as use of use. Recently, Chen and Barnes (2007) have empirically

found that two technological aspects of the interface, namely perceived ease of use and perceived usefulness significantly affect customer adaptation intentions.

4.4. Concept and Theory about Innovation and Technology

For the last 20 passing years, most of the researchers employ Theory of Acceptance Model or TAM in the explanation toward acceptance of information technology by general people and it is supported by the concepts of perceived usefulness and perceived ease of use in which they are important factors upon the acceptance and, later, an actual utilization of the technology of each individual person.

Cirera and Muzi (2016) were believed that little is known about innovation in developing countries, partly because of the lack of comparable and reliable data. Collecting data on firm-level innovation is challenging because of the subjective definition of what determines an innovation, a problem that is exacerbated in developing countries where innovation is likely to be more incremental and less radical. The work of Cirera and Muzi contributes to the literature by presenting the results of an experiment aiming to identify the survey instrument that better captures firm-level innovation in developing countries. The paper shows that a small set of questions included in a multi-topic, firm-level survey does not provide an accurate picture of firm-level innovation and tends to overestimate innovation rates. Issues related to framing explain some of the unreliability of innovation responses, while cognitive problems do not appear to play a significant role.

Aggelidis and Chatzoglou (2009) argued that the use of information technology in the health care sector and especially in hospitals offers great potential for improving the quality of services provided and the efficiency and effectiveness of the personnel, but also for reducing the organizational expenses. However, the main question that

arises according to the literature is whether hospital personnel are willing to use state of art information technology while performing their tasks. Based on their research, they concluded that the perceived usefulness, ease of use, social influence, attitude, facilitating conditions and self-efficacy significantly affect hospital personnel behavioral intention. Training has a strong indirect impact on behavioral intention through the mediators of facilitating condition and ease of use. Furthermore, the existence of significant positive effects between self-efficacy and social influence, perceived usefulness and anxiety, and facilitating conditions and social influence is also supported. According to Aggelidis and Chatzoglou, the proposed model can explain 87% of the variance of behavioral intention indicating that the core constructs of technology acceptance models have a strong and statistically significant influence on hospital personnel usage intention.

Junadi and Sferianto (2015) proposed that in the recent years, electronic commerce (e-commerce) in Indonesia has growing rapidly. E-commerce became a opportunity for company to increase their selling. Electronic payment (e-payment) was developed to facilitate e-commerce transactions between consumer and seller, therefore the researchers tried to investigate consumer's intention to use e-payment. The proposed research model was developed by extending the unified theory of acceptance and use of technology (UTAUT) with culture and perceived security into the model, in order to determine the significance factors that influence acceptance of e-payment technology. Through this model, researchers can have a more accurate explanation of the consumer behavior not only in terms of acceptance of the technology, but other factors considered influential on consumers such as culture and perceived security in the origin country. This model will be used to examine consumer's behavior in Indonesia. According to Junadi and Sferianto, culture will be used to explain more details about consumers habits while

perceived security will explain how secure e-payment system that consumers feel accordance with the conditions of Indonesian society today. Then in order to prove these hypotheses, researchers also propose measures which can be used to support a model of factors influencing consumer's intention to use e-payment system, and provide an overview of the future study. Thus be expected, the model can be used as reference in related studies.

Holtzman (2008) suggested that the executives emphasized the importance and criticality of organic growth and innovation as a major business concern and opportunity for their companies' future success. While strategies including acquisition and continuous process improvement have proven successful but very difficult to sustain, expensive and risky to integrate, "Innovation, and innovation in research and development" in particular, can provide the advantage that world class organizations need to create the sustainable growth year after year. Innovation in R&D can be a strategic weapon in which top companies employ definable strategies and practices to catalyze high levels of organic growth, support above average margins even in mature businesses, and separate themselves from the competition.

Lu and Wong (2019) mentioned that building on Cyert and March's (1963) behavioral theory of the firm, the two researchers investigate how firms adjust their exploratory and exploitative innovation activities in response to performance feedback, and how this adjustment is moderated by the firms' financial slack. It was discovered that firms invest in a different mix of innovation activities when they receive positive versus negative performance feedback. Specially, their empirical results show that the higher a firm's performance is above its aspiration level, the lower will be the share of exploratory innovation in its total portfolio of innovation activities. In contrast, the lower a firm's performance is below its aspiration level, the higher will be the share of exploratory innovation in its total innovation

activities. While financial slack has the direct effect of increasing the share of exploratory innovation activities, its interaction with performance feedback appears to moderate this effect when the firm is underperforming.

Thakun-Wernz et al. (2019) commented that as emerging economy multinational enterprises (EMNEs) enter foreign countries in search of new market, seeking to expand their knowledge bases, research on the type and nature of innovation activity is needed to address the impact of EMNEs' choices related to international expansion. Building on prior literature on entry mode and location choices, as well as on organizational learning, the researchers argue that how and where an EMNE expands internationally will impact the nature of its innovation. The researchers carry out empirical analysis on a sample of 167 Indian bio-pharmaceutical firms for the period from 1997-2017. Their findings suggest that greenfield ventures foster innovation in core technologies, while cross-border mergers and acquisitions (M&As) foster innovation in non-core technologies. In addition, locating subsidiaries in high income countries encourages product innovations, while locating in low income countries encourages process innovations. Their findings contribute to the growing literature on differences in learning outcome of EMNE internationalization.

Cirera (2015) claimed that innovation requires the transformation of knowledge capital or innovation inputs, both tangible and intangible—such as training, equipment, Research and Development (R&D) or intellectual property acquisitions—into innovation outcomes; for instance the introduction of new products, improved quality, new production processes, or organizational changes. Firms invest in knowledge inputs in order to increase their capabilities and produce innovative outcomes. As well as requiring tangible assets such as technology, equipment, and the physical production facilities, innovation needs intangible assets such as human capital, scientific and creative capital, and

organizational capital. In turn, these inputs require specific innovation activities. For example, firms invest in training in order to increase the available human capital. The combination of these inputs yield innovation outcomes in the form of new or improved products and services, production and delivery processes, business organization, and patented intellectual property. However, achieving the outcomes is heavily dependent on the ability of the firm in question, on the specific sector and country context, and on the enabling environment and policy framework in place.

Islam et al. (2016) understood that private investment can be an important engine of economic growth in East African countries that are plagued with adverse economic conditions, despite recent growth rate. Against this backdrop, there has been substantial penetration of mobile money, moving beyond simple person-to-person exchanges towards adoption by private firms. Their study explores whether there is a relationship between firm adoption of mobile money and firm investment. Using firm-level data that are nationally representative of the private sector in three East African countries—Kenya, Tanzania, and Uganda—a positive relationship is found between mobile money use and firm's purchase of fixed assets. This relationship is attributed to reduced transaction costs, increased liquidity, and increased credit worthiness associated with the use of mobile phone financial services. The finding is largely driven by small-and-medium-sized enterprises (SMEs).

Yang (2017) examined the impact of the governance environment on SME performance, concentrating on differences between innovators and non-innovators. A poor environment is related to lower profits and sales for SME innovators than non-innovators. Using a complementary indicator, SME innovators tend to have higher sales and profits when courts are perceived to be strong. On the other hand, the governance environment does not impact large innovative and non-innovative firm performance

differently. Latin America and the Caribbean is a region with many entrepreneurs but few innovators. The region also has a larger proportion of smaller firms compared to other regions. In this context, lessons on SME constraints related to governance are important for developing enabling policies.

Seker (2012) demonstrated the persistent differences in evolution of firms when they are grouped according to their trade orientation as: two-way traders (both importing and exporting), “exporters-only,” “importers-only,” and nontraders. Extending the existing models of firm evolution into an open economy setup by incorporating the importing decision, a simple model is presented and it is empirically shown that: (i) globally engaged firms are larger, more productive, and grow faster than nontraders; (ii) two-way traders are the fastest growing and most innovative group who are followed by exporter-only firms; and (iii) estimating the export premium without controlling for import status is likely to overestimate the actual value by capturing the import premium. Robustness of the results is shown by providing evidence from the panel data constructed from the original dataset and controlling for variables that are likely to affect firm evolution.

4.5. The Concept of Consumer Buying Behavior

Pawar and Naranje (2016) suggested that in present marketing scenario, the study of consumer behavior has become essential. Consumers are the kings of markets. Without consumers no business organization can run. All the activities of business concerns end with consumers and consumer satisfaction. Customer behavior study is based on consumer buying behavior, with the customer playing the three distinct roles, payer and buyer. Consumer buying behavior has become an integral part of strategic market planning. In order to develop a framework for the study consumer behavior it is helpful to begin by considering the factors which

impacts on consumer buying behavior as well as the evolution of the field of consumer research and the different paradigms of thought that have influenced the discipline.

Soodan, and Pandey (2016) explained that consumer behavior is always uncertain and rational. The complex black box of consumer is a challenge to the marketers and researchers across the world for its nature and tendency to change within no time. Consumer responses towards different marketing programs cannot be same and hence differ by means of its actions which are emotional and always stated as irrational. There are different emotional chords of consumers targeted by marketers in order to generate sales and managing effectively the marketing program. Their study was an attempt to investigate the role of emotions on Fast Moving Consumer Goods (FMCG) purchases. The study highlighted the relevant emotions in consumer purchases of FMCG products with the help of factor analysis and was conducted in north India to serve the purpose of analyzing the role of emotions in FMCG purchases.

Madhavan and Kaliyaperumal (2015) attempted to turn back the pages in literature, to understand the concepts and existing theories in the consumer buying behavior. The base research in consumer behavior, they claimed, lays foundation for quantitative research to analyze the existing theories and new emerging patterns of consumer behavior.

According to Ohio University (2019), marketing in the 21st century is part art and part science, and both sides place a crucial role in successful marketing. Creative expression develops marketing campaigns that catch the eye and capture the imagination, but behind every marketing strategy are theories grounded solidly in psychology, economics, and studies in human behavior. The scientific insights help marketers design campaigns that speak to the fundamental concerns and desires of their audience, greatly deepening the impact of the marketing materials. At the heart of the

scientific study of marketing are key insights about consumer behavior, or why consumer buy and act the way they do. Theories of consumer behavior address important issues, such as how consumers purchase as individuals versus how they purchase in groups, the role of emotions in purchasing decisions, post-purchase attitudes, and the role of object utility. Understanding these issues enhances a marketing campaign's effectiveness and its impact on consumers.

Ansere (2019) sought to establish the extent at which social media influences of students in South Ural State University when they want to make a decision to purchase a product or service. Moreover, his research also establishes the relationship between social media and consumers' process of a purchase decision. The accelerated effect of social media on businesses and consumers cannot be undermined. Social media has gained massive popularity in recent years with a great number of active users. With the emergence of numerous social media platforms, it has become common for people to identify themselves with at least one or two social media platforms. This accelerated growth of social media over the past years in the world

is identified and discussed as well as in the Russian Federation.

Das (2018) expounded that E-Shopping is the form of electronic commerce which allows consumers to buy goods and services over the internet using web browser. India is the third largest country worldwide after, America and China in terms of internet users with 121 million users by the end of 2011. E-shopping has become very popular in the Northeast with Guwahati featuring among the top 15 cities across the country. There may certainly be changes in the pattern of buying habits of the consumers when the mode of shopping changes from physical to electronic. Das explored various aspects of online shopping in terms of consumer buying behavior under the circumstance of growing e-retailing market with the help of primary data. Result showed that time saving is one of the main reasons for growing popularity of online shopping. Besides, family income, trust and perceived risk of consumers are significant factors affecting online shopping.

4.6. Conceptual Framework

Conceptual framework is shown on Figure 2.

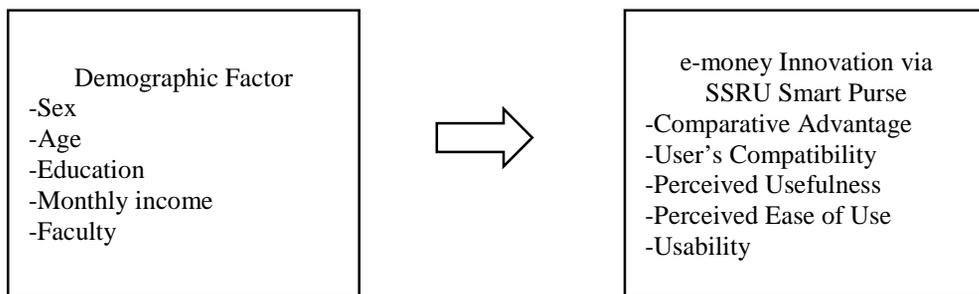


Figure 2. Conceptual Framework

5. Research Results

1. To study the electronic money via Smart Purse in buying goods, food, and beverages by students at Suan Sunandha Rajabhat University (SSRU).

The results showed that, out of 379 sample size, there are 186 of male students which is equal to 49 percent and there are 193 female students which is equal to 51 percent. This sample size has age at and lower than 18 years old for 91 persons (24 percent), 19-22 years old for 212 persons (56 percent), and 23 years

old and over for 76 persons (20 percent). They study in the 1st year of their education for 95 persons (25 percent), in the 2nd year of education for 95 persons (25 percent), in the 3rd year of education for 114 persons (30 percent), and in the senior year of education for 75 persons or 20 percent. They have average monthly income of 12,000 baht or lower for 49 persons (23 percent), between 12,001-15,000 baht for 98 persons (26 percent), between 15,001-20,000 baht for 83 persons (22 percent), and 20,001 and more for 149 persons or 39 percent. This sample size studies in the Faculty of Education for 49 persons (13 percent), Faculty of Arts for 42 persons (11 percent), College of Architecture for 42 persons (11 percent), International College for 42 persons (11 percent), Suan Sunandha International School of Art for 41 persons (10 percent), Faculty of Science and Technology for 31 persons (8 percent), College of Nursing and Health for 26 persons (7 percent), College of Innovation and Management for 26 persons (7 percent), Faculty of Management Science for 26 persons (7 percent), College of Applied Health Science for 22 persons (6 percent), College of Logistics and Supply Chain for 19 persons (5 percent), Faculty of Industrial Technology for 11 persons (3 percent), and Faculty of Humanities and Social Science for 3 persons or it is equivalent to 1 percent respectively.

2. To study the relationship between demographic factors of students at SSRU and an innovation of e-money via Smart Purse in buying goods, food, and soft-drinks.

The results showed that the overall value of e-money innovation via SSRU Smart Purse in buying products, food, and beverages is at the high level. The results also revealed that the demographic factors have no relationship with the innovation of e-money via Smart Purse in buying products, food, and beverages of SSRU students at the significant level. When consider each item separately, it was found that sex, age, education, monthly income, and faculty have no relationship with the innovation of e-money through Smart

Purse in purchasing goods, food, and soft-drinks by SSRU students.

6. Discussion

In the era of globalization, technologies have played an important role in providing quick communication around the world, only internet signals and internet connection devices such as mobile telephone, tablet, computer and etc. are needed, allowing buyers and sellers to send and/or receive products information conveniently and quickly (Payakkapong, 2017). The research on “The Innovation of e-Money via SSRU Smart Purse in Purchasing Products, Food and Beverages of Students at Suan Sunandha Rajabhat University (SSRU)” has been relevant to the work of Aldas-Manzano et al. (2009) on “The role of consumer innovativeness and perceived risk in online banking usage” in which it found that consumer innovativeness is a key construct to improve e-banking adoption both directly and by its effective role in reducing consumer risk perception of using internet channel in the financial services context. Moreover, this research is also in line with the work of Kotchari and Jiraprawat (2013) on “Risk Perception Factors and Online Buying Behavior of Generation X and Y Consumers” in which it found that there are no difference between Generation X and Y consumers on antecedents of perceived risk that are internet exposure, shopping behavior, and trust in online shopping. There is also no difference on perceived risk. And, there is no difference between Generation x and Y consumers on attitude toward online shopping and intention to purchase online.

7. Suggestions and Future Research

The findings of this study have to be interpreted considering the limitations of the study keeping in mind. First, this study was a single cross-sectional study but to determine the causal paths of studied variables multiple cross sectional studies or a longitudinal study

is more appropriate (Poon, 2004). Hence, future research should consider experimental or longitudinal studies so that the casual inferences could be made more confidently and safely. Secondly, there may be many other factors which influence customer adaption toward e-money. It is not practically possible to incorporate all the variables in a single study. But, the research models could have been more robust if few more variables could have been added. The future researchers should also investigate whether customer perceived e-money service quality can influence customers' satisfaction and in turn customer adaption and loyalty. Future research can also examine whether promotional and communicational issues or system characteristics, such as screen design and feedback, have any influence on the acceptance of e-money innovation. By attempting to explain these relationships the researchers can represent e-money both as a challenge and an opportunity for marketers of various products.

The research on "The Innovation of E-money via SSRU Smart Purse in Purchasing Products, Food and Beverages of Students at Suan Sunandha Rajabhat University" is a matter of research utilizing interdisciplinary concept in which it is continuously evolving in the marketing science. Therefore, it is strongly recommended to start a new study based on the results research. The present paper is about the innovation of E-money in purchasing the consumer goods. The future study can be replicated to other sectors like automobiles, electronic gadgets and can also find its application public sector areas like healthcare and transportation to demonstrate the role played by E-money in availing government services. The study can further be elaborated to develop models for effective framework of government policies and public welfare. This study can work as solid base for further researches as it provide inspirations besides the topic which has been mentioned and can act as a base for the future development of the concept.

References:

- Ajzen, I. (1985). *From intentions to actions: a theory of planned behavior*. Springer, pp. 11-39.
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Ansere, J. K. O. (2019). *The Influence of Social Media on Consumer Purchase Decision Process: An Empirical Study of Students in South Ural State University, Russian Federation*. Russian Federation: South Ural State University.
- Payakkapong, A. (2017). Technology Acceptance Model (TAM) for Marketing Competitive. *Journal of Humanities and Social Sciences Thonburi University*, 11(25), 128-136.
- Ajzen, I., & Madden, T. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453-474.
- Bernstein, D. A. (2010). *Essentials of Psychology*. Texas: Cengage Learning.
- Cirera, X. C. (2015). *Catching up to the technological frontier?: understanding firm-level innovation and productivity in Kenya*. Washington, D.C.: World Bank Group.
- Cirera, X. C., & Muzi, S. (2016). Measuring Firm-Level Innovation Using Short Questionnaires. *Policy Research Working Paper Series 7696*, The World Bank.
- Chen, Y. H., & Barnes, S. (2007). Initial trust and online buyer behavior. *Industrial Management & Data Systems*, 107(1), 21-36.
- Colman, A. (2015). *Theory of Reasoned Action*. A Dictionary of Psychology.

- Consult AC Nielsen. (2002). *China Online Banking Study*. Retrieved from <http://estore.chinaonline.com/chinonlbanstu.html> on April 2, 2019.
- Das, M. (2018). A Study on Influencing Factors of Consumers' Behavior in E-Shopping: Evidence from Guwahati City, Assam. *Dimensions International Journal of Management, IBS Business School, Mumbai*, 6(1) 35-49.
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies*, 38(3), 475-487.
- Davis, F. D., Bagozzi, R., & Warshaw, P. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Davis, F. D., Bagozzi, R., & Warshaw, P. (1992). Extrinsic and Intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1109-1130.
- Doswell, W., Braxter, B., Cha, E. S., & Kim, K. (2011). Testing the Theory of Reasoned Action in Explaining Sexual Behavior Among African American Young Teen Girls. *Journal of Pediatric Nursing*, 26(6), e45-e54.
- Eriksson, K., Kerem, K., & Nilsson, D. (2005). Customer acceptance of internet banking in Estonia. *International Journal of Bank Marketing*, 23(2), 200-216.
- Fishbein, M., & Ajzen, Icek. (1975). *Beliefs, Intention and Behaviour* (5th Edition). Reading, MA: Addison-Wesley.
- Gahtani, S. A. (2001). The applicability of TAM outside North America: An empirical test in the United Kingdom. *Information Resources Management Journal*, 14(3), 37-46.
- Gefen, D., & Straub, D. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1(8), 1-28.
- Gerrard, P., & Cunningham, B. J. (2003). The diffusion of internet banking among Singapore consumers. *International Journal of Bank Marketing*, 21(1), 16-28.
- Gillmore, R. M., Archibald, M. E., Morrison, D., Wilsdon, A., Wells, E., Hoppe, (...) Murowchick, E. (2002). Teen Sexual Behavior: Applicability of the Theory of Reasoned Action. *Journal of Marriage and Family*, 64, 885-897.
- Glanz, Karen, Rimer, Barbara K., & Viswanath, K. (Eds.). (2015). *Health Behavior: Theory, Research, and Practice* (5th Edition). San Francisco, CA: Jossey-Bass Public Health.
- Goldstein, E. B. (2017). *Sensation and Perception*. USA: Cengage Learning.
- Gregory, R. L. (1987). *Oxford Companion to the Mind* (10th Edition). London: Oxford University Press.
- Guriting, P., & Ndubisi, N. O. (2006). Borneo online banking: Evaluating customer perceptions and behavioral intention. *Management Research News*, 29(½), 6-15.
- Hernandez, J. M. C., & Mazzon, J. A. (2007). Adoption of internet banking: Proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*, 25(2), 72-88.
- Holtzman, Y. (2008). Innovation in research and development: tool of strategic growth. *Journal of Management Development*, 27(10), 1037-1052.

- Hu, P. J., Chau, P. Y. K., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, 16(2), 91-112.
- Islam, A., Muzi, S., & Meza, J. L. R. (2016). Does Mobile Money Use Increase Firms' Investment? Evidence from Enterprise Surveys in Kenya, Uganda, and Tanzania. *Policy Research Working Paper Series 7890*. The World Bank.
- Jaruwachirathanakul, B., & Fink, D. (2005). Internet banking adoption strategies for a Developing country: the case of Thailand. *Internet Research*, 15(3), 295-311.
- Junadi, & Sfenrianto. (2015). A Model of Factors Influencing Consumer's Intention to Use E-Payment System in Indonesia. *Procedia Computer Science*, 59, 214-220.
- Kotchari, K., & Jiraprawat, W. (2013). Risk Perception Factors and Online Buying Behavior of Generation X and Y Consumers. *Journal of Public Relations and Advertising*, 6(2), 39-56.
- Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*, 23(5), 362-380.
- Liao, Z., & Cheung, M. T. (2002). Internet-based e-banking and consumer attitudes: an Empirical study. *Information Management*, 39(4), 283-295.
- Lu, L.-H., & Wong, P.-K. (2019). Performance feedback, financial slack and the innovation behavior of firms. *Asia Pacific Journal of Management*. [https://doi.org/ 10.1007/s10490-018-9634-4](https://doi.org/10.1007/s10490-018-9634-4).
- Madhavan, M., & Kaliyaperumal, C. (2015). Consumer Buying Behavior- An Overview of Theory and Models. *St. Theresa Journal of Humanities and Social Sciences*, 1(1), 74-112.
- Mathieson, K. (1991). Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173-191.
- Mathwick, C., Rigdon, E., & Malhotra, N. K. (2002). The effect of dynamic retail experiences on experiential perceptions of value: An Internet and catalog comparison. *Journal of Retailing*, 78(1), 51-60.
- Aldas-Monzano, J., Lassala-Navarre, C., Ruiz, C., & Sanz Blas, S. (2009). The role of consumer innovativeness and perceived risk in online banking usage. *International Journal of Bank Marketing*, 27(1), 53-75.
- Narong Srisawad. *Research Methodology for Social Science*. Bangkok: Kasatsert University Press.
- Nattapong Kariyapol. (2017). *Factors Positively Impacting Intention of Using Electronic Cash Behavior of Employees in Bangkok*. An Independent Study for a Master Degree of Business Administration (MBA). Bangkok University.
- Ohio University (2019). *Four Consumer Behavior Theories Every Marketer Should Know*. Retrieved on August 8, 2019, from <https://onlinemasters.ohio.edu/blog/four-consumer-behavior-theories-every-marketer-should-know>
- Pawar, S., & Naranje, S. (2016). A Study on Factors Influencing on Buying Behaviour of Customers. *Research Journal 2015—Institute of Science, Poona College of computer Science ISSN2394-1774 Issue II*. Retrieved from <https://ssrn.com/abstract=2810090>.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnla, S. Consumer acceptance of online banking: An extension of the Technology Acceptance Model. *Internet Research*, 14(3), 224-235.

- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers, Acceptance of internet banking services. *International Journal of Bank Marketing*, 19(4), 156-165.
- Poon, M. L. (2004). Effects of performance appraisal politics on job satisfaction and turnover intention. *Personnel Review*, 33(3), 322-334.
- Roger, E. M. (1962). *Diffusion of Innovations* (1st Edition). New York, NY: The Free Press.
- Roger, E. M. (1983). *Diffusion of Innovations* (4th Edition). New York, NY: The Free Press.
- Schacter, D. L. (2011). *Psychology*. USA: Worth Publishers.
- Seker, M. (2012). Importing, exporting, and innovation in developing countries (English). *Policy Research Working Paper; no. WPS5156*. Washington D.C.: World Bank. Retrieved from <http://documents.worldbank.org/curated/en/904971468157777637/Importing-exporting-and-innovation-in-developing-countries>.
- Soodan, V., & Pandey, A. C. (2016). Influence of Emotions on Consumer Buying Behavior: A Study on FMCG Purchases in Uttarakhand, India. *Journal of Entrepreneurship, Business and Economics*, 4(2), 163-181.
- Suan Sunandha Rajabhat University. (2019). *Summary Report for Students' Registration and Graduation*. Retrieved from <https://sru.ac.th/about/restu> on April 3, 2019.
- Tan, M., & Teo, T. S. H. (2000). Factors influencing the adoption of internet banking. *Journal of the Association for Information Systems*, 1(1), 22-38.
- Tawil Tarapoch. *Social Psychology*. Bangkok: Odient Store.
- Thakun-Wernz, P., Cantwell, J., & Samant, S. (2019). Impact of International Entry Choices on the Nature and Type of Innovation: Evidence from Emerging Firms from the Indian Biopharmaceutical Industry. *International Business Review*, 28(6). <https://doi.org/10.1016/j.ibusrev.2019.101601>
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, Intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4), 342-365.
- Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, 39(2), 273-315.
- Venkatesh, V., & Morris, M. G. (2000). Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior. *MIS Quarterly*, 24(1), 115-139.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wang, Y.-S., Wang, Y.-M., Lin, H.-H., & Tang, T.-I. (2003). Determinants of user acceptance of Internet banking: an empirical study. *International Journal of Service Industry Management*, 14(5), 501-519.
- Yang, J. (2017). The governance environment and innovative SMEs. *Small Business Economics*, 48(3), 525-541.
- Zeithaml, V.A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through Web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362-375.

Sunthan Chayanon

College of Innovation and
Management,
Suan Sunandha Rajabhat
University,
Bangkok,
Thailand sunthan.ch@ssru.ac.th

Wijittra Srisorn

College of Innovation
and Management,
Suan Sunandha
Rajabhat University,
Bangkok, Thailand
wijittra.sr@ssru.ac.th

Tikhamporn Punluekdej

Graduate School, Southeast
Asia University, Bangkok,
Thailand
tikhamporn.pu@gmail.com

Excellent Paper Award of 30th International Conference on Business, Education, Social Science, and Management (BESM-30)

