REASONS FOR CUSTOMERS RELUCTANCE TO USE ELECTRONIC PAYMENTS – A STUDY IN HOCHIMINH CITY

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ABSTRACT

This study aims to investigate reasons why customers are reluctant to use e-payment and how these reasons explain their impacted values, with the following research objectives: (1) to identify characteristics of electronic payment generating the resistance of customers to this E-payment; (2) to explore the connections between those characteristics and values of individuals through the consequences from these characteristics; (3) to propose suggestions for service providers and financial institutes to develop appropriate strategic plans to motivate e-payment in Vietnam. To address these research objectives, the means-end chain (MEC) theory is employed with hard laddering interviews as data collection methods. Then, the collected data are analysed by Association Pattern Technique (APT) and used to build the Hierarchical Value Map (HVM). The HVM indicates five main reasons which bar customers from using e-payment: (1) lack of information about e-payment and its benefits, (2) security vulnerabilities in online payment systems, (3) unavailability of legal laws to protect e-payment users, (4) unpopularity of e-payment, and (5) transaction fees and no discount for e-payment. The Value map also revealed that Safety is the most crucial value explaining why most customers are unwilling to use e-payment. Besides, the respondents also care about the Economy and the Convenience of e-payment. From these findings, the study offers some suggestions for banks and service providers to increase the popularity of e-payments.

Keywords: E-payment; Hard laddering interview; Hierarchical Value Map (HVM); Means-end chain (MEC) theory; Resistance

1. Introduction

Vietnam is considered a high potential market for e-payment. According to the World Bank data, Vietnam has had a growth rate of 6.46 percent per year since 2000, one of the highest rates in the world. The majority of its population is under 35 accounting for 57% (Loi, 2017), and they are the most tech–savvy group contributing to more than 50% of internet users in Vietnam and high e-commerce increase of average 22% growth year on year (E-commerce revenue went up 22% in 2017).

Vietnam is a developing country with high internet use rate of 52 percent, which is ranked 15th in the globe (VietnamBriefing, 2017; VietNamNews, 2017). The rate is increasing at 9 percent per year. The percentage of smartphone and mobile Internet users is also high. The number of mobile subscriptions has increased to 131.9 million with the smartphone ownership reaching 72 percent and 53 percent in urban and rural areas, respectively. Vietnamese people use mobile Internet for many activities, such as surfing social networks.

However, they are not familiar with electronic payments and Vietnam is still a cash dominated economy with 90 percent of all transactions conducted in cash (VietnamBriefing, 2017).

Vietnamese government has developed a plan to reduce cash transactions and improved electronic payment methods to support the government initiatives to become cashless economy by 2020 (Fintechnews, 2017). With a plan to equip all supermarkets, shopping malls, stores, and distributors with facilities to accept credit cards, it is expected that cash payment would account for less than 10% of total market transactions. In addition, various utility providers such as electricity, water, telecommunication, internet, etc., are accepting electronic payment methods and trying to make e-payment easier and more popular to Vietnamese people. However, these efforts are not strong enough to motivate Vietnamese to accept electronic payment.

According to Ram and Sheth (1989), there are many reasons for customer resistance to changes. This resistance is normal and customers will not adapt to changes unless such reasons are addressed thoroughly. Therefore, to motivate Vietnamese customers to adopt e-payment, it is necessary to investigate why they are resistant to electronic payment. Accordingly, this paper aims (1) to identify characteristics of e-payment generating customer resistance to its use; (2) to explore the connections between those characteristics and values of individuals through the consequences from these characteristics; (3) to propose suggestions for service providers and financial institutes to develop appropriate strategic plans to motivate e-payment in Vietnam.

2. Literature review

Innovation Resistance theory (IRT)

The meaning of Innovation Resistance (IR) is the resistance by the consumers due to possible changes in current satisfactory state or difference from their idea of innovation (Ram & Sheth, 1989). According to this theory, consumers do not easily accept innovations. Two types of resistance to innovation adoption are functional and psychological barriers.

Means-end chain theory

Means-end chain (MEC) theory was designed by psychologist Tolman (1932) and economist Abbott (1955) (cited in ter Hofstede, Audenaert, Steenkamp, & Wedel, 1998), who recognized that consumers choose a product not for its own sake but for the value and benefits brought about by that product. According to Reynolds and Gutman (1988), consumers select a product or service when its attributes can help them achieve the desired values or benefits from using such product.

In the MEC theory, consumers relate to products by a hierarchical cognitive structure of three interlinked levels: product attributes, consequences of product use and personal values (Grunert & Grunert, 1995, Reynolds & Gutman, 1988, Hofstede, Audenaert, Steenkamp, & Wedel, 1998). Three concepts form the content of consumer knowledge, whereas the structure is created from the linkages among them. The linkage will then help to explain consumer decision making to translate product or service characteristics or attributes and consequences of use into personal self-relevant values as the desired ends. Attributes are tangible and intangible characteristics of a product (Reynolds and Gutman, 1988). Consequences are defined as any result (physiological or psychological) accruing directly and indirectly to the consumer (sooner or later) from their behavior (Gutman, 1982). It reflects the benefits or consequences related to the product attributes. Values are the intangible and desired-ends value of consumers which represent their most fundamental needs.

Laddering interview

Reynolds & Gutman (1988) stated that laddering is the most widely applied technique to reveal means-end structures. Two approaches for laddering interview include soft

and hard laddering interviews. The soft-laddering interview allows freedom in customer answers and their natural flow of speech. The hard-laddering interview, on the other hand, allows less freedom in consumer answers and navigate consumers to follow questions set up in advance and let them choose the best answer from a defined list.

Previous studies on E-payment

In his study conducted in Iran, Yassaman (2009) used MEC theory to explore why Iran customers do not use Internet banking (IB). The findings showed 10 attributes (A) from such reasons including (1) No computer/No Internet connection, (2) Internet Environment, (3) IB account creation procedure, (4) IB payment procedure, (5) Enter billing and card information, (6) Lack of a receipt, (7) Limited IB services, (8) Lack of bank staff presence, (9) Previous unsuccessful experience, and (10) Not being widely used. Those attributes lead to 5 personal values (V): (1) Convenience, (2) Security, (3) Economy, (4) Compatibility, and (5) Resistance to Change.

Hongxia, Xianhao, & Weidan (2011) conducted a study in China to investigate both drivers and barriers of mobile payment acceptance. The research findings revealed two keys barriers namely the perceived risks and the costs. The perceived risk means the security concern due to infancy of the market and uncertainty of the mobile payment environment and the costs involve direct transaction fee, access cost and new mobile phone cost.

Issahaku (2011) found 4 main groups of challenges for implementation of electronic payment in Ghana, including: Security with PIN for debit cards authentication, Infrastructure in term of connectivity and cost, Legal, regulatory and Socio-cultural issues with a high illiteracy rate and highly unbanked population which requires more training for customers to understand and adopt e-payment.

From the research findings of Okifo &

Igbunu (2015), customer resistances to adopt the electronic payment system in Nigeria are due to: (1) lack of awareness of and information about the benefits of e-payment system, (2) fear of risk, (3) unwell trained personnel in the key merchants & organizations, (4) cash habit, (5) people resistance to new payment mechanisms, (6) security (disclosure of private information, counterfeiting and illegal alteration of payment data), (7) low literacy rate, (8) high internet cost, and (9) unreliable power supply. In addition, the e-payment systems are also seen as an imposition, such as lack of uniform payment platforms, lack of adequate infrastructure, platform security and lack of seriousness by banks.

Arango-Arango & Suarez-Ariza (2016)) conducted a study in five main Colombian cities: Barranquilla, Bogota, Bucaramanga, Cali and Medellin with 2 surveys on consumers and merchants to understand reasons for low electronic payments usage. The study found that factors impeding the growth of electronic payments come from both consumers and merchants. For consumer side, there are 2 key areas: access to transactional services and use of electronic payment instruments. For accessibility, main reasons are low levels of income, wealth and education, privacy and inadequate product design and high costs against operation cash. The instruments are impacted by a high preference for cash: speed, price discounts, and budgetary control and low acceptance by merchants (only 13% chance of electronic payment being accepted by merchants). For merchants, the reasons include high costs and low perceived gains relative to cash payment, unbanked population and worry about informality status and low perceived demand of e-payments by clients.

Sivathanu (2018) uses the IR Theory to explain why customers are reluctant to use e-payment in India. The study found five key barriers that should be broken down to make e-

payment systems more applicable and user-friendly to customers. They are usage barrier, value barrier, risk barrier, traditional barrier and image barrier.

Dinh, Nguyen, & Nguyen (2018) provide insights into motivations and barriers affecting consumer behaviors toward mobile payments in Vietnam. The study highlights main barriers that still inhibit the mobile payment usage in Vietnam. Generally, Vietnamese consumers show a lack of trust in the mobile payment technology and service providers. In particular, they concerned much about privacy, security, fraud of bank accounts and card number, and payment transaction errors from the e-payment system. Another inhibitor is low availability with limited opportunities to use mobile payment services. The perceived complexity due to users' lack of knowledge and unclear instructions are other barriers. The last inhibitor is cash habit of Vietnamese people.

All barriers from above studies are inherited for this research and are used as the foundation for the initial study. However, they are classified into the Attribute/ Consequence/ Value levels to enable laddering interviews in qualitative study. In total, there are 14 attributes of e-payment, 10 of consequences, and 6 of personal values.

3. Methodology

Method

The main purpose of this study is to investigate reasons preventing customers from accepting and using electronic payment by employing MEC theory with hard-laddering interviews to collect data. There are 2 stages in the study. In the first stage, based on attributes (A), consequences (C), and values (V) from previous studies, soft-laddering interviews were conducted with 02 specialists in electronic payment (01 is Customer Center Director in one commercial bank and the other is Head of Product Development Division in another commercial bank) and 03 customers to modify the A-C-V list that matches with the context of Hochiminh city. After 05 soft-laddering interviews, 15 attributes (A) of e-payment (01 new A added), 12 Consequences (C) (02 new Cs added) and 6 Values (V) are used for the hard-laddering interview, totally. The finalized list of A-C-V is presented in Table 1.

Table 1

Finalized A-C-V

No	Stakeholders	From previous studies	Finalized after interviews	Code
		ATTRIBUTES		
1	*Internal factors:* Users	Cash habit	Cash habit	**A1**
2		Lack of information about electronic payment and its benefits	Lack of information about electronic payment and its benefits	**A2**
3		Need to have a bank card	Need to have a bank card	**A3**
4		No computer / no smartphone/ no Internet connection	Need to have connected laptop/smartphone	**A4**
5		Enter billing and card information	Need to enter billing and card information	**A5**
6		Lack of a receipt	Lack of a sealed receipt	**A6**
7		Electronic money is not real	Electronic money is not real	**A7**

No	Stakeholders	From previous studies	Finalized after interviews	Code
		ATTRIBUTES		
8		Previous unsuccessful experience	Previous unsuccessful experience	**A8**
9		Not being widely used	Not being widely used	**A9**
10	*External factors:* 1. Banks or Financial institutions 2.Services providers 3. Merchants 4. Policy makers	E-payment market is immature (lack of adequate infrastructure and uniform payment platforms)	E-payment market is immature (lack of adequate infrastructure and uniform payment platforms)	**A10**
11			Transaction fee/No special discount for E-payment	**A11**
12		Complicated payment procedure	Complicated payment procedure	**A12**
13		Internet Environment	Information security system is not good	**A13**
14		Not timely support services, including unwell trained staff	Not timely support services, including unwell trained staff	**A14**
15		Unavailable regulators to protect users	No legal to protect users	**A15**
		CONSEQUENCES		
1		Do not want to know/learn about EPS	No need to learn about e-payment	**C1**
2		Feel uncomfortable, unclear when using e-payment	Not clearly understand	**C2**
3		Time-consuming	Time-consuming	**C3**
4		Purchase computer/phone	Costly/ no discount	**C4**
5		Make mistakes by users	Possibility of making mistakes by users	**C5**
6		No transaction evidence	No transaction evidence	**C6**
7		Feel insecure	No trust	**C7**
8		Usage difficulty, including password required for transaction	Usage difficulty	**C8**
9			Not all merchants accept E-payments	**C9**
10		Payment transaction errors	Payment system errors	**C10**
11		Possible internet threats: Fraud of bank accounts and card number	Risk of disclosing personal information, card and account	**C11**
12			Risk of losing money	**C12**

No	Stakeholders	From previous studies	Finalized after interviews	Code
			ATTRIBUTES	
		VALUES		
1	Economy		Using E-payment is not economical	**V1**
2	Security		Using E-payment is not safe	**V2**
3	Convenience		Using E-payment is not convenient	**V3**
4	Control		Using E-payment doesn't bring financial control	**V4**
5	Efficiency		Using E-Payment is not efficient	**V5**
6	Change resistance		I'm not willing to use E-payment	**V6**

Then, in the second stage, Association Pattern Technique (APT) is followed to build the questionnaire for hard-laddering interview including two matrices (A-C and C-V) of internal factors so that respondents will select the attributes, associated consequences and values that make them reluctant to e-payment (*See Table 2 & 3*). Similarly, external factors will be explored through the last two questions.

Table 2

Matrix of attributes (A) and consequences (C)

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
A1												
A2												
A3												
A4												
A5												
A6												
A7												
A8												
A9												
A10												
A11												
A12												
A13												
A14												
A15												

Table 3

Matrix of consequences (C) and values (V)

	V1	V2	V3	V4	V5	V6
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						
C9						
C10						
C11						
C12						

Sampling

Because of the unpopularity of hard-laddering survey, respondents easily get confused when answering the questionnaire. Therefore, each respondent was approached individually in person and asked appropriate questions to target right person for the survey. The requirement to be a surveyor is that (1) Customers know about electronic payment but do not use and they conduct most of their transactions by cash; or (2) Customers who had used electronic payment before but no long use it, or (3) Customers limit the use of e-payment in their transactions. Then, each respondent needs from 15 to 20 minutes to complete the questionnaire.

Costa, Dekker, & Jongen (2004) proposed a sample size of ≥ 50 for a study using hard laddering interview technique. Therefore, the minimum sample size of this study should be ≥50. After the data collection, there were 203 qualified questionnaires used for analysis.

Data analysis

In order to analyze the means-end data from laddering interviews, Hofstede et al. (1998) proposed and validated a survey-based study named Association Pattern Technique. There are three steps in the APT (Reynolds & Gutman, 1988): (1) Finalize the list of three groups of attributes (A), consequences (C) and values (V); (2) Create the association pattern matrices from the first results where respondents are supposed to mark in a cell and a linkage is perceived; and (3) Construct the Hierarchical Value Map (HVM) by analyzing the links between elements from the two A-C and C-V matrices.

In order to construct the HVM, the first step is to quantify the A-C and C-V matrices according to the APT model. The responses for the 2 above matrices are "Yes" or "No". If the answer is "Yes", there will be a linkage for A-C or C-V and 1 point will be given. On the contrary, if the choice is "No", there is no linkage between them and a score of 0 will be given. Summarizing all points of each cell will show how many times the linkage is mentioned. The quantitative results of two

relational matrices are used to construct the HVM. A HVM is the map in which all linkages among Attributes, Consequences and Values (A-C-V) are expressed in the form of a chart to provide a visual look at the results of this study and to help them focus on the issues that need to be addressed.

The next step is to balance the amount of information from the two relational matrices and retain A/C/V elements and their linkages to create a final, clear and simple map with sufficient information for explanation. This balance depends on the quantity of sample size and the uniformity of information from respondents. It is often expressed by the cut-off point which indicates the minimum number that a link must have to appear in the hierarchical value map. For example, if the cut-off point is 4, those linkages that appear smaller than 4 will not be retained in the HVM. The purpose of cut-off is to distinguish the important linkages and omit the rest in order to achieve useful and interpretable HVMs. Kang, Kang, Yoon, & Kim (2014) suggested a cut-off point of 5% of the total cell number of the A-C matrix and the cut-off point for the C-V matrix is suggested to be 3 to 5 linkages. The HVM covers 3 levels of abstraction. The Attribute (A) is the lowest level of abstraction and located at the bottom, the value (V) is the highest level and at the top of the map. A possible HVM for the study of barriers to e-payment adoption is illustrated in Figure 1.
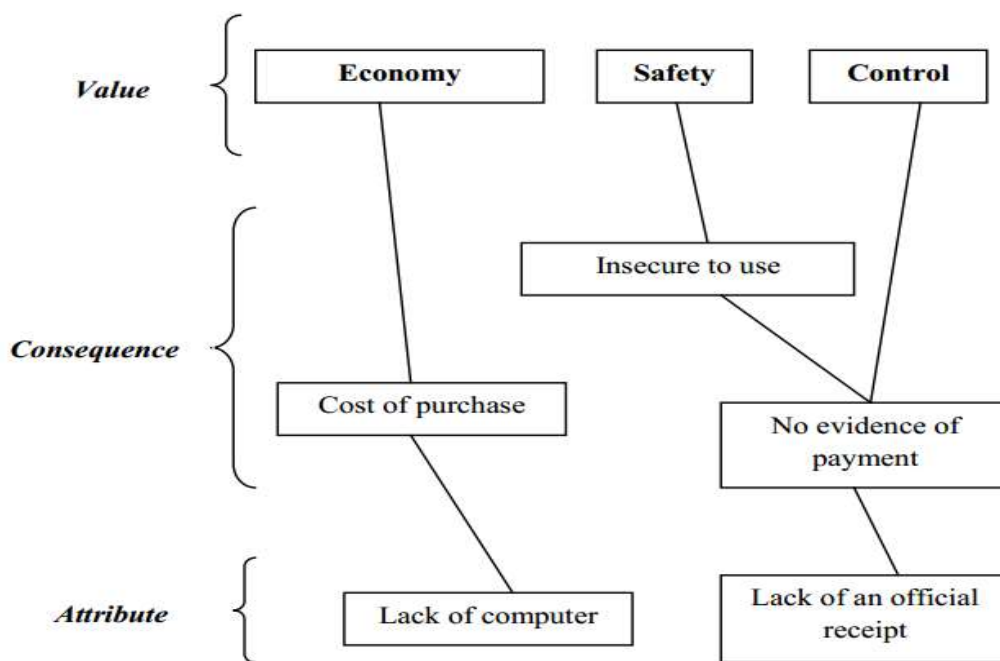
Figure 1. An example HVM for the study of barriers to e-payment adoption

4. Research findings

Data description

Table 4 summarises characteristics of the sample, including: age, gender, and payment methods. Based on the qualified questionnaires, 55% of the respondents are under 35 and this echoes the information in the aritcle of Loi (2017) mentioned in the Introduction. A majority of population is under 45 (171 out of 203 respondents) and around 80 % of them mostly or totally use cash in daily transactions. Therefore, the sample meets the requirements of the proposed target population.

Table 4

Sample' description

Description						Total
Age	18-25	26-35	36-45	46-55	>55	
No.	51	61	59	23	9	203
Gender	Male			Female		
No.	98			105		203
Payment methods	100% by cash		Mostly by cash		Same ratio	
No.	37		124		42	203

Implication matrices

The matrix in table 5 illustrates the attributes that make consumers not willing to use E-payment and the consequences from those attributes. Each cell in the matrix represents a link. There are 126 and 54 links, which are mentioned and not mentioned, respectively. The mostly-mentioned links are (A1, C1) at 86,

(A11, C4) at 85 or (A13, C11) at 81. On the other hand, there are also links with a minimum occurrence at 1, such as (A3, C5), (A5, C1) or (A7, C4). The attributes A9 and A10 have linkages to most of consequences while A11 is only linked to afew consequences. All attributes are associated with the consequence C9, whereas C6 and C11 are less linked to attributes.

Table 5

A-C matrix about reasons why customers are unwilling to use E-payment

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
A1	<u>**86**</u>	42	20	12	22	11	26	15	28	0	0	**0**
A2	17	<u>**70**</u>	11	4	8	2	16	11	16	0	0	**0**
A3	2	6	<u>**76**</u>	19	1	2	6	7	8	0	0	**0**
A4	4	3	13	33	8	0	4	16	43	0	0	**0**
A5	1	3	20	0	47	0	2	8	17	0	0	**0**
A6	0	0	0	0	3	<u>**50**</u>	8	2	1	0	0	**0**
A7	4	4	1	1	0	3	20	3	2	0	0	**0**
A8	0	4	15	2	15	1	17	8	13	0	0	**0**
A9	48	35	6	5	0	0	20	23	<u>**55**</u>	10	16	**10**
A10	13	24	18	1	0	0	36	21	41	41	31	**33**
A11	0	8	2	<u>**85**</u>	0	0	0	0	5	1	0	**3**
A12	3	6	39	2	0	0	10	35	23	17	6	**12**
A13	2	3	0	0	0	0	41	1	5	44	<u>**81**</u>	**70**
A14	2	8	24	2	0	0	21	7	30	9	4	**17**
A15	4	7	1	0	0	0	21	1	9	17	35	**58**

The matrix in table 6 demonstrates the relationship between consequences (which are from main reasons making consumers not willing to use E-payment) and underlying values effected by those consequences. Similar to the above analysis, the number of occurrences of a link between consequence (C) and value (V) are also represented by numbers in the matrix. There are 3 pairs (C, V) not forming the relationship since the number of cells in the matrix is zero (0). The number in the cell (C9, V3) is 118 and this is the largest number of occurrences in this matrix. Most of consequences are associated with 6 values except C6 and C11, in which C6 only links to 4 values. Columns V2, V3 and V4 do not contain zero (0) meaning that all 12 consequences affect these three values of the respondents.

Table 6

C-V matrix about reasons why customers are unwilling to use E-payment

	V1	V2	V3	V4	V5	V6
C1	23	49	33	21	10	51
C2	17	**_77_**	43	24	25	14
C3	25	14	76	5	69	12
C4	**_115_**	16	16	30	21	4
C5	4	64	17	18	10	8
C6	2	47	4	16	0	0
C7	1	11	12	33	10	17
C8	4	32	72	12	23	15
C9	4	36	**_118_**	17	32	14
C10	5	71	20	13	21	7
C11	0	**_102_**	11	20	13	11
C12	11	**_95_**	7	41	15	10

Hierarchical Value Map

The HVM is created by constructing the link among attributes, consequences and values or A-C-V links from the results of two relational matrices. As mentioned in Methodology, this paper uses the method suggested by Kang, Kang, Yoon, & Kim (2014). The selected cut-off value is 5% of the total cell number in the A-C matrix. The matrix in Table 5 has a total of 180 cells (15A * 12C); therefore, 9 cells (5%*180) with the highest number of occurrences are selected. Those cells in bold and underlined are retained in Table 5. From that, 50 is the cut-off value for A-C matrix. Table 7 below shows in detail 9 important links retained.

Table 7

Retained A-C links with the cut-off value at 5%

No	Number of occurrences	Coded link	Detailed Linkage
1	86	A1-C1	Cash habit make customers unwilling to use e-payment because e-payment is more time consuming than cash
2	85	A11-C4	Need to pay a transaction fee or no discount for E-payment --> Costly for using E-payment
3	81	A13-C11	Information security system of E-payment is not good --> Risk of disclosing personal information, card and account
4	76	A3-C3	Need to have a bank card for E-payment transaction --> time consuming to create a bank card
5	70	A2-C2	Lack of information on E-payment and its benefits --> Not clearly understand about E-payment
6	70	A13-C12	Information security system of E-payment is not good --> Risk of losing money
7	58	A15-C12	No available legal to protect E-payment users --> Risk of losing money
8	55	A9-C9	E-payment is not being widely used --> Not always accepted by merchants
9	50	A6-C6	Lack of a sealed receipted for E-payment --> No transaction evidence

From the 9 A-C links retained above, there are 8 consequences of those links which is further considered, C1, C2, C3, C4, C6, C9, C11 and C12. According to Kang, Kang, Yoon, & Kim (2014), the cut point of the C-V matrix is defined so that the common consequence elements of these two matrices are from 3 to 5. Therefore, the cut-off value for C-V matrix is 77. Numbers in bold and underlined in Table 6 represent the number greater than or equal to the cut-off value. With the cut-point of 77, there are 5 consequences: C2, C4, C9, C11, C12 and 5 corresponding C-V links: C2-V2, C4-V1, C9-V3, C11-V2, and C12-V2 are retained. From these 5 consequences, it is possible to identify 6 A-C links containing these 5 consequence elements in the 9 A-C links above. 6 A-C links along with 5 C-V links creates 6 linkages A-C-V as presented in Table 8.

Table 8

Retained A-C-V linkages after defining cut-off values for A-C and C-V matrices

No	Number of occurrences	Coded C-V link	Detailed Link	Coded A-C link	Coded A-C-V linkage
1	118	C9-V3	Not always accepted by merchants --> using E-payment is not convenient	A9-C9	A9-C9-V3
2	115	C4-V1	Using E-payment is costly --> using E-payment is not economical	A11-C4	A11-C4-V1
3	102	C11-V2	Risk of disclosing personal information, card and account --> Using E-payment is not safe	A13-C11	A13-C11-V2
4	95	C12-V2	Risk of losing money --> using E-payment is not safe	A13-C12	A13-C12-V2
				A15-C12	A15-C12-V2
5	77	C2-V2	Not clearly understand about E-payment -->Using E-payment is not safe	A2-C2	A2-C2-V2

The six A-C-V linkages are used to construct the HVM, of which there are 3 levels from lowest abstraction level to the highest abstraction level A-C-V. The linkages between these elements are represented by arrow-lines with the associated number of occurrences. Among 6 A-C-V linkages, there are only 2 links that started with the same A13: A13-C11-V2 and A13-C12-V2. Attribute A13 has been associated with both C11 and C12. Therefore from A13, there are two arrow directions to the C11 and C12. Both Cs connect with V2, there should be two arrows coming from C11 & C12 to V2. All numbers of occurrences will be attached to the corresponding arrow lines. In that way, the linkages A13-C11-V2 and A13-C12-V2 are represented in the Value map as below:
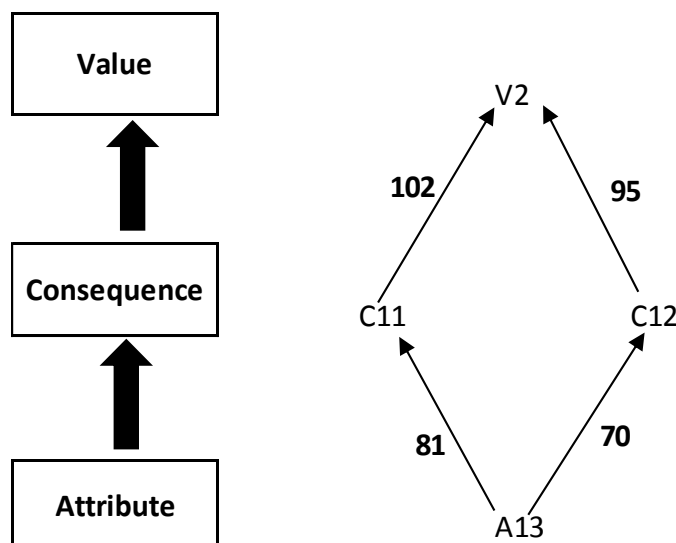
Figure 2. The linkages A13-C11-V2 and A13-C12-V2 in HVM

Similarly, all A-C-V linkages are established by the same say to have the HVM as presented in Figure 3 below. In order to read the HVM, we should start from a specific attribute (A) and follows the arrow direction to the consequence (C) and then to the value (V). For example, the linkage A11-C4-V1 in the Value Map shown in Figure 3 can be read like this: Because of "customers need to pay transaction fee or no discount for e-payment", customers feel it is costly to use e-payment method. "Being costly" makes them feel that using e-payment is not economical.
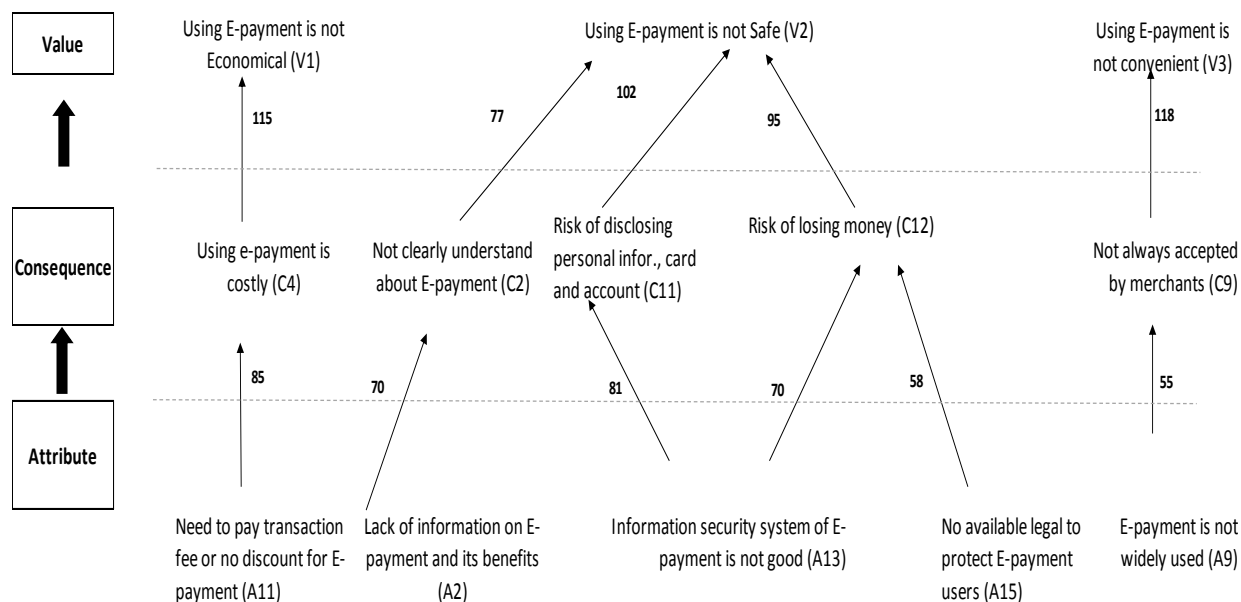
Figure 3. HVM about reasons why customers are unwilling to use E-payment

There are two important issues when reading an HVM: the inter-link between elements and the core elements of which there are many links leading to in the HVM. The numbers attached to the link are the numbers of occurrences of linkages or the strong level of the links. Based on Figure 3, the linkage between A11 and C4 is the strongest link with the highest number of occurrences (85) among A-C links. The link between C9 and V3 is repeated 118 times representing the strongest C-V linkage.

In terms of Value element, V2 is obviously the only Value with 3 Consequences linked to while the other two Values only have 1 link with the Consequence. Therefore, "Safety" is the core value when considering A-C-V linkage explaining why consumers reluctant to use E-payment.

Discussion

The HVM shows 5 main attributes of E-payment making customers unwilling to use E-payment: (1) A2 – "Lack of information on E-payment and its benefits"; (2) A13 – "Information security system of E-payment is not good"; (3) A15 – "No available laws to protect E-payment users"; (4) A9 – "E-payment is not being widely used"; (5) A11 – "Need to pay a transaction fee or no discount for E-payment". There are some points which can be easily recognized from the HVM.

Firstly, A11 is the attribute selected by most of customers. Secondly, these five attributes make customers feel that E-payment does not bring them any economic benefits (V1), safety (V2) and convenience (V3).

Thirdly, it is obvious that most of the respondents are interested in V2 and there are 3 per 5 linkages leading to this value. Lastly, 03 A-C-V linkages, A11-C4-V1 (Need to pay transaction fee or no discount for E-payment → Using E-payment is costly → Using E-payment is not Economical); A13-C11-V2 (Information security system of E-payment is not good → Risk of disclosing information, card and account → Using E-payment is not Safe); and A9-C9-V3 (E-payment is not being widely used → Not always accepted by merchants → Using E-payment is not convenient) are the most-noticed linkages with high number of occurrences by respondents.

Focusing on the consequence level, C12 (Risk of losing money) is the most significant element with 128 occurrences. This consequence is related to "Information security system of E-payment is not good" (A13), and "No available laws to protect E-payment users" (A15) at 70 and 58 occurrences, respectively. In recent years, there were many cases of losing money in the banking sector (in Vietcombank, Dong A Bank, Agribank,etc.) associated to the banking security system including threats of viruse spread, a leak of information about account and card numbers as well as attack of hackers. Those cases show the weakness in the existing security system which makes users feel unsafe and unwilling to use electronic payments. However, up to date, there has not been a completed legal document regulating the process of providing e-payment or e-banking services to create a coherent legal framework for the application of technology. The cases also show that current legal laws are unsufficient, out of date and unadapted to the change of technology and the complexity of hackers. This unsafe feeling makes clients reluctant to change from Cash payment to electronic payments.

The second significant consequence is C4 (Using E-payment is costly) with 85 occurrences from A11 (Need to pay transaction fee or No discount for E-payment). Most banks in Vietnam today require bank fees for any online transactions but charge no additional fee for cash transactions. The higher the amount of transaction, the higher the cost is applied for users. Therefore, to motivate customers to switch from using traditional payment (cash) to e-payment, a bonus or discount for e-payment transactions should be applied. In developed countries, retailers pay a commission of 2 to 3 % for electronic payments. This is really a good incentive for users of electronic payments (cards, electronic wallets, etc.). However, these kinds of promotion are still limited in Vietnam and do not encourage consumers to use e-payment.

The other consequences including C11, C2, and C9, which are linked from A13, A2 and A9, at 81, 70 and 55, respectively. All linkages in the HVM show that the obstacles can come from both customers (Lack of information on E-payment and its benefits) and external side (No available laws to protect E-payment users, or E-payment is not widely-used).

The HVM shows six A-C-V linkages (A11-C4-V1, A2-C2-V2, A13-C11-V2, A13-C12-V2, A15-C12-V2, and A9-C9-V3) and the core value of V2 (Safety) linked from 274 occurrences (from C2, C11, C12, at 77, 102, and 95, respectively). Firstly, among the six linkages, A11- C4-V1 is the most noticed linkage with the highest number of occurrences (85, 115). This means customers really care about additional cost and economic benefit/discount when adopting e-payment as a new payment method. The extra costs prevent them from using e-payment as they impact their personal value of "Economy". For these customers, "Economy" is the underlying reason that resists their willingness to adopt e-payment.

Secondly, there are four A-C-V linkages that connect to the core value of "Safety": A2-C2-V2, A13-C11-V2, A13-C13-V2 and A15-

C12-V2. The A2-C2-V2 linkage shows that customers do not have a clear understanding about e-payment because a lack of information about e-payment and its benefits. They feel unsafe when trying a new and unfamiliar payment method, and thus, avoid using it. When equipped with more information about e-payment, they certainly will be confident in using the new service. The following two A13-C11-V2 and A13-C13-V2 linkages shows another important attribute of E-payment: the information security system. Insecured security system of E-payment can lead to many bad impacts inlcuding the risk of card and account information disclosure (C11) and the risk of losing money (C13). Customers feel unsafe to try new payment methods when they see so many cases of payment fraud on the media due to weaknesses of bank security system. The last A-C-V linkage leading to the safety value is A15-C12-V2. The current legal framework is inadequate and updated to protect users in case of disputes when they use such a new service as e-payment. The risk of losing money when doing online transactions becomes more real when hackers are stronger and more dangerous. Accordingly, customers decide to stay with traditional payment methods and are reluctant to e-payment. From these four A-C-V linkages, it can be conluded that "Safety" is the core personal value for customers to decide whether to adopt e-payment.

Lastly, in the A9- C9- V3 linkage, customers care about the convenience of using e-payment. The fact that not all merchants are equipped with e-payment system make it unable for customers to use this method widely. They have no choice but to go back to the traditional cash method, not to mention that many merchants in Vietnam still prefer cash to other forms of payment. No wonder why, consumers still feel inconvenient about the new payment service. In summary, "E-payment is not being widely used" links to the underlying personal value of "convenience" that make customers unwilling to adopt to e-payment.

5. Implications and Conclusion

Based on Means-End chain theory and hard-laddering interview, this study identifies 05 main attributes of E-payment regarded by Vietnamese customers as crucial obstacles from using E-payment. These attributes are A2 "Lack of information about E-payment and its benefits", A13 "Information security system of E-payment is not good", A15 "No available laws to protect E-payment users", A9 "E-payment is not being widely-used", and A11 "Need to pay a transaction fee or no discount for E-payment". Among these 5 attributes, A11 is the one selected by most of the respondents. In particualr, A2, A12 and A15 are attributes driving to 03 significant consequences: C2 "Not clearly understand about E-payment", C11 "Risk of disclosing personal information, card and account" and C12 "Risk of losing money", which lead to V2 "Using E-payment is not safe". The HVM of the study shows that Safety is the key value explaining why Vietnamese customer are unwilling to use E-payment.

Implications

The research findings show 03 important values including Safety, Economy, and Convenience explaining why customer are not willing to use E-payment.

Firstly, the most-concerned issue of Safety is that customers are afraid of losing money. To tackle this security issue, building strong data security system is of importance and a must. IT infrastructure must be strong, software must be upgraded and up-to-date with technology change. Secondly, another safety solution is developing a risk management plan and business continuity plan. Moreover, E-payment is a high-tech combination of Internet and banking technology. Therefore, it is necessary to improve knowledge and skill of technical staff to meet the demand for

operating the payment systems with high technology and advanced security. The next reason for customers not using e-payment is their unawareness of E-payment benefits and how to use E-payment system. Therefore, banks and service providers should inform customers more of e-payment. Such information should be conveyed through different channels to approach as many customers as possible and should highlight key benefits for target customers.

In term of Convenience of E-payment, the payment procedure and other processes must be simplified while still ensuring the security and reliability of the service. Banks and service providers should cooperate to offer clients with standardized e-payment service and platform. In addition, widening the E-payment network to have high acceptance level by merchants need to be addressesd. Government and banks need to expand the ATMs and POS's network in rural areas for inclusive growth. Fintech firms (service providers), on the other hand, need to diversify services by increasing their tie-ups with other service sectors such as utility bill payments, online shopping payments on delivery, education, traditional markets, street shops, etc.

Lastly, reagarding Economy of E-payment, banks, service providers and retailers should have incentive program or promotion for non-cash transactions, especially in e-commerce and bill payment sectors. For example, in May 2018, Amazon offered to pass along the discounts it gets on credit card fees to other retailers if customers use the online payment service (Surane & Soper, 2018). Another option that was offered by some companies to motivate credit customers to pay sooner to get an early payment discount. By offering free of charge or minumum fee, it definitely will not limit the usage of e-payment for daily transactions and increase total number online transactions significantly.

Research limitations and further research

Even though all research objectives are addressed, this study also has some limitations. Firstly, the size of 203 qualified samples did not follow the sampling suggested by Gutman (1982) for Association Pattern Technique (APT). Moreover, the matrix format questionnaire used by the study is unpopular and hard for surveyors to answer because it requires a facilitator to clarify how to do the survey. This limits the capability to have more sample sizes from the online survey. Secondly, the scope of this research is limited to Ho Chi Minh City only and is selected by convenience., and thus, its findings cannot be generalized to the whole Vietnamese market.

From the above limitations, the following further research direction are recommended. Firsly, increasing the sample size is necessary to verify the result of this study. Secondly, widening the scope of this research by conducting the survey in different cities will enable researchers to generalize the study to a larger area of Vietnam■

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