

Mapping the reasons for resistance to Internet banking: A means-end approach

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Abstract

Although Internet banking has been widely adopted in developed countries, there is still a group of customers resisting the services. In other words, Internet banking, although proven to be a successful innovation, has still not become adopted by the laggards, and hence, has not met all the expectations of banks. Therefore, the purpose of this paper is to identify the reasons for consumer resistance to Internet banking. The special interest is to explore resistance among those bank customers who already have valid contracts for Internet banking but prefer to pay their bills via ATM. The objective is to identify those characteristics generating resistance to Internet banking and their connections to values of individuals. In order to achieve the objective, 30 Finnish bank customers were interviewed in-depth using the means-end approach and the laddering interviewing technique. The findings indicate both functional and psychological barriers arising from service-, channel-, consumer- and communication-related means-end chains inhibiting Internet banking adoption. The contribution of the paper lies in achieving a more profound understanding of consumer resistance to Internet banking, and further, in offering suggestions and practical advice for service providers' decision-making.

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Keywords: Consumer behaviour; Innovation resistance; Banking; Internet; ATM

1. Introduction

It is argued that Finland is one of the leading countries in electronic banking (Karjaluoto, Mattila, & Pento, 2002). Already 76% of the Finnish population use Internet at home or elsewhere and 64% describe Internet as the primary channel for payment transactions (The Finnish Bankers Association, 2005). When compared to other payment channels, Internet has seen to offer many advantages both for banks and for customers. It is low-priced, not dependent on place or opening hours of banks, and moreover, it puts the customer in control (Karjaluoto, 2002). Consequently, banks have increased investments in Internet services and reduced the number of branch offices and payment automated teller machines (ATMs).

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However, 36% of Finnish bank customers still use ATM and non-electronic methods for payment transactions. Payment ATM, especially, is still a remarkably popular channel in Finland. Therefore, banks are required to continue to offer ATM payment service despite the additional costs involved when compared to Internet channel. Although Internet banking is a growing phenomenon, the factors inhibiting its diffusion are not sufficiently recognised (Bradley & Stewart, 2002; Mols, 1999).

Consumer resistance to innovations has received relatively little attention in the marketing literature when compared to the attention paid to innovation adoption. Most innovation studies have focused on successful diffusion through the market. This is due to the biased idea that all innovations are improvements over existing products providing added value for the majority of consumers. However, resistance to change is seen as a normal consumer response to the changes innovations imply for consumers (Ram, 1987). Resistance represents the other side of the phenomenon and there is a need to see both sides of the coin. Sheth (1981) argues that

...it is about time we paid respect to individuals who resist change, understand their psychology of resistance and utilize this knowledge in the development and promotion of innovations rather than thrust upon them preconceived innovations... (p. 274).

The objective of this study is to explain, why Internet banking encounters resistance and what are the barriers inhibiting its adoption among the group of laggards, who already have adopted ATM bill payment service. For this purpose, a total of 30 customers of a large Scandinavian bank were interviewed in-depth using the means-end approach and the laddering interviewing technique. The sample consists of individual customers, who have valid contracts for Internet banking but who prefer ATM in payment transactions.

The study reveals both functional and psychological barriers producing resistance to Internet banking and elicits the attribute-value connections driving these barriers. The paper begins with a review of the essential literature of innovation resistance and makes a recap on previous studies on Internet banking. The latter part of the paper presents the approach and the method used and reports the main results of the study. Finally, the main results are discussed and the implications are presented.

2. Resistance to innovations

For a long-time innovation research suffered from different biases. The greatest problem in the research has been so-called pro-change bias (Sheth, 1981) standing for an assumption that every innovation is good and should be adopted by all the members of a social system (Ram, 1987). According to the assumption, innovation should neither be rejected nor re-invented. Due to the biased preconceptions the phenomenon of resistance has not received as large attention as innovation adoption in scholarly research. Since the biases have been recognised, more studies on consumer resistance and rejection have been conducted.

The earlier literature does not comprehensively separate the concepts of rejection and resistance. In this study rejection is defined as a passive form of behaviour resulting in an ultimate decision not to adopt or to ignore an innovation. Resistance, on the other hand, is seen as an active behaviour, which may occur in every adoption process but does not necessarily result in non-adoption i.e. rejection (see Fig. 1). According to Szmigin and Foxall (1998) innovation resistance may also take forms of postponement or opposition. The former refers to pushing the adoption decision to the future whereas the latter refers to protesting the innovation or searching for further information after the trial.

According to Ram (1987), resistance is a normal consumer response to an innovation and adoption may begin only after initial resistance has been overcome. In other words, there is always some resistance before

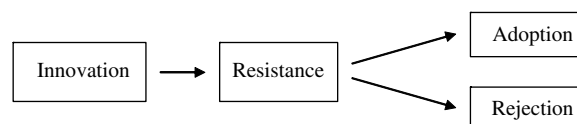


Fig. 1. The relationship between resistance and rejection.

Table 1
Barriers to innovation adoption

Functional barriers			Psychological barriers	
<i>Usage barrier</i> Innovation's incompatibility with consumer's practices or habits	<i>Value barrier</i> Innovation's inability to produce economic-or performance-based benefits	<i>Risk barrier</i> Physical risk Economic risk Functional risk Social risk	<i>Tradition barrier</i> Magnitude of change caused by the innovation	<i>Image barrier</i> Negative image related to the innovation

adoption and adoption and resistance may also coexist. Resistance and ultimate rejection may also occur at any stage of adoption process. Nowadays, some consumers may perceive innovation overload. It refers to the difficulty of a consumer to manage multiple simultaneous innovations; rapid changes may render a consumer impervious to anything new (Dunphy & Herbig, 1995). Innovation overload may also give rise to innovation negativism; when an innovation fails, a consumer may start systematically rejecting all innovations (Rogers, 2003). It is argued, thus, that one of the major causes for market failure of innovations is the resistance they encounter from consumers (Ram & Sheth, 1989). Therefore, identifying the factors generating resistance is the key to successful development of innovations.

2.1. Barriers to adoption

Sheth (1981) seeks to understand the psychology of innovation resistance. He argues that (i) a tendency towards an existing practice or behaviour and (ii) perceived risks associated with innovation adoption are the most useful constructs for innovation resistance. The tendency towards existing behaviour is seen as human pursuit of consistency and status quo, whereas perceived risk is seen as physical, social, economic or functional uncertainty and the perceived side effects associated with the innovation. Ram and Sheth (1989) further develop the understanding of innovation resistance by suggesting functional and psychological barriers to adoption (Table 1).

Accordingly, functional barriers can be divided into usage, value and risk barriers, whereas psychological barriers include tradition and image barriers. Usage barrier is related to innovation's incompatibility with consumer's practices or habits. Due to consumers' preference for existing practices and products, an innovation must also offer high monetary value in order to become adopted. An innovation without a strong performance-to-price value will be resisted and a substitute will be chosen (Ram & Sheth, 1989). Risk barrier refers to the degree of risks an innovation entails (Ram & Sheth, 1989). Uncertainty is inherent in innovations, and therefore, they always entail at least some degree of perceived risk. Risk may be physical and cause harm to a person or his property. Risk may also be economic representing a wrong decision to adopt an innovation instead of waiting for a better or more inexpensive version. Moreover, risk may be functional, indicating an innovation's inability to function properly. Finally, risk may be social, implying fear of being seen in a negative way by others.

The psychological barriers include tradition and image barriers. Tradition barrier mainly refers to the change an innovation may cause in routines. If these routines are important to a consumer, resistance will be high. Image barrier, on the other hand, is associated with the origin of an innovation such as product class, industry or the name of the company. Perceived negative image may also be a cause for resistance.

3. Factors inhibiting Internet banking adoption

Despite its advantages, Internet has encountered resistance in banking actions. Chang, Cheung, and Lai (2004) state that both perceived characteristics and the degree of involvement of a financial product influence channel choice. Whereas high involvement transaction requires a channel that is perceived extremely secure, a payment transaction with only a small amount of money transferred requires the most convenient channel (Black, Lockett, Ennew, Winklhofer, & McKechnie, 2002). Due to the high involvement included in most

banking transactions, security and privacy concerns and perceived risk on Internet channel are found to be the major obstacles to Internet banking (Aladwani, 2001; Bestavros, 2000; Elliot & Fowell, 2000; Polatoglu, & Ekin, 2001; Rotchanakitumnuai & Speece, 2003; Sathye, 1999; Singh & Malhotra, 2004).

In addition to security concerns, uncertainty of usage increases the perceived risk. Mattila, Karjaluo, and Pento (2003) argue that some customers perceive the lack of training for Internet banking usage and, thus, are uncertain with it. Furthermore, information before but also during usage is perceived to be important in order to enable customers to perform transactions individually (Filotto, Tanzi, & Saita, 1997). The information provided should be detailed enough and easily available on the web pages (Jayawardhena & Foley, 2000). Perceived risk may also exist due to customers' uncertainty about bank's actions with errors occurring during online transactions (Suganthi, Balachandher, & Balachandran, 2001). Problems occurring while making transactions should also be easily and immediately resolved and should not require visiting the bank branch (Rotchanakitumnuai & Speece, 2003).

Furthermore, it seems that when compared to ATM, Internet has not demonstrated additional relative advantage to all customers (Gerrard & Cunningham, 2003). Although there are studies (Lee, Kwon, & Schumann, 2005) implying that ATM usage has a positive effect on Internet banking adoption, it seems that for some customers ATM simply is a more preferable option. It is argued that the primary criterion for channel choice is usefulness with ease of use only a secondary consideration (Davis 1989; Eriksson, Kerem, & Nilsson, 2005; Lin & Lu, 2000). Accordingly, some customers seem to perceive ATM more useful and more convenient than Internet channel (Wan, Luk, & Chow, 2005). It also seems that some customers perceive ATM to be less risky and to entail less effort in learning. It is, further, argued that some customers do not want to become PC-literate or even to become familiar with the Internet (Mols, 1999).

4. Data and methods

4.1. Means-end approach

Earlier studies have indicated some factors inhibiting Internet banking adoption. However, the underlying connections between the concrete channel attributes and the desired end-states of individuals driving the resistance have remained unclear. It is argued that core values i.e. the desired end-states of an individual are the most basic and fundamental motivators of behaviour (Woodruff & Gardial, 1996) guiding the selection or evaluation of human behaviour (Schwartz & Bilsky, 1987). Bagozzi and Lee (1999) propose that consumer's decision processes regarding innovations may be perceived as an instance of purposive behaviour, where the consumer makes decisions about goals related to his subjective well-being. It is also stated that innovations threatening core values are significant subject for resistance (Arnould, Price, & Zinkhan, 2004).

The means-end approach (Gutman, 1982) and the laddering interviewing technique (Reynolds & Gutman, 1988) were used within the study. Means-end theory explains how different product or service attributes facilitate consumers' achievement of desired end-states. Gutman (1982) argues that this approach is appropriate for determining why certain products are not chosen. The approach suggests a hierarchical representation of how customers view products and services.

There are three levels of abstraction:

- (1) product or service attributes,
- (2) consequences of product usage and service consumption,
- (3) values i.e. desired end-states of customers.

Whereas attributes describe the perceived characteristics of the product or service and consequences describe the advantages/disadvantages the customer perceives as a result of product or service consumption, the desired end-states are seen as the ultimate ends that are served by the product or service means (Woodruff & Gardial, 1996). The method suggests to summarise the most significant attribute-consequence-value chains in a hierarchical value map represented graphically in a tree diagram.

4.2. Laddering technique

The laddering technique refers to a semi-structured in-depth interviewing technique in which a respondent describes, why something is important to him (Reynolds & Gutman, 1988). The technique was developed in order to gain understanding of how respondents associate product attributes and consequences with their desired end-states and underlying values (Reynolds & Gutman, 1988). It allows the researcher to dig below consumers' surface knowledge about the perceived product attributes and consequences to their underlying beliefs about value satisfactions (Peter & Olson, 2005). The premise of the technique is that lower levels imply the presence of higher levels standing for product or service attributes having consequences that lead to value satisfaction. Accordingly, laddering involves a specific interviewing format using a series of probing questions beginning with distinctions between product attributes and leading to different consequences and values (Reynolds & Gutman, 1988).

4.3. Sample and data collection

In this study, sampling was carried out within the bank's private customer base in Helsinki in Finland. The sample includes only those customers who primarily use ATM for payment transactions although have valid contracts for Internet banking services. In other words, the sample consists of only non-adopters of Internet banking regarded as laggards in this study. According to Rogers (2003), laggards appreciating most existing ideas and habits are defined as the last consumers adopting an innovation and are most likely to resist an innovation. Within this group of customers simple random sampling was carried out in order to gain as representative sample as possible. Accordingly, 53% of the sample consists of men and 47% of women. Age and education structures are also broad. However, 37% of the sample consists of employees and 6.6% of those in middle management or managerial positions (see Table 2). Altogether thirty in-depth interviews were conducted at the bank's head office.

Reynolds and Gutman (1988) argue that the interviewing environment should be relaxed, so that the respondents do not feel threatened and thus are willing and able to be introspective. Accordingly, the interviewees were told that there were no right or wrong answers and that the purpose of the interview was simply to understand the ways respondents saw electronic banking channels. It is argued that by creating a sense of involvement and caring and making the respondent feel at ease, it is possible to get the respondent to reveal inner perceptions and values (Reynolds & Gutman, 1988).

By following Reynolds and Gutman (1988), laddering probes began with respondent-perceived distinctions of ATM and Internet as payment channels. The laddering process then continued with questions like "Why is that important to you?" after each response. The answers typically led from concrete attributes to consequences and finally to the personal values of the respondent. The interview continued along the "chain" until the respondents could no longer provide any further information.

4.4. Analysis of the data

In the analysis phase, resistance generating factors identified from the interviews were classified into attribute, consequence and value levels based on the idea that the level of abstraction increases when moving from the lower level to the higher levels (attribute-consequence-value) in the hierarchy. The focus was to concentrate on the linkages between the elements, not on the elements themselves. After having identified and summarised the factors they were numerically coded and the individual value chains of the respondents were formed. Furthermore, the similar linkages were calculated in order to reveal the most important connections. The results were then summarised in the hierarchical value map (HVM) illustrating the main attribute-consequence-value linkages.

5. Results

The results suggest that there are several attributes connected with different consequences and values generating resistance to Internet banking. Lack of a computer, routine usage of ATM, lack of information,

Table 2
Demographics of the respondents

Demographic characteristics	N	Percentage
<i>Gender</i>		
Male	16	53.3
Female	14	46.7
<i>Age</i>		
18–25 yr	6	20.0
26–35 yr	5	16.7
36–45 yr	5	16.7
46–55 yr	6	20.0
56–65 yr	7	23.3
over 65 yr	1	3.3
<i>Education</i>		
Primary/secondary school	3	10.0
Vocational/trade school	9	30.0
High school/matriculation	6	20.0
Institute level education	2	6.7
Polytechnic degree	2	6.7
University degree	8	26.7
<i>Profession</i>		
Managerial position	1	3.3
Middle management position	1	3.3
Entrepreneur	3	10
Specialist	3	10
Employee	11	37
Student	4	13.3
Retired	5	16.7
Unemployed	2	6.7
Total	30	100

usage of own device, absence of an official receipt, Internet surroundings, absence of bar code reader, changeable passwords and unclear proceeding at the monitor seem to be the main attributes generating resistance and causing final rejection. Furthermore, the most influential values seem to be economy, safety, control, efficiency, convenience and general resistance to change (see Fig. 2).

The respondents argued that the lack of an Internet connection compels them to leave home for payment transactions. Due to numerousness of payment ATMs, the machines may be located closer than Internet payment kiosks. On the other hand, purchasing a computer and/or Internet connection was considered expensive when compared to the advantages it generates. For these respondents economy was, thus, more important than convenience. Further, the respondents still considered Internet banking as a new way of conducting payment transactions. Respondents, in general, did not appreciate newness but preferred existing habits. Some respondents argued that they were not comfortable using Internet and they did not want to learn new banking methods. With these respondents, resistance to change was high.

“It feels so natural (payment ATM). It makes sense. I am so used to it, so why should I change?”
(Respondent no. 11)

Certain respondents did not only regard Internet as a new method but also suffered from the lack of information concerning the channel. They did not feel having received enough information or help from the bank. This is why they felt uncertain with the channel and were afraid of making mistakes. Some respondents also felt higher responsibility for possible mistakes. Accordingly, respondents felt less responsibility when using the bank’s ATM. The lack of channel usage knowledge as well as the feeling of responsibility was connected to safety value.

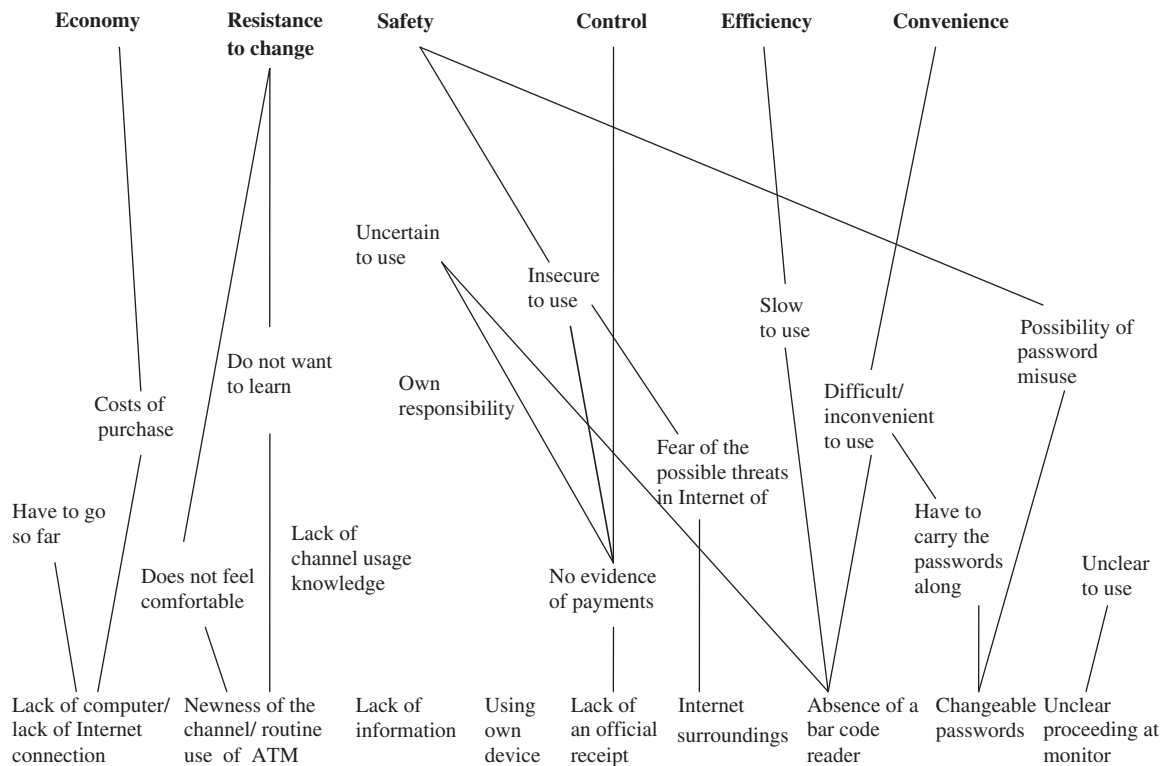


Fig. 2. Hierarchical value map.

“I am not sure that I know all the security matters. If I use a public Internet connection and leave some page open, then anything can happen.” (Respondent no. 1)

An official receipt seemed to be important for many customers, especially due to the proof it represents. Respondents did not consider it possible to receive a receipt easily and fast via an Internet channel. For these respondents a receipt received from ATM generates the feeling of certainty and security by providing a concrete evidence of a completed transaction. These consequences were strongly connected to safety value. An official receipt was also important for respondents who preferred having control over their expenses.

“I always keep receipts. You never know when you need them. I just have to have it. That is why I have to use an ATM.” (Respondent no. 8)

Internet surroundings are also considered unsafe by the respondents. Many respondents felt a risk of bank account misuse on Internet. It is worth noticing that these respondents were not afraid of making mistakes but simply felt the channel insecure. Further, a bar code reader was considered valuable by the majority of the respondents. It was argued to produce convenience and efficiency by making transactions easier and faster. Moreover, a bar code reader was claimed to ensure safety by reducing the number of possible typing mistakes.

“There are so many dangerous possibilities in Internet. And these possibilities are global. Hackers and some programs... And what if the connection breaks down?” (Respondent no. 21)

“It is just so easy to use the bar code reader. And fast. And you cannot make a mistake.” (Respondent no. 22)

Changeable passwords appeared to be a significant attribute generating resistance to Internet banking. Many respondents felt it inconvenient to carry the passwords with them. It was considered unsafe to use the passwords due to the risk of losing the code list and the risk of possible code list misuse. When compared to only one password needed at ATM, the respondents considered Internet banking both inconvenient and

unsafe. In addition, proceeding at the monitor was considered unclear in Internet banking. When compared to ATM the instructions were perceived to be difficult to follow.

“I think changeable passwords are the most important issue for me. I mean, you might lose them and someone might use them. But how can you lose the password you have at an ATM when you have it in your head?” (Respondent no. 22)

“It is so easy to proceed at ATM. It tells you everything. And it goes step by step.” (Respondent no. 7)

6. Discussion

Comparing the results of the study to the adoption barriers categorisation by Ram and Sheth (1989), similarities can be found. Many customers, who use ATM for their payment transactions seem to face the usage barrier perceiving Internet banking to be unsuitable for them. Similarly to Ram and Sheth's (1989) categorisation, usage barrier arises from concrete, functional elements of Internet channel. The lacks of an Internet connection, official receipt and bar code reader, and further, changeable passwords and unclear proceeding at the monitor are concrete causes of resistance to the channel.

Some customers seem to perceive no relative advantage in switching banking channel from ATM to Internet. Many seem to prefer the old routine of ATM use or consider Internet an unsafe, inefficient or inconvenient channel. Furthermore, Internet channel is perceived to increase responsibility for possible mistakes. Despite the advantages of the Internet channel, some customers seem to perceive no performance-to-price value due to the high purchasing costs of a computer and Internet connection. Unwillingness to use one's own device for banking, habitual usage of ATM and markedly negative attitudes and beliefs regarding the channel cause resistance due to psychological reasons. Furthermore, resistance often arises from the learning requirements of the new channel. These respondents seem to face the value barrier to adoption for both functional and psychological reasons and not only for functional reasons as Ram and Sheth (1989) suggest.

Many ATM customers also seem to face the risk barrier in the adoption of the Internet channel. Perceived risks are mostly economic and functional. The fear of possible misuse of changeable passwords; the fear of typing mistakes due to absence of a bar code reader and the perceived lack of an evidence due to lack of an official receipt are the most typical causes of perceived risk. The use of one's own personal computer as well as the lack of information about channel usage increase the feelings of uncertainty and also enhance perceived risk. Although perceived risk may focus on both functional and psychological elements, it seems to arise from psychological factors within the context and not from functional factors as Ram and Sheth (1989) suggest.

A strong tradition barrier and to some extent an image barrier also exist. Some customers seem to have difficulties in articulating the reasons for not switching the payment channel from ATM to Internet. It seems that these customers are reluctant to change the status quo or even to learn new ways of action due to habitual use of ATM. They also usually bear markedly negative image regarding new technology and they are against the trend of moving services onto the Internet. These customers perceive especially strong resistance to change. Similarly to Ram and Sheth's (1989) categorisation, tradition and image barriers seem to arise from psychological factors. Table 3 illustrates various barriers to Internet banking adoption.

Table 3
Barriers to Internet banking adoption

Functional barriers		Psychological barriers		
<i>Usage barrier</i>	<i>Value barrier</i>	<i>Risk barrier</i>	<i>Tradition barrier</i>	<i>Image barrier</i>
Absence of many concrete elements provided at ATM	Perceived insecurity, inefficiency, inconvenience, learning requirements and increased responsibility	Economic-perceived possibility of bank account misuse. Functional-absence of many concrete attributes provided at the ATM and lack of information	The habit of using ATM and strong resistance to change	Markedly negative attitudes and beliefs regarding Internet channel

As indicated by Ram and Sheth (1989), there seem to be both functional and psychological barriers causing resistance also in the Internet banking context. However, there seem to be psychological elements within most of the barriers. Some barriers are connected to Internet banking as a service and some are connected to Internet channel. Moreover, both consumer characteristics as well as communication characteristics may generate the barriers. Many of the barriers are connected to safety value, as expected. Convenience, efficiency, economy and control values are also seen to influence the resistance. In addition, resistance to change seems to be a major single value or a personality characteristic of a respondent generating resistance also to Internet banking.

7. Managerial implications

Resistance to innovations retards their adoption and requires the service providing companies to continue to provide the existing options in customer service. It also decreases the ability of the service providers to realise the full potential of their innovations. In the banking context, regardless of the financial benefits of using Internet, banks still have to offer ATM payment service in order to cater for the banking needs of those customers who are not yet ready to adopt the new channel.

The business logic for creating and launching Internet based services that make the service more efficient is typically to get it used as much and widely as possible. Therefore, understanding the phenomenon of resistance and carefully dealing with the aspects that can be overcome is important for the companies committed to realising the potential of the electronic channel. This is also the case with the banks; they are actively directing their customers into electronic channels by informing, offering better prices and real-time service that is not bound to time or place.

Understanding the rationale in resisting Internet banking is of value to companies by enabling the creation of tactics to implement the above-mentioned strategy. If lack of information, for example, is causing people to hesitate or resist Internet services, the company can launch a properly planned communications campaign to give information tailored to help in the situation. Understanding the nature of resistance, companies are also able to take this into account early enough when creating new service concepts.

The findings of this particular study suggest that banks can identify areas that have an effect on resistance to adopt Internet banking services. The concern regarding a physical receipt within usage barrier, for example, can be eased by informing the customers that the receipt from the Internet banking is “official” for e.g. the Finnish authorities. In addition, the feelings of insecurity and learning issues within value barrier could be avoided by proper marketing campaigns, communications, customer training and Internet banking design. Most of the issues identified seem to be achievable to influence with proper communications, and most of all, by providing good service in the Internet channel.

8. Limitations and future research

Due to the qualitative nature of the study the objective was merely to gain deeper understanding of consumer resistance to Internet banking. In order to gain full advantage of this study, a quantitative follow-up study based on the results is needed. Due to the observation of service and channel characteristics being interrelated, it also seems reasonable to examine resistance to other services and services within other electronic channels in order to better distinguish the resistance generating factors.

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