SST and the Consumer Behaviour in Portuguese Financial Services

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ABSTRACT

Financial services, especially commercial banking has been introducing new self-service technologies (SST), in the contact with customers, which allows the customer to accede service in an autonomous and timeless form. This paper discusses the behaviour of users and non-users of self-service technologies (namely, ATMs, call center/telephone, and internet) in Portuguese banking services. An empirical study was carried out by means of a questionnaire. Data were collected on 300 individuals, representing a sample, by region, gender and age group, of the Portuguese population, age 18 and over, and living in mainland Portugal. The results call for a user's profile and consumer's behaviour of SST. The SST users reveal a higher intention of repurchase, propensity to complain and higher price sensibility than the non-users. They are younger and middle-aged individuals, with a medium and high level of education. The main contribution of the paper is that banking managers that invest in SST may expect more sales (as a result of consumers with higher intention of repurchase), more opportunities of recovering the service (as a result of consumers with higher propensity to complain), but more price competitiveness (as a result of a consumer behaviour more price sensible). The paper put in evidence that SST use is not sufficient to determine consumer satisfaction and positive word-of-mouth, and it is not a barrier to bank switching.

Keywords: TSS (self-service technology), consumer's behaviour, ATM, internet banking, telephone banking, Portugal

JEL Classification: M30

1. INTRODUCTION

Banking was one of the economic sectors that early began the services automation. Technological innovations in banking services were an opportunity to differentiate in a mature market (Devlin, 1995). One of the most visible and client orientated technological innovations were the self-service technologies (SST) that includes the automated teller machine (ATM), call centers/telephone banking (TB) and internet banking (IB). These technologies can be used by consumers in an independent way, without interaction of an assistant or employee (Meuter *et al.*, 2000). Nowadays, banking automation service is indispensable, in order to obtain efficiency of to provide basic financial services. Without the technology, banks would be slow and inoperative concerning the actual demands, both in services processing and to the attendance to client's needs. This paper examines the impact on consumer behaviour resulting from the use of these SST in Portuguese banking services.

2. SST IN BANKING

Portugal disposes more than 11.400 ATM, where 63 million operations are carried out, on average per month (SIBS, 2007). The network offers a wide range of operations. Through telephone clients can accede to a call center to perform their operations. In the same way, via Internet, clients can accede to the sites of the banks and carry out almost all operations that they could to the balcony, or in the ATM. Studies accomplished by Marktest (Marktest, 2007) showed that in one month, Portuguese banking sites received more than 1.050 thousand visitors and the total time of navigation in Portuguese banking sites was nearly 621 thousand hours, what is equivalent to a daily average of 21 hours in total or 35 minutes per user, in that month. However, the privileged contact mean used by private clients in Portugal is the personal interface with the balcony (Marktest, 2006), in spite of this preference being decreasing. For example, between 2000 and 2004, a decrease from 85% to 76%, related to the use of the personal channel was verified (Marktest, 2006). ATM, the second contact channel with the bank, with frequencies of use, of 67% in year 2000, 73% in 2002 and 75% in 2004, was in 2006 considered the most used mean by mainland inhabitants, with 15 and more years of age, in order to contact their principal bank (80%). Preference for telephone contact had a decrease along the years, representing, respectively, 7% of the used contact means (2000), 6% (2004) and 3,2% (2006) (Marktest, 2006). Access via Internet registered the biggest growth rates of use. From 2000 to 2006, its use grew almost five times, passing from 4% to 18,9% overcoming 1,3 millions of users (Marktest, 2006). Albeit IB registered the greater growth rhythms whereas clients perceive its usefulness (Mols *et al.* 1999; Mols, 1999; Eriksson *et al*, 2005). TB is also

pointed as a channel in growth: in 1999 one in each five financial institutions clients (including banks) used call centers, and in 2004, it was expected that this ratio would alter to one in each three (Ahmad and Butlle, 2002).

Zeithaml and Bitner (2000) summarize some characteristics of the electronic distribution of services based in SST: standard services, client active participation, convenience, customizing (in spite of the difficulties to customize highly standard services), low cost, wide distribution, competition for the price (clients compare prices easily), possible lack of consistency in function of client's involvement, possible modification demand on consumer's behaviour, concern with security and major competition resulting from the increased geographic encompassing. Services based in SST highlight advantages and disadvantages to providers and consumers of these services. For the banks, the use of SST allows significant costs reduction, increases their efficiency and effectiveness. Kalacota and Frei (1997) estimate that electronic transaction processing costs less than six times, relatively to its manual processing. SST has become a critical component of the service, where approximately half of the transactions are performed by consumers in an autonomous manner (Lawrence and Karr, 1996). On the other hand, the more a service depends on technology for its production, the less contact between people will occur and therefore, it will be less characterised by means of heterogeneity of the service (Zeithaml and Bitner, 2000; Lee and Allaway, 2002). New technologies permit banks, as well, to achieve benefits associated to diversification of the accesses and contact points with the clients.

Several studies demonstrate that services based in SST aren't advantageous for all the clients. Grönroos (1990) sustains that the self-service success depends on the clients' level of involvement and the benefits that they perceive and that they should be rewarded and motivated to take part in the process. Bitner *et al.* (2000) show that the main advantage of the SST is to accede to service when and where the clients wish. There are other benefits perceived by clients: easiness of use, major convenience relatively to the alternatives, less spended time, cost savings, major control over service providing, major personalization, location convenience and amusement resulting from the technology use (Curran and Meuter, 2005; Ho and Ko, 2008). However, SST use may provoke anxiety and stress to consumers, in a way in which, some consumers feel some discomfort in services mediated by technologies (Mick and Fournier, 1998). According to Zeithaml and Gilly (1987), several consumers observe the service encounter as a social experience, preferring to interact with people rather than with machines. Some authors alert that SST may have negative repercussions in long-term relationship between the bank and the consumer, due to depersonalization of the service (Ricard *et al*, 2001; Proença and Silva, 2007; Proença and Silva, 2008).

Literature presents numerous facts that might motivate the SST implementation. Dabholkar (1996), Parasuraman (2000), Bobbitt and Dabholkar (2001), Kolodinsky *et al.*

(2004), Curran and Meuter (2005) and Berger (2009), summarize the variables that motivate the SST use: the control, the performance, the easiness of use, the non need of human interaction, the reliability, the speed, the usefulness, the smallest risk, the simplicity, or the own orientation of consumers to the convenience, for service, for technology, for change and for knowledge (namely of computers exploitation and of Internet). Cultural factors associated to consumers are also referred in the implementation and use of new technologies, for instance, habits, beliefs, customs and the level of uncertainty avoidance (Laforet and Li, 2005; Nilsson, 2007). Though, motivation can vary, in function of the technology type being used. Eriksson *et al.* (2005) highlight the usefulness of the Internet Banking (IB) use to consumer and Akinci *et al.* (2004) show that ATM, POS and Telephone use increases whereas clients are more confident and more change orientated, for knowledge and for computers.

3. CONSUMER'S BEHAVIOUR OF THE BANKING SERVICES AND SST

Several authors relate SST and the behaviour of the services consumer [see, for example, Rust *et al.* (1995) and later, Zeithaml and Bitner (2000)]. From the work of Rust *et al.* (1995), Zeithaml *et al.* (1996) discusses the relationship between quality of service and consumer's intentions. When the quality of service is perceived as superior, intentions are favourable. When quality of service is perceived as inferior, intentions are unfavourable. Alternatively, intentions will impact on behaviour, namely, in retention or desertion of consumers, consonant if they are favourable or not. Retention provokes a positive effect (profit increase, expense increase, *premium* price and reference to new clients), while desertion as a negative impact (expense reduction, sales decrease, clients' loss). Quality of service acts like a determinant of client's retention or desertion and the behavioural variables are indicators of client's retention or desertion.

The introduction of the SST offers banks the opportunity to improve the quality of the service and its convenience, what consistently with Al-Ashban and Burney (2001) provokes on consumer favourable behavioural intentions that, on the other hand, will turn into retention and into positive consequences for enterprises, in this case, for the banks. Mols (1998) points out that, SST users reveal more favourable behaviours than non-users. The variables of consumer's behaviours studied by Zeithaml *et al.* (1996) and later by Mols (1998) are six: satisfaction, propensity to complain, sensibility at price, propensity to change of bank, word-of-mouth and intention of repurchase. Following on, each one of these variables will be discussed.

- **Satisfaction**

Diverse authors have been investigating satisfaction and the relationship between satisfaction and consumer's behaviour, particularly, when this is influenced by new

technologies (LaBarbera *et al.*, 1983; Meuter *et al.*, 2000; Bitner *et al.*, 2002, among others). One of the forms, in which technology can contribute to client's satisfaction, is by means of the service customizing. Customizing takes place, when clients use technology to create services for themselves, according to their needs. The study of Meuter *et al.* (2000) explores client's experiences with self-service technologies and shows that the main factor, which induces client's satisfaction with SST, is the possibility to customize the offer. There are other benefits related to the SST that interferes in client's satisfaction, for example, the client producing and consuming service when and where it's needed. Mols (1998) points out that, users of PC banking in Denmark were more satisfied and more loyal to their bank. Bitner *et al.* (2002) shows that clients who use SST, enjoy convenience and easiness of access to services that these technologies allow. For instance, the POS´s e ATM's placed in gas stations allow clients to pay for the service without leaving the car. On the other side, damaged machines, internet pages in maintenance and non-recognized personal identification code, etc. generate dissatisfaction. When technologies fail and client's expectations are not accomplished, the consumer is obliged to use the conventional service, which causes dissatisfaction (Meuter *et al.,* 2000).

- **Complain**

    Client's complain can be negative for the enterprise, in consequence of dissatisfaction (Singh, 1988) or positive, given that they constitute an opportunity for improvement and service recovering (Zeithaml *et al.,* 1996; Levesque and McDougall, 1996; Mols, 1998). For Singh (1988), the complain behaviour of the consumer side is provoked by a dissatisfaction situation during a purchase and can be manifested in three forms: direct complain next to service provider, negative word-of-mouth communication (next to others) and the appeal to legal actions. Richins (1983) suggests that complain caused by dissatisfaction are inevitable and welcome, allowing the enterprise to correct the dissatisfaction's source. For Zeithaml *et al.* (1996), consumer's high trend to complain is related to the tendency of consumers satisfied with the service, in giving an opportunity to the enterprise to rectify the dissatisfaction's source. Without complain, one can not know what kind of problems there are, in order to do something to satisfy discontent clients. Levesque and McDougall (1996) consider that complain give to bank the possibility to turn dissatisfaction into satisfaction, recognizing that, when the service provider accepts the responsibility and solves the problem, the client becomes more loyal. Technology, for its turn, can develop an important role on the complain s flows, insofar as it can make them easier and encourage them (Brown, 1997). New technologies allow, in an easy and anonymous way, that dissatisfied consumers may bring to the bank's notice, the dissatisfaction, through an e-mail or simple telephone call, without leaving the place were they are.

- **Price sensibility**

Automation allowed banks to offer more economical operations, than the ones effectuated to the balcony. However, satisfied consumers are less price sensitive (Fornell, 1992; Zeithaml *et al*., 1996). Mols (1998) shows that the PC bank users are less price sensitive. I.e., the consumer may be receptive to pay for automated services and operations, since he/she recognizes them value. This makes the banks less vulnerable to price competition (Mols, 1998).

- **Propensity to change of bank**

This variable is related to the biggest or the lowest easiness that consumers have to abandon their current bank and change to a concurrent bank, considering that the more barriers exist, the more difficult will be the change. Theory suggests that SST can function has barriers to the change of bank (or banks), that one usually works with (Fornell, 1992). SST may demand time and learning, for this reason, consumers might be less disposed to change of bank, after dominating a determinate technology (Mols, 1998). The rates of satisfaction revealed by SST users are as well recommended by Fornell (1992) as a barrier to the change of bank. Accessibility, which attracts consumers can increase the number of transactions and the relationships between the bank and the consumer, it makes him/her also more captive, by creating barriers to the competitors (Ricard *et al*, 2001). In short, reasons of economical, psychological, technological order or related to the accessibility may represent barriers to the change of bank.

- **Word-of-mouth**

Positive word-of-mouth turns into favourable displays of service utilization, before others, including potential clients (Zeithaml *et al*, 1996). Fornell (1992) shows a positive correlation between the rate of satisfaction and the positive word-of-mouth, i.e., satisfied consumers are more inclined to express the preference for their bank and recommend it to others. In the same way, Parasuraman *et al.* (1988) or Goode *et al.* (1996) found a positive and significant relationship between the perception of the quality of the service and the recommendation of the respective enterprise. So being, SST users satisfied and enthusiastic with low costs, convenience, accessibility and others advantages of these services, are more predisposed to express positive comments to other people, when recommending the bank.

- **Repurchase Intention**

Repeated purchases throughout time constitute the wish of any organization. If the SST use represents to consumers, a positive valuable experience, they will continue on using these services. Service quality is on the basis of the satisfaction and this one determines behavioural

results, as word-of-mouth, complains, recommendations and supplier's changing. Meanwhile, different quality of service aspects and different consumer's features may be associated to different behaviours. Satisfied consumers will be able to be more loyal, in other words, they will be able to reveal high repurchase intention, will be able to be less price sensitive and will be able to demonstrate low propensity to change of bank, when compared with non-users (Fornell, 1992; Zeithaml *et al*, 1996; Mols, 1998). Similarly to what Mols (1998) proposed to the PC banking users, the SST users compared with the non-users, may be more satisfied with their bank, produce positive word-of-mouth, have high repurchase intention and present low sensibility at price.

4. THE RESEARCH

4.1 Objectives

This paper presents a research about the use of self-service technologies (SST) in banking services, namely, the effects of the automated teller machine (ATM), telephone banking/call centers (TB) and internet banking (IB). The research relates the use of SST with six dimensions of the behaviour of financial services consumer: satisfaction, price sensibility, word-of-mouth, intention to repurchase, propensity to change of bank and to complain, see Figure 1. The paper also discusses users and non-users of SST (ATM's, TB and IB), and shows the user and non-user profile, in terms of gender, age, education, income and occupation and at last, the identification of the most SST used, by clients.
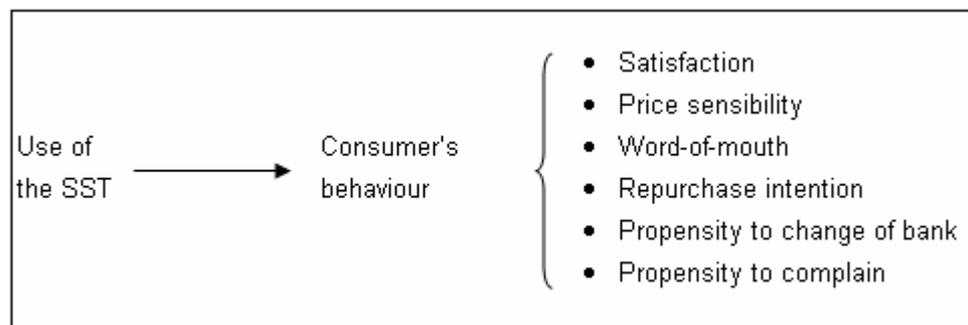

Figure 1.
The effects of the SST use in the banking services on consumers behaviour

4.2 Hypothesis

From the presented problem in the aforementioned question several research hypotheses can be formulated.

Accessibility in time and space, together with the possibility to customize service, provided by SST, contribute to a greater satisfaction of the client (Meuter *et al.,* 2000; Bitner *et al.,* 2002), in consequence SST banking users turn out to be more satisfied than the non-users.

H1: Clients users of SST turn out to be more satisfied with the service of their bank than the non-users.

The existence of a correlation is deduced between satisfaction and the word-of-mouth effect, that is, satisfied consumers reveal more predispositions to express, in front of others, their preference and the service recommendation (Fornell, 1992). The same positive relationship was found in the ATM (Goode *et al*, 1996) and PC banking (Mols, 1998) clients' users.

H2: Clients users of SST produce a positive word-of-mouth effect higher than the non-users.

Benefits provided by means of the SST, which in general, turns into greater satisfaction and value for the client, can generate a minor sensibility at price (Fornell, 1992; Zeithaml *et al.*, 1996). Mols (1998) shows that PC banking users reveal less sensibility at price, what can also be verified by ATM, TB and IB users

H3: Clients users of SST turn out to be less price sensitive than the non-users.

Facing complain as a positive factor for the enterprise, they are verbalized by satisfied clients, who want to give the enterprise an opportunity to rectify the dissatisfaction source (Zeithaml *et al.*, 1996). The same can happen with SST clients of banking services, that once, more satisfied can reveal higher propensity to complain.

H4: Clients users of SST reveal higher propensity to complain than non-users.

It is noticed that it exists in the SST users, a higher expenditure of time and investment on learning with the SST. This effort, together, with the biggest satisfaction rates (Fornell, 1992) and accessibility, attracts consumers and increases the number of transactions and connections between the bank and the consumer. These factors contribute to turn consumer more captive and to create barriers relatively to the competitors (Ricard *et al*, 2001).

H5: Clients users of SST reveal a less propensity to change of bank than non-users.

SST use adds value to the relationship with the consumers and represents a positive experience, which can turn the repetition of transactions easier, with the bank (Mols, 1988). In same cases, users will want, in the future, to do more business with their bank (Mols, 1998).

H6: Clients users of SST reveal higher intentions to repurchase than non-users.

4.3 Methodology

The study falls upon the Portuguese population that inhabits in mainland Portugal with more than 18 years of age. The research used a structured questionnaire and the sampling technique for quotas. This technique makes possible the control of the sample characteristics

and the population representativeness, despite of being of slow implementation and encompassing elevated costs (Malhotra, 2004). As control categories were selected the gender, the age and the region of residence. From the *Instituto Nacional de Estatistica* (INE, 2007) data, about the Portuguese population, 300 individuals were selected in the proportion of the inhabitant population in Portugal, in function of the 3 control categories: gender, age and region. See Table 1.

Table I:

The sample

Age	Region										Total Age
	North		Center		Lisbon		ALENTEJO		ALGARVE		
	H	M	H	M	H	M	H	M	H	M	
18 to 34 years	16	17	10	11	12	13	3	4	2	2	90
35 to 54 years	18	20	12	13	14	15	4	4	2	2	104
more than 54 years	18	20	12	14	14	15	4	4	2	3	106
Total Gender	52	57	34	38	40	43	11	12	6	7	300
Total Region	109		72		83		23		13		300

The questionnaire had as principal purpose the investigation of the behaviour of the user and non user of the SST provided by banking services. Additionally, it was attempted to know the socio-demographic characterization of these consumers of banking services. There were used scales and questions already validated by Zeithaml *et al.* (1996) and by Mols (1998), although adapted for this investigation. It was intended to evaluate the frequency, that the respondents use and the operations that they make through each one, of the technologies: ATM, TB and IB, as well as, to know consumer's behaviour, relatively to their bank, around six variables: sensibility at price, satisfaction, word-of-mouth, intention to repurchase and propensity to change of bank and propensity to complain. It was intended, yet, to know the main bank or the most used of each respondent individual and obtain their demographic data, namely, civil status, education, job occupation and income.

The questionnaire was tested in a group of people chosen by convenience what allowed one to make alterations to the preliminary version, namely, in composition, relative position of some questions and elimination of others. The questionnaire includes 11 questions and takes about 7 minutes to be fulfilled. Data collection was effectuated through telephone interviews distributed among the regions of the sample. Contacted homes by telephone were selected randomly, from a data base of telephone numbers of each district and region. At home, the individual, with bank account to be interviewed, was selected in function of the predefined quotas of age and gender. Control was made in two sequential phases. The first phase consisted on direct supervision of the process and the second phase, given the impossibility to follow all

the interviews, was accomplished at random, by contact to 30 respondents, i.e., to 10% of the respondents.

5. RESULTS

5.1 The sample and socio-demographic characterization of the SST users

The majority of the respondents are married and female. The level of studies of the men and women of the sample are predominantly at grade school and are inversely related with the age level. A significant number of respondents did not reveal the level of income.

Table 2 summarizes the socio-demographic information of the users and non-users of the SST. The existence of relationships among variables was analysed by means of the Chi-Square independence test, which allows the comparison of qualitative variables (ordinal and nominal) (Malhotra, 2004).

The analysis of data reveals that, in Portugal Mainland there is a significant relationship between the demographic variables like, age, level of education, occupation, inhabited region and the use of the SST. In other countries, demographic variables are not necessarily important, in related to the use of SST. It depends on the culture of the country (Nilsson, 2007). Although, literature mentions that men are the major users of the self-service technologies (Goode and Moutinho, 1995; Mols *et al.,* 1999; Akinci *et al*., 2004), data of this research shows that, both men ant women are SST users. Nevertheless, the non-users are, above all, of the feminine gender [there is no dependence among these variables (sig=0.128)]. The age group of 18-34 and 35-54 years utilises mostly the SST, which is consistent with Goode and Moutinho (1995) and Mols *et al.* (1999). Non-users are most of all, older individuals. Results demonstrate a significant difference between SST users and non-users, in terms of age (sig=0,000). Married or similar individuals constitute the most part of the users (49%). However, though the test highlights sig=0,525; it can not be stated that there is a significant difference between SST users and non-users at the level of the civil status. Individuals that have 12 years of schooling (College) constitute most of the SST users, and the non-users are especially, individuals with lower level of education (sig=0,000), what is in agreement with Goode and Moutinho (1995) and Mols *et al.* (1999), that identify the "well educated" as users of the self-service technology.

Table II.

Socio-demographic characterisation of the SST users

		STT				Pearson Chi-Square
		Non-user		User		
		%	N	%	N	
Gender	Female	13,3%	40	39,0%	117	Value=2,321 Sig=0,128
	Male	8,7%	26	39,0%	117	
Age	18 to 34 years	2,0%	6	28,0%	84	Value=41,651 Sig=0,000
	35 to 54 years	5,0%	15	29,7%	89	
	More than 54 years	15,0%	45	20,3%	61	
Civil Status	Single or similar	7,3%	22	29,3%	88	Value=0,405 Sig=0,525
	Married or similar	14,7%	44	48,7%	146	
Education Level	without schooling or incomplete grade school	3,3%	10	2,7%	8	Value=37,859 Sig=0,000
	Grade school	11,0%	33	20,7%	62	
	High school	5,0%	15	17,0%	51	
	College	2,0%	6	24,0%	72	
	Graduate school	0,7%	2	13,7%	41	
Occupation	Employee	3,0%	9	31,7%	95	Value=34,996 Sig=0,000
	Independent contractor (self-employed)	3,0%	9	8,7%	26	
	Businessman	0,0%	0	2,7%	8	
	Unemployed/retired or similar	15,7%	47	26,7%	80	
	Student	0,3%	1	8,3%	25	
Income	till €500	4,7%	14	11,7%	35	Value=5,217 Sig=0,266
	€501 a €1.000	4,0%	12	11,0%	33	
	€1.001 a €1.500	3,3%	10	12,3%	37	
	more than €1.500	0,7%	2	8,3%	25	
	Doesn't know or doesn't answer	9,3%	28	34,7%	104	
Region	North	8,3%	25	28,0%	84	Value=11,658 Sig=0,020
	Center	7,3%	22	16,7%	50	
	Lisbon	3,3%	10	24,3%	73	
	Alentejo	2,7%	8	5,0%	15	
	Algarve	0,3%	1	4,0%	12	

Note: adapted from SPSS

Finally, data show that the employees are the group that most uses SST. The non users are, essentially, unemployed/retired or similar and there is a significant difference between users and non-users, as to the developed occupation. As to income, of the respondents, the majority of users have higher income levels than non-users, but, data collected does not allow taking significant conclusions, due to the great rate of respondents that have chosen not to answer this question. Users of SST inhabit, above all, in the northern regions and in Lisbon. Curiously, the biggest rates of non-users inhabits, also, in the northern region and in the center of the country. The statistical test carried out, indicates a statistically significant relationship (sig=0,02) between the variables (SST use and region).

5.2 The SST user's behaviour

Characterization of the SST use

The most used self-service technology, in the banking services is the ATM, above all, by individuals of male gender. Those that less use ATM, are the oldest. The most effectuated operation is the raise of cash. The IB is the second most used SST, especially by younger male individuals. The most carried out operation in IB are consultations. The TB is less used. Their users are mainly men of middle age (35-54 years) that favour, as well the execution of consultations.

The SST user's behaviour

To study the relationship between consumer's behaviour and SST use, one used the bivariate correlation analysis, which determines the degree of association among variables. The extreme values (outliers) were eliminated to avoid distortion of the final results. The selected correlation coefficients were the Kendall's tau-b and the Spearman's, because they are non-parametric measures of association between variables, they only require an ordinal scale (which is the case), eliminate the effect of the outliers and (they) don't demand the knowledge of the distribution of the used variables. The relationship between the use of SST and the behavioural variables was analysed. The variable "use of the SST" (U_SST) represents the use of self-service technologies, through the respondents and was codified, with value 1 for the "non-users" and 2 for the "users". The behavioural variables had associated an ordinal measure scale and a range of values from 1 to 5, where 1 corresponds to total disagreement and 5 total agreement. For each one of the behavioural dimensions was determined the mean of their items, so, the behavioural variables started to be represented by their middle values (X_Word-of-mouth; X_Intention to repurchase; X_Sensibility at price; X_Propensity to complain ; X_Satisfaction and X_Propensity to change of bank). Correlation was determined between the behavioural dimension means, among each other and with the SST use. The research results are presented in Table 3.

Table III.

Correlation analysis between the SST use and the behavioural variables

Spearman's rho		X_Word-of-mouth	X_Intention to Repurchase	X_Price Sensibility	X_Propensity to Complain	X_Satisfaction	X_Propensity to change of bank	X_Use of the SST
X_Word-of-mouth	Correlation Coefficient	1						
	Sig.(2-tailed)							
	N	300						
X_Intention to Repurchase	Correlation Coefficient	0,563 (**)	1					
	Sig.(2-tailed)	0						
	N	300	300					
X_ Price Sensibility	Correlation Coefficient	-0,273(**)	-0,235(**)	1				
	Sig.(2-tailed)	0	0					
	N	300	300	300				
X_Propensity to Complain	Correlation Coefficient	0,051	0,139	0,09	1			
	Sig.(2-tailed)	0,377	0,016	0,118				
	N	300	300	300	300			
X_Satisfaction	Correlation Coefficient	0,596(**)	0,618(**)	-0,316(**)	0,273(**)	1		
	Sig.(2-tailed)	0	0	0	0			
	N	300	300	300	300	300		
X_Propensity to change of	Correlation Coefficient	-0,207(**)	-0,200(**)	0,220(**)	-0,048	-0,355(**)	1	
	Sig.(2-tailed)	0	0,001	0	0,41	0		
	N	300	300	300	300	300	300	
X_ Use of the SST	Correlation Coefficient	0,031	0,133(*)	0,248(**)	0,141(*)	0,05	0,072	1
	Sig.(2-tailed)	0,597	0,021	0	0,015	0,385	0,214	
	N	300	300	300	300	300	300	300

Notes: **Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed). SPSS

The coefficients Spearman and Kendal tau-b present similar values, however, Spearman coefficient was chosen, because it presents values, slightly more favourable. The results (see Table 3) suggest significant relationships between the diverse variables on study and are consistent with the literature (Fornell, 1992, Zeithaml *et al*, 1996; Mols, 1998). Consumer's satisfaction is positive and significantly correlated with the positive word-of-mouth, intention to repurchase and the propensity to complain ($p<0,01$). Between satisfaction and price sensivite and propensity to change of bank, was verified a negative and significant correlation ($p<0,01$). In this way, clients who are satisfied with their bank produce a positive word-of-mouth, have a higher intention to repurchase and a higher propensity to complain, when something goes wrong. Similarly to the study of Mols (1998), satisfied clients are less price sensitive and reveal a minor propensity to change of bank. The research also shows a positive relationship among the word-of-mouth and the intention to repurchase and a negative relationship between the word-of-mouth and the sensibility at price and the propensity to change of bank ($p<0,01$). A negative correlation was found between the intention to repurchase and sensibility at price and the propensity to change of bank ($p<0,01$), the opposite (positive relationship) is verified between the intention to repurchase and the propensity to complain ($p<0,05$). The research, shows a positive relationship between the sensibility at price and the propensity to change of

bank, in other words, clients more price sensitive display a higher propensity to change of bank (p<0,01). Finally, the results corroborate part of the study proposal, i.e., SST users reveal a higher propensity to repurchase (p<0,05) and a higher propensity to complain , when something does not run well (p<0,05). Relatively to the positive word-of-mouth and the satisfaction, the results of the study are consistent with the proposal, that associates the SST users to a positive word-of-mouth and a higher satisfaction, i.e., the correlation coefficient has the correct signal, however, it is not statistically significant (p<0,05). Results reveal the existence of a positive correlation, but not statistically significant between the SST use and the propensity to change of bank. In other words, this study shows that the SST use is not sufficient for getting satisfied and loyal clients, which therefore, can express positive word-of-mouth. Conversely to Mols (1998), this investigation shows that the Portuguese SST users are more price sensitive (p<0,01). The highest sensibility of the Portuguese consumer at price may be related to the biggest difficult of banks in differentiating their services, given that currently, every banks place at disposal SST, which in consequence, is not anymore a differentiating source, has happened before.

5.3 Discussion

Hypothesis 1 – Clients users of SST turn out to be more satisfied with the service of their bank than the non-users. There is a positive relationship between the use of the SST use and satisfaction (Rho=0,05). However, it is not verified, empirical evidence statistically significant, that relates variables (sig=0,385). Hypothesis 2 – Clients SST users reproduce an effect word-of-mouth more positive than the non-users –a positive relationship is confirmed between the SST use and the positive word-of-mouth (Rho=0,031). Nevertheless, a statistically significant correlation between the variables (sig=0,597) is not verified. Hypothesis 3 - Clients SST users are less price sensitive than the non-users – demonstrates an opposite relationship relatively to the expected one. There is a positive relationship between the sensibility at price and the SST use (Rho=0,248), which is statistically significant (sig=0,000), in other words, SST users are more price sensitive than the non-users. Hypothesis 4 –Clients SST users reveal higher propensity to complain to their bank, than the non-users – it is verified a positive correlation between the SST use and the propensity to complain (Rho=0,141) statistically confirmed (sig=0,015). The analysis of hypothesis 5- Clients SST users reveal less propensity to change of bank, than the non-users – it does not demonstrates a relationship (negative) between the SST use and the propensity to change of bank (Rho=0,072 and sig=0,214). Hypotheses 6 – Clients SST users reveal higher intentions of repurchase than the non-users – it is verified, since there is a positive and statistically significant correlation between the SST use and the intention to repurchase (Rho=0,133 and sig=0,021). Concluding, the research confirms two of the six suggested hypotheses. Discussion shows that the highest SST users' satisfaction is not sufficient to compete or to attract new clients, not even to construct barriers to change. However, the

SST's constitute an important channel for the complain flowing and helps in the recovering of the service. By the other hand, the highest repurchase intention displayed by users leads to the growth of the sales and the increase the profits for the banks. These results are divergent from the ones obtained in previous studies, formerly mentioned, which can be related with the maturing of the financial market: higher rivalry between competitors, more difficult innovation, where the SST's do not constitute more source of differentiation among banks.

6. CONCLUSION

The research discussed some dimensions of the behaviour of the SST Portuguese consumer in banking services. We showed that satisfied clients (with their bank) reveal a positive word-of-mouth, a higher intention to repurchase, a minor sensibility at price, a minor propensity to change of bank and a higher propensity to complain . The ATM, TB and IB Portuguese users reveal higher repurchase intention, propensity to complain and a higher sensibility at price. It was not possible to achieve a significant statistically relationship between the SST use and satisfaction, propensity to change of bank and positive word-of-mouth. From the six formulated hypothesis, solely, two are confirmed and remained obvious: (i) the relationship between the SST use and the higher sensibility of consumer at price; and that (ii) the SST use is not sufficient to satisfy and keep clients, in order, to originate a positive word-of-mouth effect. The paper, also, shows the socio-demographic profile of the Portuguese segment user of the SST. It was verified that in mainland Portugal, the SST use, does not register significant differences, in terms of gender, however, are the younger and the middle age people, with education at the 12th year level (or more) and employees who most utilize the SST, to carry out raise of money, deposits, consultation and other operations. The paper, confirms the literature about satisfaction (Fornel *et al*, 1996).

7. CONTRIBUTES FOR BANKING MANAGEMENT, LIMITATIONS AND FUTURE RESEARCH

It is important for managers to analyse, the impact of the self-service technologies on the consumer's behaviour in banking, given that the SST involve high investments and the clients interact more and more, with their bank, by means of these forms of contact.

The investigation showed the existence, of a strong relationship between client's satisfaction and several consumers' behaviours of the banking services. The satisfaction allows among other situations, a higher loyalty from the clients, what is consistent with Zeithaml and Bitner (2000) that showed that, the more time clients remain in the enterprise, greater will be the profits, lower will be the costs of serving them, higher will be the respective volume of

purchases, more easily they will tolerate a superior price and higher will be the positive impact of the word-of-mouth. A higher propensity of the satisfied clients, to complain, will give the bank a second chance to satisfy them. The study demonstrates that the SST use is not sufficient anymore, to determine the satisfaction of the client, the positive word-of-mouth effect, does not even constitutes a barrier to bank changing. In other words, managers that invest in SST may expect more sales, more opportunities of recovering the service and a more sensible consumer at price. Nevertheless, to promote the remaining behaviours, they will have to find other solutions.

The research presents some limitations, albeit the obtained results being representative of the Portuguese adult resident population, in the mainland. The study analyses the impact of the SST use, only in some dimensions of the consumer's behaviour. It would be interesting to investigate other dimensions. On the other side, solely three forms of contact were analysed between the consumer and the bank: ATM, TB and IB, that interests to compare with other forms of contact that meanwhile are emerging on the market. Future investigations should go through the removal of these limitations.

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