Exploring Rural Household's Adoption of SSTs (Self Service Technologies) with Special Reference to ATM's in Banking Industry

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1. Attitude
2. SST
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4. Industry
5. Rural household
6. ATM

Abstract

After the advent of self-service technologies, there has been a great shift in the way customers interact with the service providers. Any change is not considered worth unless it is usable, understandable and finally adoptable by the user (Dix 2001). It is a challenging and daunting task to educate and convince a customer to get used to the newer technologies that facilitate faster transactions, provide cost advantages to service provider. Many banking organizations at one point of time highlighted their SST capability as USPs for e.g.: Canara bank was the first to release mobile ATMs in India and SBI also claimed that it has the largest number of ATMs in India. Technological change can happen any time, in any form as it is imminent. If an organization doesn't accept change, then it may end up being the architect of its own decaying incompetent business model. Whenever an innovation yields it's' advantages should be disseminated and awareness has to be created so that anxiety and skepticism should not find their place in the minds of people (Langer and Saegert, 1977). When companies introduce self service technologies, they have greater challenge of communicating, comforting the consumer to accept the change. At the same time they should be able to successfully measure attitudes, behavioral intentions of people towards the technologies and focus on educating the segments that are not comfortable in using self-service technologies. This paper stands as window opener to analyze consumer adoption of self-service technologies by a conceptual model of attitude development by Davis, Bagozzi D Fred and Warshaw. Also this paper discusses installation of SSTs in rural areas and alternatives to extract more response to adopt SST have also been stressed.

INTRODUCTION

The self-service concept in businesses has grown in significance. Self service technologies play a vital role in reducing costs of an organization by facilitating automated interface between service provider and the customer. For example, Amtrak introduced telephone self-service by means of an IVR (Interactive Voice Response) system that allowed cost savings of $13 million; likewise, Royal Mail's IVR system led to a 25% reduction in its customer service costs (Economist, 2004). Once industry players learnt about advantages of SSTs, the rapid induction of same started happening in all streams of service delivery. This complicated the service encounter with the customers as sizeable segment of them didn't have required expertise to handle SSTs (Meuter et al. 2000). Examples of SSTs include Internet based services, automated hotel checkout, automated teller machines (ATMs), or mobile banking. Many studies have been conducted for technology adoption and Davis et al(1989), concluded from his study that attitude has a major influence on developing intentions for accepting technologies.

'Self-service' can be defined as any technologically mediated interaction or transaction with a company where the only humans involved in the experience are the customers themselves (Meuter M, Ostrom A, Roundtree R and Bitner M, 2005). In recent times, public have been exposed to technological products such as ATMs, kiosks, and personal computers. For instance, an individual may form an attitude towards computers based on his observation of other people's computer usage rate. More studies on attitude have provided insight as to why some consumers do (and do not) adopt SSTs. It is obvious if consumers don't form favorable attitudes; they will be placing themselves far from the technology based self-services and may feel neglected. If a consumer has already experienced the technology before trying first hand experience offered by service provider, he would definitely adopt the technology (Dickerson and Gentry, 1983; Korgaonkar and Moschis, 1987). Even exposure to good or positive word of mouth also plays a positive role in getting a user near to the technology. Adoption is all about accepting the technology as harmless and developing a sense of trust and positive feeling towards using it without associating some kind of risk with the technology. However the study takes a rural SST adoption view where the perceived risk

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element has a major role to play in case of rural areas as they have to be dragged out from their conservative mindsets with the help of well planned market campaigns. As it takes large scale of investment time and money to design, implement and manage the self service technologies, the firms need to understand the consumer intentions and ensure that there will be a pleasant service experience at the first encounter. Service provider should develop a smart way of educating people about advantages by getting the best of technologies. It is important to note that large numbers of users subscribing for the SST can not be read as overall success of a SST implementation and consumer adoption. This figure might be very evident in urban areas but not rural areas. Real India lives in rural sector and as per the balanced regional developmental policy laid by Government of India, the real development should happen in a geographical area where collectively if calculated large amount of people of a country live. The problems or gaps occur when the connectivity issue between the consumers and the service providers start taking a dark and complex shape that finally fetches zero returns to the service providers over investment on the self service technology. The thought connection between two communities can happen only when the service provider gets the knowledge of the rural people's attitudinal formation as well as different patterns on SSTs. If there is a perfect thread of understanding about relevant consumer attitudes driving the intentions to use SSTs, firms will be in a better position to achieve SST implementation goals and objectives. The households and rural community in the present situation retain lot of barriers such as negative frame of mind on technology. These barriers have to be countered with good penetration plans by the service provider.

OVERVIEW OF RURAL INFRASTRUCTURE

Rural infrastructure stands as a key to propel faster growth for the country. Better connectivity of the geography leads to increased market accessibility for industries and balanced regional development can be expected in these situations. The other factor that links rural infrastructure with the economic growth is poverty alleviation and human development. If rural areas are well connected through roads, then companies can think of investing in these areas and many SMEs also can be encouraged. These are some of the basic needs for a geographical region's eligibility to get synergized in a development wave. Business activities cannot take off unless these above mentioned points are taken care. Providing infrastructure facilities is not the key for development, but rural households should be able to use the infrastructure for improving their income and consumption should happen for example, having individual electricity connection to all households, ability to make phone calls and use roads for motorized transport. According to (Jocelyn Songco, 2002), rural infrastructure investments will benefit the rural poor by getting their incomes increased and helping them to consume more thereby stimulating and mobilizing the dead consuming mechanism. If infrastructural importance is neglected, the gap will widen between poor and rich in rural areas. Many empirical studies around the world have published the findings of close relationship between infrastructural investments and economic growth. According to World Bank sources, 1 percent increase in infrastructure stock is directly related to 1 percent increase in GDP across all countries. At the same time market access has an inverse relationship with travel time, which can be reduced through improvements in road networks. Broadly speaking, rural infrastructure development propels the growth cycle faster by,

Creating better access to employment and providing further earning opportunities;

Creating access to previously inaccessible commodities and services;

Saving time, that can be better utilized in productive activities;

Better health and physical conditions of the Region.

The key point is all about whether the technology is perceived as an attractive experience for the customer or whether it detracts them from overall service experience. If companies ignore this point, customers may feel free to withdraw their business transactions entirely. Gartner states that 68% of customers usually leave a service provider incase of a dissatisfactory service encounter, therefore by simple mistakes, competitors benefit using the weakness of the strong player.

OBJECTIVES

The main subjective of the paper focuses on exploring rural household's attitude development on self service technology. The sub objectives revolve around analyzing the approach made by different scholars to measure the attitude development on SST. An attempt to link adoption of self service technologies by rural people and economic development has also been made by providing overview of rural infrastructure and importance of infrastructural projects in catalyzing economic development.

LITERATURE REVIEW

In literature review we shall start with an introduction of technology acceptance and rejection percentages among

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world communities then percolate to core issues. A study by Jupiter Research (cited in Bailor, 2005) found in UK that only 52% of customers are satisfied with self-service experiences. One of the chief reasons was, over 80% of calls to contact centers were common questions or standard problems. However, studies have shown that self-service does not replace the contact centre but in some cases supplements it. Understanding SST would be a harder task for rural people. A technique applied in this context as a remedy is persona design for eg: Jenni by Yahoo Corporation is a computerized speech recognition system with a human touch (virtual female character) with bio data; age 24 years, height 5.5 ft and even her Zodiac sign Leo.

PERSONA DESIGN IN ATM'S

A persona is an imaginary person who can be used in the process of designing a self-service application. A persona will have all the characteristics of a human being such as a name, age, gender, job title, accent, and even humor. According to (Schiffman and Kanuk, 2007), right brain is active in capturing visual aids and left brain is active in capturing the literature communication, here in case of rural consumer, the best way of personalizing technology is to introduce a persona or animated character that will guide these consumers in a local language instead of points display. The fun element from (Dabholkar, 2003) can also be made use in building a system that becomes rural customer friendly in a first encounter. There can't be a second word about self-service being hugely successful. SSTs have provided such a convenient platform with 70% of all cash withdrawals in the UK in 2003 were through ATMs, amounting to a staggering £144.4 billion in cash (APACs, UK Payment association, 2006). Kiosks have become a real success story for some companies, just as ATMs have been for banks. But the success in Indian rural scenario has to be experimented with the help of rural people's attitude development.

Davis, Bagozzi D Fred and Warshaw in the year 1992 constructed a model (Fig 1) that links the degree to which users think the system is easy to use and also believe the system is useful. This predicts the user's attitude towards the system and the likelihood for them to actually use it.

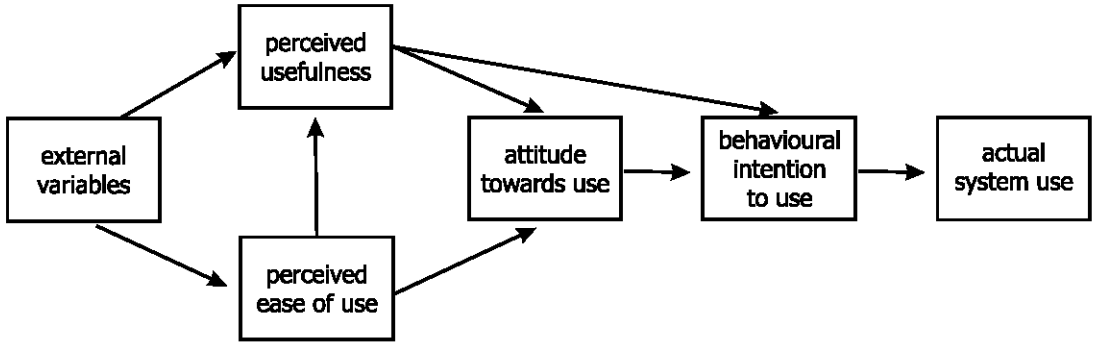

Diagram 1 : Model of Attitudinal Development by Davis, Bagozzi D Fred and Warshaw

The above diagram explains the sequence of decision making in the minds of the targeted or prospective user. The research scholars have used perceived usefulness and perceived ease of use as external variables that help an individual's mind to trigger an array of decision making activities that in turn gives rise to attitude development on a technology. After developing an intention to use the technology, it will be adopted by an individual. Overall the benefit points from self-service may be pointed where technology is good at boring customers handling repetitive tasks but on the other side humans are good at empathy, relationship building, complex problem solving and creativity.

Marketers face challenges at one point where we all know that consumers differ in their preferences it may be demographic, psychographic profiles or by personality traits. Many researchers such as (Darian 1987; Eastlick 1993; Fram and Grady 1997; Stevens, Warren, and Martin 1989) have contributed in the field of demographic factors relevance to technology based self service and they came out with findings depicting young, affluent, educated males are more likely to use SST options. But in recent days, women, older consumers, the less educated, and the less affluent have access to same level of SSTs and also they have become familiar. McMellon, Schiffman, and Sherman (1997) separated older consumers into technology lovers and technology users to understand online behavior. Like other researchers (Barczak, Ellen, and Pilling, 1997) divided banking consumers into security conscious, maximizers, instant gratifiers, and hassle avoiders to understand their

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preferences for ATMs, automatic deposit and withdrawal, and telephone banking. Overall, psychographic studies have provided insights to marketers with possible consumer segments. But they may not go far enough in understanding underlying consumer motivation. There, concept of self-efficacy comes into light and is defined as an individual's assessment of his or her ability to perform a behavior. According to (Bandura 1977), experience is the main factor as it is based on performance accomplishments to produce higher, more generated and stronger efficacy expectations.

The concept of customer segmentation has been helping companies to know the diverse needs of their different customers. A study by the Future Foundation (Howard M & Worboys C, June 2003) identified three broad groups that were primarily motivated by different factors to deal with companies:

Table 1 : Groups motivated by three different factors

Sr. No.	Groups Segregation	Preferred By
1	Speed	More males, younger, most likely to choose the Internet
2	Human contact	More middle aged, prefer telephone or face-to-face
3	Control	More female, older, more positive than other groups about using kiosks, although primarily use the telephone.

The key issue is to decide on self-service options offering to these customers. Consumer perceptions of self-service technologies are colored by many things. Expectations, previous encounters, emotional state and all have a strong influence on their thought of using self-service systems. It is also said that successful service providers must be able to relate the technology with the personal aspects of service delivery (Berry LL, 1999). Adding to that, (Meuter et al. 2005 and Dabholkar, Bobbitt, & Lee 2003), have made significant contribution on post SST usage behavior. In a typical business environment customer satisfaction is a major driver of customer retention and profit, waiting time is always a crucial factor which adds to customer's experience (Davis and Vollmann 1990; Tom and Lucey 1995).

CONCLUSION

Despite large presence of self-service technologies there has been a lack of research on consumer attitudes and adoption of SSTs (Weijters et al., 2007). There are few studies that have probed into perceptions towards the use of SST among different age groups. But using self-service machines essentially requires behavioral change on the part of consumers. As the literature review provides a clear window opening towards the external variables like perceived ease of use and perceived usefulness. In the model presented by (Bagozzi, Davis and Warshaw, 1992), the measure of perceived usefulness and ease of use has to be measured as these variables have to be analyzed in formation of attitude. Even researchers (Igbaria and Parasuraman, 1989; Kay, 1993) have classified the types of anxiety such as, fear, apprehension, and expectations people feel when considering possible or actual use of computer technology and interestingly anxiety influenced by technology adoption is stated as negative state of mind about technology tools (Meuter et al. , 2003). There are four factors that affect attitudinal development of people towards technology. They are optimism, innovativeness, discomfort and insecurity where optimism and innovativeness are considered as the positive drivers of technology adoption encouraging customers to use technological products/services and to stick on a positive attitude toward technology, while discomfort and insecurity are negative drivers, making customers reluctant to use technology.

(Ziefle & Bay 2005) compared young age 20-35 and old age 50-64 consumers groups to measure difference in their interacting pattern with technology by testing their ability to learn and perform certain tasks on both simple and complex mobile phones. They came out with the findings that significantly lower percentage of the older age group was successful in accomplishing the assigned tasks and older adults required longer time to complete the tasks (on average, nearly double the amount of time spent by the younger age group). The inference can be drawn that, based on prior encounter with technological devices; older consumers may have less confidence than younger consumers in using SSTs. So, the question of training or making rural elder class technology friendly is out of context but instead, there is a larger segment of young age group that falls in 20 – 35 category (NCAER, 2007) can be targeted to induce technological service consuming behavior. As present young generation gets older, slowly the transactions would be mastered and passed on to the younger generations and trust element would definitely escalate and will get stabilized on technology. The younger generations will walk on the foot steps of their adults. As we

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need phases to complete SST adoption process in the rural geography, it takes time for generations to adopt SSTs. Once there is a technology friendly environment exhibited by all the rural community in the area, the adoption of the SST can be treated as complete.

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