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# Self-Service Technologies (SSTs) in small towns of India: A study in Doom Dooma town, Assam (India)

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## Abstract

**Keywords**

*Self Service
Technology,
Service
Marketing,
Customer satisfaction,
Internet.*

*In present day business world, the ultimate aim of any business company is customer satisfaction. It is because a satisfied customers is a sign of good business prospect for service providers. So, with regard to customer satisfaction every possible options are taken to bring and increase customer satisfaction and SST stands highly among them which is one of the vital subject of Service Marketing. It is because SST enables to provide advanced form of services to the customers. And no doubt it is happening due to the infusion of technology.*
*This paper tends to have an overview and analysis of how SST is becoming a vital tool of enhancing customer service facilities in this competitive business world. And what are the factors influencing SSTs and its effects.*

## Introduction

The infusion of technology is dramatically changing the nature of service which has been traditionally used by service providers. Technological innovations has brought a revolution in the field of Service Marketing, and Self-Service Technologies is a great example of it. Self-service technologies (SSTs) are increasingly changing the way customers interact with firms to create service outcomes. By providing a self-service solution it is very easy to settle transactions with customers instantly and comfortably and thereby enhance the customer relationship. These technology based interactions are expected to become a key criterion for long-term business success.

**Self-Service Technologies** (SSTs) are technological interfaces allowing customers to produce services independent of involvement of direct service employee. Self-Service Technologies are replacing many face-to-face service interactions with the intention to make service transactions more accurate, convenient and faster.

In other words, it refers to services that are performed by customers themselves using various types of technological innovations, such asfor e.g. banking via automated teller machines (ATMs), online banking, phone banking, Internet shopping, Internet information search, automated hotel checkout, automated car rental, automated airline ticketing and check-in , self-scanning at stores or in libraries, package tracking, automated gambling machines, and pay at the pump terminals, only to mention a few. They represent an alternative way of service delivery using innovative technologies for complementing or even replacing personal services.

## Objectives of the study

i. To study the awareness level of SST'sin rural areas of Assam.
ii. Tu study the factors influencingrural customers which are making them 'choose' or 'not to choose' SST's.
iii. To know in which category of services SST is more preferred by the customers of the study.

## Methodology

i. **Sampling unit**: The sampling unit of the study consists of 200 respondents, and all the respondents are of age group above 18 years which were mostly students, service holders and businessmen including male and female.

ii. **Data collection method:** To address the objectives of the study, the data collected are primary data by serving *questionnaire* to the respondents as the instrument of data collection and no secondary data was being followed to collect answers to the questions of the questionnaire in the study.

iii. **Data analysis:** The results obtained are analyzed by showing in respective tables more simply understandable.

## Classification of SSTs

In **Figure 1**shows us the four categories of SSTs, under each category there is many different SSTs. This table help us to understand the definition of SSTs and how we can chose them regarding to interface, purpose, private and public interaction.The columns of the matrix represent the types of technologies companies are using to interface with customers in self-service encounters. The rows of the matrix represent thepurposes of the technologies from the customer perspective—what the customer can accomplish by using the technology.The types of technology interfaces (the columns in Figure1) include telephone-based technologies and variousinteractive voice response systems, direct online connectionsand Internet-based interfaces, interactive free-standingkiosks, and video or compact disc (CD) technologies. Sometimesthese technologies are used in combination. For example,a company provides a CD that enables a customer toreview products or services and then link directly to a Website for more information or ordering. Similarly, a customermight buy a mail-order item through an automated telephonesystem but then track the delivery time for the packagethrough a Web site that provides automated packagetrackingcapabilities.



**Figure 1**

*Source:***Matthew L. Meuter, Amy L. Ostrom, Robert I. Roundtree, & Mary Jo Bitner,** *Self-Service Technologies: Understanding Customer Satisfaction with Technology-BasedService Encounters***, Journal of Marketing Vol. 64 (July 2000), p52**

## Factors influencing adoption of self-service technologies

### Perceived risk

Kim *et al*. (2009) studied the perceived risk and risk reduction in purchasing air-tickets online. They included risk dimension variables derived from the literature to date including performance risk, security risk, financial risk, physical risk, psychological risk, time risk and found that security risk was of primary importance. This finding is similar to previous research which found that payment and privacy security appeared as a major risk factors in Internet shopping settings *(Forsythe and Shi, 2003; Cases, 2002; Liebermann and Stashevsky, 2002).*

### Consumer's perceived control:

The **consumer's perceived control** associated with a technology based Self-service is another factor which has been shown to influence the adoption of SSTs. It refers to the amount of control a consumer expects to haveover both the process and the outcome of a service encounter, and is therefore a factor that is intrinsicallyimportant to potential adopters.

### Trust in technology

Another SST related factor, namely **trust in technology**, has to be mentioned, since it seems to capture the uncertainty related factors mentioned above. It has been proposed to be important for consumers to adopt Internet based services. *Kim and Prabhakar (2004)* show that trust in the Internet has a positive influence on the adoption of Internet banking. Carter and Bélanger (2005) investigating the adoption of e-government services find that trust in the Internet is a significant predictor of the respondents' intention to use these e-services.

### Computer experiences

The lack of computer experiences seems to inhibit customers to adopt Internet banking. Customers with higher levels of experiences with technology based products and services are more likely to try Internet and IVR (Interactive Voice Response) based SSTs than those with less experience in the study of *Meuter et al. (2005).*

### Consumer Readiness

Consumer readiness consisting of the three dimensions role clarity, ability, and motivation. In this approach, self-service customers are regarded as partial employees, since they take over the tasks of the service employee in case of SST use.

• *Role Clarity:* It refers to the customer's understanding of what functions are required, what to do and how to do it.

• *Motivation:* the customer's perception that there is the customer's perception that there is a benefit in using the SST (compared to other alternatives).

• *Ability:* the customer's self-confidence that he/she possesses the skills and has the necessary equipment to use the SST.

*Meuter (1999) and Meuter et al. (2005)* show that the consumer readiness dimensions do not only mediate the impact of several innovation attributes and individual differences, but also that they outperform those factors with regard to predicting the consumers' first trial of an SST, which is one stage of the adoption process according to *Meuter (1999).*

### Effects of self-service technologies

The effect of SSTs can be positive or negative depending upon various factors as some of them are discussed above. Some important effects of Self – Service Technologies are discussed below:

### Effect on Customer Satisfaction

As expressed by *Gerson (2001),* customer satisfaction originates from customer expectations.Customers' expectations in service, for examples: speed, security and ease of service. Manual service may be hectic due to that is inevitably slow. Thus, there is a gap between the expectations and reality of service received by the customer. Self-service technology is actually the answer to fill that gap. Customers who want speed service at a competitive cost would be very grateful in responding the application of self-service technology and thereby enhance customer satisfaction.

### Effect on Customer Loyalty

Once the customers are satisfied, it's hardly far enough to gain their loyalty.*Wallace et al. (2004)* stated that groove interactions doubles, including transactions carried out in self-service media, has been shown to lead to positive disconfirmation, which in turn was found to lead to increased satisfaction and loyalty.

**Cost and time savings**

SSTs is a cost and time saving factor both for the customer and the service provider. Avery common example to explain this effect is Banking Self Service facilities, nowadays people well acquainted with Self-Service Technologies are not seen standing in a long queue in the bank branch counter rather they either visit an ATM spot and get their task done or they open the specific mobile app in their mobile and get their work done by themselves as per their convenience. So the result is that lots of time is being saved for both customer and the service provider, which time can be utilized in some other vital task.

**Relationship Building**

Automation of services will surely play an important role in providing services instantly, smartly and efficiently but that kind of interaction can afford tobe transactional only rather than relational. This is because automated transactions are in indirect form in which customers and service providers do not come into personal contact. Now this can be an issue in relationship building with the customers because direct contact with the customers are more convenient and flexible in building a valuablerelationship with the customers than the automated interactions. Thus, improper adoption of SSTs by the service providers may have negative impact on relationship building. Although, this can be avoided through well planned and customer centric automated services.

## Data analysis and interpretation

**1.      Are you aware of Self Service Technologies (SST)?**

**Table 1**

| Response | Respondents | Total No. Respondents | Percentage (%) |
|---|---|---|---|
| Yes | 182 | 200 | 91 |
| No | 18 | 200 | 9 |

*Source: Primary*

**INFERENCE:** From the above given data in *Table 1.*it is evident that the awareness of SST's in the study area is quite strong as 91 % of the total respondents are aware of SST's. The fact can also be understood from the *Diagram 1.*shown below.

**Diagram 1**



10
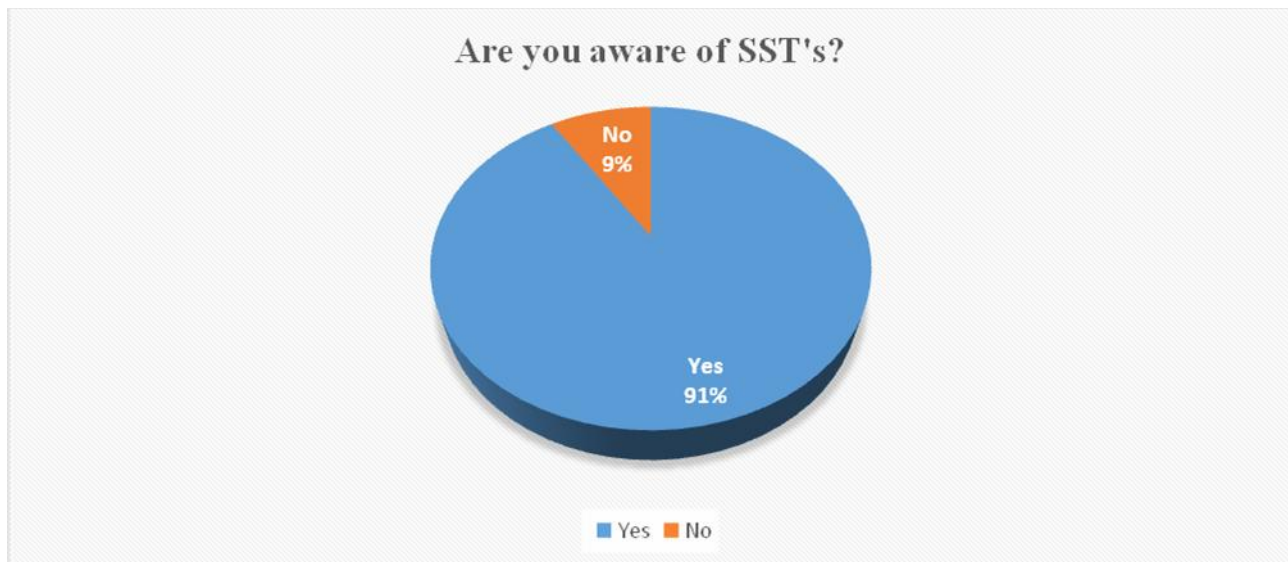
## 2. Are you using SST's?

**Table 2**

| Response | Respondents | Total No. of respondents | Percentage (%) |
|---|---|---|---|
| *Yes* | *161* | *182* | *88* |
| *No* | *21* | *182* | *12* |

*Source: Primary*

**INFERENCE:** From among the respondents those who are aware of SST's i.e. 182 respondents, 88% of them are using SST's. Since, majority of the awared respondents uses SST's, thus the SST's user level of the study area is high, which is clear from the data shown in *Table 2.* The fact can also be understood from the *Diagram 2.*shown below.

**Diagram 2**
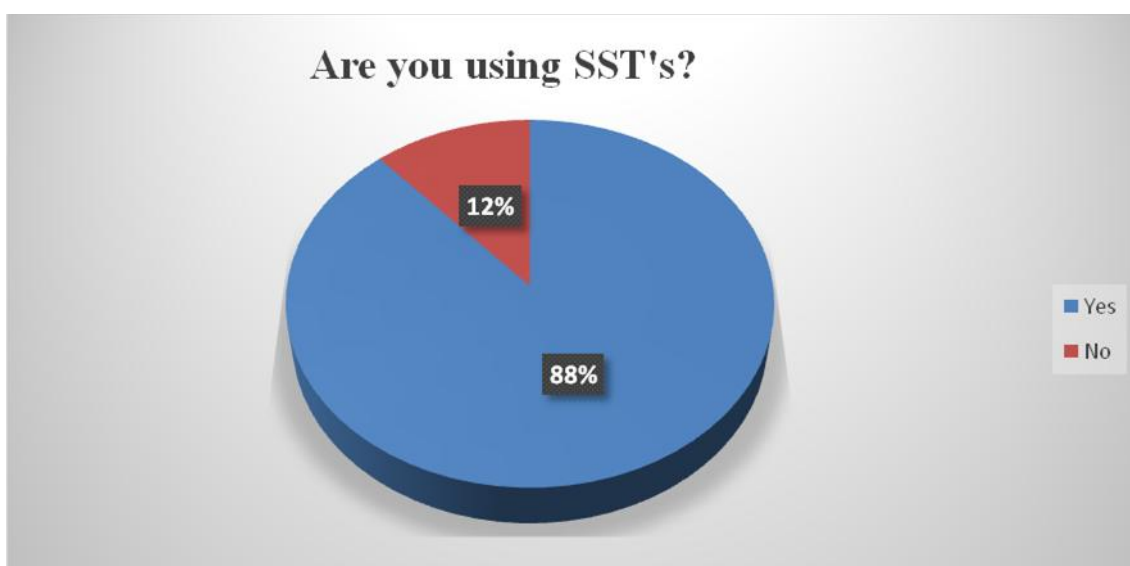


### If yes, how is it influencing you?

**Table 3**

| Factors | Respondents | Total No. of respondents | Percentage (%) |
|---|---|---|---|
| *Instant access* | *154* | *161* | *96* |
| *Time Saving* | *146* | *161* | *91* |
| *Wide range of options* | *135* | *161* | *84* |

*Source: Primary (Each factor is considered independently with respect to total respondents.)*

**INFERENCE:** From the data presented in *Table 3*it is evident that all the factors considered as the influencer of SSTs which influences the customers to go for SSTs. All of them seems to be effectively influencing the customers as 80% above (with respect to each factor on an average) of the respondents have responded that all three factors considered have influenced them greatly. Still from among the three the Instant access factor tops the list as 96% of the respondents have ticked on it, followed by Time saving factor with 91% of the respondents and Wide range of options with 84%. The fact can also be understood from the diagrampresented below.

**Diagram 3**
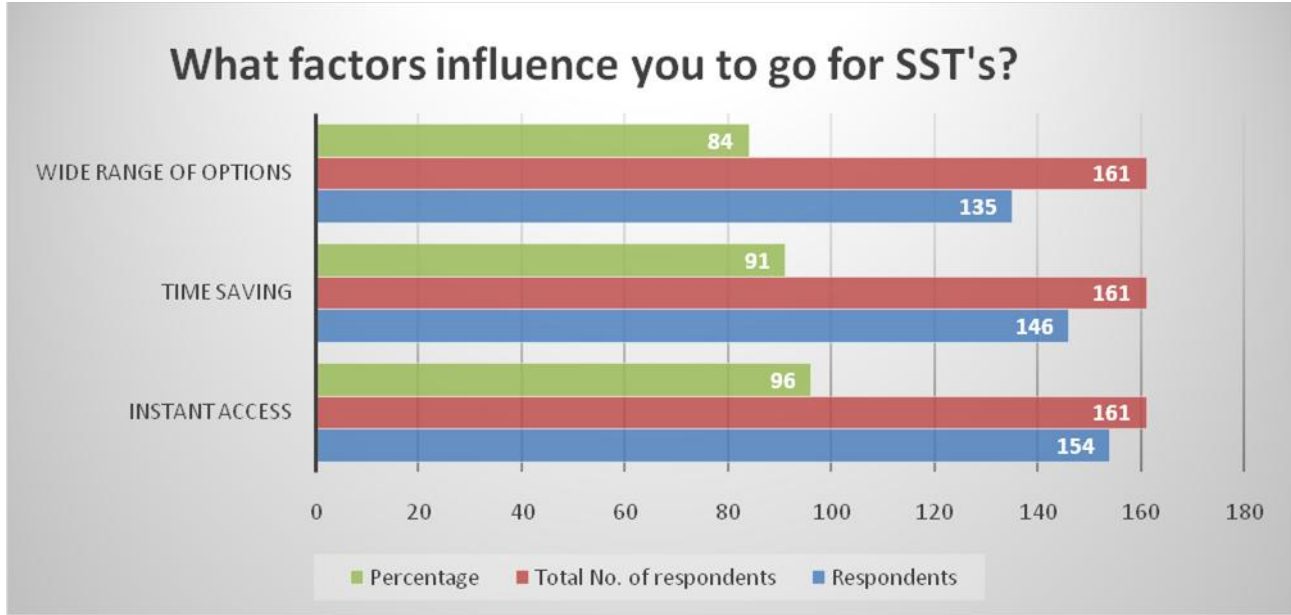


**If no, why?**

**Table 4**

| Factors | Respondents | Total No. of respondents | Percentage (%) |
|---|---|---|---|
| *Perceived risk* | 19 | 21 | 90 |
| *No computer experience* | 16 | 21 | 76 |
| *Complex Procedure* | 18 | 21 | 86 |

*Source: Primary (Each factor is considered independently with respect to total respondents.)*

**INFERENCE:** From the data presented in **Table 4.** it is evident that 90% of the respondents of the study area those who are not using SSTs is mostly due to *perceived risk* involved in it in the form of performance risk, security risk, financial risk, physical risk, psychological risk and time risk, that is again followed by the factor '*Complex procedure*' involved for using SSTs which 86% of the respondents ticked from the list. And lack of computer experience i.e. no knowledge of using computer also happens to be one of the major factors which 76% of the respondents not using SSTs have given. The fact is also presented in **Diagram 4.** given below.

**Diagram 4**
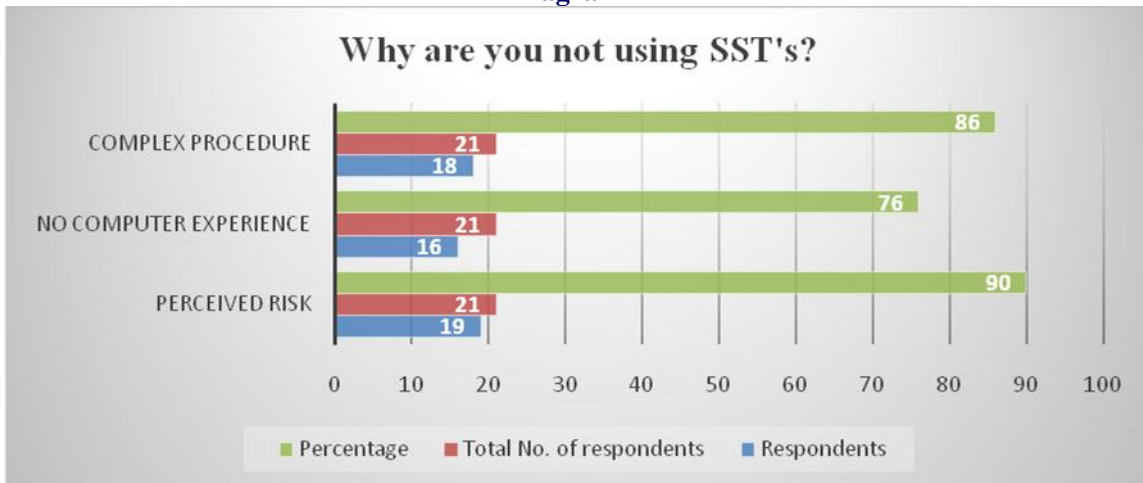
**3.**     **If you are using SST's which categories of SST's you are using most?**

**Table 5**

| Factors | Respondents | Total No. of respondents | Percentage (%) |
|---|---|---|---|
| Banking Services | 156 | 161 | 97 |
| Online shopping | 147 | 161 | 91 |
| online ticket booking *(movies, games, travelling etc)* | 146 | 161 | 80 |
| online hotel room booking | 95 | 161 | 52 |

*Source: Primary (Each factor is considered independently with respect to total respondents.)*

**INFERENCE:** Data presented in *Table 5* shows that 97 % of the respondents using SSTs uses SST for availing banking services, followed by 91 % of the respondents uses for *Online shopping*, which is followed by 80 % of the respondents using it for *online ticket booking* and only 52 % of the respondents use it for *hotel room booking*. Thus, it is clear from the data presented that majority of the respondents using SSTs uses it for availing banking services most followed by online shopping and ticket booking. The fact is also shown in *Diagram 5*.
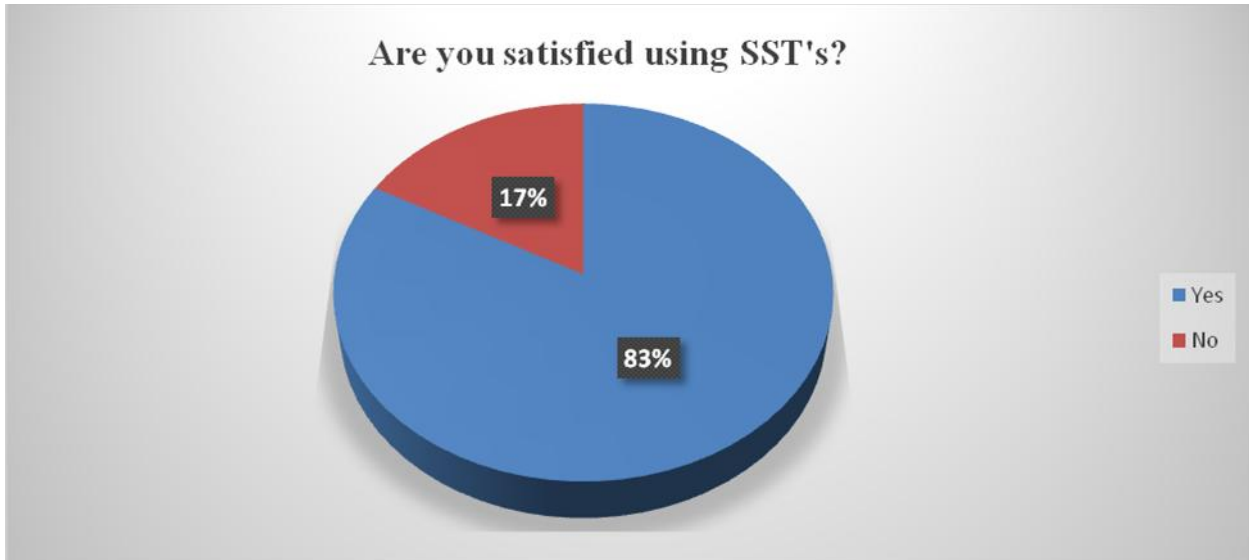
**Diagram 5**
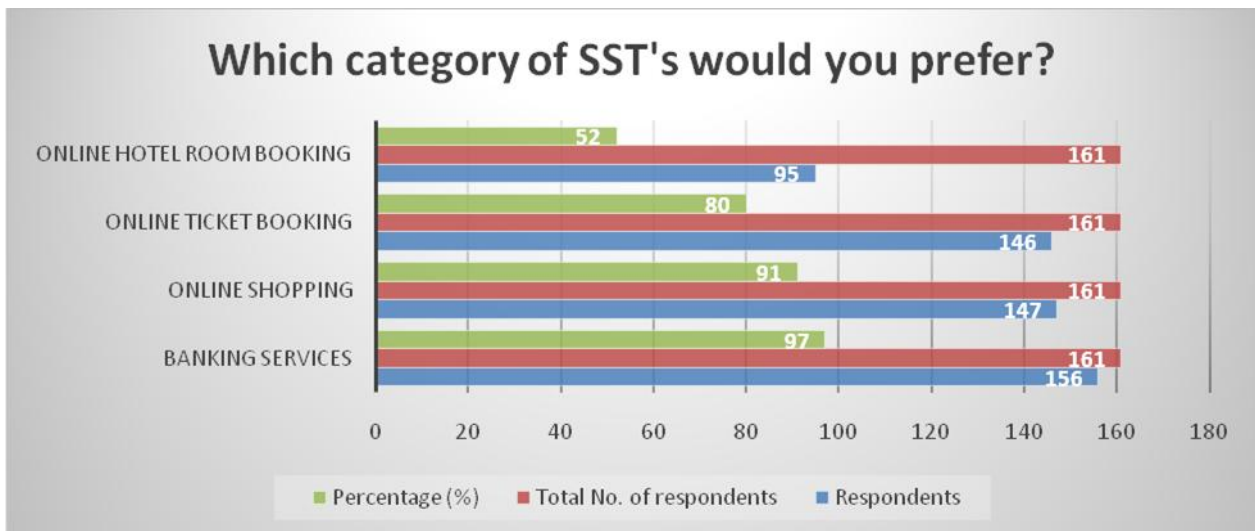


**If you are using SST's, are you satisfied with it?**

**Table 6**

| Responses | Respondents | Total No. of respondents | Percentage (%) |
|---|---|---|---|
| Yes | 133 | 161 | 83 |
| No | 28 | 161 | 17 |

*Source: Primary*

**Diagram 6**



**If not satisfied, then why? (Give your own reasons)**

*Since the respondents were asked to give their own reasons, some of the significant reasons given by the respondents were sorted out as follows:*

i. Increases the task of the users.
ii. Creates confusion sometimes.
iii. Lack of versatility as everything is automated.
iv. Useless when server is down.

## Conclusion

Thus, from the above discussed aspects of Self-Service Technologies it is evident that SST is a new and advanced way of interacting with the customers through which service providers tries to provide instant and hassle free service to their customers. We have seen that there are good side as well as downside of SSTs depending upon the way customers and service providers adopt it.And customer's awareness and positive evaluation is equally important ingetting consumers to try SSTs.

## References

*Forsythe, S. and Shi, B.(2003) Consumer Patronage and Risk Perceptions in Internet Shopping, Journal of Business Research, 56(11), pp.867-875.*

*Gerson, F Richard. 2001. MengukurKepuasanPelanggan. PPM. Jakarta.*

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*Kim, L., Qu, H. and Kim, D.(2009) A Study of Perceived Risk and Risk Reduction of Purchasing Air-Tickets Online, Journal of Travel and Tourism Marketing, 26, pp.302-24.*

*Matthew L. Meuter, Amy L. Ostrom, Robert I. Roundtree, & Mary Jo Bitner, Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters, Journal of Marketing Vol. 64 (July 2000), p52*

*Mary Jo Bitner Professor of Marketing and Pet Smart Chair W P Carey School of Business Self-Service Technologies: Innovation and Execution 2007 IEEE/INFORMS NSF Workshop on Service Science August 2007.*

*Meuter, M., Bitner, M., Ostrom, A., and Brown, S. (2005) Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies, Journal of Marketing, 69(April), pp.61-83.*

*Muhammad Shahid Bashir Sameh A. H. Albarbarawi, Factors Influencing the Adoption of Self Service Technologies (SSTs), A study of attitudes towards SSTs (Internet Banking, Online Shopping and Self-Check-In Machine at the Airports) and the influence of new technologies (smart phones and tablet computers).*

*http://www.diva-portal.org/*

*Sheryl E. Kimes and Joel E. Collier How Customers View Self-Service Technologies Magazine: Fall 2015Research Highlight September 15, 2015*

*Wallace, D., J. Giese, J. Johnson. 2004. "Customer retailer loyalty in the context of multiple channel strategies". J. Retail.*

http://sloanreview.mit.edu/article/how-customers-view-self-service-technologies/

http://www.grin.com/en/e-book/75028/the-adoption-of-self-service-technologies

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