Customer Satisfaction for ATM Services: A Comparative study of Public & Private Sector Banks in Sahibabad

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Abstract: The diversity and number of computer users has increased rapidly. The users include administrative assistants, salesmen, insurance adjusters, health care workers, teachers, home makers, engineers, accountants, and managers. Majority of these users are engaged in tasks that rapidly vary on a daily, monthly, and yearly basis. Consequently, the software needs of computer users are frequently change, complex, and diverse. This trend suggests that professional software developers are unlikely to meet all the needs of the users on a direct basis, attributed to slow development processes and limited domain knowledge. This trend has prompted the emergence of ATM approaches that seek to solve the problem[4][20]. The aim of this study is to investigate the degree to which ATM services have promoted customer satisfaction[2][6][12].

Index Terms: Bank's Service Quality, Customer Satisfaction, ATM, Private Sector, Public Sector

I. INTRODUCTION

Delivering the right data to the right individuals, in the right manner, and at the right time forms an important requirement in the current business arena. Business operators have had to deal with the dynamic information needs but the inability to incorporate the used information system in supporting the changing needs of the users, stakeholders and the rest of the society continues to stall progress . The dilemma has prompted the affected firms to adopt an ATM perspective[15]. One of the forces driving the adoption of ATMs is that professional developers have failed to understand the end users' inability to communication the requirements for a new application with ease. Additionally, ATMs have emerged because of slow regular development cycles that fail to meet the fast changing requirements of user groups (Tuchinda,)[11][16]. According to Yeo, Venugopal Chu and Buyya (2010), trends in software technology have seen more and more interactive applications gain writing by individuals with expertise in alternative domains to achieve the goal that certain computations support[17].

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The US Bureau of Labor and Statistics predicted that the year 2012 would see less than three million professional programmers emerge but the number of people using databases and spreadsheets at work, engaging in queries and written formulas, was predicted to be stretch beyond 55 million (Aghaee & Pautasso, 2014). The outcome indicates that the number of end users, who are not professional software developers, has grown and overtaken the number of professional software developers to a significant extent [8]. The trend implies further that the impact of ATMs on enterprise development and operation cannot be overlooked[13]. This section provides some of the theories that drive ATM implementation, focusing on the similarities and differences before selecting the most ideal theory that depicts alignment with the study, and that can be advanced by the current study.

II. REVIEW OF LITERATURE

The process of eliminating the role of systems analysts as central figures responsible for the analysis and design processes is documented to pose critical dangers. Kannabiran and Pandyan (2010) examined some of the dangers that remain inherent to the establishment of ATM applications. Firstly, ATM establishment was perceived to separate the roles of analysts from those of the users, leading to neglect in the maintenance, documentation, and training of user-established applications. Additionally, the emergence of ATM s implies that the user is unlikely to identify complete data requirements with correctness. Furthermore, Ko, Abraham and Beckwith et al. (2011) affirmed that the end user is likely to inadvertently apply wrong analysis approaches to situations or even engage in solution provision to wrong problems, attributed to the establishment of ATM s. The development of ATM s has also been associated with frequent errors. For instance, mistakes arise in terms of the overall lack of comprehensibility, inability to modify or change applications, unauditable applications, unreliable output, and mistakes in logic Lopez-Nicholas and Merono-Cerdan (2011) affirmed that ATM developers are not exposed to computer training practices, indicating that 60 percent of ATM developers constitute individuals form the non-technical personnel, with computers used primarily for problem solving and task performance. Indeed, mixed outcomes and reactions regarding the establishment of

EUDs have led to penetrations and research into the degree to which they foster customer satisfaction.

III. OBJECTIVES

a. To analyze and compare the overall customer satisfaction for ATM Services in public and private Sector banks.
b. To analyze and compare the each service quality dimension for ATM Services in Public and Private sector banks.

IV. HYPOTHESIS

Following hypothesis will be testing:

c. **H01:** There is no significant difference in the Reliability and accessibility dimension of services of Indian private and public sector banks.
d. **H02:** There is no significant difference in the User-friendliness dimension of services of Indian private and public sector banks.
e. **H03:** There is no significant difference in the security/privacy dimension of services of Indian private and public sector banks.
f. **H04:** There is no significant difference in the Responsiveness dimension of services of Indian private and public sector banks.
g. **H05:** There is no significant difference in the overall satisfaction level of customers between private and public sector banks[19].

V. RESEARCH METHODOLOGY

The present study is mainly based on Primary Survey being conducted with the help of a pre-tested ,well structured questionnaire which is being personally administered to 200 customers,100 customers each from Public and Private Bank.Two public bank considered for the study include Punjab National Bank and State Bank Of India and the Private Bank include HDFC and Axis Bank[21].

Data is being collected from the customers of these four respective banks from Sahibabad.Four dimensions have been considered in this study for analyzing the level of satisfaction of the respondent on a five point scale ranging from Strongly Agree to Strongly Disagree[3].

Convenience Sampling is used to collect the data. Mean Standard Deviation and frequency distribution method has been used to compare the percentage of satisfaction on different variables between public and private banks.

ANOVA is applied to the data to identify if there exist any significant difference in the variables affecting the satisfaction level of the public and private banks customers[5].

VI. SURVEY RESULTS AND INTERPRETATION

In the present study four dimensions are taken:
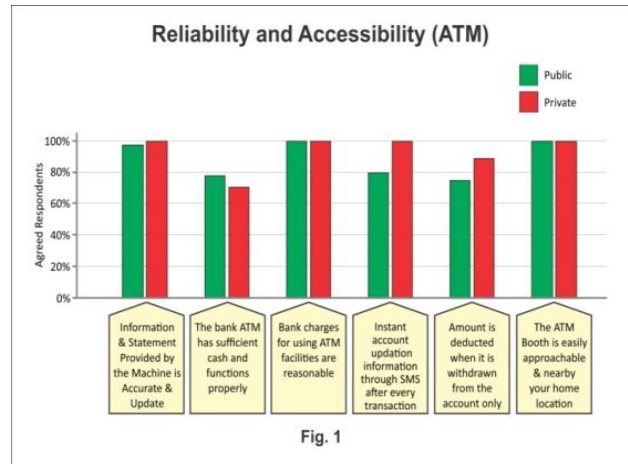
A.RELIABILITY AND ACCESSIBILITY (ATM)

Fig. 1

From the figure above, it is evident that of 89% customers from private sector banks are agreed that only after withdrawal of cash from ATM, amount is deducted from their accounts, while only 75% customers of public sector banks are agreed with this statement.

In all we see thatthe customers of the private sector banks are more satisfied with the reliability and accessibility of ATMs.
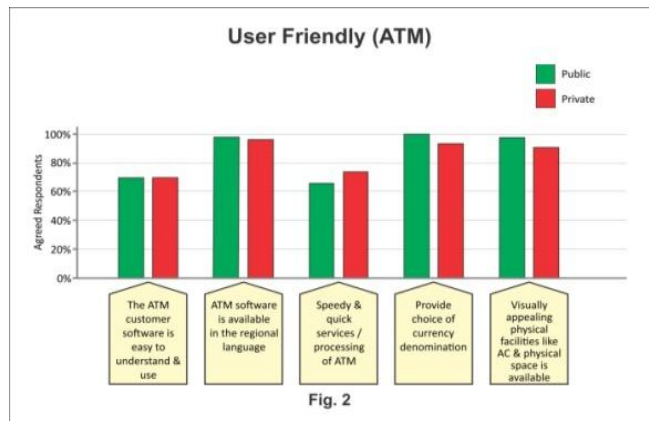
B.USER FRIENDLY (ATM)

Fig. 2

From the above Fig 2. it can be observed that 100% customers of the public sector banks are agreed that their bank ATMs provide them for choice of currency denomination, while 94% customers of private sector banks are agreed with this statement.

98% customers of public sector banks are satisfied with the physical appearance of their ATMs, while only 91% customers of private sector banks are satisfied with this statement.

74% customers of private sector banks are satisfied with the working speed of their ATMs, while only 66% customers of public sector banks are agreed with this statement.

In all we see thatthe customers of the public sector banks are more satisfied with the user friendly quality of ATMs.

C.SECURITY/PRIVACY (ATM)

Fig. 3

From the above Fig 3. it can be observed that 92% customers of the public sector banks are agreed that their bank ATMs ensure financial security and confidentiality, while 88% customers of private sector banks are agreed with this statement[7].
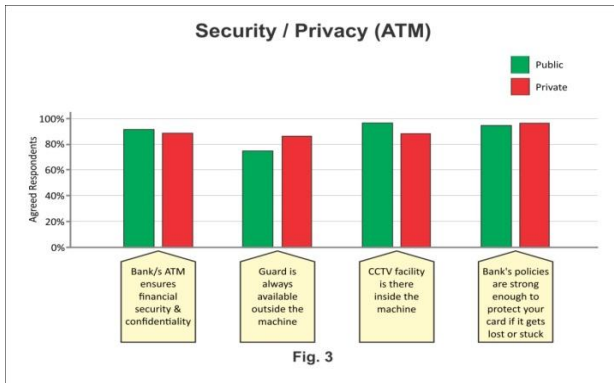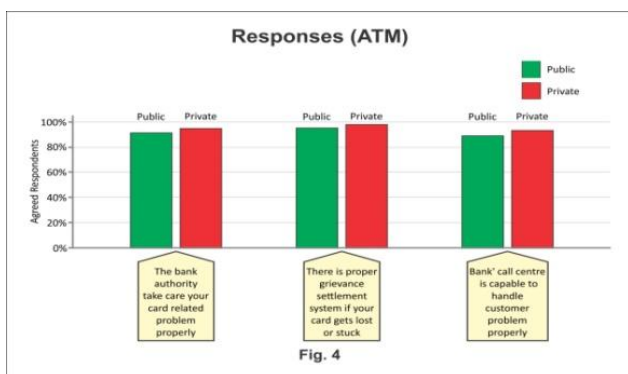
97% customers of public sector banks are satisfied with the CCTV facility inside the ATMs, while only 88% customers of private sector banks are satisfied with this statement.

86% customers of private sector banks are agreed that a guard is always available outside the machine, while only 76% customers of public sector banks are agreed with this statement.

In all we see thatthe customers of the public sector banks are more satisfied with the security system provided by their banks.

D.RESPONSIVENESS (ATM)

Fig. 4

From the above Fig 4. it can be observed that 94% customers of the private sector banks are agreed that their banks' authority take care their card related problems properly, while 91% customers of public sector banks are agreed with this statement.

97% customers of private sector banks are agreed that there is a proper grievance settlement system if their card gets lost or stuck, while 95% customers of public sector banks are satisfied with this statement.

93% customers of private sector banks are agreed that their banks' call centres are capable to handle customers' problem properly, while only 88% customers of public sector banks are agreed with this statement.

In all we see thatthe customers of the private sector banks are more satisfied with the responsiveness of their banks[10].

(Based on Mean and standard deviation)

VII. Hypothesis Testing:

Comparing the each service quality dimensions for ATM Services in Public and Private sector banks:

Reliability and Accessibility Dimensions of ATM services of Indian Banks.

Following analysis clarify the situation of reliability aspect of service quality dimension in public and private sector banks–

H01: There is no significant difference in the Reliability dimension of services of Indian private and public sector banks.

ANOVA table is as following–

ANOVA					
Reliability Index					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.500	1	4.500	24.944	.000
Within Groups	35.720	198	.180		
Total	40.220	199			

As P values are less than .05, hence null hypothesis gets rejected and alternate hypothesis that there is significant difference between Reliability dimension of services of Indian private and public sector banks–

Descriptive analysis of reliability is as following-

Descriptives								
RI								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Public Sector Bank	100	4.02	.376	.038	3.95	4.09	3	5
Private Sector Bank	100	4.32	.469	.047	4.23	4.41	4	5
Total	200	4.17	.450	.032	4.11	4.23	3	5

Above table reflects that mean reliability score of Private sector banks is higher than Public sector banks, reflecting the better services of private sector banks in synchronization with public bank.

Descriptives								
User friendliness Index								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Public Sector Bank	100	3.70	.482	.048	3.60	3.80	3	5
Private Sector Bank	100	3.82	.411	.041	3.74	3.90	3	5
Total	200	3.76	.451	.032	3.70	3.82	3	5

ANOVA findings. Following table will make it more clear–

ANOVA					
Security Index					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.845	1	.845	5.211	.024
Within Groups	32.110	198	.162		
Total	32.955	199			

Bank Type Vs Reliability Index					
Count					
		Reliability Index			Total
		Can't say	Agree	Strongly Agree	
Bank Type	Private Sector Bank	0	68	32	100
	Public Sector Bank	6	86	8	100
Total		6	154	40	200

Bank Type Vs Reliability Index

Thus it is concluded that private sector banks in India are performing better than their public counterparts in case of reliability dimension of services.

User-friendliness Dimensions of ATM services of Indian Banks.

Following analysis clarify the situation of User-friendliness aspect of service quality dimension in public and private sector banks–

H02: There is no significant difference in the User-friendliness dimension of services of Indian private and public sector banks.
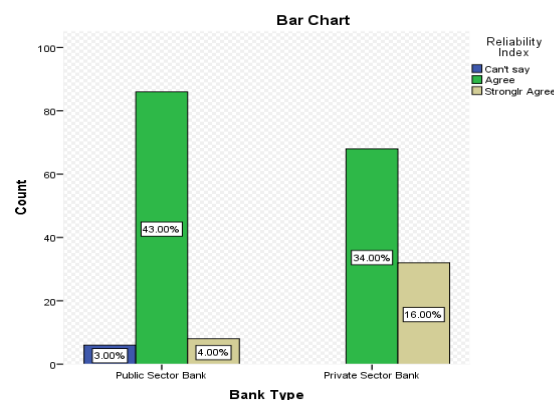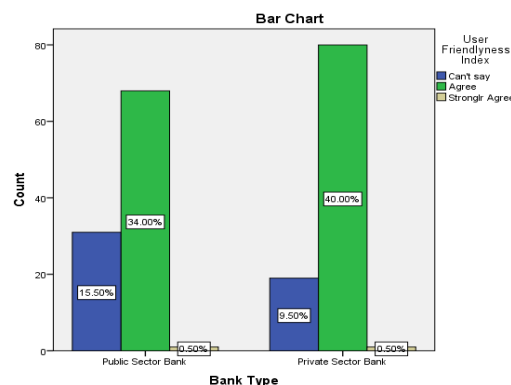
ANOVA table is as following–

ANOVA

User friendliness Index					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.720	1	.720	3.586	.060
Within Groups	39.760	198	.201		
Total	40.480	199			

As P values are more than .05, hence null hypothesis gets accepted and alternate hypothesis that there is significant difference between Reliability dimension of services of Indian private and public sector banks gets rejected. Thus we can say that in terms of User–friendliness both public and private sector banks are equally competent.

Descriptive analysis of User–friendliness is as following.

Above table reflects that mean user-friendly score of Private sector banks andPublic sector banks is almost same reflecting equal user-friendly services of private sector banks in synchronization with ANOVA findings. Following table will make it more clear–

Bank Type Vs User friendliness Index

Count					
		User friendliness Index			Total
		Can't say	Agree	Strongly Agree	
Bank Type	Private Sector Bank	19	80	1	100
	Public Sector Bank	31	68	1	100
Total		50	148	2	200

Bank Type Vs User-Friendliness Index

Thus there it's concluded that in case of User–friendliness dimension both public and private sector banks are almost same and providing competent services.

Security/Privacy Dimensions of ATM services of Indian Banks.

Following analysis clarify the situation of Security aspect of service quality dimension in public and private sector banks–

H03: There is no significant difference in the Security dimension of services of Indian private and public sector banks.

ANOVA table is as following–

As P values are less than .05, hence null hypothesis gets rejected and alternate hypothesis that there is significant difference between Security dimension of services of Indian private and public sector banks gets accepted.

Descriptive analysis of Security is as following.

Descriptive

Security Index								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Public Sector Bank	100	3.92	.307	.031	3.86	3.98	3	5
Private Sector Bank	100	4.05	.479	.048	3.95	4.15	3	5
Total	200	3.99	.407	.029	3.93	4.04	3	5

Above table reflects that mean security scores of Private sector banks is higher than Public sector banks, reflecting

the better security features of private sector banks as confirmed by ANOVA results. Following table will make it more clear–

Bank Type Vs Security Index

Count					
		Security Index			Total
		Can't say	Agree	Strongly Agree	
Bank Type	Private Sector Bank	9	77	14	100
	Public Sector Bank	9	90	1	100
Total		18	167	15	200

Thus there it's concluded that in case of Security dimension Private Sector banks have taken a lead over their public counter parts in India.

VIII. Responsiveness Dimensions of ATM services of Indian Banks.

Following analysis clarify the situation of 6.2.4 Responsiveness aspect of service quality dimension in public and private sector banks–

H04: There is no significant difference in the Responsiveness dimension of services of Indian private and public sector banks.

ANOVA table is as following–

ANOVA
Responsiveness Index

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.620	1	1.620	4.537	.034
Within Groups	70.700	198	.357		
Total	72.320	199			

As P values are less than .05, hence null hypothesis gets rejected and alternate hypothesis that there is significant difference between Responsiveness dimension of services of Indian private and public sector banks gets accepted.

Bank Type Vs Responsiveness Index

Count						
		Responsiveness Index				Total
		Disagree	Can't say	Agree	Strongly Agree	
Bank Type	Private Sector Bank	1	27	62	10	100
	Public Sector Bank	4	30	65	1	100
Total		5	57	127	11	200

Thus there it's concluded that in case of Responsiveness dimension as well private sector banks have taken an edge lead over their public counter parts in India.

H05: There is no significant difference in the overall satisfaction level of customers between private and public sector banks.

ANOVA table is as following–

ANOVA
Customer Satisfaction Index

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.405	1	.405	9.604	.002
Within Groups	8.350	198	.042		
Total	8.755	199			

As P values are less than .05, hence null hypothesis gets rejected and alternate hypothesis that there is significant difference between the overall customer satisfaction between public and private sector bank, holds true.

Public/Private sector banks Vs Customer Satisfaction

Public/Private sector banks * Customer Satisfaction Index					
		Customer Index	Satisfaction		Total
		Can't say	Agree	Strongly Agree	
	Public Sector Bank	8	92	0	100
	Private Sector Bank	0	99	1	100
Total		8	191	1	200

Above table reveals it more clearly that satisfaction level of customers of private sector banks is much higher than that of public sector banks in NCR region.

IX.   RECOMMENDATIONS

This study highlights following recommendations to the banks management which hopefully would help them to overcome their weaknesses:

1. All banks should have efficient money in ATM for 24 hours.

2. The publicbanks must develop their ATMs' SMS service (instant account updation information through SMS after every transaction) using moreinnovative technology.

3. The public and private sector banks must improve their ATMs' software. The ATM software should be easier and understandable by illiterates also.

4. The public banks should improve the working speed of their ATMs.

5. The public banks should be more careful about the security guard. A security guard should always be available in ATMs.

6. CCTV cameras should always be active in private banks.

7. The public bank's call centres should be more capable to handle their customers' problems properly

8. The customers expect more and better quality of A.T.M. services from the public sector banks. More funds must be invested in this area.

X.   CONCLUSION AND CONTRIBUTION

The Automated Teller Machine has changed people's lifestyle. ATM's provides a lot of benefits to the people. The most important benefit the banks experience is of providing its customers funds as and when it is required[9]. That is because the customers are happy and satisfied. They are able to do various other transactions also and it has proved to be very helpful to the customers. The banking industry should take steps to make its ATMs safe and secure for its customers. The research has helped us to understand that more satisfied customers belong to private sector banks but still why one would like to have an account in publicsector bank is for the level of security it offers. Also, the study has endowed insights and implications for bank management, thus enabling them to developstrategies to improve their customers' satisfactions for ATM services.

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