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THE INSTALLATION OF POS (POINT OF SALE) TERMINALS BY INDIAN BANKS

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ABSTRACT

The main objective of this research paper is to find out whether the selected Indian Banks have installed sufficient number of POS (Point of Sale) Terminals. This was pursued by collecting secondary data from RBI Reports, Regulations and Notifications, websites of RBI, selected banks and related websites of World Bank, IEEE, ISO, BASEL Committee etc and studying the various brochures, products and services as well as procedures of selected Indian banks. The Researcher also noted on-the-spot observations by visiting the branches of the banks and using their various products and services like ATM's, Net Banking, Mobile Applications, POS Terminals, Credit and Debit cards of various banks. The research clearly suggests that barring the top private sector banks, most other banks selected by the researcher in his research either do not offer this service or their exposure negligible in comparison to their size & the plastic money cards issued by them.

JEL CLASSIFICATION

M15: IT Management

KEYWORDS

Point of Sale Terminal, Point of Purchase Terminal, checkout, POS, POP.

INTRODUCTION

Credit and Debit Cards are electronic plastic cards that are used as a substitute for cash. Bank Debit Cards help reduce the need for carrying cash and checks. Debit cards are directly linked to a cardholder's bank account. Whenever a card holder withdraws money from an ATM or uses the debit card for making payments, his/her account balance is automatically reduced.

Debit cards and credit cards differ in some significant ways. In the case of a credit card, the issuer offers credit and overdraft facilities, this facility is not available with a debit card, which will only debit payments from existing and available funds within the cardholders account. A credit cardholder therefore has a monthly bill to pay in every month that the card is used. If they don't pay that bill, high interest charges are applied. A debit card holder is free from the hassle of paying those bills and from the risk of building up large debts to credit card companies.

The card transactions are routed through the VISA or MasterCard networks rather than directly via the issuing bank.

POS (Point of Sale) Terminals also sometimes referred to as **point of purchase (POP)** or **checkout** is the location where a transaction occurs. A "checkout" refers to a POS terminal or more generally to the hardware and software used for checkouts, the equivalent of an electronic cash register. A POS terminal manages the selling process by a salesperson accessible interface. The same system allows the creation and printing of the receipt after the transaction has been completed by charging via a debit, credit or prepaid card.

REVIEW OF LITERATURE

Nitsure Rupa Rege [2003]² in her article explains that the e-banking revolution has fundamentally changed the business of banking by scaling borders and bringing about new opportunities. In India also, it has strongly impacted the strategic business considerations for banks (including the PSBs) by significantly cutting down costs of delivery and transactions. It must be noted, however, that while e-banking provides many benefits to customers and banks, it also aggravates traditional banking risks. Compared to developed countries, developing countries face many impediments that affect the successful implementation of e-banking initiatives. In this paper, she has identified some such impediments in the Indian context and have suggested ways to overcome them in order to move forward with the wave of e-banking successfully. In India there is a major risk of the emergence of a digital divide as the poor are excluded from the internet and so from the financial system. Even today, the operational environment for public, private and foreign banks in the Indian financial system is quite different. Though there has been higher acceptance of technology by public sector banks, they are at a different level in the computerization spectrum as compared to private and foreign banks. This has endangered their position in the immediate period due to the lack of adequate systems for customer and investor protection. PSBs are more susceptible to breaches of security and to disruptions in the system's availability and hence to reputational risk.

Rajshekhara K. S. [2004]³ in his study described the adoption of IT in banking has undergone several changes with the passage of time. Today IT has become an inseparable segment of banking organization. The application of information technology in the banking sector resulted in the development of different concepts of banking such as – E-banking, Internet Banking, Online Banking, Telephone Banking, Automated teller machine, universal banking and investment banking etc. Information technology has a lot of influence on banking transactions. It ensures quick service with low transaction cost to the customers. The real success of IT in the banking sector depends upon the customer's satisfaction. Therefore banks should organize and conduct customer awareness program in their service area.

Rishi & Saxena [2004]⁴ in their study suggest that the advancements in information and telecommunication technologies (IT) since past 25 years clearly indicate a positive impact on banking and financial institutions. Innovations in information technology and development in IT sector has been enforced the convention of IT elements in maximum branch of banks. Public sector banks were late adopter of new technology as compare to private and foreign banks.

Vittaladas Leeladhar [2006]⁵ in his study suggests that RBI has also adopted IT in endorsing the payment system's functionality and modernization on an ongoing basis to improve the efficiency of banking sector. There is a noticeable improvement in the performance of financial institutions and the service sector by incorporating IT into their functionality. It shows an increasing share, enhanced competitiveness at the global surface because of adopting IT culture

Mittal & Dhingra [2007]⁶ in their study suggest that Indian banking industry has witnessed a remarkable development in the Informational Technology (IT) in last few years. Banking transactions are become easier and customer friendly due to the technological improvements. To play a supportive and key role, banks are providing with lots of services which are the combination of electronics and information technology, like, Automatic Teller Machines (ATM), plastic money i.e. Credit card, debit card and smart cards, phone banking, e- banking which is called by net-banking, etc. ATMs have emerged as the most favored channel for offering banking services to the customers in the world.

Uppal R.K. [2008]⁷ in his study analyzes the quality of e-banking services in the changing environment. The sample size of bank customers is 25. The data is collected through pre-tested and well structured questionnaire in Ludhiana, Punjab in May 2006. The study concludes that the customers of ebanks are satisfied with the different e-channels and their services in the spread of ebanking services. It also suggests some measures to make ebanking service more effective in the future. The present study is mainly concerned with the Indian banking industry in general and particular those banks that are producing service through e-channels i.e. ebanks.

Ashish Das & Rakhi Agarwal [2010]⁸ in their technical report suggest that debit cards as business proposition for POS usage brings in significant gains for the banking industry since it helps in reducing branch visits of bank account holders (merchants and consumers alike) for cash deposits and withdrawals and less dependence on ATM usage. Both the latter means of payment vehicles (branch visits and ATM usage) are relatively more expensive for the banks. Moving from such expensive payment vehicles to debit card at POS gives banks a means for cutting costs and increasing efficiency leading to increased profits. Alongside, such an innovative development in the payment system leads to increased convenience, security, accountability and financial inclusion for our countrymen. Furthermore, with advancement of time, debit cards are now looked as nothing but electronic cheques.

Erik-Jan Monshouwer & Raul Valverde [2011]⁹ in their study suggests that literature research and the prototype tests and evaluation in this project shows that transactions fees and performance of POS terminal payments transactions through web services can be competitive to conventional payment transactions methods and create flexibility for vendors POS terminal application. Vendor's available Internet connections and the web services standards in the market can be used for payment transactions. With web services the system can be created and changed relatively fast and simple if the right skills are available.

Mukesh Kumar Verma [2011]¹⁰ in his study concludes that there is tremendous growth in cashless banking through card payments. Banks are utilizing POS as CASA tool to attract merchant to open their account with bank. Private Banks and Foreign banks are leader and they are offering various concessions in merchant account to popularize POS and their Cards. The POS can be customized for utility bill payments, mobile top-up, foreign currency payments, cash payments etc. Thus POS is now, exclusively utilized for marketing of low cost deposit by all Indian banks.

Sushma Patil [2014]¹¹ in her study concludes that the arrival of malls, multiplexes, online shopping stores and shopping complexes encourage the customers to make use of plastic cards. The modern day, Indian customers find it easier to make physical payment (credit card or debit card payments) rather than carrying too much cash contributing to the growth of plastic money in the country.

HYPOTHESIS

The research work was conducted to prove the assumption that the individual Indian Banks have installed less number of POS (Point of Sale) Terminals in comparison to the plastic money cards issued by them.

OBJECTIVES OF THE STUDY

The research work was conducted with the objective to find out the whether the selected Indian Banks have installed sufficient number of POS (Point of Sale) Terminals.

RESEARCH METHODOLOGY

SCOPE OF RESEARCH

Since all banks follow the norms of the RBI and the computerization by banks is done as per the recommendations of committees formed by the Central Bank from time to time, therefore their policy for implementation of the computerization in branches of a particular bank are same anywhere. Therefore, the area of research chosen by the researcher is Meerut city, as it is a well developed city having branches of most of the banks.

POPULATION

The researcher has focused his research only on the scheduled banks. The scheduled banks are SBI & its six Associates, 19 PSU's, OTHER PUBLIC SECTOR BANK- IDBI Bank Limited, 14 OLD PRIVATE SECTOR BANKS, 7 NEW PRIVATE SECTOR BANKS, 36 FOREIGN BANKS, Regional Rural Banks (Total 82 Banks are there but in UP only 7 are present and in Meerut only 1 with only one branch). There are 53 Urban Cooperative Banks, 31 State Cooperative Banks, 371 District Central Cooperative Banks and 93413 Primary Agricultural Societies in India.

SAMPLE DESIGN

Since the population size is very big it was not feasible to study the entire population, so the researcher decided to go for a sample survey. In order to get a holistic representation, the researcher has used stratified sampling and scheduled banks categorized by RBI have been divided into groups referred to as strata on the basis of the Total Turnover of the banks.

SAMPLE SIZE

The total number of banks selected by the researcher is 16 (Sample size- 16). The list of selected banks is as shown below:

LIST OF BANKS SELECTED AS SAMPLE			
S. No.	Bank	S. No.	Bank
1	SBI- State Bank Of India	9	South Indian Bank
2	PNB- Punjab National Bank	10	Nainital Bank
3	CBI-Central Bank of India	11	ICICI Bank
4	Syndicate Bank	12	HDFC Bank
5	Andhra Bank	13	Axis Bank
6	Punjab & Sind Bank	14	Yes Bank
7	IDBI Bank	15	Sarva UP Gramin Bank
8	Federal Bank	16	Zila Sahkari Bank, Meerut

RESEARCH DESIGN

DATA COLLECTION

The Data is collected from secondary sources & on-spot observations.

DATA COLLECTION FROM SECONDARY SOURCES

This was pursued by collecting secondary data from RBI Reports, Regulations and Notifications, websites of RBI, selected banks and related websites of World Bank, IEEE, ISO, BASEL Committee etc and studying the various brochures, products and services as well as procedures of selected Indian banks.

The Researcher also noted on-the-spot observations by visiting the branches of the banks and using their various products and services like ATM's, Net Banking, Mobile Applications, POS Terminals, Credit and Debit cards of various banks.

ANALYTICAL TOOL

The mainly quantitative data produced from secondary sources & on-spot observations was analyzed through GAP analysis. Gap analysis is a tool that helps organizations compares actual state with potential state. At its core are two questions: "Where are we?" and "Where do we want to be?".

Gap analysis compares the Current State of banks (as per the collected data) with the Desired State of the banks (considering the various Guidelines, Rules and Regulations of RBI, the international Guidelines as well as Data from international organizations like World Bank etc.) and it is presented with the help of GAP Analysis Worksheets etc.

ANALYSIS, INTERPRETATIONS & FINDINGS

The details of the POS Terminals network of the selected Indian Banks as on 31st March 2011

#GAP ANALYSIS WORKSHEET 1.0							DESIRED STATE	GAP		
CURRENT STATE: ¹² BANK-WISE NO. OF POS TERMINALS OF SELECTED BANKS AS ON 31-03-2011				CURRENT STATE: ¹³ BANK-WISE NO. OF Cr & Dr CARDS OF SELECTED BANKS AS ON 31-03-2011						
Bank Name	Number of POS terminals			Number of Credit & Debit Cards						
	On-line	Off-line	Total	Cr Cards	Dr Cards	Total				
SBI & ITS ASSOCIATES							The POS Terminal is a channel of e-banking which can also be used by a non customer of the bank, should be part of the banks portfolio of e-banking facilities	POS Terminals are not installed by the Bank at all		
SBI	0	0	0	2088515	73134000	75222515				
NATIONALISED BANKS										
ANDHRA BANK	2113	0	2113	121466	13567190	13688656			The no. of POS Terminals in comparison to cards issued is negligible.	
CBI	729	0	729	80999	6164517	6245516				
SYNDICATE BANK	376	0	376	63431	5324961	5388392				
PNB	176	0	176	48067	2622639	2670706				
P&S BANK	0	0	0	0	48669	48669				POS Terminals are not installed by the Bank at all
OTHER PUBLIC SECTOR BANKS									The no. of POS Terminals in comparison to cards issued is decent.	
IDBI LTD.	18403	0	18403	0	4355550	4355550				
OLD PRIVATE SECTOR BANKS									Needs to increase the no. of POS Terminals	
FEDERAL BANK	1885	0	1885	0	3251543	3251543				
NAINITAL BANK	0	18	18	0	1663029	1663029				POS Terminals are virtually not installed by the Bank.
SIB	0	0	0	0	0	0				POS Terminal are not installed by the Bank at all
OLD PRIVATE SECTOR BANKS									The no. of POS Terminals in comparison to cards issued is good.	
ICICI BANK	178960	3861	182821	3361684	16041986	19403670				
AXIS BANK	186708	0	186708	634499	10165381	10799880				
HDFC BANK	125179	0	125179	5089800	13207311	18297111				
YES BANK	1505	0	1505	0	174097	174097	Needs to increase the no. of POS Terminals			
REGIONAL RURAL BANK							POS Terminal are not installed by the Bank at all			
SARVA UP GRAMIN BANK	0	0	0	0	0	0				
DISTRICT COOPERATIVE BANK							POS Terminal are not installed by the Bank at all			
ZILA SAHKARI BANK	0	0	0	0	0	0				

#NOTE: THE DATA OF BANK-WISE NO. OF PREPAID CARDS OF SELECTED BANKS HAS NOT BEEN INCLUDED, AS IT IS NEGLIGIBLE

The data as per GAP analysis worksheet 1.0 clearly suggests that as on 31st March 2011, the top private sector banks are the leaders in installing POS Terminals. Most other banks selected by the researcher in his research either do not offer this service or their exposure negligible in comparison to their size. Surprisingly SBI, the largest bank in the country, does not have a single POS Terminal as on 31st March 2011.

The details of the POS Terminals network of the selected Indian Banks as on 31st March 2014

#GAP ANALYSIS WORKSHEET 2.0							DESIRED STATE	GAP	
CURRENT STATE: ¹⁴ BANK-WISE NO. OF POS TERMINALS OF SELECTED BANKS AS ON 31-03-2014				CURRENT STATE: ¹⁵ BANK-WISE NO. OF Cr & Dr CARDS OF SELECTED BANKS AS ON 31-01-2014					
Bank Name	Number of POS terminals			Number of Credit & Debit Cards					
	On-line	Off-line	Total	Cr Cards	Dr Cards	Total			
SBI & ITS ASSOCIATES							The POS Terminal is a channel of e-banking which can also be used by a non customer of the bank, should be part of the banks portfolio of e-banking facilities	SBI has started the installation of POS Terminals since FY2011 but are still lagging behind when compared with the no. of plastic cards issued.	
SBI	114406	0	114406	2805281	116827184	119632465			
NATIONALISED BANKS									
PNB	10460	0	10460	125049	24437226	24562275			The no. of POS Terminals have increased since FY 2011 but in they are comparison to cards issued is negligible.
ANDHRA BANK	2369	0	2369	131613	9408331	9539944			
CBI	1315	0	1315	60176	6680752	6740928			
SYNDICATE BANK	944	0	944	68487	6154361	6222848			
P&S BANK	0	0	0	0	444606	444606			POS Terminal are not installed by the Bank at all
OTHER PUBLIC SECTOR BANKS									
IDBI LTD.	14417	0	14417	0	6153024	6153024			The no. of POS Terminals have decreased since FY 2011 & cards issued has increased, therefore bank needs to install more terminals.
OLD PRIVATE SECTOR BANKS									
FEDERAL BANK	8559	0	8559	0	3689637	3689637			Needs to increase the no. of POS Terminals
NAINITAL BANK	0	0	0	0	0	0			POS Terminal are not installed by the Bank.
SIB	333	0	333	0	3116416	3116416			Needs to increase the no. of POS Terminals
OLD PRIVATE SECTOR BANKS									
AXIS BANK LTD.	240150	0	240150	1324790	13541453	14866243			The no. of POS Terminals in comparison to cards issued is good.
ICICI BANK	228686	9441	238127	3180401	21613061	24793462			
HDFC BANK	223006	0	223006	5091024	17532616	22623640			Needs to increase the no. of POS Terminals
YES BANK	6615	0	6615	0	574813	574813			
REGIONAL RURAL BANK									
SARVA UP GRAMIN BANK	0	0	0	0	0	0	POS Terminal are not installed by the Bank at all		
DISTRICT COOPERATIVE BANK									
ZILA SAHKARI BANK	0	0	0	0	0	0	POS Terminal are not installed by the Bank at all		

#NOTE: THE DATA OF BANK-WISE NO. OF PREPAID CARDS OF SELECTED BANKS HAS NOT BEEN INCLUDED, AS IT IS NEGLIGIBLE

The data as per GAP analysis worksheet 2.0 clearly suggests that as on 31st March 2014, that the top private sector banks are the leaders in installing POS Terminals.

ICICI is the only bank that has installed off-line terminals.

SBI & PNB have started the installation of POS Terminals since FY2011 but are still lagging behind.

IDBI has slowed down the installation of POS Terminals since FY 2011, where as the cards issued has increased.

Most other banks selected by the researcher in his research either do not offer this service or their exposure negligible in comparison to their size & the cards issued by them.

HYPOTHESIS TESTING

The analysis as described by GAP analysis worksheet 1.0 proves that the top private sector banks are the leaders in installing POS Terminals and most other banks selected by the researcher in his research either do not offer this service or their exposure negligible in comparison to their size, therefore it proves that the Hypothesis assumed by the researcher "The research work was conducted to prove the assumption that the individual Indian Banks have installed less number of POS (Point of Sale) Terminals in comparison to the plastic money cards issued by them." is TRUE for Public sector, Old Private Sector, Regional Rural & Cooperative Banks in India but not so, only for the top private sector banks.

CONCLUSIONS

The research clearly suggests that barring the top private sector banks, most other banks selected by the researcher in his research either do not offer this service or their exposure negligible in comparison to their size & the plastic money cards issued by them, also these banks have not made any significant progress in the last three financial years.

RECOMMENDATIONS & SUGGESTIONS

All the Indian Banks should initiate the process of setting up more POS terminals as it will increase the use of plastic money, reduce pressure on their branches as well as increase the revenue. The banks must also install off-line POS terminals.

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