

Major Challenges in ERP and CRM software implementation in Banking Industries

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Abstract - ERP (Enterprise Resource Planning) software is a large, integrated software package that offers solutions for administrative and, depending on the industry, also for core-business processes. While the CRM (Customer Relationship Management) is also an important software widely used throughout the world for providing maximum benefits to the customers. This software maintains all the data and information for providing maximum benefits to the customers. It focuses on pre-existing (by providing maximum services) and potential customers for long-term benefits. This study was conducted to collect data about the major challenges in ERP and CRM system implementation in Banking Industries. The questionnaire survey was conducted for data collection. A total of 100 participants were interviewed for data collection. Only those respondents selected for data collection have experience of using ERP and CRM systems. Both the customers and the employees from different banks of Texas were selected for data collection. The findings of this study revealed that the users report different challenges while using the ERP and CRS systems i.e. most of the respondents concluded that the main challenge is security of data and information (53%) followed by a complicated way of using the system (18%). Similarly, the outcomes of this study also concluded that the (63%) respondent's responses the application of ERP and CRS systems enhances the productivity of their organization and the 27% respondent responses this system does not put any significant impacts on productivity. There were different ways such as improving the software with the passage of time, conducting different training sessions, improving the interface and increasing data security. The findings of this study concluded that increasing the data security (45%), followed by improving the interface (35%), conducting different training sections (25%) and updating the software (5%) can improve the productivity and effectiveness of ERP and CRM systems.

Index Terms - ERP, CRM, Banking industry, Periodicity, Questionnaire survey.

1.INTRODUCTION

Enterprise resource planning (ERP) is worldwide application software that integrates all necessary information under a single system with a common database (AboAbdo *et al.*, 2019). ERP systems is a large, integrated software package that offers solutions for administrative and, depending on the industry, also for core-business processes (Sanchez *et al.*, 2020). The ERP (Enterprise Resource Planning) is a type of software, used to manage the operations, manufacturing, and manage human resource-based activities (Zhao and Tu, 2021). Such software is developed to integrate all the relevant departments of an organization. It also helps an organization to share and exchange information between different departments within an organization.

The ERP is mainly developed to properly manage the financial information, integrate the customer orders information, human resource information, and reduce the inventory (Alhalboosi *et al.*, 2021). In the traditional way of business, the information moves from customer to seller, then to inventory, production, and then the finance department (Surung *et al.*, 2020). In this way, information moves from one department to another and one department does not have any information about another department and the exchange of the information takes time (Carlsson-Wall *et al.*, 2022). But ERP (Enterprise Resource Planning) provides the access to data of any department to the employees of all departments. It prevents the duplication of data, saves time, and money, and enhances the satisfaction level of the customer (Mundra and Prakash, 2022).

The CRM (Customer Relationship Management) is also an important software widely used throughout the

world for providing maximum benefits to the customers (Hanif *et al.*, 2020). This software maintains all the data and information for providing maximum benefits to the customers. It focuses on pre-existing (by providing maximum services) and potential customers for long-term benefits (Manuel and Herron, 2020). This software mainly focuses on enhancing the productivity, delivery, cost, and quality of the product for obtaining maximum benefits (Chen *et al.*, 2018). The CRM software integrates all the basic types of Customer Relationship Management including Operational CRM, Analytical CRM, and Collaborative CRM (Al-Homery *et al.*, 2019).

The enhancement in IT technology eases the storage and sharing of the data between different departments of an organization and customers. Enterprise resource planning (ERP) and CRM (Customer Relationship Management) are two main software used in banking to share and store data and information (Chauhan and Singh, 2020). But entirely dependent on the software also have some drawbacks including the open-access to data, security of data, internet hacking, and the need for software expertise (Alhayani *et al.*, 2021). This study was designed to investigate the major challenges faced by the banking industries in the implementation of ERP and CRM software, the perception of the customers for the application of these software, and the impact of these software on enhancing the productivity of the company or banking industry in the study area. This study was mainly conducted to achieve the following objectives:

1. To investigate the major challenges involved in the implementation of ERP and CRM software in the Banking industries.
2. To analyze the reasons for the non-implementation or affective implementation of ERP and CRM software in the Banking industries.
3. To recommend the suggestions for effective implementation of ERP and CRM software in the Banking industries.

2. REVIEW OF LITERATURE

The Enterprise resource planning (ERP) system was primarily deployed for the manufacturing of large-scale data and information. But nowadays this system is passionately used by different and large numbers of companies. e.g. Morawiec and Sołtysik-

Piorunkiewicz, (2022) concluded that about 70% of companies already use the ERP for manufacturing data and information. Another study Fuß *et al.*, (2007) concluded that the ERP systems manage the market of USD 20 billion \$ in 2005. There was a huge increase in implementation of this system was recorded e.g. Gartner, (2004) reported that in 2004 ERP system cover up to USD 447 in the banking industry.

Chakravorty *et al.*, (2020) conducted a research study in India to investigate the implementation, hurdles, and challenges of using enterprise resource planning (ERP) in the Indian market and all over the world. The findings of this study concluded that enterprise resource planning (ERP) has deep applications in every field of business. This study mainly focuses on Prathma (a blood bank). The findings of this study also concluded that the Prathma is the first and only blood bank in India using enterprise resource planning (ERP), which improves the effectiveness of the Prathma by improving productivity, improving quality, and reducing the cost of transportation and other expenses.

Cruz-Torres *et al.*, (2021) conducted a research study to investigate the impacts of ERP systems on the preference and effectiveness of different companies using ERP and CRM systems. The findings of this study concluded that ERP and CRM systems dramatically improve the working abilities of companies. This study concluded that application of ERP and CRM systems reduces the operating cost up to 22% followed by reduction in the cost of administrative activities (20%, up to 19% improvement purchasing goods, taking online orders and delivery and 17% reduction in cost of manufacturing and distributing of different goods.

3. MATERIAL AND METHODS

3.1 Research Design

The present study was an explanatory and investigative study. The quantitative approach was used for collection and analysis. The information was collected by conducting a semi-structured questionnaire survey. The data about sharing of professional information, skills and knowledge were collected.

3.2 Target population

The targeted population for this research study was individual employees of banking organizations including the JP Morgan Chase Bank, East West Bank, and Frontier Bank of Texas. The banks of only one state, Texas, were selected for data collection. A total of 100 participants were used for data collection. Both the male and female employees were entertained for data collection.

3.3 Research instrument

A well-structured questionnaire was designed for collection of information. The previously designed questionnaire was used for data collection. Similarly, different modes of information technology including social media and Gmail were used to get an approach to the employees of Banks for the collection of data. Similarly, direct and personal meetings with administration and employees were also conducted for data collection.

3.4 Data Analysis

The questionnaire survey from the employees was used for the collection of the data. The data was collected in numeric form. The tools of SPSS (ANOVA, t-test and regression) etc. were used for analysis of data.

3.5 Ethical Consideration

The permission was obtained from the management of the organization (bank) to collect data. An information letter was given to management to invite the employees in a research study. The participants for data collection were selected on their will and none of them was forced. For conducting the research, employees and managers were guaranteed that no one will be forced to take part in the survey or interview. The respondents were not forced to take part in study.

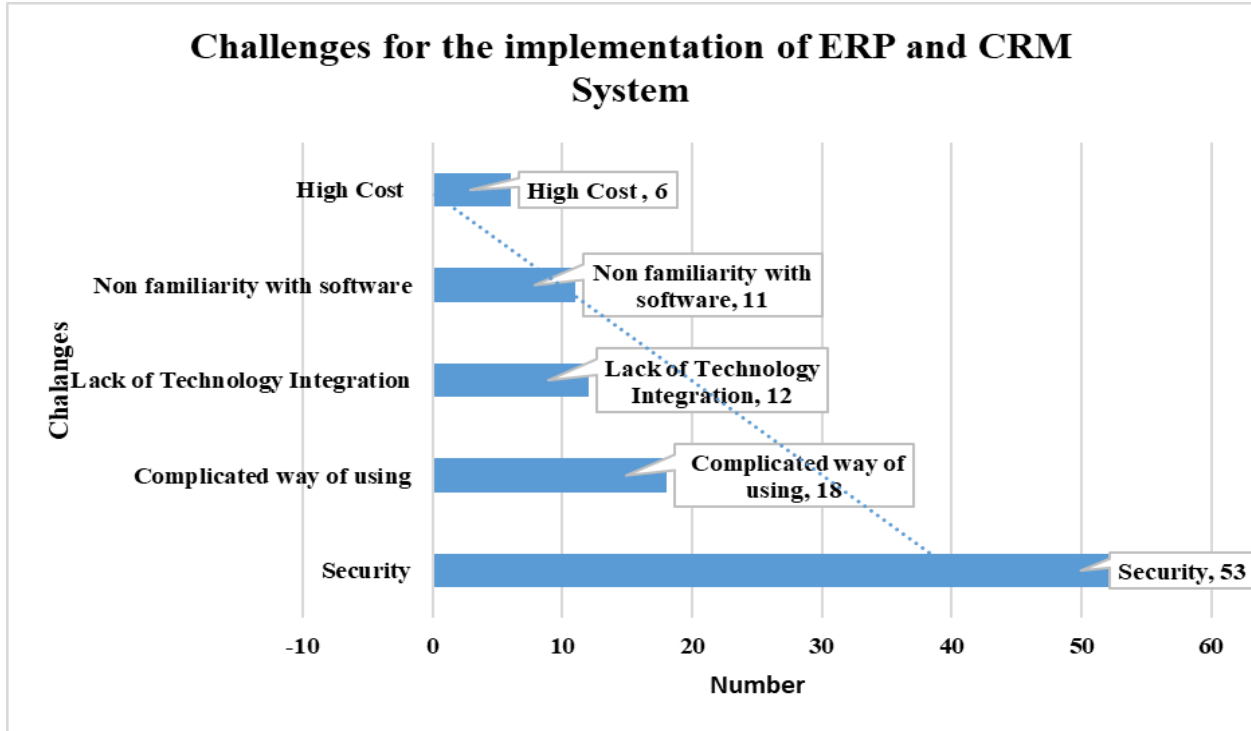
This study was conducted to collect data about the major challenges in ERP and CRM system implementation in Banking Industries. The questionnaire survey was conducted for data collection. A total of 100 participants were interviewed for data collection. Only those respondents selected for data collection have experience of using ERP and CRM systems. Both the customers and the employees from different banks of Texas were selected for data collection. The participants have different educational backgrounds, different ages (ranges from 23 to 45 years) and different occupations.

4.2 Major challenges

The findings of this study indicates that the uses report different challenges while using the ERP and CRS systems i.e. most of the respondent concluded that the main challenge is security of data and information (53%) followed by complicated way of using system (18%), lack of technology integration (12%), non-familiarity with system (11%) and lowest number of respondents reported that the high cost (6%) is main challenge for implication of ERP and CRS systems. Most of the respondents (61%) were satisfied with the services and outputs of ERP and CRS systems and responses that this software was useful for their work followed by 20% respondents who concluded that the manual system of data collection was better than ERP and CRS systems. While 14% respondents concluded that the application of ERP and CRS systems was difficult and most people did not understand its procedure. Wikipedia, (2009) also concluded similar findings and concluded that the security of data and access of information by multiple peoples was the main drawback of ERP and CRS systems. Olsen *et al.*, (2007) and Maditinos *et al.*, (2011) also concluded that the customer related issues, lack of training, expenses of software updates and high integration cost are the main challenges for proper application of ERP and CRM software.

4.RESULTS AND DISCUSSION

4.1 Background Information and Nature of Study

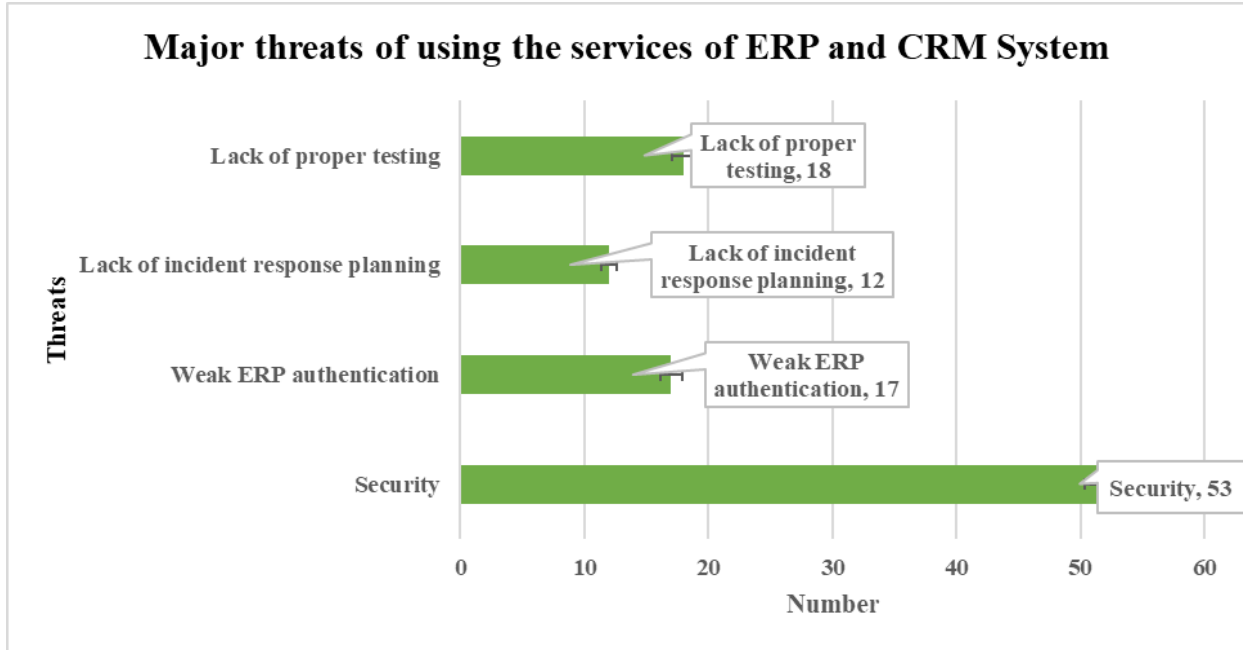


4.4 Reasons of non-implementation ERP and CRM software

There were many factors which affected the 100% application of the ERP and CRS systems in the Banking industry. The findings of this study concluded the major factor which affects the 100% application of ERP and CRS systems in the Banking industry as security. Most of the respondents

concluded the access of all types of data by many people in the organization is a threat (53%) followed by lack of proper testing (18%), weak ERP and CRM authentication (17%) lack of incident response planning (12%). Reinhold and Alt, (2012), Reinhold and Alt, (2012); Stein et al., (2013); Steel et al., (2013) also concluded similar findings.

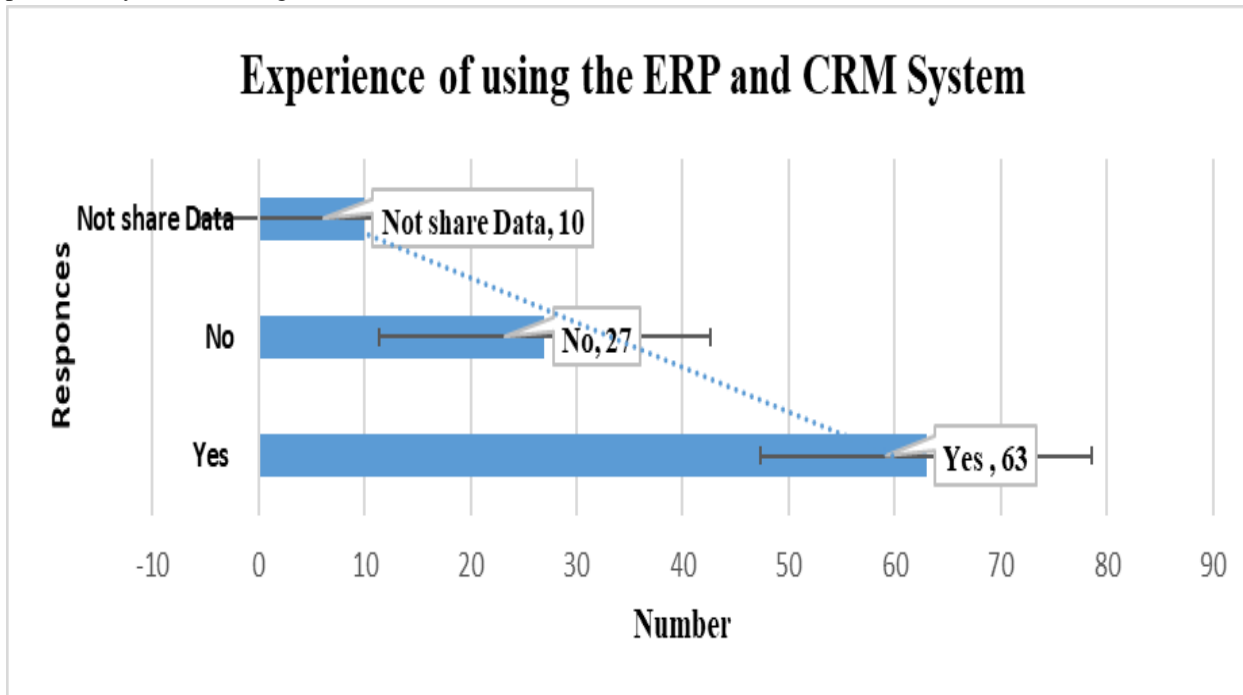
Paired Samples Test									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	main challenges for the implementation of ERP and CRM - experience of using the ERP and CRM	.540	.731	.073	.395	.685	7.391	99	.000
Pair 2	safe in terms of DATA security - satisfaction level	-.060	.239	.024	-.107	-.013	-2.514	99	.014
Pair 3	perception about ERP and CRM - role of ERP and CRM	-.100	.522	.052	-.204	.004	-1.915	99	.058

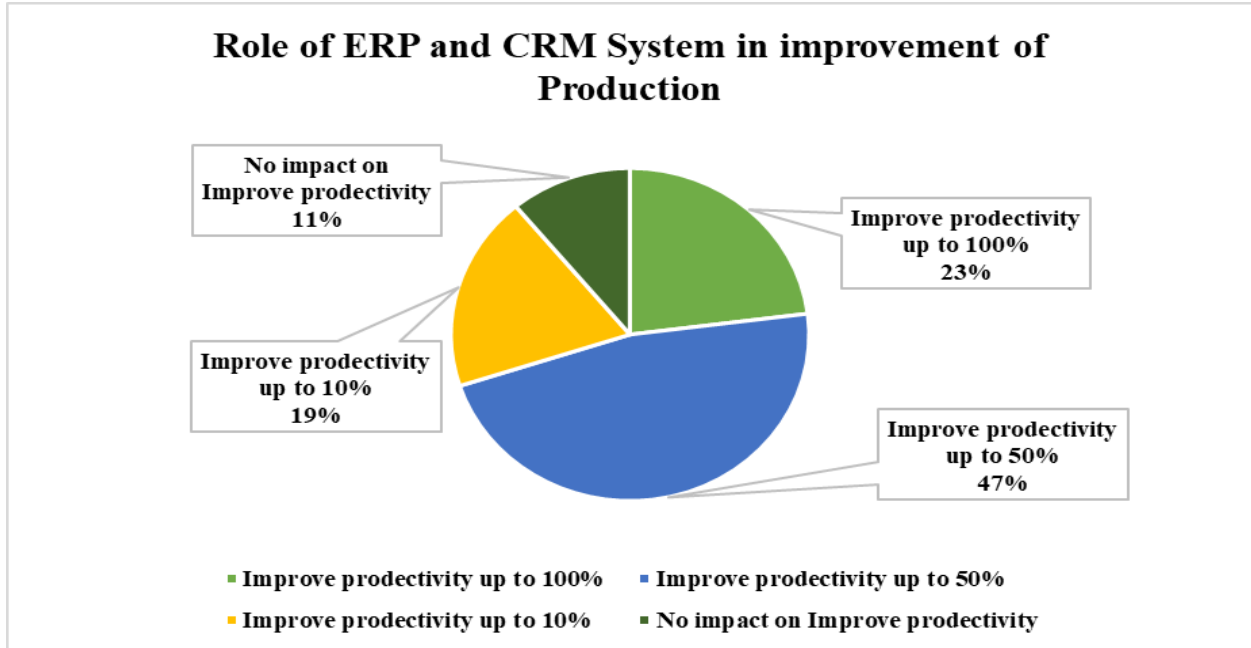


4.5 Role of ERP and CRM software in Improvement of Productivity

The ERP and CRS systems play an important role in improving productivity of organization in the banking industries. The findings of present study concluded that the (63%) respondent's responses to the application of ERP and CRS systems enhances the productivity of their organization, while the 27%

respondent's responses this system does not put any significant impacts on productivity and 10% peoples does not share any experience. Similarly, 47% respondents concluded that the ERP and CRS systems improves the productivity of their organization up to 50%. MacLachlan, (2009) also concluded that the reduction in cost can improve the effectiveness of ERP and CRS software.

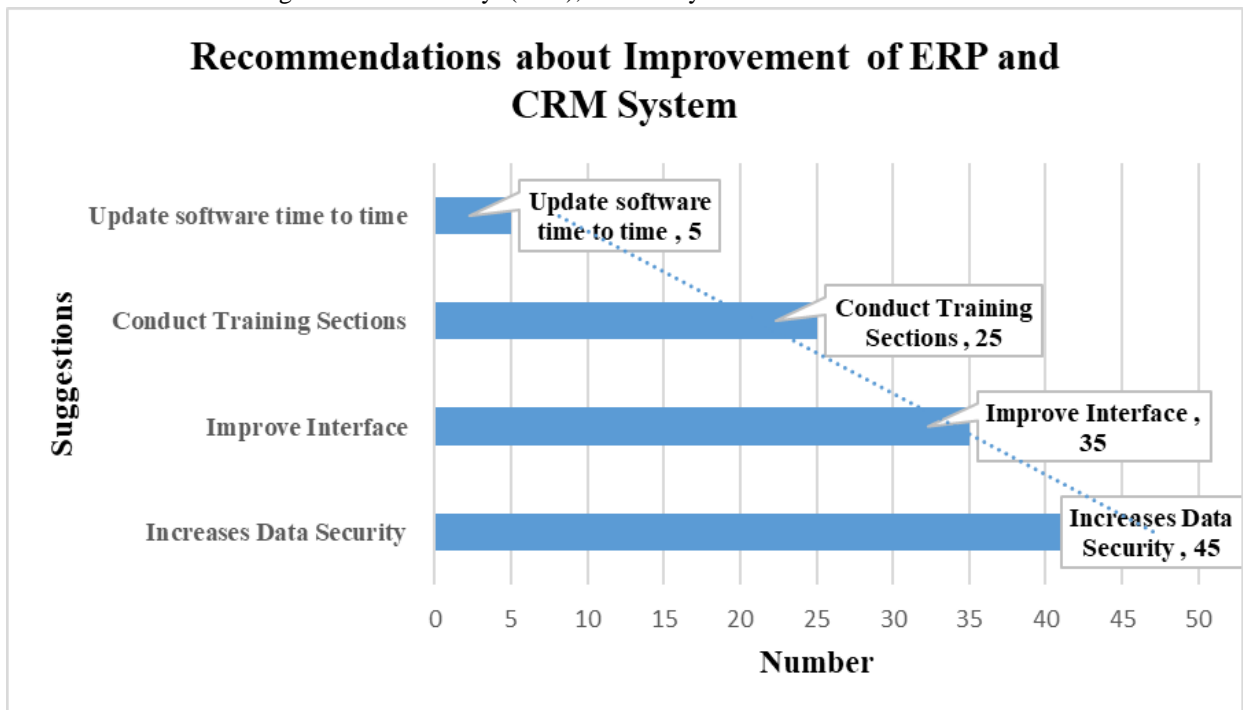




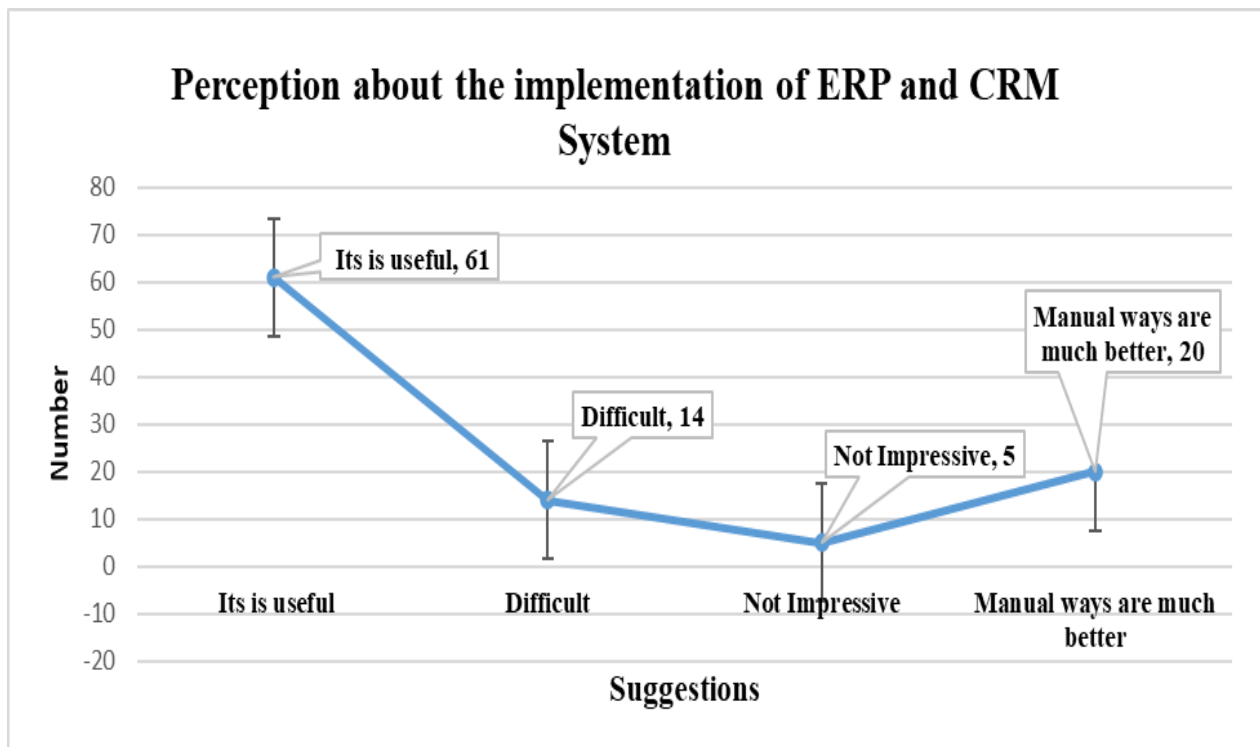
4.6 Suggestions for effective implementation of ERP and CRM

There were different ways such as improving the software with the passage of time, conducting different training sessions, improving the interface and increasing data security. The findings of this study concluded that increasing the data security (45%),

followed by improving the interface (35%), conducting different training sections (25%) and updating the software (5%) can improve the productivity and effectiveness of ERP and CRM systems. Similarly, most of the respondents (55%) were satisfied with the services of the ERP and CRM system.

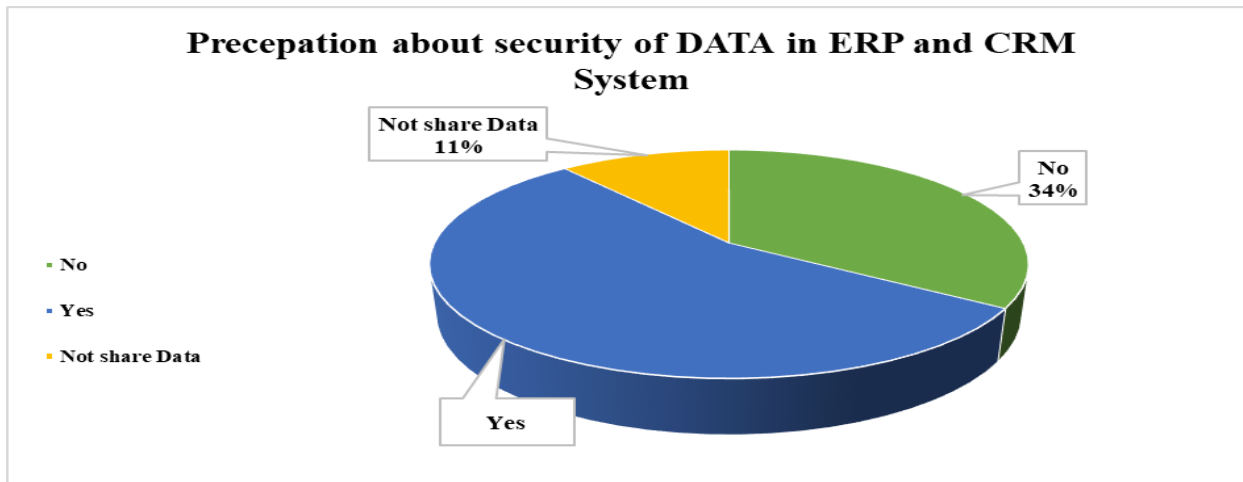
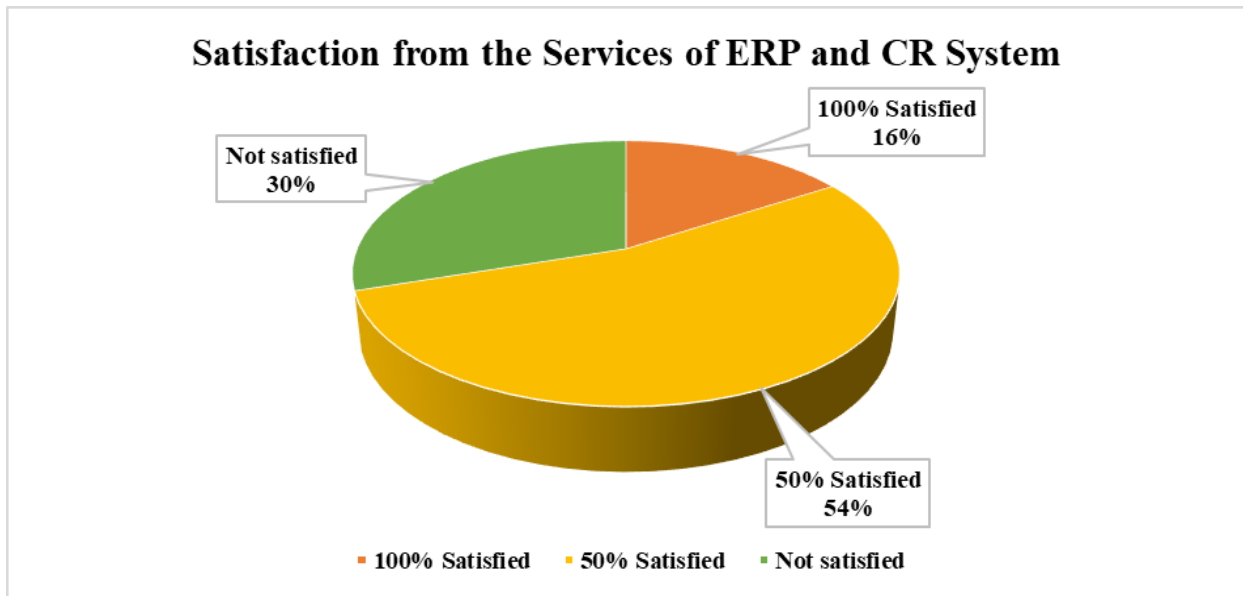


ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
main challenges for the implementation of ERP and CRM software	Between Groups	156.462	3	52.154	766.998	.000
	Within Groups	6.528	96	.068		
	Total	162.990	99			
experience of using the ERP and CRM	Between Groups	34.368	3	11.456	131.200	.000
	Within Groups	8.382	96	.087		
	Total	42.750	99			
safe in terms of DATA security	Between Groups	40.598	3	13.533	214.998	.000
	Within Groups	6.042	96	.063		
	Total	46.640	99			
satisfaction level	Between Groups	52.841	3	17.614	621.898	.000
	Within Groups	2.719	96	.028		
	Total	55.560	99			
perception about the implementation of ERP and CRM	Between Groups	132.955	3	44.318	405.764	.000
	Within Groups	10.485	96	.109		
	Total	143.440	99			
Role of ERP and CRM	Between Groups	100.041	3	33.347	333.523	.000
	Within Groups	9.599	96	.100		
	Total	109.640	99			



Coefficient					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.416	.073		-5.703	.000
experience of using the ERP and CRM	.321	.100	.165	3.199	.002
safe in terms of DATA security	.001	.137	.000	.006	.995
satisfaction level?	.337	.143	.197	2.352	.021
perception about the implementation of ERP and CRM	.065	.070	.061	.931	.354
Role of ERP and CRM	.104	.089	.085	1.171	.245
Major threats of using the services of ERP and CRM	.549	.116	.503	4.719	.000

a. Dependent Variable: main challenges for the implementation of ERP and CRM



5.CONCLUSION

This study was conducted to collect data about the major challenges in ERP and CRM system implementation in Banking Industries. The questionnaire survey was conducted for data collection. A total of 100 participants were interviewed for data collection. Only those respondents selected for data collection have experience of using ERP and CRM systems. Both the customers and the employees from different banks of Texas were selected for data collection. The participants have different educational backgrounds, different ages (ranges from 23 to 45 years) and different occupations. The findings of this study indicates that the users report different challenges while using the ERP and CRS systems i.e. most of the respondents concluded that the main challenge is security of data and information (53%) followed by a complicated way of using the system (18%). Similarly, the outcomes of this study also concluded that the (63%) respondent's responses the application of ERP and CRS systems enhances the productivity of their organization and the 27% respondent responses this system does not put any significant impacts on productivity. There were different ways such as improving the software with the passage of time, conducting different training sessions, improving the interface and increasing data security. The findings of this study concluded that increasing the data security (45%), followed by improving the interface (35%), conducting different training sections (25%) and updating the software (5%) can improve the productivity and effectiveness of ERP and CRM systems. This study recommends the conduction of different training sections, improve interface and increase the data security for improvement productively of ERP and CRM systems.

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