ASSESMENT OF ENTERPRISE RESOURCE PLANNING SYSTEM IMPLEMENTATION ON BANK PERFORMANCE IN RWANDA

A CASE STUDY OF TWENTY FOUR HOURS RELEASE (T24 R08) PROJECT IN BANQUE POPULAIRE DU RWANDA

Devote Kayonga ✉

Jomo Kenyatta University of Agriculture and Technology, Kigali, Rwanda

devote.kayonga@gmail.com

Kule Julius Warren

Jomo Kenyatta University of Agriculture and Technology, Kigali, Rwanda

kulewarren@gmail.com

Eugene Ndabaga

Jomo Kenyatta University of Agriculture and Technology, Kigali, Rwanda

ndabagav@yahoo.ie

Abstract

This research examined the effect of Enterprise Resource Planning systems implementation on Bank Performance in Rwanda. Three specific objectives were formulated: To examine the effect of T24 R08 accounting module on bank performance; to analyze the effect of T24 R08 Customer Service management module on bank performance and to assess the effect of T24 R08 loan management module on bank performance. The target population was 185 staff of Banque Populaire du Rwanda. A simple random sampling technique was used to select respondents. Primary data were collected from respondents by use of questionnaire and documentary analysis was used to collect secondary data. Descriptive statistical analysis was used to process and analyze data to establish the effect of ERP systems implementation on bank performance. Pearson's correlations model was used to establish the relationship between the ERP systems implementation and the bank performance. The study established that accounting module, customer relationship management modules and loan management modules moderately

influences bank efficiency, return on investment, return on asset, return on equity, liquidity and the bank profitability. In establishing relationship between Enterprise Resource Planning System implementation and Bank Performance, the finding revealed that the Enterprise Resource Planning system implementation has a positive moderate correlation to the bank performance equal to .673** and the p-value is .000 which is less than 0.01. This means that the two variables are correlated and therefore the null hypothesis started that there is no correlation relationship between ERP system project implementation and Bank performance in Banque Populaire du Rwanda was rejected by the researcher and conclude that there is a moderate relationship between Enterprise Resource Planning System and Bank Performance because the system improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 67.3%.

Keywords: Enterprise Resource Planning, ERP Systems implementation, Bank performance, Twenty four hours Release 8 (T24R08)

INTRODUCTION

The use of Enterprise Resource Planning (ERP) software has become increasingly more common in a lot of today's businesses. It is adopted in many firms in attempts of improving business performance. The concept of business performance can be operationalized as financial gains by the organization, operational improvements for the organization or intangible gains for the organization.

The benefits of ERP systems are usually overestimated by ERP vendors. Promises are made about performance such as fast, return on investment (ROI), profitability and fast decision making but such claims need to be researched and tested in order to establish their degree of correctness (Trott & Hoecht, 2004). The aims of this study is to review the current research surrounding the benefits of implementing ERP systems around the world both in developed and developing world. Because according to Gupta unsuccessful ERP have effects on bank financial performance. For examples Gupta (2004) suggest that investing into ERP systems which are very costly and which don't return business value will waste business resources.

In a study conducted by Gupta (2004), results of the study show that financial institutions around the world, especially in developed countries like USA and United Kingdom have invested heavily in ERP projects due to the benefits it has got on business/ project performance. The benefits include automation and reengineering of business processes (Hitt et al., 2002). Other business reasons provided by Federici (2009) are better management, better operations, better

information availability and reengineering procedures, which are all reasons for acquiring ERP. Other business reasons include enhancing cooperation and teamwork between employees in the company. In addition, benefits expected from implementation of ERP systems include tangible benefits like reducing costs, reducing operations time, and a lean organization, while intangible benefits like information integration, better information quality, and increase in customer satisfaction also exist (Loh et al., 2006; Nicolaou, 2004). Such perceived benefits are expected because ERP help make services in financial institution more efficient by integrating information from other departments like sales, accounting and procurement. All the above benefits lead to increase in business return on investment and profitability.

Financial institutions in developing countries have also started realizing the benefits of ERP projects in promoting performance of the business. They have started introducing different IT projects in order to test the viability and ERP projects have promoted performance of some banks for example Stanbic bank South Africa, Kenya and Uganda. Also in the same project is Standard Chartered bank spread across South and East African countries. According to Tumusiime (2012) IT solutions project have drastically improved performance of banking institutions in the region, he further argued banking institutions to invest in ERP projects in order to improve service delivery and promote bank performance accordingly. Rwanda banking industry have also adopted investment in IT solutions project and this was witnessed by bank of kigali in 2008 introducing different ERP projects with different modules like ATM, customer service and many others but they are now the leading banking institution in Rwanda and East Africa at large because of good ERP implementation which promoted its performance.

Therefore this research attempt to find the best approach to implement the management information systems in BPR and to remove the obstacles that prevent the implementation of Management of Information Systems (MIS) in BPR. This is to ensure that the bank goals and objectives of efficient and quality services is promoted and ensured and at the same time improving the bank's profitability and return on investment. This is because the bank is one of the oldest banking the country but however their performance has almost remain the same in spite of the evolution of Information Technology in promoting service delivery. The question raised is that"does the bank developing in the right ERP projects or not".

BanquePopulaire Du Rwanda (BPR) finds its origin back in 1975, when the people of Nkamba, a village in the current Eastern province felt the need to have a savings and credit scheme, to help them grow financially and achieve better livelihoods. This is how the first BanquePopulaire was born. Subsequently, other community based savings and credit schemes were established in other areas of Rwanda becoming various autonomous "BanquesPopulaires." In 1986, as these autonomous savings and credit schemes grew bigger and stronger, an umbrella

bringing them together was put in place, with its headquarters in Kigali, under the name "Union des BanquesPopulaires du Rwanda (UBPR). These entities were tied together as cooperatives mainly to serve their members. 33 years along the road, the experience gained in providing financial services to the people, the growth that had been realized, but also the potential for growth that was inhibited by being a cooperative, called for upgrading (BPR report, 2014).

In 2008, UBPR transformed to become a commercial bank but while retaining its cooperative roots. 65% of the shares were retained by the former cooperative members, while 35% were acquired by a strategic partner, Rabobank. The latter having the main mission to help upgrade "BPR" into a fully-fledged retail bank and there was need for a modern ERP system in order to ensure effective and efficient service delivery. BPR was using T24 R08 as its core banking system and it is moving to T24 R12 to align more with the latest release of T24. BPR has a long history with Temenos since the first implementation of Globus G9 in 1993, successively upgraded to Globus G13 in 2004 and T24 R08 in 2009 (BPR report, 2014).

BanquePopulaire du Rwanda business has revolved over time and therefore it is imperative to migrate/upgrade the banking system to T24 R12. Driven by this, the Bank therefore desires to achieve certain objectives some of which are listed below. Implementing T24 release 12 Model Bank with provision for minimum Model Bank customizations; Fine tuning and migrating all existing solutions, setups and local developments from R08 to R12; Developing and implementing solutions to address user requirements from all departments of the bank; Interface developments wherever required; Automating maximum functionalities and services to achieve error free operations; Improve and develop management reporting and audit capability of the system; Migrating all static and financial details to new system; Migrate all existing loans from Mortgage to Loans and Deposits module; Migrate the current bank product and charging structure to R12; Resolving issues with T24 audit report (this is being addressed as a separate project); Resolving and proposing/providing solutions to all other identified issues and Testing the solution delivered in various agreed phases which was accomplished in July 2015.

It is based on the above background that is why the researcher would like to establish the effects ERP system implementation in BanquePopulaire Du Rwanda (BPR) business performance, simply because the system implementation is costly and therefore it should generate financial benefits to the bank(BPR report, 2014).

Statement of Problem

Poor Enterprise Resource Planning System project implementation leads to project failures and losses to the organization. This was attributed to the misalignment between the objectives from the ERP implementation and the strategic organizational and IT goals (Gupta et al., 2004). If such a

misalignment exists, it can cause the business to lose the advantages of ERP systems. On the other hand, investing into ERP systems without any objective other than following the market or industry trend might also cause an ERP project to fail (Kang et al., 2008).

ERP failure can be associated to internal or external aspects to the organization. Internally, failure is associated to the insufficient business knowledge, while externally failure is associated to the weak technical skills of the consultants helping in the ERP implementation. Miscommunication between the teams involved can also result into failure (Hitt et al., 2002). Another issue raised was that resisting activities associated with ERP can lead to ERP project failure or a huge loss of benefits (Velcu, 2007). Insufficient training of end users is also a reason attributed to ERP failures (Gupta et al., 2004; Häkkinen&Hilmola, 2007; Loh et al., 2006).

The above ERP challenges have affected efficiency of financial institutions which in turn affected their financial performance inform profitability, return on investment, return on asset and return equity and loan. These effects have made some banks to be dissolved and others merged in order to promote efficiency. For former BCR was acquired by I&M bank because of poor performance. It is based on those challenges that the researcher would like to assess the effects of ERP systems on business performance of commercial banks in Rwanda.

General objective of the Study

To assess the effect of Enterprise Ressource Planning system implementation on Bank Performance in Rwanda.

Specific objectives of the Study

1. To examine the effect of T24 R08accounting module on bank performance
2. To analyze the effect of T24 R08Customer Service management module on bank performance
3. To assess the effect T24 R08loan management module on bank performance

Research Hypothesis

1. *H_0: P=0:* There is No correlation relationship between T24 R08accounting moduleand Bank performance in BanquePopulaire du Rwanda

H_1: P≠ 0: There is a correlation relationship between T24 R08accounting moduleand Bank performance in BanquePopulaire du Rwanda

2. *H_0: P=0:* There is No correlation relationship between T24 R08Customer Service management module and Bank performance in BanquePopulaire du Rwanda

H$_1$: P≠ 0: There is a correlation relationship between T24 R08Customer Service management module and Bank performance in BanquePopulaire du Rwanda

3. *H$_0$: P=0:* There is No correlation relationship between T24 R08loan management module and Bank performance in BanquePopulaire du Rwanda

H$_1$: P≠ 0: There is a correlation relationship between T24 R08loan management moduleand Bank performance in BanquePopulaire du Rwanda

RESEARCH METHODOLOGY

As stated by Kombo & Tromp (2006) the descriptive research designs help provide answers to the questions of who, what, when, where, and how associated with a particular research problem. It is used to obtain information concerning the current status of the phenomena and to describe what exists with respect to variables or conditions in a situation. This study used a descriptive correlation case study; because the researcher based on primary and secondary data, to describe how ERP implementation effects on BPR performance. In the case of this study, the researcher analyzed financial performance of BPR to determine the relationships between ERP implementation and BPR performance.

The researcher followed quantitative and qualitative approaches. For quantitative approach, the researcher analyzed figures from BPR financial statements over different years to assess the effect of ERP implementation and BPR performance. Qualitative approach was followed to get responses from different respondents.

Study population

This study was carried out to analyze the effects of ERP implementation on BPR performance. The study population comprised of 185 staff of BPR from the department of accounting, administration, loan, operations and information technology.

Sampling design

A simple random sampling technique based on the willingness of the bankers to respond to the questionnaire, was adopted in this research in order to be able to generate sufficient data pool necessary to assess and evaluate the effect of the ERP system implementation on BPR performance.

The researcher used a statistical formula to determine the sample size. The formula to be used has been perfected by Yemane (1967:886) which provides a simplified formula to calculate sample size.

$$n = \frac{N}{1 + Ne^2}$$

Where

N= Population size

n= Simple size

e= standard error, the marginal error equal to 0.05

Confidence level 95%, p=0.05

The population size of this research is 185 employees of BanquePopulaire Du Rwanda. We take a sampling error of 5%, and then the sample size comes out to be: 115. Thus research picked 115 respondents to represent 185 employees of BPR in order to come up with required findings

Data Collection

The researcher collected primary data from respondent of the questionnaire and observations when conducting the data collection. Open-ended and closed-ended questionnaires were administrated to the target population.

The research used self-administered questionnaires because as started by Kothari (2008), these allowed respondents to choose from alternative that were provided by the researcher which is later analyzed to provide results necessary for solving a given research problem .
The secondary data were collected by documentary review.

Dailey (1998) defines documentary study as the analysis of documents. These documents include any written materials that contain information about the phenomenon we wish to study including books and reports from the library. In this research the researcher reviewed reports, and financial statement of the bank in order to analyze the performance of the bank effectively, books, journals .internet on effect of ERP system implementation on bank performance

Data Analysis

The coding of data was done in order to convert responses into measurement that was statistically analyzed, edited in order to examine data, detect any errors and omission, and to correct them where possible and tabulation for presentation of data inform of frequency and percentages, especially quantitative data. Qualitative analysis techniques were used. The Qualitative analysis techniques were complemented with some statistics that were mainly obtained from the secondary data that was obtained through documentary analysis from the case study.

The descriptive statistics was used to describe data collected from the research by using percentages, mean and standard deviation. The researcher used Pearson correlation test to establish the relationship between the variables. Mean and standard deviations presentations gave

clear understanding of the research interpretations for clear and easy understanding of the phenomenon studied. This analysis was done by the help of using a Statistical Package for Social Sciences (SPSS) software.

RESEARCH FINDINGS AND DISCUSSIONS
Accounting module and BPR performance

Table 1: Accounting module in BPR

Accounting module in BPR	Mean	Std. Deviation	Comments
T24 R08 accounting module helps in budgeting and planning for the bank	4.3565	.49897	Strong homogeneity
T24 R08 accounting module helps the bank in accounts reconciliation	4.2870	.47323	Strong homogeneity
T24 R08 accounting and finance system helps in costing of materials	4.3130	.48423	Strong homogeneity
T24 R08 accounting module helps in tax management	4.3391	.49359	Strong homogeneity
T24 R08 accounting module helps in managing accounts receivable	4.3913	.50776	Strong Heterogeneity
T24 R08 accounting module helps in managing accounts payable	4.3652	.50141	Strong Heterogeneity
Summary of findings	**4.3420**	**0.4931**	**Strong homogeneity**

Analysis on accounting module in BPR revealed that T24 R08 accounting module helps in budgeting and planning for the bank as reflected by a strong mean of 4.3565 and a homogeneity standard deviation of .49897. The module helps the bank in accounts reconciliation since reconciliation is a key function in financial accounting with a strong mean of 4.2870 and a homogeneity standard deviation of .47323. T24 R08 accounting module helps in costing of materials as reflected by a strong mean of 4.3130 and a homogeneity standard deviation of .48423. Furthermore T24 R08 accounting module helps in tax management as reflected by a strong mean of 4.3391 and a homogeneity standard deviation of .49359. The system helps especially in calculating the different types of tax the bank is supposed to pay for example pay as you earn tax, VAT and withholding tax.

The system helps in managing accounts receivable as reflected by a strong mean of 4.3913 and a heterogeneity standard deviation of .50776. The system reflects the credit entry in the journal with particulars of the payers. Lastly T24 R08 accounting module helps in managing accounts payable as reflected by a strong mean of 4.3652 and a heterogeneity standard deviation

of .50141. This implies that T24 R08 accounting and finance system helps in managing accounts payable especially reflecting the debit entry and indicating the payees. This minimizes errors in accounts management because it ensures all payments are done according to the required procedures.

Summary of the findings revealed that T24 R08 accounting system has improved budgeting and planning for the bank, costing of material, payables and receivables in the bank accounts reconciliation. This reflected by strong mean of 4.3420 and a homogeneity standard deviation of 0.4931.

Table 2: Effect of accounting module on BPR performance

Accounting module and BPR performance	Mean	Std. Deviation	Comments
T24 R08 accounting module has improved on the bank efficiency	4.5217	.53554	Very Strong Heterogeneity
T24 R08 accounting module has promoted the bank return on capital	4.5391	.53454	Very Strong Heterogeneity
T24 R08 accounting module has promoted the bank return on asset	3.3913	.63378	Weak Heterogeneity
T24 R08 accounting module has promoted the bank return on equity	4.5130	.53583	Strong Heterogeneity
T24 R08 accounting module has increased the bank liquidity	4.5565	.53297	Very Strong Heterogeneity
T24 R08 accounting module has improved on the bank profitability	2.9043	.70055	Weak Heterogeneity
Summary of findings	**4.0709**	**0.5788**	**Strong Heterogeneity**

Analysis on the effects of accounting module on BPR performance revealed that T24 R08 accounting and finance module has improved on the bank efficiency as reflected by a strong mean of 4.5217 and a heterogeneity standard deviation of .53554. The system T24 has promoted the bank return on capital as reflected by a strong mean of 4.5391 and a heterogeneity standard deviation of .49897. The system has also promoted the bank return on asset as reflected by a weak mean of 3.3913and a heterogeneity standard deviation of .63378

Furthermore T24 R08 accounting module has promoted the bank return on equity as reflected by a strong mean of 4.5130 and a heterogeneity standard deviation of .53583. It has increased the bank liquidity as reflected by a strong mean of 4.5565 and a heterogeneity standard deviation of .53297. Lastly T24 R08 accounting module has improved on the bank profitability as reflected by a weak mean of 2.9043 and a heterogeneity standard deviation of .70055.

Summary of the findings revealed that T24 R08 accounting system has improved performance of the bank as reflected by bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability. This reflected by strong mean of 4.0709 and a homogeneity standard deviation of 0.5788.

Table 3: Relationship between accounting and BPR performance

Relationship		Accounting module	BPR performance
Accounting module	Pearson Correlation	1	.751[**]
	Sig. (2-tailed)		.000
	N	115	115
BPR performance	Pearson Correlation	.751[**]	1
	Sig. (2-tailed)	.000	
	N	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

In establishing relationship between accounting module and BPR Performance the finding revealed that ERP system implementation has positive high correlation to the BPR performance equal to .751[**] and the p-value is .000 which is less than 0.01. This means that the variables are correlated. The findings shows that the system improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 75.1%.We can conclude that there is a significant relationship between accounting module and BPR Performance

Customer Relationship Management module and BPR performance

Table 4: Customer Relationship Management module on BPR performance

CRMS on BPR performance	Mean	Standard deviation	Comments
T24 R08 CRMS helps in timely customers payment and withdrawal services	4.2087	.55402	Strong Heterogeneity
T24 R08 CRMS helps in 24/7 service delivery	4.1826	.57097	Strong Heterogeneity
T24 R08 CRMS helps in managing customer complain effectively	4.1826	.52286	Strong Heterogeneity
T24 R08 CRMS helps in reconciling customers accounts effectively	4.1652	.56086	Strong Heterogeneity
T24 R08 CRMS help customers to pay and withdraw money from anywhere	4.2174	.52620	Strong Heterogeneity
Summary of findings	4.1913	0.5469	Strong Heterogeneity

Analysis on the Customer Relationship Management module revealed that T24 R08 customer relationship management module helps in timely customer's payment and withdrawal services as reflected by a strong mean of 4.2087 and a heterogeneity standard deviation of .55402. The module helps in 24/7 service delivery in the bank which makes customers comfortable to perform their transactions at any time they wish to, this was revealed by a strong mean of 4.1826 and a heterogeneity standard deviation of .57097. The module also helps in managing customer complain effectively by registering all the required complains. This was reflected by a strong mean of 4.1826and a heterogeneity standard deviation of .52286.

Furthermore the module also helps in reconciling customers' accounts effectively by comparing withdrawal and deposit. This was reflected by a strong mean of 4.1652 and a heterogeneity standard deviation of .56086. Lastly the module help customers to pay and withdraw money from anywhere by use of Visa and master cards, this was reflected by a strong mean of 4.2174 and a heterogeneity standard deviation of .52620.

Summary of the findings revealed that Customer Relationship Management module has improved timely customer's payment and withdrawal services, 24/7 service delivery, managing customer complain, reconciling customers accounts and customers to pay and withdraw money from anywhere by use of Visa and master cards. This reflected by strong mean of 4.1913 and a homogeneity standard deviation of 0.5469.

Table 5: Effects of Customer Relationship Management module on BPR performance

CRM module on BPR performance	Mean	Std. Deviation	Comments
T24 R08 CRMS has improved the bank efficiency	4.4696	.65322	Strong Heterogeneity
T24 R08 CRMS has promoted the bank return on investment	4.4261	.70164	Strong Heterogeneity
T24 R08 CRMS has promoted the bank return on asset	3.3478	.83816	Weak Heterogeneity
T24 R08 CRMS has promoted the bank return on equity	4.4087	.72421	Strong Heterogeneity
T24 R08 CRMS has increased the bank liquidity	4.3652	.77607	Strong Heterogeneity
T24 R08 CRMS has improved on the bank profitability	2.3304	.57311	Weak Heterogeneity
Summary of findings	3.8913	0.0955	Strong Heterogeneity

Analysis on the Effects of Customer Relationship Management module on BPR performance revealed that T24 R08 customer relationship management module has improved the bank efficiency through timely service delivery, cost effective service delivery and conveniences since

one can with draw from anywhere. This was reflected by a strong mean of 4.4696and a heterogeneity standard deviation of .65322. The module has promoted the bank return on investment. It was reflected by a strong mean of 4.4261 and a heterogeneity standard deviation of .70164. The module has promoted the bank return on asset and this was reflected by a weak mean of 3.3478 and a heterogeneity standard deviation of .83816.

Furthermore T24 R08 customer relationship management module has promoted the bank return on equity and loan which was reflected by a strong mean of 4.4087 and a heterogeneity standard deviation of .72421. The module has increased the bank liquidity which was reflected by a strong mean of 4.3652 and a heterogeneity standard deviation of .77607. Lastly the module has improved on the bank profitability and this was reflected by a weak mean of 2.3304 and a heterogeneity standard deviation of .57311.

Summary of the findings revealed that Customer Relationship Management module has improved performance of the bank as reflected by bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability. This reflected by strong mean of 3.8913 and a homogeneity standard deviation of 0.0955.

Table 6: Relationship between Customer Relationship Management module and BPR performance

Relationship		Customer Relationship Systems	BPR performance
Customer Relationship Systems	Pearson Correlation	1	.686[**]
	Sig. (2-tailed)		.000
	N	115	115
BPR performance	Pearson Correlation	.686[**]	1
	Sig. (2-tailed)	.000	
	N	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

In establishing relationship between Customer Relationship module and Bank Performance the finding revealed that hat ERP system implementation has positive moderate correlation to BPR performance equal to .686[**] and the p-value is .000 which is less than 0.01. This means that there is a moderate relationship between Customer Relationship module and Bank Performance because the system improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 68.6%.The researcher conclude that variables are correlated.

Effects of loan management module on BPR performance

Table 7: Loan Management module in BPR performance

Loan Management module on BPR performance	Mean	Std. Deviation	Comments
T24 R08 loan management system helps in loan assessment	4.1913	.45683	Strong homogeneity
T24 R08 loan management system helps in processing	4.2000	.48123	Strong homogeneity
T24 R08 loan management system helps in loan scheduling	4.1652	.47629	Strong homogeneity
T24 R08 loan management system helps in mortgage and payment tracking	4.1913	.49374	Strong homogeneity
T24 R08 loan management system helps in managing accrue interest income	4.1565	.52300	Strong heterogeneity
T24 R08 loan management system helps to integrate with general ledger	4.1652	.49436	Strong homogeneity
Summary of findings	4.17825	0.487575	Strong homogeneity

Analysis on Loan Management module in BPR performance revealed that T24 R08 loan management module helps in loan assessment since loan assessment is very important to the bank before any loan is disbursed to the clients. It analyses the capacity of the clients whether he will be able to pay the loan or not. This reflected by a strong mean of 4.1913 and a homogeneity standard deviation of .45683. The module helps in loan processing especially after the loan is assessed so that all the necessary deductions and loan terms are put into considerations. This was reflected by a strong mean of 4.2000 and a homogeneity standard deviation of .48123. The module also helps in loan scheduling especially showing when the installments and date for loan payment which is reflected by a strong mean of 4.1652 and a heterogeneity standard deviation of .47629.

Furthermore T24 R08 loan management module helps in mortgage and payment tracking which is reflected by a strong mean of 4.1913 and a homogeneity standard deviation of .49374. The module helps in managing accrue interest income reflected by a strong mean of 4.1565and a heterogeneity standard deviation of .52300. Lastly the module helps to integrate loan with general ledger which was reflected by a strong mean of 4.1652 and a homogeneity standard deviation of .49436.

Summary of the findings revealed that T24 R08 loan management module has improved loan assessment, loan processing, loan scheduling, mortgage and payment tracking, managing accrue interest income and integrate loan with general ledger. This reflected by strong mean of 4.1913 and a homogeneity standard deviation of 0.5469.

Table 8: Effects of loan management module on BPR performance

Effects of loan management module on BPR performance	Mean	Std. Deviation	Comments
T24 R08 loan management system has improved the bank efficiency	4.3739	.79979	Strong Heterogeneity
T24 R08 loan management system has promoted the bank return on investment	4.3913	.84496	Strong Heterogeneity
T24 R08 loan management system has promoted the bank return on asset	2.8696	.33826	Weak Heterogeneity
T24 R08 loan management system has promoted the bank return on equity	4.3826	.86433	Strong Heterogeneity
T24 R08 loan management system has increased the bank liquidity	4.4000	.84604	Strong Heterogeneity
T24 R08 loan management system has improved on the bank profitability	2.6087	.49018	Weak Heterogeneity
Summary of findings	3.8376	0.6972	Strong Heterogeneity

Analysis on the effects of loan management module on BPR performance revealed that T24 R08 loan management module has improved the bank efficiency by a strong mean of 4.3739 and a heterogeneity standard deviation of .79979. The module has promoted the bank return on investment by a strong mean of 4.3913 and a heterogeneity standard deviation of .84496. The finding revealed that the module has promoted the bank return on asset as reflected by a weak mean of 2.8696 and a heterogeneity standard deviation of .33826.

Furthermore the findings revealed that T24 R08 loan management module has promoted the bank return on equity as reflected by a strong mean of 4.3826 and a heterogeneity standard deviation of .86433.

The module has improved bank liquidity reflected by a strong mean of 4.4000 and a heterogeneity standard deviation of .84604. Lastly T24 R08 loan management module has improved on the bank profitability as reflected by strong mean of 2.6087 and a heterogeneity standard deviation of .49018.

Summary of the findings revealed that loan management module has improved performance of the bank as reflected by bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability. This reflected by strong mean of 3.8376 and a homogeneity standard deviation of 0.6972.

Table 9: Relationship between of loan management module and BPR performance

Relationship		Loan Management System	BPR performance
Loan Management System	Pearson Correlation	1	.583**
	Sig. (2-tailed)		.000
	N	115	115
BPR performance	Pearson Correlation	.583**	1
	Sig. (2-tailed)	.000	
	N	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

In establishing relationship between loan management module and Bank Performance the finding revealed that independent variable has positive moderate correlation to dependent variable equal to .583** and the p-value is .000 which is less than 0.01.. This means that there is a moderate relationship between loan management module and Bank Performance because the system improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 58.3%.The researcher conclude that variables are correlated.

Relationship between Enterprise Resource Planning Systems and Bank Performance

Table 10: Relationship between ERP System Implementation and BPR Performance

Enterprise Resource Planning Systems and Bank Performance		ERP system Implementations	Bank Performance
ERP system Implementations	Pearson Correlation	1	.673**
	Sig. (2-tailed)		.000
	N	115	115
Bank Performance	Pearson Correlation	.673	1
	Sig. (2-tailed)	.000	
	N	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

The finding revealed that the Enterprise Resource Planning System implementation has positive moderate correlation to the Bank Performance equal to .673** and the p-value is .000 which is less than 0.01. This means that the null hypothesis which started that there is no significant relationship

between Enterprise Resource Planning System and Bank Performance was rejected by the researcher and conclude that the ERP system implementation improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 67.3%.

SUMMARY OF FINDINGS

Relationship between accounting module and BPR performance

The research finding shows that T24 R08 accounting module in BPR perform so many functions which includes; budgeting and planning for the bank, bank accounts reconciliation, costing of materials, tax management, managing accounts receivable and managing accounts payable. The research revealed that accounting and finance modules highly influences BPR performance inform of promoting bank efficiency, banks return on capital, return on asset, return on equity, liquidity and profitability. The results indicate that independent variable has positive moderate correlation to dependent variable equal to .751[**] and the p-value is .000 which is less than 0.01 which indicate that variables are correlated and null hypothesis is rejected and the researcher remains with alternative hypothesis. This means that there is a moderately relationship between accounting and finance module and BPR Performance. We can therefore conclude Customer accounting module highly contributes to the Performance of BPR.

Relationship between Customer Management System and BPR performance

The research Finding shows thatT24 R08 customer relationship management modules helps the bank in timely customer's payment and withdrawal of money, 24/7 service delivery, managing customer complain effectively, reconciling customers accounts effectively and mobile payment. The research revealed that T24 R08 customer relationship management module moderately affects BPR performance in that, it has improved the bank efficiency, return on investment, return on asset, return on equity, liquidity and the bank profitability. In establishing relationship between Customer Relationship module and Bank Performance the finding revealed that independent variable has positive moderate correlation to dependent variable equal to .686[**] and the p-value is .000 which is less than 0.01. This means that the system improved moderately the bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 68.6%.

Relationship between loan management module and BPR performance

The research finding shows that T24 R08loan management module in BPR performs the following functions; it helps in loan assessment, loan processing, loan scheduling, mortgage and payment

tracking and managing accrue interest income. The research further showed that T24 R08loan management module moderately influences BPR performance in that, it has improved the bank efficiency, bank return on investment, return on asset, return on equity, liquidity and the bank profitability. In establishing relationship between loan management module and Bank Performance the finding revealed that independent variable has positive moderate correlation to dependent variable equal to .583[**] and the p-value is .000 which is less than 0.01. This means that loan management module had moderately improved the Bank Performance because the system improved bank efficiency by 58.3%.

ERP Challenges affecting BPR performance

During the research, the respondents stated that challenges affecting ERP performance are unreliable network which affects the operations, no direct payment of loan when you make deposit in T24 R08, no loan history generated by T24 R08. The Enterprise Resource planning implemented in BPR is not user friendly, and the respondents requested that everyone must be thoroughly trained in order to use the system. There are also the challenge of data corruption issues. Security issues when using the system should be also improved.

CONCLUSION

The research has revealed that accounting module, customer relationship management module and loan management module moderately influences BPR performance in that has improved the bank efficiency, return on investment, return on asset, return on equity, liquidity and bank profitability. In establishing relationship between Enterprise Resource Planning System implementation and Bank Performance the finding revealed that independent variable has positive moderate correlation to dependent variable equal to .673[**] and the p-value is .000 which is less than 0.01,therefore researcher conclude that variables are correlated. This research indicated that the Enterprise Resource Planning System has moderately improved the Bank Performance We can conclude that that there is a significant relationship between Enterprise Resource Planning System and Bank Performance because the system improved bank efficiency, bank return on capital, bank return on asset, bank return on equity, liquidity and bank profitability by 67.3%.

RECOMMENDATIONS

The researcher has indicated that the Enterprise Resource Planning implementation has a moderate effect on bank performance in BanquePopulaire Du Rwanda, some challenges were found and the following recommendations were given to the bank;

    i.   The bank should acquire a system which perfectly promotes bank performance.

ii.   Staffs should be though trained in order to use the system appropriately

iii.   The system should be re programmed in order to generate the history of transaction for proper tracking of the trend of performance.

iv.   The bank should subscribe to a reliable network for effective and efficient operations.

v.   The management should ensure that the system is user friendly especially the interface being used by the bank customers.

vi.   Strong security measures should be programmed in order to detect any foreign network or intruders from entering the bank network.

The study will help the bank to improve on their ERP systems implementation and financial performance accordingly especially if they adopt the recommendations highlighted. It will contributes to better formulating policy in terms of future investment, improving the quality of existing ERP system as well as reducing the cost associated. The study will contribute to the current body of knowledge as basis for further investigations in this area.

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