ORIGINAL RESEARCH PAPER

Management

EVALUATION OF PROJECT RISK ON IMPLEMENTATION OF DIGITAL BANKING PROJECTS AMONG COMMERCIAL BANKS IN MOMBASA COUNTY, KENYA

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ABSTRACT

Adoption of digital banking as a platform for banking services has continued to rise globally as consumers become more and more comfortable with using mobile and Internet channels for banking. Banks on the other hand are continuously breaking away from the traditional branch banking by embracing digital banking mainly to cut cost and win the young tech-savvy customers. The study was carried out in Mombasa County from February 2020 to September 2020 with the objective being to examine the effect of project risk on implementation of digital banking projects among commercial banks in Mombasa-Kenya. The target population was 140 employees (branch managers, digital channels officers, operations officers, and customer service officers) of commercial banks in Mombasa County in Kenya. The sample size was 104 employees. A modified Likert scale questionnaire was developed divided into three parts. Data analysis was performed on a PC computer using Statistical Package for Social Science (SPSS Version 25) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation, and the information generated was presented in form of graphs, charts, and tables. The study findings revealed that banks pass project risks to third parties as a way of mitigating risk and being able to recover in case of any eventuality. The study recommends that commercial banks should adopt project scheduling in the implementation of digital projects; that commercial banks should continue with communications during project implementation since this will help various stakeholders to understand what is going on at the banks and that commercial banks should adopt criticality index (CI) as a performance metric, used to identify those activities that are critical in a project network

BACKGROUND

Digital banking refers to a variety of financial services provided by banks to customers through Internet technology or other public information networks through personal computers or other smart devices. The online banking business not only covers the traditional banking business, but also breaks the boundary of banking operations and penetrates into the fields of securities, insurance and even commercial circulation. Mobile banking is an extension of online banking (Shu, Tsang, & Zhao, 2020).

Digital banking projects are divided into three. The first category is full digital banking platforms such as Alipay and Tencent. The second category comprises of Fintechs (Financial Technology companies) which are mainly driven by data and technology and are changing the ecological pattern of the financial industry. As for the application of financial technology, Citigroup has reported that the total investment attracted by financial technology in the past five years was close to \$50 billion, from \$1.8 billion in 2010 to \$19.1 billion in 2015. China is particularly prominent in the particularly fast-growing economies (Siam, 2020). The third category comprises of traditional banks that are attempting to engage in digital transformation.

In Kenya, Banks have been significantly affected by the evolution of technology, competition between banks has forced them to find new market to expand, and the number of financial institutions that offer electronic banking products increased, (Almazari & Siam, 2019). Electronic banking has become the way for the development of banking system, as it offers opportunities to create services processes that demand few internal resources, and therefore, lower cost. As well as it provides wider availability and possibility to reach more customers (Gardachew, 2018).

The banking industry's efforts to shift to digital channels have been halting, at best — a business unit here, an upstart department there. Given the industry's financial pressures and global economic uncertainties, there is increased urgency and opportunity to adopt a holistic approach to going digital and integrating that strategy across the banking ecosystem. Embracing a digital strategy requires end-to-end modernization of a bank's often-outdated infrastructure (Bultum, 2019).

Statement of the Problem

The Kenyan banking industry has been undergoing rigorous transformation including changing customer needs, innovation, technological advancements, deregulation, globalization and stiff competition (CBK, 2018). To cope with these market forces that threaten survival, competitiveness, sound project management practices, profitability and growth, commercial banks are implementing several digital banking projects (Githuku & Kinyuru, 2019).

Many digital projects around the world keep failing, resulting in loss of millions of dollars for organizations. This persisting challenge has led many project management professionals to attempt to identify the critical factors that need to be tackle head-on to produce a successful project management outcome World Bank (2010). The benefits of digital banking to banks are lower fees in banking because costs of staff or overheads are non- existent. Other benefits of digital banking are, increased customer base, marketing or communication, increased customer loyalty and satisfaction, high profit consumers, ability to attract new customers and enable innovation and development of non – core business services. The benefits of digital banking can only be realized through sound project planning practices.

In a study by Kyalo (2017) on the relationship between technology advancement and the service quality in the banking industry in Kenya, he found out that technology affected service quality in the banking industry. Banks that invest in technology in order to improve their service quality

have a competitive advantage. According to the study, service quality is the main differentiator among banks in Kenya. This study therefore sought to investigate the effect of 'project risk evaluation' practices on the implementation of digital banking projects among banks in Mombasa County-Kenya.

Research Hypotheses

H_1: Project risk has no significant effect on implementation of digital banking projects in Mombasa County.

Conceptual Framework
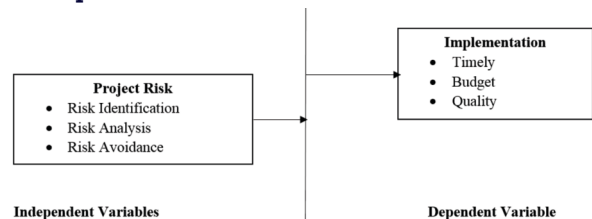
Figure 4.1 Conceptual Framework

Research Design

This study adopted a cross-sectional survey research design aimed at collecting large number of qualitative and quantitative data at a point in time so as to establish implementation of digital banking projects in commercial banks in Kenya. A cross-sectional survey research design enables collection of data about a given phenomenon within a limited time horizon which can help describe incidences of events or provide an explanation of factors related to an organization (Saunders, Lewis & Thornhill, 2019).

Target Population

According to Sekaran (2015), a target population was classified as all the members of a given group to which the investigation was related, whereas the accessible population was looked at in terms of those elements in the target population within the reach of the study. According to Kothari, and Garg (2018), a population is a group of events, people, or items of interest with a common observable attribute. According to the CBK, (2017) there are 35 commercial banks licenced to operate in Mombasa County Kenya. The study targeted 38 branch managers, digital channels officers, operations officers and customer service officers respectively working in commercial banks in Mombasa County.

Table 6.1 Target Population

Category	Target Population	Percent
Branch Manager	35	25
Digital Channels Officers	35	25
Operations Officers	35	25
Customers Service Officers	35	25
TOTAL	140	100

Sampling and Sampling Technique

Stratified random sampling method was used to select relevant respondents ensuring inclusion in the sample of subgroup which otherwise could be omitted entirely by other sampling methods. In this case stratification was based on department from which employees come from.

Sample Size

The total sample size for this study was obtained using the formulae developed by Saunder et al., (2018) together with Miller and Brewer (2019) and the adjusted sample size was 70 as per workings below. With a study population of 38 (there are 35 commercial banks in Mombasa County) and a target population of 140 being the branch manager, digital channels officer, operations officers and customer service officers, the researcher will apply the multi-stage sampling frame of choosing 4 respondents from every commercial bank. With a confidence interval of 95 percent, the sample size was

determined using the formula given by Miller and Brewer (2019) as shown.

$$n = \frac{N}{1 + N(\alpha)^2}$$

Where: n= the sample size,
N= the sample frame (population)
The sample size was 104.

Table 8.1 Sample Size

Category	Target Population	Sample Size	Percent
Branch Managers	35	31	25
Digital Channels Officer	35	31	25
Operations Officers	35	31	25
Customers Service Officers	35	31	25
TOTAL	140	104	100

Data Collection Methods
Primary Data

The primary research data was collected using a semi-structured questionnaire. Items in the questionnaire were arranged in a logical sequence according to the themes being studied and items that would elicit similar responses being grouped together. The questionnaire had both closed and open-ended, predetermined, and standardized set of questions. These closed-ended questions were adopted since they are easier to analyze as they are in an immediate usable form, are easier to administer and are economical to use in terms of time and money Cooper and Schinder, (2018). The open-ended questions gave the respondents complete freedom of response in one's own words.

Secondary Data

Secondary data was obtained from literature sources through review of published literature such as journals, articles, published theses and textbooks. These sources were reviewed to give insight in the search for the primary information. Secondary data on implementation of digital banking projects was obtained commercial banks reports.

Data Analysis and Presentation

Qualitative as well as quantitative methods of data analysis was used to analyze the research variables. A Likert scale was adopted to provide a measure for qualitative data. The scale helps to minimize the subjectivity and make it possible to use quantitative analysis. The numbers in the scale will be ordered such that they indicated the presence or absence of the characteristic to be measured Kothari and Gang, (2014). This mix of tools is necessary because whereas some aspects of the study were qualitative others were of quantitative nature.

Qualitative Analysis

In qualitative studies, the researcher was interested in analyzing information in a systematic way in order to come to useful conclusions and recommendations. In qualitative studies, researcher obtained detailed information about the phenomena being studied, and then try to establish patterns, trends and relationships from the information gathered. Qualitative analysis aims at providing basic information without proof of it. Before processing the responses, data preparation was done on the completed questionnaire by editing, coding, entering and cleaning the data. Data collected will be analyzed using descriptive statistics. The descriptive statistical tools helped in describing the data and determining the respondents' degree of agreement with the various statements under each factor. Data analysis was done with the help of SPSS version 25.0.

Quantitative Analysis

Whereas qualitative analysis aimed at providing basic information, quantitative analysis goes further to test the

theories in the theoretical framework behind the study and prove or disapprove it. For this kind of a study, there is need to go further and test hypothesis. The multiple regression analysis was used to explore the relationship between project schedule, project resources, project risk and project communication as the independent variables and implementation of digital banking projects in Kenya as the dependent variable. Pearson's product moment correlation analysis will also use and it's a powerful technique for exploring the relationship among variables. Correlation coefficient was used to analyze the strength of the relations between variables. Correlation coefficients was calculated to observe the strength of the association. A series of multiple regression analysis (standard and step wise) was used because they provide estimates of net effects and explanatory power. Analysis of variance (ANOVA) was used to test the significance of the model. R^2 was used in this research to measure the extent of goodness of fit of the regression model. The multiple linear to be used to estimate the coefficient is as follows:

$Y=\beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$ Where:-

Y = represents the dependent variable, implementation of digital banking projects in Kenya

β_0, β_1, β_2, β_3 and β_4 are the Regression Coefficient to be estimated

X_1 = Project Risk

Hypothesis Testing
Table 10.3 Study Hypothesis and Analytical Models

Hypothesis Statement	Hypothesis Test	Decision Rule and Anticipated model
H1: Project risk has no significant effect on implementation of digital banking projects in Mombasa County.	-Karl Pearson (Beta test) product moment. H0: $\beta3 = 0$ HA: $\beta3 \neq 0$	Reject H03 if P-value ≤ 0.05 otherwise fail to reject H01 if P- value is > 0.05

RESULTS
Questionnaire Response Rate
One hundred and four questionnaires were issued to respondents. 84 questionnaires were filled and returned representing 80.7% response rate. Bryman and Bell, (2018) posts that a response rate of 50% is adequate for analysis and reporting, 60% is good and 70% and above is excellent. For this study the response rate was excellent as shown in Table 11.1

Table 11.1 Response Rate

	Frequency	Percentage
Respondents	84	80.7
Non-Respondents	20	19.3
TOTAL	104	100

Working Experience
The study results revealed that respondents with a working experience of between 0-3 years were 15.4%, between 3-6 years were 28.6%, between 6-9 years were 31% and those with a working experience of over 9 years were 25% with a mean score of 2.65 and a standard deviation of 1.024 as shown in Table 4.4. This shows that majority of respondents were those with a working experience of between 3-6 years.

Table 11.2 Working Experience

	Frequency	Percent
Between 0-3 Years	13	15.4
Between 3-6 Years	24	28.6
Between 6-9 Years	26	31
Over 9 Years	21	25
Total	84	100

Level of Education
Respondents holding certificates were 14.3%, diploma 9.5%, degree 58.4%, master's degree 7.1% and those with other qualifications were 10.7% with a mean score of 2.90 and a standard deviation of 1.082.

Table 11.3 Level of Education

Level of Education	Frequency	Percent
Certificate	12	14.3
Diploma	8	9.5
Bachelor's Degree	49	58.4
Master's Degree	6	7.1
Other Qualifications	9	10.7
Total	84	100

Project Risk and Implementation of Digital Banking
Table 11.3 Project Risk

	N	Minimum	Maximum	Mean	Std. Deviation
Banks identify risks inherent in digital banking projects	84	1	5	3.49	1.207
Banks avoid risks inherent in digital banking projects	84	1	5	4.07	1.387
Banks have put in place mitigation measures	84	1	5	4.02	1.353
Banks have a risk analysis matrix	84	1	5	3.90	1.314
Banks cannot eliminate all digital banking projects risks	84	1	5	3.61	1.380
Banks pass project risks to third parties	84	1	5	4.13	1.259

Banks identify risks inherent in digital banking projects represented a mean score of 3.49 and a standard deviation of 1.207, in banks avoiding risks inherent in digital banking projects mean score was 4.07 and a standard deviation of 1.387. The statement that banks have put in place mitigation measures had a mean score of 4.02 and a standard deviation of 1.353 while it was observed that banks had a risk analysis matrix mean score of 3.90 and a standard deviation of 1.314. It was evident that banks cannot eliminate all digital banking projects risks with a mean score of 3.61 and a standard deviation of 1.380. Evidently banks pass projects risk to third parties posing a mean score of 4.13 and a standard deviation of 1.259. These results agree with Njogu (2019) in the study on risk and project delivery in Kenya which opines that since risk has not occurred as yet, it may or may not occur. It is therefore a created image or projection of an occurance that may happen with negative consequences. Risks irrespective of their type should be adequately managed to achieve the desired project goals and objectives.

Implementation of Digital Banking
Table 11.4.1 Implementation of Digital Banking

	N	Minimum	Maximum	Mean	Std. Deviation
Banks have timelines to implement digital projects	84	1	5	3.57	1.593
Banks have a budget for implementing digital projects	84	1	5	4.01	1.207
Banks have two parallel systems running during implementation of digital projects	84	1	5	4.18	1.346
Banks pilot, test and run digital projects upon satisfaction	84	1	5	4.12	.688
Digital banking improves returns on Investment	84	1	5	3.36	1.403
Banks improves returns on equity	84	1	5	4.26	.946

Table 11.4.2 Test of Hypothesis

Hypothesis Statement	Regression Results	Decision

H01: Project risk has no significant effect on implementation of digital banking projects in Mombasa County.	t = -6.390 P = 0.000	Accept H03 null hypothesis Project risk has no significant effect on implementation of digital banking projects in Mombasa County.

Discussion of the Findings

On project risk the study results revealed that banks pass project risks to third parties as a way of mitigating risk and being able to recover in case of any eventuality. Banks avoid risks inherent in digital banking projects. Banks have a risk analysis matrix. Banks cannot eliminate all digital banking projects risks. On inferential statistics the study established that the independent variable project risk and dependent variable implementation of digital banking projects in Mombasa County had a strong negative correlation at -0.607. Further for every unit increase in project risk led to -62.7% increase in implementation of digital banking projects in Mombasa County.

Recommendations

Recommendations were made from the study findings and conclusions as follows:

1. The study recommends that Commercial banks should adopt project scheduling in the implementation of digital projects.
2. The study recommends that Commercial banks should continue with communications during project implementation since this will help various stakeholders to understand what is going on at the banks.
3. The study recommends that commercial banks should adopt criticality index (CI) is a performance metric, used to identify those activities that are critical in a project network.

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