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**INFLUENCE OF STRATEGIC MANAGEMENT BEST PRACTICES
ON PERFORMANCE OF COMMERCIAL BUILDING PROJECTS
REGISTERED BY NATIONAL CONSTRUCTION AUTHORITY IN
NAIROBI CITY COUNTY, KENYA**

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Abstract

Purpose: The purpose of the study was to examine influence of strategic management best practices on performance of commercial building projects registered by national construction authority in Nairobi City County, Kenya

Methodology: A descriptive survey design was adopted by the study and a total of 289 commercial building projects registered by National Construction Authority in Nairobi City County was the target population, as shown in NCA (2020) directory. Using Kothari (2014) sample size formula, the study got 167 commercial building projects. This study used simple random sampling to get the firm. A structured questionnaire was used to collect primary data. The questionnaire was set in likert scale format to capture quantitative data. Data analysis entailed descriptive analysis such as means, frequency and percentages. Data was also analyzed through inferential analysis which entails correlation and regression. Statistical tests were conducted at five percent level of significance and the findings were presented through tables and figures.

Results and conclusion: The coefficient of determination also called the R² was 0.634. R² value of 0.634 means that 63.4% of the corresponding variation in performance of commercial building projects registered by National Construction Authority in Kenya can be explained or predicted by (information technology adoption, strategic partnerships, customer experience management, team management) which indicated that the model fitted the study data. The findings of the study indicated that information technology adoption, strategic partnerships, customer experience management and team management have a positive relationship with performance of commercial building projects registered by National Construction Authority in Kenya.

Policy recommendation: the study recommends that companies should embrace strategic management best practices so as to improve performance and further researches should to be carried out in other institutions to find out if the same results can be obtained.

Keywords: *information technology adoption, strategic partnerships, customer experience management, team management*

1.1 Introduction

Various definitions of strategy exist, and numerous schools of thought have their own ideas of what strategy is, however all agree that every organization must have a visionary long-term objective, break down the long-term objective to actionable goals and tasks, allocate resources towards implementation and monitoring of those tasks then the entity can be said to have a strategy (Rogers, 2018). Formulation, implementation, evaluation of goals and objectives are key parts in strategic management.

This process is undertaken by the top leadership team on behalf of the shareholders, board of directors and employees after completion of an internal and external analysis of strengths, weaknesses, opportunities and threats. Strategies are key to companies since they lead the top management towards setting direction, focusing effort, defining and or clarifying the organizational goals, and providing steadiness in response to the organizational setting. Strategic planning can help leaders and managers of public organizations to think, learn and act strategically (Bryson, 2014).

Strategic planning emerged in organizations that cited the necessity to have actions geared towards increase in cost reduction. Currently, the drive is multifaceted differing from organization to organization. As outlined in the abstract the theories of interest will be the Dynamics capabilities and resource based theories. Dynamic capability is the capability of an organization to purposefully adapt an organization's resource base.

A concept initiated by David Teece, Gary Pisano and Amy Shuen, in their 1997 paper dynamic capabilities and strategic management, as the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments. This theory concerns development of strategy in successful companies to take up radical changes in strategy by using minimum resources. It focuses on competitive survival unlike the resource-based view that that focuses on sustainable competition.

1.2 Statement of the Problem

The Kenya National Bureau of Statistics (2017) estimated the Kenyan growth population at 4.2% and is expected to reach 50 million by 2020. Based on these estimates there is an annual demand of 206,000 units of buildings and the current supply is 50,000 units per year which creates a shortfall of 156,000 units every year (UNDP, 2015). Ministry of Housing, Land and Urban Development (2014) reported that 48% of construction projects in Kenya are still incomplete and 10% of these projects have completely stalled.

Failure of these construction projects has resulted in reduced supply of quality buildings as well as a less vibrant economy which consequently contributes to lower standards of living as well as increased unemployment (KIPPRA, 2017). According to Deloitte (2015), most of the collapsing building cases are in poor neighborhoods where there is little or no inspection. The construction industry has recorded dismal performance when it comes to the underlying factors that contribute to successful completion of projects (UNDP, 2015).

Cost management in the construction industry is a major indicator of performance especially in cases where banks have financed it (Murutu, 2016). In most cases the developers invite investors to buy the units while still under construction to increase their liquidity. Poor cost management may arise due to improper financial plans made in the initial stages which may result in stalling

of construction. Some of the factors that impact on performance of the industry include: experience of the project manager, enforcement and adequacy of regulations.

Kibert (2018) studied the regulation of building contractors in Kenya and challenges of enforcing the National Construction Authority mandate. Results showed that the major challenges to the effectiveness of the NCA in registering and regulating the practices of building contractors were lack of strategic management best practices, poor sensitization, lack of proper organization of the NCA contractor training programs on strategic management best practices and centralization of the NCA services.

Deloitte (2015) investigated the effect of competence of contractors on the construction of substandard buildings in Kenya. Results showed that strategic management best practices and qualifications of contractors influenced construction of standard buildings. These studies however, did not look at strategic management best practices on performance of commercial building projects registered by National Construction Authority. It is against this back drop that this study seeks to examine the influence of strategic management best practices on performance of commercial building projects registered by National Construction Authority in Nairobi City County, Kenya.

1.3 Objectives of the Study

1. To determine the influence of information technology adoption on performance of commercial building projects registered by National Construction Authority in Nairobi City County, Kenya.
2. To establish the influence of strategic partnerships on performance of commercial building projects registered by National Construction Authority in Nairobi City County, Kenya.
3. To examine the influence of customer experience management on performance of commercial building projects registered by National Construction Authority in Nairobi City County, Kenya.
4. To determine the influence of team management on performance of commercial building projects registered by National Construction Authority in Nairobi City County, Kenya.

2.0 LITERATURE REVIEW

2.1 Innovation Diffusion Theory

Diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas and technology spread. Everett Rogers (1962) popularized the theory in his book diffusion of innovations; the innovation must be widely adopted in order to self-sustain. Rogers defines diffusion as ‘the process by which an innovation is communicated through certain channels over time among the members of a social society’ (Bahli & Rivard, 2018). An innovation is an idea or object that is perceived to be new.

According to DOI, the rate of diffusion is affected by an innovation’s relative advantage, complexity, compatibility, trialability and observability. Gupta and Snyder (2018) define relative advantage as ‘the degree to which an innovation is seen as being superior to its predecessor’. Complexity, which is comparable to perceived ease of use construct, is ‘the degree to which an

innovation is seen by the potential adopter as being relatively difficult to use and understand'. Compatibility refers to 'the degree to which an innovation is seen to be compatible with existing values, beliefs, experiences and needs of adopters'. Trialability is the 'degree to which an idea can be experimented with on a limited basis'. Finally, observability is the 'degree to which the results of an innovation are visible' (Gupta, 2018).

The advantage of the information technology adoption is that it has allowed for better communication between the partners since they have to communicate to ensure that less time is taken to replenish inventory. The diffusion theory is relevant because it explains the reason why strategic managers in the construction industry adopt technological innovations.

One of the reasons why strategic managers in the construction industry adopt technological innovations is relevant advantage. This means that the strategic managers in the construction industry that adopt technological innovations have relatively better financial advantage than those who do not (Thai, 2017). The theory therefore supports the first objective of the study on information technology adoption.

2.2 STRATEGIC MANAGEMENT BEST PRACTICES

2.1.1 Information Technology Adoption

The attributes of information technology adoption which were taken into consideration in this study are: mobile money transactions, partner electronic data interchange and inventory control systems. Nowadays organizations must increase their core competency and competitive advantage with an upward trend to remain sustainable in the market (Davila, 2018). Therefore, they must employ new technologies and adopt themselves with the new system permanently.

According to Jha (2017) this extensive form of competition among organizations is what so called hyper-competition. Besides, Samuelson (2018) proposed that such a competition could direct the organizations toward enhancement of innovation as a solution for establishing the constant competitive advantages. According to Kitheka (2015) because of such competitions, the need for increasing efficiency and prompt access to knowledge and information among organizations is vital. As a result, implementation and adoption of information technology (IT) has dramatically increased over the last years. Less than two decades afterward the progress of the worldwide network, the globe faces a monumental digital divide (Andrew, 2015).

2.1.2 Strategic Partnerships

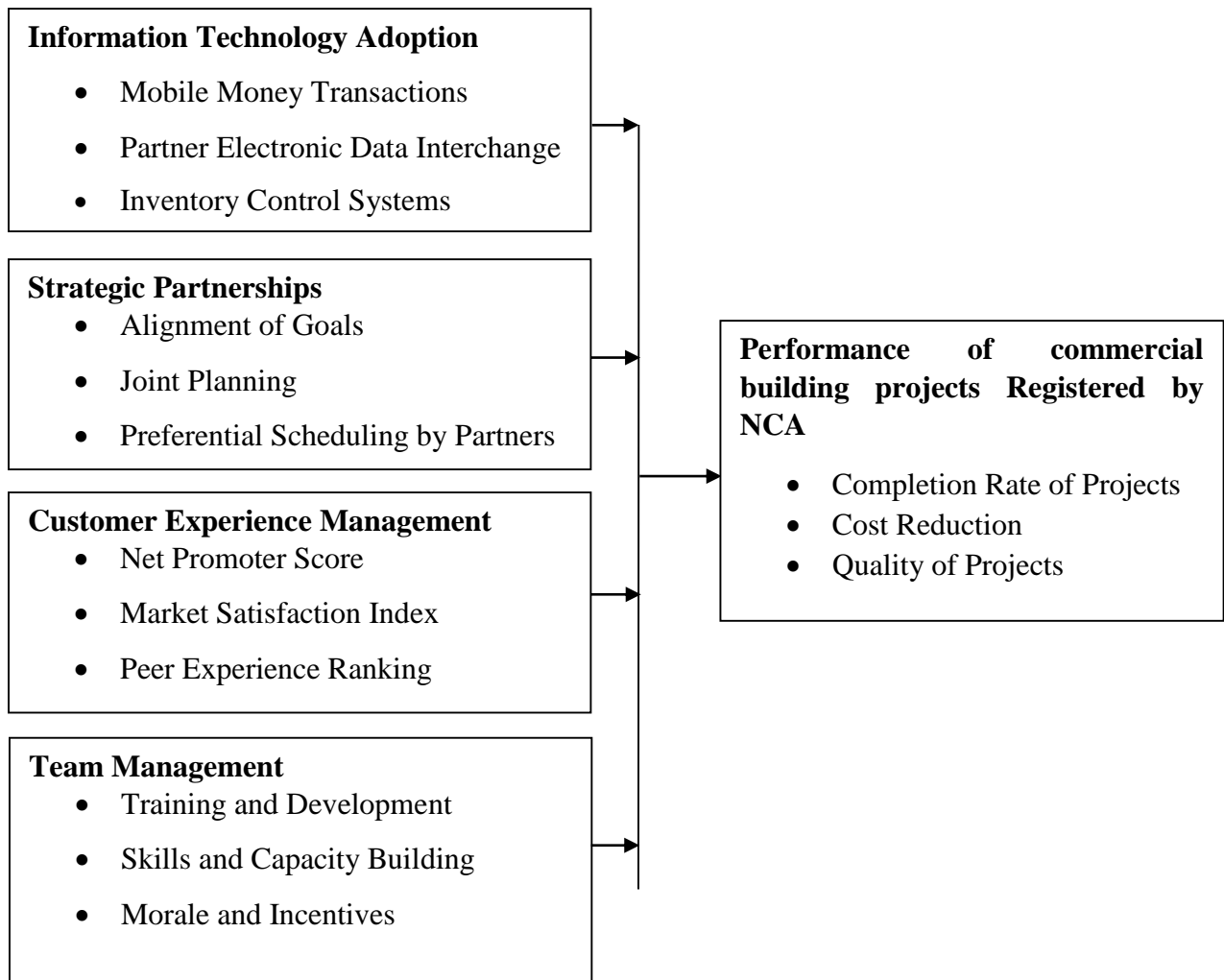
Outsourcing in this study was considered as a strategic procurement variable that influences performance of World Bank funded projects. The attributes of outsourcing which were taken into consideration in this study are: vendor performance management, core versus noncore spend monitoring and realized versus contracted savings comparison. Outsourcing is a common practice among both private and World Bank funded projects and is a major element in business strategy (Onyango, 2011). Perhaps most organizations now outsource some of the functions they used to perform themselves. Due to widespread outsourcing practices, it has become a frequent topic in the literature. Numerous reasons why outsourcing is initiated have been identified by researchers. Organizations may expect to achieve many different benefits through successful outsourcing, although there are significant risks that may be realized if outsourcing is not successful (Andrew, 2012).

2.1.3 Customer Experience Management

Customer experience management (CEM) is part of customer relationship management (CRM) and the natural extension of building brand awareness (McCrudden, 2018). An enterprise's reputation its brand is no longer built solely via mass media. It is also built at customer touch points. Whenever customers come into contact with an enterprise, they experience what it is like to deal with that organization and form an opinion good, bad or indifferent (Jha, 2017).

2.1.4 Team Management

Team building is an important topic in the current business climate as organizations are looking to team-based structures to stimulate further improvements to their productivity, cost reduction and service quality (Mentzer, 2017). Managers and organization members universally explore ways to improve business results and cost reduction. Many view team-based, horizontal, structures as the best design for involving all employees in creating business success. Team-based improvement efforts strive to improve results for customers (Odundo, 2015).



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

3.0 METHODOLOGY

A descriptive survey design was adopted by the study and a total of 289 commercial building projects registered by National Construction Authority in Nairobi City County was the target population, as shown in NCA (2020) directory. Using Kothari (2014) sample size formula, the study got 167 commercial building projects. This study used simple random sampling to get the firm. A structured questionnaire was used to collect primary data. The questionnaire was set in likert scale format to capture quantitative data. Data analysis entailed descriptive analysis such as means, frequency and percentages. Data was also analyzed through inferential analysis which entails correlation and regression. Statistical tests were conducted at five percent level of significance and the findings were presented through tables and figures.

The research used a multiple regression model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

| | |
|--------------------------------------|---|
| Y | = Performance of Commercial Building Projects Registered by NCA |
| β_0 | = Constant |
| $\beta_1, \beta_2, \beta_3, \beta_4$ | = Beta Coefficients |
| X1 | = Information Technology Adoption |
| X2 | = Strategic Partnerships |
| X3 | = Customer Experience Management |
| X4 | = Team Management |
| ε | = Error Term |

4.0 RESULTS FINDINGS

4.1 Descriptive Statistics

4.1.1 Information Technology Adoption

The first objective of the study was to examine the influence of information technology adoption on performance of commercial building projects registered by National Construction Authority in Kenya. The respondents were asked to indicate to what extent information technology adoption influence performance of commercial building projects registered by National Construction Authority in Kenya. Results indicated that majority of the respondents 46% agreed that it was effective, 41% said that it was very effective, 8% said it was ineffective, somehow effective was at 5%.

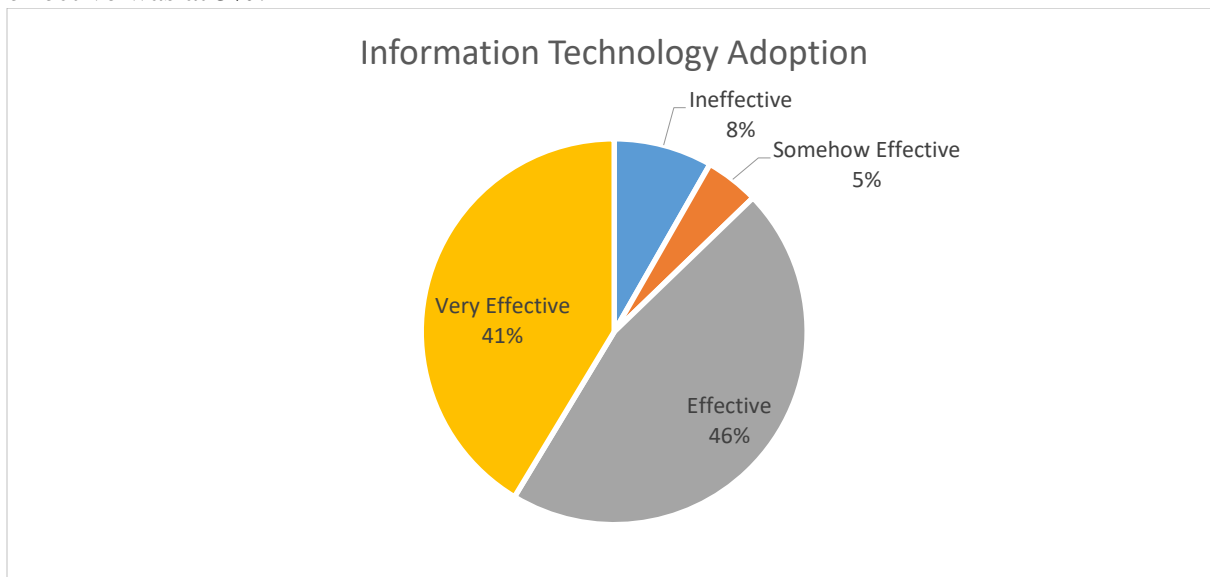


Figure 1: Information Technology Adoption

The respondents were also asked to comment on statements regarding information technology adoption influence on performance of commercial building projects registered by National Construction Authority in Kenya. The responses were rated on a likert scale and the results presented in Table 4.3 below. It was rated on a 5 point Likert scale ranging from; 1 = strongly

disagree to 5 = strongly agree. The scores of ‘strongly disagree’ and ‘disagree’ have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘neutral’ has been taken to represent a statement agreed upon, equivalent to a mean score of 2.6 to 3.4. The score of ‘agree’ and ‘strongly agree’ have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.

The respondents were asked to indicate the descriptive for information technology adoption. The result in table 4.3 revealed that majority of the respondent with a mean of (3.86) agreed with the statement that mobile money transactions play a significant role in attaining a higher completion rate of projects. The measure of dispersion around the mean of the statements was 0.928 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (3.85) agreed with the statement that partner electronic data interchange plays a significant role in attaining a higher completion rate of projects. The standard deviation for the statement was 0.883 showing a variation. The result revealed that majority of the respondent (3.83) agreed with the statement that inventory control systems plays a significant role in attaining a higher completion rate of projects. The results were varied as shown by a standard deviation of 0.906.

The result revealed that majority of the respondents as shown by a mean of (4.47) indicated that they agreed with the statement that mobile money transactions play a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.501. The result revealed that majority of the respondents with a mean of (4.44) indicated that they agreed with the statement that partner electronic data interchange plays a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.656. The result revealed that majority of the respondents (4.47) indicated that they agreed with the statement that Inventory control systems plays a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.544.

The result revealed that majority of the respondents (4.44) indicated that they agreed with the statement that mobile money transactions play a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 0.752. The result showed that majority of the respondents (4.02) indicated that they agreed with the statement that partner electronic data interchange play a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 0.826. Further, the results indicated that a majority of the respondents (4.4) agreed with the statement that inventory control systems plays a significant role in improving quality of projects. There was a standard deviation of 0.717 indicating a variation of responses. The average response for the statements on information technology adoption was 4.19. The findings agree with Kusljic and Marenjak (2018) that information technology adoption is necessary for performance of commercial building projects registered by National Construction Authority. The findings also agree with Krajewski and Ritzman (2018) that information technology adoption influences performance of commercial building projects significantly.

Table 1: Information Technology Adoption

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|--|-------------------|----------|---------|--------|----------------|------|----------------|
| Mobile money transactions play a significant role in attaining a higher completion rate of projects | 1.50% | 1.50% | 36.80% | 29.30% | 30.80% | 3.86 | 0.928 |
| Partner electronic data interchange plays a significant role in attaining a higher completion rate of projects | 0.80% | 2.30% | 36.10% | 33.10% | 27.80% | 3.85 | 0.883 |
| Inventory control systems plays a significant role in attaining a higher completion rate of projects | 1.50% | 1.50% | 36.80% | 32.30% | 27.80% | 3.83 | 0.906 |
| Mobile money transactions play a significant role in improving cost reduction | 0.00% | 0.00% | 0.00% | 52.60% | 47.40% | 4.47 | 0.501 |
| Partner electronic data interchange plays a significant role in improving cost reduction | 1.50% | 0.00% | 0.00% | 49.60% | 48.90% | 4.44 | 0.656 |
| Inventory control systems plays a significant role in improving cost reduction | 0.00% | 0.80% | 0.00% | 51.10% | 48.10% | 4.47 | 0.544 |
| Mobile money transactions play a significant role in improving quality of projects | 2.30% | 0.80% | 0.00% | 45.10% | 51.90% | 4.44 | 0.752 |
| Partner electronic data interchange play a significant role in improving quality of projects | 0.00% | 0.00% | 33.10% | 32.30% | 34.60% | 4.02 | 0.826 |
| Inventory control systems plays a significant role in improving quality of projects | 1.50% | 1.50% | 0.00% | 49.60% | 47.40% | 4.4 | 0.717 |
| Average | | | | | | 4.19 | 0.745 |

4.1.2 Strategic Partnerships

The second objective of the study was to determine the influence of strategic partnerships on performance of commercial building projects registered by National Construction Authority in Kenya. The respondents were asked to indicate to what extent strategic partnerships affected performance of commercial building projects registered by National Construction Authority in Kenya. Results indicated that majority of the respondents 47% agreed that it was to a very great extent, 45% said that it was to a great extent, 2% said it was moderate; little extent was 2% and not all at 4%.

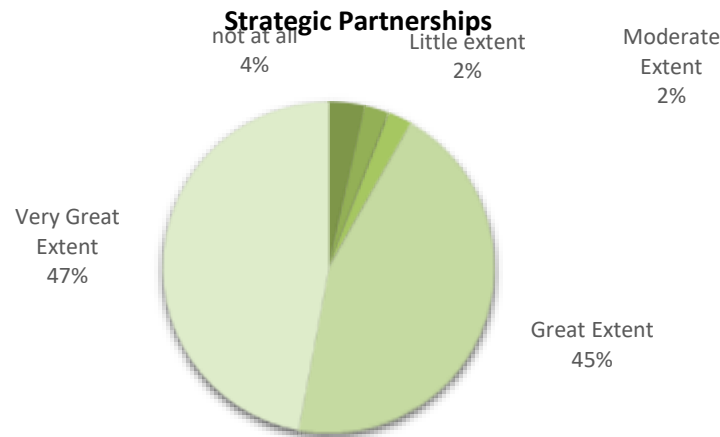


Figure 2 Strategic Partnerships

The respondents were also asked to comment on statements regarding strategic partnerships influence on performance of commercial building projects registered by National Construction Authority in Kenya. The respondents were asked to indicate descriptive responses for strategic partnerships. The result in table 4.4 revealed that majority of the respondents as indicated by a mean of (3.98) indicated that they agreed with the statement that alignment of goals play a significant role in attaining a higher completion rate of projects. The responses were varied as measured by standard deviation of 0.83. The result revealed that majority of the respondents as shown by a mean of (3.9) indicated that they agreed with the statement that joint planning plays a significant role in attaining a higher completion rate of projects. The responses were varied as measured by standard deviation of 0.815. The result revealed that majority of the respondents with a mean of (4.05) indicated that they agreed with the statement that preferential scheduling by partners plays a significant role in attaining a higher completion rate of projects. The responses were varied as measured by standard deviation of 0.847.

The result revealed that majority of the respondents (4.46) indicated that they agreed with the statement that alignment of goals play a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.5. The result revealed that majority of the respondents (4.58) indicated that they agreed with the statement that joint planning plays a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.496. The result showed that majority of the respondents (2.99) indicated that they agreed with the statement that preferential scheduling by partners plays a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 1.459.

The result revealed that majority of the respondents as shown by a mean of (2.96) indicated that alignment of goals play a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 1.489. The result revealed that majority of the respondents with a mean of (3.56) indicated that they agreed with the statement that joint planning play a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 1.117. The result revealed that majority of the respondents (3.71) indicated that they agreed with the statement that preferential scheduling by partners plays a significant role in improving quality of projects. The responses were varied as measured by

standard deviation of 1.07. The average response for the statements on strategic partnerships was 3.79. The findings agree with Jin and Dolo (2018) that exemplary strategic partnerships are necessary for performance of commercial building projects registered by National Construction Authority. The findings also agree with Hooper and Potter (2017) that strategic partnerships influence performance of commercial building projects significantly.

Table 2: Strategic Partnerships

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|--|-------------------|----------|---------|--------|----------------|------|----------------|
| Alignment of goals play a significant role in attaining a higher completion rate of projects | 0.00% | 0.00% | 35.30% | 31.60% | 33.10% | 3.98 | 0.83 |
| Joint planning plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.00% | 38.30% | 33.10% | 28.60% | 3.9 | 0.815 |
| Preferential scheduling by partners plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.00% | 33.10% | 28.60% | 38.30% | 4.05 | 0.847 |
| Alignment of goals play a significant role in improving cost reduction | 0.00% | 0.00% | 0.00% | 54.10% | 45.90% | 4.46 | 0.5 |
| Joint planning plays a significant role in improving cost reduction | 0.00% | 0.00% | 0.00% | 42.10% | 57.90% | 4.58 | 0.496 |
| Preferential scheduling by partners plays a significant role in improving cost reduction | 21.8% | 20.3% | 15.00% | 22.60% | 20.30% | 2.99 | 1.459 |
| Alignment of goals play a significant role in improving quality of projects | 24.1% | 17.3% | 19.50% | 16.50% | 22.60% | 2.96 | 1.489 |
| Joint planning play a significant role in improving quality of projects | 0.00% | 24.1% | 21.10% | 29.30% | 25.60% | 3.56 | 1.117 |
| Preferential scheduling by partners plays a significant role in improving quality of projects | 0.00% | 18.0% | 21.10% | 32.30% | 28.60% | 3.71 | 1.07 |
| Average | | | | | | 3.79 | 0.958 |

4.1.3 Customer Experience Management

There was also need to assess the influence of customer experience management on performance of commercial building projects registered by National Construction Authority in Kenya as the third objective. The respondents were asked to comment on extent of customer experience management influence on performance of commercial building projects registered by National Construction Authority in Kenya. Results also showed that 3% of respondents indicated to very great extent, great extent was at 12%, moderate extent was 37%, while little extent was at 27% and not at all was at 21%.

Customer Experience Management

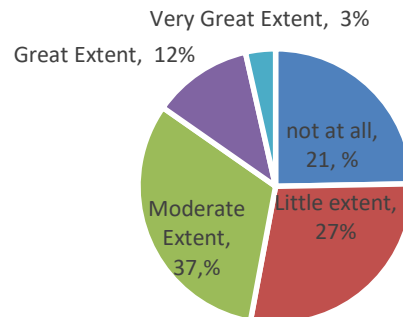


Figure3: Customer Experience Management

The respondents were asked to indicate their levels of agreement on statements regarding customer experience management. The results in table 4.5 revealed that majority of the respondent (4.14) agreed with the statement that net promoter score plays a significant role in attaining a higher completion rate of projects. The responses were varied as shown by the standard deviation of 0.818. The result revealed that majority of the respondent (3.87) agreed with the statement that market satisfaction index plays a significant role in attaining a higher completion rate of projects. The measures of dispersion around the mean were 0.783. The result revealed that majority of the respondent (3.86) agreed with the statement that peer experience ranking play a significant role in attaining a higher completion rate of projects. The measures of dispersion around the mean were 0.955.

The result revealed that majority of the respondent (3.98) agreed with the statement that net promoter score plays a significant role in improving cost reduction. The measures of dispersion around the mean were 0.802. The result revealed that majority of the respondent (3.82) agreed with the statement that market satisfaction index plays a significant role in improving cost reduction. The measures of dispersion around the mean were 1.029. The result revealed that majority of the respondents as shown by a mean of (4) indicated that they agreed with the statement that peer experience ranking play a significant role in improving cost reduction. The responses were varied as measured by standard deviation of 0.816.

The result revealed that majority of the respondents with a mean of (2.86) indicated that they agreed with the statement that net promoter score plays a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 1.476. The result revealed that majority of the respondents (4.44) indicated that they agreed with the statement that market satisfaction index plays a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 0.498. The result revealed that majority of the respondents (4.53) indicated that they agreed with the statement that peer experience ranking play a significant role in improving quality of projects. The responses were varied as measured by standard deviation of 0.501. The average response for the statements on participative style of leadership was 3.94. The findings agree with Hui (2017) that customer experience management is necessary for performance of commercial building projects registered by National Construction Authority. The findings also agree with a study done by Haberberg and Rieple

(2015) that customer experience management influences performance of commercial building projects significantly.

Table 3: Customer Experience Management

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|--|-------------------|----------|---------|--------|----------------|------|----------------|
| Net promoter score plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.00% | 27.10% | 31.60% | 41.40% | 4.14 | 0.818 |
| Market satisfaction index plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.00% | 37.60% | 37.60% | 24.80% | 3.87 | 0.783 |
| Peer experience ranking play a significant role in attaining a higher completion rate of projects | 0.00% | 6.80% | 33.10% | 27.80% | 32.30% | 3.86 | 0.955 |
| Net promoter score plays a significant role in improving cost reduction | 0.00% | 0.00% | 33.10% | 36.10% | 30.80% | 3.98 | 0.802 |
| Market satisfaction index plays a significant role in improving cost reduction | 3.80% | 3.80% | 29.30% | 33.10% | 30.10% | 3.82 | 1.029 |
| Peer experience ranking play a significant role in improving cost reduction | 0.00% | 0.00% | 33.10% | 33.80% | 33.10% | 4 | 0.816 |
| Net promoter score plays a significant role in improving quality of projects | 26.3% | 18.80% | 15.00% | 21.80% | 18.00% | 2.86 | 1.476 |
| Market satisfaction index plays a significant role in improving quality of projects | 0.00% | 0.00% | 0.00% | 56.40% | 43.60% | 4.44 | 0.498 |
| Peer experience ranking play a significant role in improving quality of projects | 0.00% | 0.00% | 0.00% | 46.60% | 53.40% | 4.53 | 0.501 |
| Average | | | | | | 3.94 | 0.853 |

4.1.4 Team Management

There was also need to examine the influence of team management on performance of commercial building projects registered by National Construction Authority in Kenya. The respondents were also asked to comment on statements regarding team management influence on performance of performance of commercial building projects registered by National Construction Authority in Kenya. Results indicated that majority of the respondents 25% agreed that it was to a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little extent and not all were at 5 and 8% respectively.

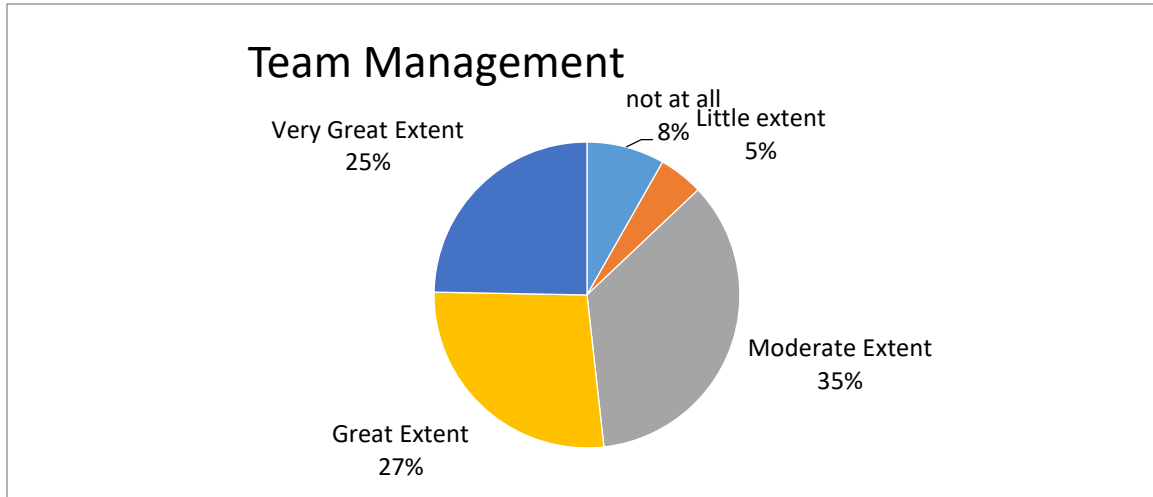


Figure 4: Team Management

The respondents were asked to indicate the descriptive for team management. The result in table 4 revealed that majority of the respondent (4.56) agreed with the statement that training and development plays a significant role in attaining a higher completion rate of projects. The responses were varied as shown by a standard deviation of 0.499. The result revealed that majority of the respondent (4.48) agreed with the statement that skills advancing and capacity building plays a significant role in attaining a higher completion rate of projects. The responses were varied as shown by a standard deviation of 0.502. The result revealed that majority of the respondent (4.39) agreed with the statement that morale and incentives play a significant role in attaining a higher completion rate of projects. The responses were varied as shown by a standard deviation of 0.672.

The result further revealed that majority of the respondent (4.44) agreed with the statement that training and development plays a significant role in improving cost reduction. The responses were varied as shown by a standard deviation of 0.742. The result further revealed that majority of the respondent (4.51) agreed with the statement that skills advancing and capacity building plays a significant role in improving cost reduction. Responses were varied as shown by a standard deviation of 0.502. The result further revealed that majority of the respondent (4.47) agreed with the statement that morale and incentives play a significant role in improving cost reduction. Responses were varied as shown by a standard deviation of 0.501.

The result revealed that majority of the respondent (4.37) agreed with the statement that training and development plays a significant role in improving quality of projects. The responses were varied as shown by a standard deviation of 0.691. The result revealed that majority of the respondent (4.5) agreed with the statement that skills advancing and capacity building plays a significant role in improving quality of projects. The responses were varied as shown by a standard deviation of 0.502. The result revealed that majority of the respondent (4.51) agreed with the statement that morale and incentives play a significant role in improving quality of projects. The responses were varied as shown by a standard deviation of 0.502. The average response for the statements on team management was 4.47. The findings agree with Freeman *et al.*, (2017) that team management is necessary for performance of commercial building projects registered by National Construction Authority. The findings also agree with a study done by

Githeu (2017) that team management is paramount for performance of commercial building projects significantly.

Table 4: Team Management

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|---|-------------------|----------|---------|--------|----------------|------|----------------|
| Training and development plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.0% | 0.00% | 44.40% | 55.60% | 4.56 | 0.499 |
| Skills advancing and capacity building plays a significant role in attaining a higher completion rate of projects | 0.00% | 0.0% | 0.00% | 51.90% | 48.10% | 4.48 | 0.502 |
| Morale and incentives play a significant role in attaining a higher completion rate of projects | 0.00% | 2.3% | 3.80% | 46.60% | 47.40% | 4.39 | 0.672 |
| Training and development plays a significant role in improving cost reduction | 1.50% | 1.5% | 1.50% | 42.90% | 52.60% | 4.44 | 0.742 |
| Skills advancing and capacity building plays a significant role in improving cost reduction | 0.00% | 0.0% | 0.00% | 48.90% | 51.10% | 4.51 | 0.502 |
| Morale and incentives play a significant role in improving cost reduction | 0.00% | 0.0% | 0.00% | 52.60% | 47.40% | 4.47 | 0.501 |
| Training and development plays a significant role in improving quality of projects | 0.80% | 1.5% | 3.00% | 49.60% | 45.10% | 4.37 | 0.691 |
| Skills advancing and capacity building plays a significant role in improving quality of projects | 0.00% | 0.0% | 0.00% | 49.60% | 50.40% | 4.5 | 0.502 |
| Morale and incentives play a significant role in improving quality of projects | 0.00% | 0.0% | 0.00% | 48.90% | 51.10% | 4.51 | 0.502 |
| Average | | | | | | 4.47 | 0.568 |

4.2 Correlation Analysis

Correlation analysis was used to determine both the significance and degree of association of the variables and also predict the level of variation in the dependent variable caused by the independent variables. The results of the correlation analysis are summarized in Table 5

Table 5: Summary of Pearson's Correlations

| Correlations | | Information Technology Adoption | Strategic Partnerships | Customer Experience Management | Team Management | Performance of Commercial Building Projects registered by NCA |
|---|---------------------|---------------------------------|------------------------|--------------------------------|-----------------|---|
| Information Technology Adoption | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | 133 | | | | |
| Strategic Partnerships | Pearson Correlation | .558** | 1 | | | |
| | Sig. (2-tailed) | 133 | 133 | | | |
| Customer Experience Management | Pearson Correlation | .532** | .546** | 1 | | |
| | Sig. (2-tailed) | 133 | 133 | 133 | | |
| Team Management | Pearson Correlation | .570** | .845** | .613** | 1 | |
| | Sig. (2-tailed) | 133 | 133 | 133 | 133 | |
| Performance of Commercial Building Projects registered by NCA | Pearson Correlation | .714** | .728** | .714** | .737** | 1 |
| | Sig. (2-tailed) | 0 | 0 | 0 | 0 | |
| | N | 133 | 133 | 133 | 133 | 133 |

**** Correlation is significant at the 0.05 level (2-tailed).**

The correlation summary shown in Table 5 indicated that the associations between each of the independent variables and the dependent variable were all significant at the 95% confidence level. The correlation analysis to determine the association between information technology adoption and performance of commercial building projects registered by National Construction Authority in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship ($r=0.714$) between information technology adoption and performance of commercial building projects registered by National Construction Authority in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

The correlation analysis to determine the relationship between strategic partnerships and performance of commercial building projects registered by National Construction Authority in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results

indicated that there was a positive relationship ($r=0.728$) between strategic partnerships and performance of commercial building projects registered by National Construction Authority in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

The correlation analysis to determine the relationship between customer experience management and performance of commercial building projects registered by National Construction Authority in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship ($r=0.714$) between customer experience management and performance of commercial building projects registered by National Construction Authority in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

The correlation analysis to determine the relationship between team management and performance of commercial building projects registered by National Construction Authority in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship ($r= 0.737$) between team management and performance of commercial building projects registered by National Construction Authority in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

4.3 Regression Analysis

In this study multivariate regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. Regression analysis was conducted to find the proportion in the dependent variable (performance of commercial building projects registered by NCA) which can be predicted from the independent variables (information technology adoption, strategic partnerships, customer experience management, team management).

Table 6: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|--------------------|----------|-------------------|----------------------------|
| 1 | 0.796 ^a | 0.634 | 0.622 | 0.203452 |

Predictors: (Constant), Information Technology Adoption, Strategic Partnerships, Customer Experience Management and Team Management

Dependent Variable: Performance of Commercial Building Projects Registered by NCA

Table 8 presented the regression coefficient of independent variables against dependent variable. The results of regression analysis revealed there was a significant positive relationship between dependent variable and the independent variable. The independent variables reported R value of 0.796 indicating that there was perfect relationship between dependent variable and independent variables.

The coefficient of determination also called the R^2 was 0.634. R^2 value of 0.634 means that 63.4% of the corresponding variation in performance of commercial building projects registered by National Construction Authority in Kenya can be explained or predicted by (information technology adoption, strategic partnerships, customer experience management, team management) which indicated that the model fitted the study data.

R^2 in table 4.8 was called the coefficient of determination which indicated how performance of commercial building projects registered by National Construction Authority in Kenya varied with variation in influences of factors which includes; information technology adoption, strategic partnerships, customer experience management, team management. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at ($\beta = 0.634$), $p=0.000 < 0.05$).

ANOVA is used to compare differences of means among more than 2 groups. It does this by looking at variation in the data and where that variation is found (hence its name). Specifically, ANOVA compares the amount of variation between groups with the amount of variation within groups.

Table 7: ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 9.167 | 4 | 2.292 | 55.366 | .000 ^b |
| | Residual | 5.298 | 128 | 0.041 | | |
| | Total | 14.465 | 132 | | | |

Predictors: (Constant), Information Technology Adoption, Strategic Partnerships, Customer Experience Management and Team Management

Dependent Variable: Performance of Commercial Building Projects Registered by NCA

The significance value is 0.000 which is less than 0.05 thus the model is statistically significance in predicting how information technology adoption, strategic partnerships, customer experience management, team management influence performance of commercial building projects registered by National Construction Authority in Kenya. The F critical at 5% level of significance was 35.65. Since F calculated which can be noted from the ANOVA table above is 55.366 which is greater than the F critical (value =35.65), this shows that the overall model was significant. The study therefore establishes that; information technology adoption, strategic partnerships, customer experience management, team management influence performance of commercial building projects registered by National Construction Authority. These results agree with Burger and Hawkesworth (2016) results which indicated a positive and significant influence of strategic management best practices on performance of commercial building projects registered by National Construction Authority. The results also agree with Dryden and Brownell (2015) results which indicated a significant influence of strategic management best practices on performance of commercial building projects in Dublin.

Table 8: Coefficients of Determination

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------------------------|-----------------------------|------------|---------------------------|-------|-------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 1.967 | 0.218 | | 9.022 | 0.000 |
| Team Management | 0.358 | 0.049 | 0.568 | 7.327 | 0.000 |
| Information Technology Adoption | 0.132 | 0.056 | 0.152 | 2.364 | 0.000 |
| Customer Experience Management | 0.121 | 0.032 | 0.27 | 3.835 | 0.020 |
| Strategic Partnerships | 0.05 | 0.05 | 0.074 | 0.998 | 0.030 |

a) Predictors: (Constant), Information Technology Adoption, Strategic Partnerships, Customer Experience Management and Team Management

b) Dependent Variable: Performance of Commercial Building Projects Registered by NCA

The research used a multiple regression model

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y= Performance of Commercial Building Projects Registered by NCA

β_0 = Constant coefficient

X_1 = Information Technology Adoption

X_2 = Strategic Partnerships

X_3 = Customer Experience Management

X_4 = Team Management

ε = Random error term

The regression equation is;

$$Y = 1.967 + 0.358X_1 + 0.132X_2 + 0.121X_3 + 0.05X_4$$

The regression equation above has established that taking all factors into account (information technology adoption, strategic partnerships, customer experience management, team management) constant at zero, performance of commercial building projects registered by National Construction Authority in Kenya will be an index of 1.967. The study found that a unit increase in team management will lead to a 0.358 increase in performance of commercial building projects registered by National Construction Authority in Kenya. The P-value was 0.000 and hence the relationship was significant since the p-value was lower than 0.05.

The findings presented also shows that taking all other independent variables at zero, a unit increase in information technology adoption will lead to a 0.132 increase in performance of commercial building projects registered by National Construction Authority in Kenya. The P-value was 0.02 which is less 0.05 and thus the relationship was significant. In addition, the study found that a unit increase in customer experience management will lead to a 0.121 increase in performance of commercial building projects registered by National Construction Authority in Kenya. The P-value was 0.000 and thus the relationship was significant. The study also found that a unit increase in strategic partnerships will lead to a 0.05 increase in performance of

commercial building projects registered by National Construction Authority in Kenya. The P-value was 0.03 and thus the relationship was significant.

5.0 Summary, Conclusion And Recommendations

5.1 Summary of Findings

The study sought to examine the influence of strategic management best practices on performance of commercial building projects registered by National Construction Authority in Kenya. The study targeted strategy managers of commercial building projects registered by National Construction Authority. A total of 133 strategy managers participated. The summary of the study findings presented herein followed the research objectives formulated in chapter one of the study. The study endeavored to determine the influence of strategic management best practices on performance of commercial building projects registered by National Construction Authority in Kenya. The regression results revealed that strategic management best practices identified in the study, that is, information technology adoption, strategic partnerships, customer experience management and team management combined could explain approximately 63.4% of the variations in performance of commercial building projects registered by National Construction Authority. The other 36.6% may be attributed to other strategies not explained by the model or the variables.

5.2 Conclusion

The findings demonstrated the important strategic management best practices to include; information technology adoption, strategic partnerships, customer experience management and team management. The current study obtained an R^2 of 63.4% and should therefore be expanded further in future in order to include other strategic management best practices that may as well have a positive significance to performance of commercial building projects registered by National Construction Authority.

Based on the study findings, the study concludes that performance of commercial building projects registered by National Construction Authority can be improved by information technology adoption, strategic partnerships, customer experience management and team management

5.3 Recommendations

The study recommends that companies should embrace strategic management best practices so as to improve performance and further researches should be carried out in other institutions to find out if the same results can be obtained

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