

**PROJECT PLANNING PRACTICES AND PERFORMANCE OF  
CONSTRUCTION PROJECTS IN NAIROBI CITY COUNTY, KENYA**

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**Abstract**

This paper explored project planning practices and performance of construction projects in Nairobi City County, Kenya. The specific objectives were to determine the effects of human resource planning practices, financial resource planning practices, material usage planning practices and time management on performance of construction projects in Nairobi City County, Kenya. The target population was one hundred and twenty-five construction projects within Nairobi City County. Semi-structured questionnaires were used to collect data from one hundred and twenty-five project managers who formed the respondents of the study. The study findings indicated that majority of the firm accord human resource management function as an important role and that majority of the firms conduct training to its project team members. The results indicated that project completion was being done without much struggle and that the budgeted funds were enough to complete the project. The study further established that all material resources allocated were in use and that project output had been well defined. The study also found that quality projects' planning was being carried out effectively. It was also clear that that activity duration had been well estimated, time schedules were well developed, and that project scope had been well specified during the planning phase. The study concluded that human resource planning, time management, material resource planning and financial resource planning positively and significantly contributes to performance of the construction projects. The study concluded that Construction firms should conduct proper and continuous training programs aimed at developing human resources in the industry. The study recommends that the cost estimation be founded on the project scope and be associated to the project plan. The study further recommends the creation of time plans in accordance with previously created work break down structures.

**KeyWords:** Planning, Human Resource Planning, Financial Planning, Material usage, Time planning, performance

### **Introduction**

Projects make up approximately 50% of all work conducted and consequently deemed as the vehicle for the organizational growth execution (Raz & Shenhar, 2003). Peter (2005) noted that the project accomplishment through the application as well as project management process integration of initiation, planning, execution, controlling, monitoring and closing, is referred to as project management.

Efficient and operational project management requires whole contributions of competed human resources well equipped with requisite skills, knowledge and approaches to work. Success or subsequent failure of a project or related businesses requires thorough resource planning processes for the whole project to succeed ( Besner, & Hobbs, 2011). Researchers assert that project management has at its core objective of meeting and surpassing the expectations of the project sponsors. According to Kress (1994), these prospects are expressed typically within three categories. Cost: The project generates desired result/outcome for the anticipated cost. Quality: Project generates desired result/outcome with minimum defects. Schedule: The project generates the desired result/outcome within the estimated period.

Project performance and success in terms of effectiveness measures revealed five major component factors: Customer Satisfaction, Learning and Exploitation, Stakeholder Objectives, User Satisfaction and Operational Assurance. Given that effectiveness project success measures are associated with the project 'results', factors for instance meeting the users and clients' satisfaction, learning from projects, meeting pre-stated project stakeholders' objectives (accomplishing project objectives as well as core business) and supported by a well-organized commissioning programmes are the expected outcomes of the project. The indicators of proper project performance include; aligning project outcomes with customer needs expectations and specifications (Lauri & Gregory, 2002).

According to Lewis (2005) other measures of project performance includes; project completed according to desired specifications, completion of project using the specified budget and completion of project within the promised schedule of time. Hamilton and Gibson (1996) have also argued that the cost and schedule saving is a good measure of project performance while meeting the expectations of stakeholders. The project performance relies heavily upon on key indicators such as time taken to complete, meeting the standards set by various authorities such as the government and county authorities (Kagalwala & Ram,2003).

### **Statement of the Problem**

While most of the project managers utilize most of their time figuring out how to meet the objectives of the projects they are carrying out, most of these projects within Nairobi City County are not completed within the stipulated time. The main challenges experienced in this delay being human capital and financial resources (Kennedy, 2016). Majority of the project

Managers concentrate their financial and time resources in handling the immediate problems thus unable to anticipate and prepare for the next challenge.

There is scanty of empirical studies on the effects of project planning practices on project performance in Nairobi City County, Kenya. For the last five years, several plans on how the city's infrastructure projects and most important how the road can be decongested have been mooted and laws created, but less than 10 projects have been actualized (Waruhiu, 2017). Competing interests, duplication of roles, endless planning and grandstanding by stakeholders are standing in the way of an efficient traffic flow, working public transport system in Nairobi City County and poorly constructed infrastructures. This study therefore sought to determine the effects of project planning practices on construction projects performance in Nairobi City County, Kenya. In particular, the study sought to:-

To determine the effects of human resource planning on performance of construction projects in Nairobi City County, Kenya.

To analyze the effects of financial resource planning on performance of construction projects in Nairobi City County, Kenya.

To identify the effects of material usage planning on performance of construction projects in Nairobi City County, Kenya.

To establish the effects of time management on performance of construction projects in Nairobi City County, Kenya.

## **2.0 Literature Review**

### **2.1 Theoretical Review**

The study explored three theories namely: Agency theory, Theory of change and Stewardship theory.

#### **2.1.1 Agency Theory**

According to the theory, project managers of asset left on their own are expected to act on the best interest of those who have appointed or elected them. This implies that the entire project ought to be carried out in a manner to benefit owners (Lan, 2010). In agency theory terms, the project beneficiaries are principals and project managers are the agents. Therefore, the agents, since they hold power on behalf of the principal, are expected to exercise control for the benefit of the principal by ensuring sufficient returns. According to (Bonazzi, 2007). Agency theory specifies mechanisms that reduce loss and increasing benefits (wealth creation) to the principal thus, managers should always act to the best interest of the beneficiaries. This theory is significant in managing projects and it indeed emphasizes on the need of taking the interest of the stakeholders in all management decisions of the projects. Agency theory is applicable to the study in that it supports the works of project managers in ensuring that resources such as time, finance, human and materials are utilized to the best interest of the citizens/beneficiaries.

#### **2.1.2 Theory of Change**

Theory of Change is a comprehensive illustration as well as a description of how and why a change that is desired is anticipated to take place in a context (Andersen, 1996). It's focused on bridging the gap in the so commonly referred to as the "missing middle" between what a change or program initiative does (its interventions or activities) and how these bring about preferred goals being attained (Chizea, 2002). This theory is applicable to the study in that it supports construction firms to first identify the preferred long-term project/goals performance and then work back from these to make out all the conditions (outcomes) that ought to be in place (and how these casually related to one another) for the goals to take place (Mintzberg & Waters 1996). This may involve ensuring material, time, financial and human resources are used effectively and efficiently

### **2.1.3 Steward ship theory**

Stewardship theory supports the first independent variable that is the human resource planning must be done well to see a positive relationship between the firms' success and the managers. The stewards maximize as well as protect wealth of shareholders through firm performance. According to Davis, Schoolman & Donaldson (1997) a steward who successfully makes improvement performance satisfies the majority stakeholder groups within an organization, when these groups have interests that are served well by increasing wealth of the organization.

## **2.2 Empirical Review**

### **2.2.1 Human Resource Planning and Project Performance**

Huang (2010) studied the influence of human resource management practices on employees' performance (job satisfaction levels, intention to leave, and organizational commitment). The study targeted employees in the construction industry. The study found that a company's human resource management practices contribute to increased performance and therefore help it to grow as well as gain sustainable competitive advantage. These researches bade to explain the relationship between human resource management practices and financial performance and sustenance of a competitive advantage in a dynamic environment but did consider the project performance aspects.

Armstrong and Murlis (2014) studied the effects of human resource planning practices on organization performance. This research utilized a descriptive research design and the findings were analyzed through descriptive, correlation and inferential analysis. The study found that strategies of reward are a significant part of HRM of an organization and ought to be bundled with other HR practices in order that they complement as well as reinforce one another for the purpose. However, the findings disagreed with Bratton and Gold (2007) study on human resource planning practices on organization performance. The findings were that motivation through a good reward system might bring about an increase in productivity of employees.

### **2.2.2 Financial Resource Planning and Project Performance**

Karlsson (2011) studied the effects of financial planning on project performance. Descriptive survey design was used and the study targeted projects in Sweden. The study found that

education, culture and financial status are the background factors affecting methods and approaches in the management of projects. However, many middle level managers lack authority assigned. This is because managers have responsibility of a certain area within which they can make decisions over and this is a problem since it was not considered in this study. Many of the construction companies are more flat and power is extensively given to middle management. This is as well connected to the higher level of authority in the organization and may affect how finances are utilized.

PMBOK (2014) investigated the influence of cost planning on project performance. This study utilized a descriptive research design. The respondents of the study were project managers. The study found that project cost planning practices, which includes the cost budgeting as well as cost estimating process, affects project performance. According to the study, cost-planning practices are essential to complete a given project within the agreed budget. The project's budget is crucial, and it has an influence in all areas in both projects planning as well as implementation. The study recommended that it is crucial to keep track of expenses for various work packages and total costs in a project. However, the study failed to show the relationship strength between project performance and cost planning.

### **2.2.3 Material Usage Planning and Project Performance**

Plenert and Best (2012) studied the influence of material level on project performance. The study was a survey of construction companies. Descriptive analysis was utilized, and the study found that most of the JIT cost benefits took place when inflation increases bringing about great increases in the cost of carrying inventory. The study recommended that firms must be capable of only focusing our planning on materials needed, and when they are needed. The study failed to indicate clearly the relationship between material usage and project performance.

Kress (2014) studied the effects of material planning on project performance through a survey design of selected constructions firms. The study targeted construction projects not completed in time in London. The study found that the project management primary objective is to meet otherwise surpass the material usage sponsors anticipation of the project. According to the study these anticipations are usually expressed within 3 groupings; a given project generates preferred result with minimum defects. Cost: A given project generates preferred result for the expected cost Schedule: A given project generates the preferred result within the expected period. However, the study did not consider many forces intervening and attempting to push projects off target.

### **2.2.4 Time Management and Project Performance**

Loid (1999) studied time planning functions effects on performance of the project. The study was a survey of construction projects. The study targeted projects not completed in time and the respondents were project managers and sponsors. The study found that function is defined as the prior planning of the project at any time based on present certainties as well as revised prospects. The study also found that this is reasonable since the constraints as well as even the objectives of

the project can change during the process of implementation. It is not easy and sometimes not possible at all to detect deviance from plans. It could be on this preface assert that; planning ought to be thorough to make control achievable, since it loses promptly its worth if nonconformity from it can't be revealed as well as amended promptly.

Akpan and Chizea (2012) studied the determinants of time planning systems in the construction firms. A case study of failed projects in Nigeria was selected. The study found that time planning system necessitates the sensible evaluation of actual implementation with standards that are pre-established and if implementation is different from the conventional objectives/goals then the corrective action is enforced immediately. Conversely, execution of a project refers to actualizing a project plan and at the same time, tracking the plans effectiveness in the achievement of the set goals and this can be defined as project control in action. The study did not establish the effects of time planning on project performance.

### 3.0 Methodology

Descriptive research design was adopted in this study. The study's target population was projects that never take-off, stalled and on-going road projects, housing projects and water and drainage projects started in the year 2013 to 2017 in Nairobi City County, Kenya. Some of the projects targeted especially the road projects have not been completed. The total number of the road projects targeted is fifty-one, the total number of the housing projects is forty-three and the total number of water and drainage projects is thirty-one making one hundred and twenty five projects (KNBS, 2017). The respondents were the one hundred and twenty five project managers. Since the population is of manageable size, a census of all the one-hundred and twenty five projects was conducted.

**Table 1: Target Population**

<b>Projects</b>	<b>Project Managers</b>
Housing Projects	43
Road Projects	51
Water and Drainage Projects	31
<b>Total</b>	<b>125</b>

**Source: Nairobi City County Secretary's Office (2018)**

Semi-structured questionnaires with closed and open-ended questions were utilized in the collection of primary data to accomplish the research objectives. The administration of the questionnaires was done through drop and pick later method to the population.

Analysis of data was done by the use of descriptive statistics, which included means, frequencies and percentages. These showed the correlation between the independent variable and dependent variable and the significant P- values, and inferential analysis was used to make judgments of the

probability that an observed difference between groups and studies is a dependable one. A multiple regression model was utilized to show the connection between the dependent and independent variables.

The multiple regression model of the form;

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

Where: Y= Project Performance

$\beta_0$ = Constant

$\beta_1$  to  $\beta_4$  =Coefficients

$X_1$  = HRM planning

$X_2$ = Financial Resource Planning  $X_3$  = Material Usage Planning

$X_4$  = Time Planning  $\varepsilon$  =Error term.

## **4.0 Research Findings and Discussions**

### **4.1 Descriptive Statistics Results**

#### **4.1.1 Human Resource Planning and Project performance**

Table 2 summarizes respondents' level of agreement on aspects relating to human resource planning on performance of construction projects in Nairobi City County. The findings in the table indicates that most of the respondents approved that human resource management function is accorded an important role as depicted by mean score 4.50 and a low standard deviation of

0.188. It is evident that majority of the respondents agreed that training was done to project team members as shown by mean score of 4.48 and very low standard deviation of 0.007. Human resource department is majorly involved in the company's planning process as illustrated by mean score of 4.32 and a standard deviation of 0.188; respondent further agreed the formulation and implementation of human resource training are in line with overall goal as depicted by mean score of 4.13 and a standard deviation of 0.339. The respondents corresponded that all resources were allocated (qualified personnel and infrastructure) as shown by mean score of 4.11 and a standard deviation of 0.311. It is therefore clear that human resource planning practices is done effectively by the projects in Nairobi City County through the consideration of the important role of human resource managers, allocating enough human resources and training them well. The

study concurs with Batt (2002) findings that firms’ puts emphasize more on high training on skills, participation of employee in decision making and incentives of human resource for instance employment security.

**Table 2: Human Resource Planning and Project Performance**

Statements	Mean	STD ev
Human resource department is majorly involved in the company’s planning process	4.32	0.188
The formulation and implementation of human resource training are in line with overall goal	4.13	0.339
The human resource management function is accorded an important role	4.50	0.033
All resources were allocated (qualified personnel and infrastructure)	4.11	0.311
Training was done to project team members	4.48	0.007
Project managers were involved in planning stage	4.20	0.155

**Source: Research Data, (2018)**

**Financial Planning and Project performance**

The researcher required the respondents to state their level of conformity on the statements in relation to how financial resource planning affects performance of construction projects in Nairobi City County. Several indicators of financial resource planning were applied, and the results were presented in table 3. The findings showed that majority of the respondents strongly agreed that project completion was done without struggle and that project manager was able to forecast expenses as depicted by mean score of 4.58 and 4.50 respectively. Further respondents agreed that budget for the project was properly regulated (combining the projected costs of specific activities or work packages to ascertain an approved expenditure baseline) and that the budgeted funds were enough to complete the project as indicated by mean score of 4.37 and 4.34 respectively. Finally, respondents were neutral that project cost was well estimated as depicted by a mean of 3.16 and a standard deviation of 1.965. Generally, it is clear from the presented study that proper financial planning was done as indicated by proper projections of the costs and completions of project phases in time without hustle. The study agrees with Guoli (2010) which found that a professional developed budget controls and the project cost creates favourable cash-flow conditions in the project. The study also found that insufficient cash flow consequence in a project is frequently associated with delays and large extra costs, since there is a great possibility for a temporary halt of the entire project.



**Table 3: Financial Resource Planning and Project Performance**

Statements	Mean	STDev
Project cost was well estimated	3.16	1.965
The budgeted funds were enough to complete the project	4.34	0.515
Budget for the project was properly determined (combining the estimated costs of individual activities or work packages to establish an authorized cost baseline)	4.37	0.998
The project manager was able to forecast expenses	4.50	0.83
Project completion was done without struggle	4.58	0.683

**Source: Research Data, (2018)**

**4.1.3 Material Usage Planning and Project performance**

The researcher used a combination of various indicators of material usage planning and presented to the respondents as statements as indicated in table 4. The study findings indicated majority of the respondents agreed that appropriate material was provided as depicted by mean score 4.16 and a standard deviation of 0.799, respondent also agreed that all material resources allocated were used and that project output was well defined as shown by mean score of 4.13 and 4.11 respectively. Quality planning were carried out as illustrated by mean score of 4.07, further respondent agreed that project material and organization was well communicated during planning phase as depicted by mean score of 3.92. It is clear from the results that material usage planning was effectively practiced as indicated quality of the material used, right materials used and the indication that all materials needed were availed to the projects. The study concurs with Plenert and Best (2012) findings that most of the JIT costs took place when inflation increases bringing about great increases in the cost of carrying inventory. The study recommended that firms must be capable of only focusing our planning on material resources needed, and when they are required.

**Table 4: Material Usage Planning and Project Performance**

Statements	Mean	ST Dev
Appropriate material was provided	4.16	0.799
Project material and organization was well communicated during the planning phase	3.92	0.745
Project Scope was well specified	4.07	0.807
Project output was well defined	4.11	0.593
Quality planning carried out	4.07	0.739
All material resources allocated were used	4.13	0.772

**Source: Research Data, (2018)**

**4.1.4 Financial Planning and Project performance**

The last objective of the study aimed to determine the effect of time planning on project performance in Nairobi City County. The results were presented in table 5. The results indicate that majority of the respondents agreed that activity duration was well estimated as depicted by mean score of 4.61 and a standard deviation of 0.195; schedules were well developed (prepared) as shown by mean score of 4.58 and low standard deviation of 0.126. The project scope was well specified during the planning phase as illustrated by mean score of 4.55 and a standard deviation of 0.195. Further respondents were neutral that the projects were to be completed on the original (planned) schedule with a mean of and that all projects were going to be completed on the agreed time as illustrated by mean score of 3.18 and 3.01 respectively. This is an indication that on average projects are completed at the agreed time and that the project scope and activity duration were well done. The study agrees with Loid (1999) findings that time planning functions effects on performance of the project. The study indicated that planning ought to be adequately comprehensive to make management possible, since it loses promptly its convenience if deviation from it can't be sensed as well as amended promptly. The study disagrees with Tel sang (2014) findings that devoting resources and making timely planning does not always guarantee that a desired goal will be achieved. The study found that time management hardly works that way since the unanticipated more often take place regardless of how scrupulous the process of planning may have been.

**Table 5: Time Management and Project Performance**

<b>Statements</b>	<b>Mean</b>	<b>STDev</b>
The project scope was well specified during planning phase	4.55	0.195
Schedules were well developed (prepared)	4.58	0.126
Activity duration was well estimated	4.61	0.454
The project was completed on the original(planned) schedule	3.18	0.455
All projects were to be completed on the agreed time	3.01	0.29

**Source: Research Data, (2018)**

#### **4.2 Multiple Regression Analysis**

The researcher conducted a multiple regression analysis to determine the change in the (dependent variable) performance of construction projects because of change in the four independent variables.

##### **4.2.1 Model Summary**

The model summary presents the coefficient of determination which explained the degree to which variations in the dependent variable can be elucidated by changes in the independent variables. It can also be explained as a percentage of variation in the dependent variable (performance of construction projects) that is described by all the four independent variables

(human resource planning, financial resource planning, material usage planning and time management). The results were presented in table 6.

**Table 6: Model Summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	0.913	0.834	0.751		0.4538

Source: Research Data, (2018)

The four independent variables (human resource planning, financial resource planning, material usage planning and time management) contributes to 75.1% on performance of construction projects as represented by the adjusted R<sup>2</sup>. Consequently, the other factors not considered in this research contribute to 24.9% on performance of projects. Further research should be conducted to explore the other factors (24.9%) that affect performance of projects.

**Analysis of Variance(ANOVA)**

The study sought to establish the overall significance. The results were presented in table 7.

**Table 7: Analysis of Variance**

	Squares		Square		
Regression	142.771	4	35.69	49.872	0.000
Residual	14.645	101	0.145		
Total	157.416	105			

Source: Research Data (2018)

The findings in the table 4.11 indicate that the overall model was significant. The overall model was significant as shown by a calculated F statistic of 49.872 (p value 0.000). The calculated F statistics was larger than the critical F statistic. The findings indicated that the variables: human resource planning, financial resource planning, material usage planning and time management are good predictors of performance of construction projects.

**4.2.3 Regression Coefficients**

The study coefficients of independent variables are presented in table 8. The coefficients indicate the direction and change of dependent variable because of change in the independent variables.

**Table 8: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		

(Constant)	1.308	1.342		1.623	0.357
<b>Human Resource Planning</b>	0.558	0.310	0.172	4.342	.0276
<b>Financial Resource Planning</b>	0.731	0.156	0.210	3.532	.0285
<b>Material Usage Planning</b>	0.785	0.322	0.067	3.542	.0202
<b>Time Management</b>	0.620	0.245	0.148	3.458	.0249

**Source: Research Data, (2018)**

As per the results in table 4.13, the equation

$(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon)$  becomes:

$$Y = 1.308 + 0.558X_1 + 0.785X_2 + 0.620X_3 + 0.731X_4$$

Using the regression equation above and holding all factors constant (human resource planning, financial resource planning, material usage planning and time management) performance of construction projects will be 1.308. The findings in table 8 indicate an increase in human resource planning will significantly increase project performance. The study findings agree with Armstrong and Murlis (2014) on the study of the effects of human resource planning practices on organization performance. The study found that strategies of reward are a significant and positively form part of the organizational performance. However, the findings disagreed with Bratton and Gold (2007) study on human resource planning practices on organization performance. The findings were that human resource planning does not significantly determine performance but through a good reward system might bring about a proliferation in the employees' productivity.

The results further indicate that an increase in financial resource planning will significantly lead to an increase in project performance. The study concurs with Antvik and Sjöholm (2013) study findings on the impact of financial planning on project performance. The study found that estimation of cost ought to be grounded on the scope of the project and established that financial planning significantly and positively affects project performance. The study also agrees with PMBOK (2014) study findings on the investigation of the influence of cost planning on project performance. The study found that project cost planning practices, which includes the cost budgeting as well as cost estimating process, positively affects project performance. The findings in table 8 show that an increase in material usage planning will lead to an increase in project performance. The study findings agree with Plenert and Best (2012) study findings on the influence of material level on project performance. The study found that material usage planning increases the performance of project performance by bringing about large decreases in the cost of carrying and holding inventory. The study also concurs with Kress (2014) study on the effect of material planning on project performance which found that proper material usage improves performance of projects.

The results in table 8 also indicate that an increase in time management will lead to an increase in project performance. A study by Loid (1999) on the effects of time planning on performance of the project agrees with this study that time planning ought to be sufficiently detailed to make control possible and this significantly increases the performance of the projects. Akpan and Chizea (2012) study also agrees with the current study which found that time planning systems in the construction firms significantly affects performance of the projects.

### **5.0 Summary**

The study was motivated by the fact that for the last five years, several plans on how the city's infrastructure projects have been presented and less than 10 projects have been actualized. The study specific objectives were determining the effect of human resource planning, financial resource planning, material usage planning, and time management on performance of construction projects in Nairobi City County.

The study findings indicated that most of the firm accord human resource management function is an important role that aims to improve performance of construction projects. Most firms conduct training to its project team members. In most construction companies, human resource department is majorly involved in the company's planning process. The study inspected the effect of financial resource planning on performance of construction projects and established that project completion was being done without much struggle and that project manager was able to forecast expenses.

The effect of material usage planning on performance of construction projects was that appropriate material had been provided. The study further established that all material resources allocated were in use and that project output had been well defined. Regarding time management influence on performance of construction projects, the study revealed that that activity duration had been well estimated. Time schedules were well developed (prepared). The study also established that the project scope had been well specified during the planning phase. It was clear that most of the projects would not be completed on the original (planned) schedule. The study found that time management positively and significantly affects project performance.

### **5.1 Conclusion**

Based on the analysis, discussion and findings the study made the following conclusion. The study concluded that most of the firms accord human resource management function is important role that aims to improve performance of construction projects. Most firms conduct training to its project team members. Additionally, the study concludes that formulation and implementation of human resource training are in line with overall goal. The study concluded that human resource planning positively and significantly contributes to performance of the construction projects.

The study concludes that financial resource planning has a positive and significant effect on the performance of construction projects. The study concludes that the budget for the project was properly determined and that the budgeted funds were enough to complete the project. The study concludes that material resources planning has a positive and significant effect on the performance of construction projects. The study concludes that that activity duration was well

estimated. The study concludes that time management has a positive and significant effect on the performance of construction projects.

### **5.2 Recommendations**

Construction firms should equip the human resources in their industry through appropriate and constant training programs addressing the performance of construction projects. The study also recommends that there is a need for construction firms to understand the prerequisites of the project team members in order to address them. Additionally, it is recommended that Construction projects forecast the level of performance of a project before it is inaugurated.

Financial resource planning, on the other hand has a major influence on both the planning and execution parts of a project. For efficient utilization of the resource, total costs and individual costs of the diverse work packages in the project should be kept track of. The project scope should be used to estimate the cost of the project with the WBS being connected to the project plan. Estimating the costs of individual activities based on execution conditions will assist to generate correct overall cost estimation. On the same the study recommends that for successful construction project planning, materials management should be a focus to ensure that projects are within time and budget.

The study recommends development of time schedules based on the formerly developed WBS. Likewise, to develop accurate and attainable schedules, the study recommends accurate sequencing of activities. The process of sequencing the activities encompasses distinguishing dependencies and logical relationships between the project activities. A time schedule without control is not useful to the project organization hence regular checks and controls should be conducted in order to identify deviations as early as possible. Early detection of deviations will enable necessary actions by the project team.

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