# The Impact of Technology Innovation Strategy on the Completion of Strategic Projects in the Electric Power Subsector in Kenya

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**Abstract**

*This paper examined the impact of technology innovation strategy on the completion of strategic projects in the electric power subsector in Kenya. Motivated by high cost of large projects planned and implemented but got abandoned or delayed, the study sought to model the relationship between technology innovation strategy and the completion of projects. Employing a mixed method approach, this study collected quantitative data, using structured questionnaire, from targeted managers of corporations in the subsector; and used an interview schedule to collect qualitative data from key informants-representatives of the Ministry of Energy, donors and project contractors. A total of 166 respondents out of the targeted 223 filled the questionnaire. Key informants were interviewed until saturation was reached. Factor analysis was used to test reliability and validity of the variable constructs and to confirm that they were suitable for use to generate useful statistics to inform the study. Utilizing SPSS application, a regression model was used to analyze quantitative data. Qualitative data was analyzed thematically. To test the null hypothesis that technology innovation strategy had no influence on the completion of projects, regression analysis turned out a p-value of –which was less than 0.05 and therefore significant. This meant that the null hypothesis was rejected and the alternative hypothesis that technology innovation strategy influenced project completion was not rejected. Culture was found not to moderate the relationship between technology innovation strategy and project completion. Consequently, the study recommended that project implementation agencies increase investments in and prioritize the implementation of technology innovation strategy.*

**Keywords**: Technology Innovation Strategy, Project Execution; Project Completion

## Introduction

With millions of dollars wasted, or lost because of abandoned, delayed or uncompleted projects in the electric power subsector, this paper sought to find out why the implementation of some planned projects does not deliver the desired results in Kenya. Specifically, this paper examined the impact of technology innovation strategy on the completion of strategic projects in the electric power subsector in Kenya. The study sought to model the relationship between technology innovation strategy and the completion of projects in the electric power subsector in Kenya. Technology innovation is expected to deploy knowledge and skills as well as adopt improved machinery, tools, and make use of improved processes, which together would enhance the performance of project implementation. But the observed realities in the electric power subsector appear not to bear that position.

Henderson (1989) compared the survival of biological species to competition in industry citing Gause's Principle which states that competitors that make their living in the same way cannot co-exist; each must have a unique advantage to survive. Since the 1980s, organizations have adopted various unique technologies believing that they will help them to gain competitiveness, (Bowman, 1992). Sometimes, technologies facilitate efficiency and effectiveness in delivering desired outcomes; at other times the adoption of technologies through partnership outsourcing, or other approach, can have disastrous results, (Porter, 2001). Kay (2001) advances this view, adding that some of the solutions offered by innovation may be more costly than the ones they propose to address. Organizations that engage in large projects therefore risk large-scale disadvantages if they adopted and implemented inappropriate technologies. Porter suggested that adopted technologies should be within a strategy that positions an organization with a goal, specific value proposition, which should be reflected in its value chain, whilst taking account of trade-offs with other considerations; but must fit together with corporate strategy and activities as well as provide overall long-term continuity of direction. This suggestion by Porter (2001) provides a rationale for the inclusion of technology innovation strategy within corporate strategic framework. Kim and Mauborgne (2015), however intimate that it is value innovation not technology innovation that creates breakthroughs for organizations. Therefore, some organizations are not only driven by innovative, value-creating, cutting-edge technologies, but they include a technology innovation strategy as an identifiable component in their corporate and business strategies (Schilling, 2016). According to Schein and Schein (2016), culture moderates the relationship between technology innovation strategy and project execution and completion.

## Literature Review

### *Theoretical Literature Review*

While a number of theories underpin the adoption and use of technology, technology acceptance model (TAM), technology-organization-environment (TOE) and *Technology Strategy Implementation* frameworks are used in this paper to explain the adoption and use of technology innovation strategy.

#### *Technology Acceptance Model (TAM)*

Developed by Davis (1985), TAM posits that the adoption or acceptance and use of technology by an organization is determined by perceived usefulness and perceived ease of use. According to Davis (1985), perceived usefulness refers to the degree to which organization executives believe that using a particular technology-knowledge, skills, machines, tools, devices, or materials- would improve an organization's performance. On the other hand, ease of use refers to the degree to which an organization believes that using a particular technology would entail minimal effort. Thus, an organization's perception of usefulness and ease of use of a given technology system defines its attitude towards the new technology which in turn defines whether an organization would adopt and use a technology that is presented (Schillewaert *et al.*, 2005). Ease of use in the framework is thought to influence perceived usefulness, so that the simpler to use a technology is, the more useful it is perceived to be and the more likely it will be accepted (Hong et al., 2006). Thus, TAM is a model for predicting the likelihood of adoption of technology.

#### *Technology-Organization-Environment (TOE) Framework*

Technology-organization-framework (TOE) was developed by Tornatzky (1990) as a model for explaining adoption of technological services and products at the organizational level. A

reading of the framework indicates that it offers a broad view of technology adoption, its execution, challenges and its effect on value chain activities, among others. The framework provides factors that influence adoption of technology, use of technology and value creation from technology innovation. The three variables in the model-technology, organization and environment- are considered as additional valuable aspects in explaining technology acceptance, creativity and implementation in organizations (Hossain & Quaddus, 2011). The technological context, according to Tornantzky (1990), comprise innovation culture, possibility of system integration or perceived appropriateness or otherwise as well as the potential benefits of the new technology. These will influence acceptance of the new technology. The organizational context comprises the size, scope, and executive readiness to accept technology. Technology acceptance is also influenced within the organization by perceived loss of control by senior executives, top management support for adoption, operational ability, nature of human capital, availability of funds to support purchase and maintenance, among other factors, (Hossain & Quaddus, 2011). The environmental context consists of factors outside the organization that affects the business of the organization including government regulations, taxes, power availability, competition from other firms, customer demands, and ecological vulnerability, among others. These factors influence the acceptance and use of a given technology (Musawa & Wahab, 2012).

*Technology Strategy Implementation Theory*

Establishing a technology strategy implementation theory, Shane (2014) defines technology as the application of tools, materials, processes and techniques to human activity. It further comprises the use of knowledge, techniques, machines, tools and processes to human activity thereby aiding in efficiency and effectiveness in delivering intended outcomes. He further defines innovation as the process of using knowledge to solve a problem. This is preceded by invention, which is the discovery of a new idea, which, when it is used to solve a problem becomes an innovation. Therefore, technological innovation is the use of knowledge to apply tools materials, processes and techniques to come up with new solutions to problems. Johnson et al. (2018), states that technological innovation is derived from different fields of knowledge to provide solution to varied problems and does not necessarily need to be profitable or commercially feasible. Consistent with Shane (2014), Johnson et al. (2018) theorize that strategy is the direction and scope of an organization over the long term which seeks to achieve advantage in a dynamic environment through configuration of resources and competencies with the aim of fulfilling stakeholder expectations. They further posit that technology innovation strategy is aligned to the corporate objectives and is intended to contribute to those objectives. Pisano (2015), adds that innovation strategy has a set of interdependent processes and structures that guide an organization to identify novel problems and solutions, find concepts and designs that result in acceptable products or processes. In implementing technology innovation strategy, the plan (innovation strategy), resources for innovation, innovative capabilities and innovation processes, need to be in place (Schilling, 2016).

***Empirical Literature Review***

According to Christensen et al. (2015), innovation may be radical or incremental. Radical innovation is one that fundamentally changes the products or the way things are done in an organization; it disrupts the existing technology, creates departure from existing practices and creates a new business model. Incremental innovation, on the other hand, refers to that which results in lesser degree of departure from existing practices. Technology innovation strategy is

intended to enable the organization to achieve its objectives through better or new products, new ways or processes that are more efficient, all of which serve the stakeholders more effectively, competitively and sustainably. Zartha et al. (2016) clarifies that technology innovation strategy defines the processes, structure for implementation, resources and end products and outcomes which include improved or new products, processes or services. Katz et al. (2016) confirm that the components of technology innovation strategy model comprise first, objectives or goals to be achieved which are consistent with the corporate objectives; second, the structure for development and implementation of the strategy; third, the process or methodology for new products/services; and finally, the resources allocated for strategy execution. Considering that innovation technology strategy creates value to stakeholders, brings about new products, processes and new ways of getting things done, one can surmise that when effectively implemented, such a strategy can provide the means for facilitating overall strategic project execution and completion. This study therefore hypothesized that such a strategy would significantly improve the capacity to complete execution and completion of strategic projects.

## Research Methodology

This study adopted a mixed method design, combining both quantitative and qualitative data using a survey questionnaire and an interview guide respectively. A census of 223 managers in the corporations in Nairobi was invited to participate out of which 166 responded to the questionnaire. A census was preferred because it gives the full diversity of views, and the number of managers in all implementing agencies accessible within Nairobi and their population could be managed within the time and budget available. Using an interview schedule, donors, project contractors and Ministry of Energy representatives were interviewed until saturation level was reached. Factor analysis was used to test reliability and validity of the variable constructs and to confirm that they were suitable for use to generate useful statistics to inform the study. A regression model was used to analyze quantitative data with the help of Statistical Package for the Social Sciences (SPSS). Qualitative data was analyzed thematically.

## Results and Discussion

### *Descriptive Statistics*

The target corporation managers comprised 81% males and 19% females all of who had a first degree while 74% had a post graduate degree. Over 96% of the managers had stayed in the corporations between 6and over 20 years. Managers, whilst dominated by men, were highly educated and experienced. The respondents' feedback regarding technology innovation strategy was that it existed (mean score, 3.36), and was aligned to corporate strategy (mean score, 3.20), and that there was a structure, policies, procedures and operating systems for its implementation (mean score 3.33). Though employees saw technology innovation strategy as being part of research and development (R&D) (mean score, 3.5), they did not see technology innovation as part of their culture (mean score, 2.87). These results are shown in Figure 1, Figure 2 and Figure 3.

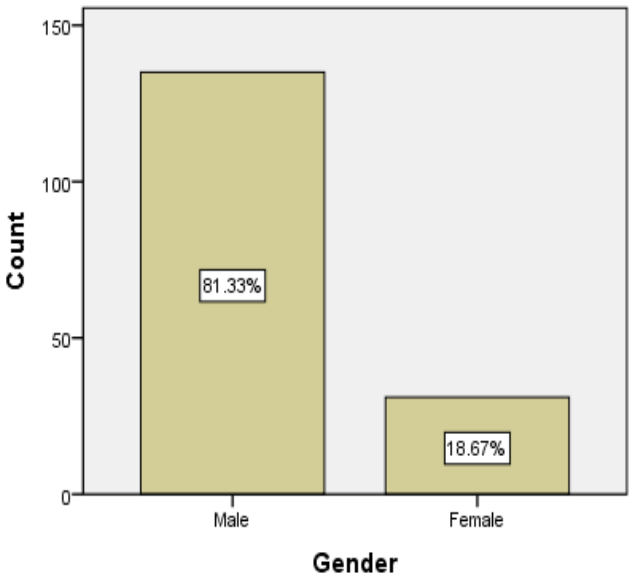


**Figure 1: Gender of Respondents**

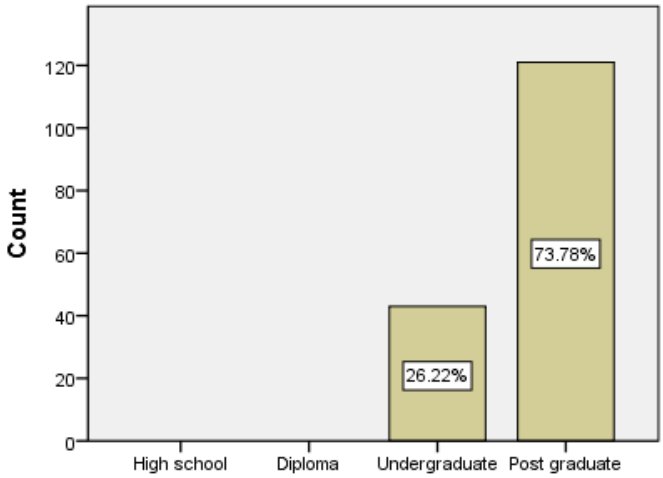


**Figure 2: Level of Education of Respondents**

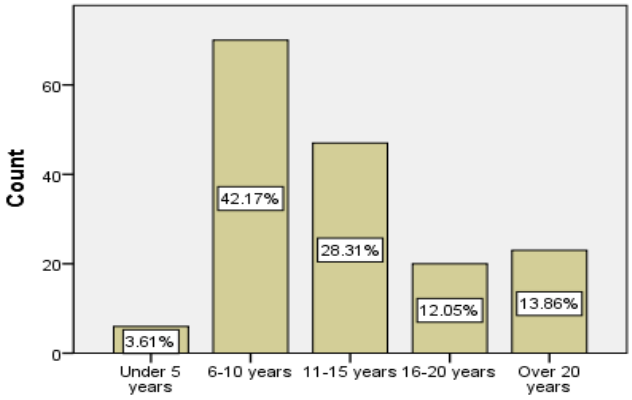


**Figure 3: Length of Stay in the Corporation**

In the circumstance, the respondents indicated that there had been few technology innovation outcomes in terms of improved processes or products (mean score 2.71). The strategy was indicated to have contributed modestly to the implementation and completion of strategic projects. The apparent low outcome rate from implementation of technology innovation strategy may therefore be ascribed to what respondents indicated as low budgetary allocation (mean 2.89), and comparatively low level of acceptance as part of corporate culture. Considering the responses as a whole, it can be surmised that technology innovation strategy was not fully understood, and therefore all supporting structures, processes, budgetary allocation and acceptance as part of the culture, were at a comparatively lower level.

***Bivariate Statistics***

The bivariate analysis tested the association between a number of variables, the first being gender and project implementing agency or corporation. The analysis turned out a Chi-Square value of 4.808 with a p-value of 0.440 as shown in Table 1. Since the p-value was greater than 0.05, the study concluded that there was no association between gender and the implementing agency as shown in Table 1.

**Table 1: Chi-Square Tests of Relationship between Gender and Implementing Agencies**

| | Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 4.808 | 5 | .440 |
| Likelihood Ratio | 5.183 | 5 | .394 |
| Linear-by-Linear Association | 1.787 | 1 | .181 |
| N of Valid Cases | 166 | | |

Regarding whether there was an association between gender and length of stay, the analysis showed a Chi-Square value of 5.920 with a p-value of 0.205, indicating that there was no association between gender and length of stay in the corporation. The analysis found an association between highest level of education and the implementing agency having turned out a Chi-Square value of 74.6, and a p-value of 0.000 which is less than 0.05 as shown in Table 2. This means that the implementing agencies differ in their level of investment in higher education for their senior managers; alternatively, they differ in the level of education of senior managers they recruit.

**Table 2: Chi-Square Tests of the Relationship between Level of Education and Implementing Agency**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 74.614[a] | 5 | .000 |
| Likelihood Ratio | 79.239 | 5 | .000 |
| Linear-by-Linear Association | 55.576 | 1 | .000 |
| N of Valid Cases | 164 | | |

Further, as shown in Table 3, the analysis obtained a Chi-Square test value of 23.124 and a p-value of 0.000 which is less than 0.05 indicating that there was an association between the highest level of education and length of stay in the implementing agency. This may imply that

the longer the manager had stayed in the corporation, the greater the likelihood that they would be sponsored or given time off to study for a higher degree.

**Table 3: Chi-Square Tests: Length of Stay and Level of Education**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 23.124[a] | 4 | .000 |
| Likelihood Ratio | 29.356 | 4 | .000 |
| Linear-by-Linear Association | 20.543 | 1 | .000 |
| N of Valid Cases | 164 | | |

It may therefore be concluded that people stay longer to take advantage of the opportunities for higher education, promotion and the rewards that go with them. Once promoted and rewarded, managers are willing to stay longer. This may mean that the agencies have policies that support human resource development at least at the managerial level; and that there is clear career path for growth and promotions that keep staff motivated and aspiring for the next level as years go by.

The relationship between the highest level of education and gender show that of all the males, 24.1% had undergraduate degree while 75.9% had postgraduate degree. Of all the females, 35.5% had undergraduate degree while 64.5% held post graduate degrees as shown in Table 4.

**Table 4: Highest Level of Education and Gender 'Crosstab'**

| | | Highest level of education | | Total |
|---|---|---|---|---|
| | | Undergraduate | Post graduate | |
| **Gender** | Male | 24.1% | 75.9% | 100.0% |
| | Female | 35.5% | 64.5% | 100.0% |
| **Total** | | 26.2% | 73.8% | 100.0% |

The proportions demonstrate that more of both male and female managers had post graduate degrees which may be indicative of fairly equitable educational opportunities for both men and women, after allowing for disproportionately larger number of men at managerial level.

Finally, the results show that the proportion of managers who had stayed in the agency for 16-20 years and had post graduate degrees was 95%; while those who had stayed for 11-15 years and had postgraduate degrees was 78.3%; 57.1% had stayed for 6-10 years and had post graduate degree while those under 5 years with post-graduate studies were 66.7% as shown in Table 5.

**Table 5: Length of Stay and Level of Education**

| | | Length of stay in the agency | | | | |
|---|---|---|---|---|---|---|
| | | Under 5 years | 6-10 years | 11-15 years | 16-20 years | Over 20 years |
| **Highest level of education** | Undergraduate | 33.3% | 42.9% | 21.7% | 5.0% | 0.0% |
| | Post graduate | 66.7% | 57.1% | 78.3% | 95.0% | 100.0% |
| **Total** | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

The data seem to indicate that the longer the manager had stayed in the corporation, the greater the likelihood that they would be sponsored or given time off to study for a higher degree.

***Factor Analysis***

On reliability, technology innovation strategy reported a Cronbach Alpha Index of 0.723. The six items that were retained gave an overall Cronbach's alpha index of 0.902. Confirmatory factor analysis was carried out and the findings were that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy for technology innovation strategy value was 0.792 and Bartlett's Test of Sphericity was 0.000, which was less than 0.05 hence the construct items were found to be ideal for factor analysis. High values (close to 1.0) generally indicate that a factor analysis may be useful with study data.

The extractions of all the six items and the communalities of the constructs for technology innovation strategy are shown in Table 6. Each of the six extractions indicates the level of variance which is accounted for by the item explaining technology innovation strategy. This variance is the variable communality (amount of variance which is accounted for).

**Table 6: Communalities**

| Item | Initial | Extraction |
|---|---|---|
| 1. The corporation has a technology innovation strategy | 1.000 | .825 |
| 2. The corporation's technology innovation strategy is aligned to the corporate strategy | 1.000 | .898 |
| 3. A structure exists to support implementation of technology innovation strategy | 1.000 | .832 |
| 4. There are policies, procedures and operating systems to guide implementation of technology innovation strategy | 1.000 | .528 |
| 5. Technology innovation is part of the culture of the organization (Dropped) | 1.000 | .363 |
| 6. The execution of technology innovation strategy has often produced new processes that have facilitated efficient completion of strategic projects | 1.000 | .730 |

**Extraction Method: Principal Component Analysis.**

Using principal **component analysis,** Eigenvalues (characteristic roots) were extracted to show the variance explained by each of the factor out of the total variance. The rule is that factors with Eigenvalues greater than one (1) should be considered, (Orcan, 2018). The six items extracted may measure one underlying factor, of which 69.603% of the variance is accounted for by the first factor. This is because only the first component has an Eigenvalue of at least one (1) as shown in Table 7.

**Table 7: Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.176 | 69.603 | 69.603 | 4.176 | 69.603 | 69.603 |
| 2 | .888 | 14.803 | 84.406 | | | |
| 3 | .420 | 7.002 | 91.408 | | | |
| 4 | .324 | 5.394 | 96.802 | | | |
| 5 | .135 | 2.253 | 99.055 | | | |
| 6 | .057 | .945 | 100.000 | | | |
| **Extraction Method: Principal Component Analysis.** | | | | | | |

Pearson correlation is a measure of linear relationship or association between variables and takes the values between -1 and +1, with the latter indicating perfect positive correlation and the former perfectly negative correlation between variables, (Lind et al., 2021). The component matrix in Table 8 shows the Pearson correlation between the construct items and the component (called factor loading). The component, technology innovation strategy, reported a correlation between 0.6 and 0.948indicating that they were closer to 1. According to Lind et al. (2021), the nearer the correlation to 1, the stronger the relationship; thus the correlation between each of the six items with the component extracted and listed in Table 8 are closely related to, and from principal component analysis, accounting for the variance of the technology innovation strategy. These results imply that given the positive correlation between the construct items and the component, the constructs can reliably be used as a guide to the key variables that need to be taken into account in implementing a technology innovation strategy. The key constructs that explain the technology innovation strategy are its existence, alignment to the main strategy and having its own structure (Table 8). These findings are consistent with the empirical study of Katz et al. (2016) and Zartha et al. (2016) who found that where a technology strategy exists, it needs to be aligned to corporate strategy, adequate resources allocated and a structure for its implementation put in place.

**Table 8: Component Matrix**

| | Component |
|---|---|
| | 1 |
| 1. The corporation has a technology innovation strategy | .908 |
| 2. The corporation's technology innovation strategy is aligned to the corporate strategy | .948 |
| 3. A structure exists to support implementation of technology innovation strategy | .912 |
| 4. There are policies, procedures and operating systems to guide implementation of technology innovation strategy | .726 |
| 5. Technology innovation is part of the culture of the organization | .602 |
| 6. The execution of technology innovation strategy has often produced new processes that have facilitated efficient completion of strategic projects | .855 |

***Regression Model***

To test the null hypothesis that technology innovation strategy does not affect project execution and completion in the electric power subsector in Kenya, technology innovation strategy was regressed against project execution and completion and the results were presented in Table 9.

**Table 9: Results of Regression of Technology Innovation Strategy on Project Completion**

| | Coefficient | t-statistic | P-value | $R^2$ | Adjusted $R^2$ | F-ratio |
|---|---|---|---|---|---|---|
| **Project execution and completion** | | | | | | |
| Constant | 4.017 | 21.317 | .000 | .172 | .167 | 33.307 |
| Technology innovation strategy | -.325 | -5.771 | .000 | | | |

From Table 9, 17.2% of the variation in project execution and completion was accounted for by technology innovation strategy, and the regression coefficient of –0.325 indicated that a change of one (1) unit of technology innovation strategy is associated with a negative change of 0.325 units in the outcome of project execution and completion. The results further reported a (F-ratio =33.307, p-value =0.000) which is significant. This implied that the null hypothesis is rejected. The alternative that technology innovation strategy affects the execution and completion of projects in the electric power subsector is not rejected.

With the interaction effect of culture, the Adjusted $R^2$ marginally increased from 0.220 to 0.232 (Table 10). This means that with the interaction of culture, technology innovation strategy explains 23 percent of the variation in project execution and completion. The other 77% is explained by six other determinants considered in this study. Therefore, the level of 23% explained by one factor is comparatively significant.

In addition, with the interaction effect of culture, the regression coefficient remained more or less the same, marginally decreasing from negative 0.185 to negative 0.187 (Table 10), meaning that a change in one unit of technology innovation strategy is associated with a negative change of -0.187 units in the outcome of project execution and completion. This indicated the minimal effect, if any, that culture may have on the relationship between technology innovation strategy and the execution and completion of projects.

Further, with the inclusion of interaction effect of culture, F-ratio, which measures the accuracy of estimates, reduced from 23.556 to 17.131 as shown in Table 10. This implies that the influence of organizational culture has minimized impact of technology innovation strategy on strategic project execution and completion. With the interaction of culture, the p-value was 0.062, which were higher than the significance level of 0.05; indicating that organizational culture did not have a moderating effect on the relationship between technology innovation strategy and successful completion of projects in the electric power subsector in Kenya. Therefore, the study failed to reject the null hypothesis that there was no moderating effect of culture on technology innovation strategy and project completion. The implication of this finding is that culture needs to embrace technology innovation strategy so that it can influence its effective implementation as indicated by Schein and Shein (2016).

**Table 10: Regression Analysis Results of Culture, Technology Innovation Strategy and Project Completion**

| Project execution and completion | Coefficient | t-statistic | P-value | $R^2$ | Adjusted $R^2$ | F-ratio | Recomm-endation |
|---|---|---|---|---|---|---|---|
| **Model without moderation effect of culture** | | | | | | | |
| Constant | 4.781 | 16.454 | 0.000 | 0.230 | 0.220 | 23.556 | significant |
| Technology Innovation strategy | -0.185 | -2.658 | 0.009 | | | | |
| Organization culture | -0.337 | -3.316 | 0.001 | | | | |
| **Model with Moderation effect of culture** | | | | | | | |
| Constant | 4.993 | 16.129 | 0.000 | 0.247 | 0.232 | 17.131 | significant |
| Technology Innovation strategy | -0.187 | -2.708 | 0.008 | | | | |
| Organization culture | -0.372 | -3.627 | 0.000 | | | | |
| Interaction | -0.131 | -1.878 | 0.062 | | | | |

The thought of technology innovation strategy affecting the execution and completion supports the objective to improve project execution and completion. Varadarajan and Jayachann (2018), argue that technology innovation strategy may enhance and change an organization's direction and objectives as well as outcomes, thus indicating the significance of this factor. The absence of technology strategy among the implementing agencies negates the basis for making decisions about the type, level and impact of innovation that best match the corporate objectives. This therefore implies possible application of technological innovation in a haphazard manner. This has the effect of causing confusion or misalignment of process activities which inhibit efficient implementation of projects (Schilling, 2016). This conclusion calls for the need to include technology innovation strategy in the implementing corporations' strategic plan.

The low level of technology innovation strategy adoption appear inconsistent with the theoretical proposition that technology innovation is a basic tool for mobilization and allocation of resources) and this study's findings that the technology innovation strategy outcomes improve project performance and that it is one of the three fundamental factors determining project execution and completion (Schilling, 2016). He further pointed out that technology innovation strategy provides a framework for allocation of resources to support innovations whose outcomes are expected to improve the capacity of an organization to perform its functional activities more efficiently. The import of this theoretical position is that without a technology innovation strategy, there is no plan for mobilization and allocation of resources to support it, with the result that its benefits are lost.

## Conclusions and Recommendations

The technology innovation strategy was identified in the stepwise regression analysis as a fundamental determinant of project execution and completion. This follows the fact established in empirical studies that its fundamentality is evidenced where it provides a framework for allocation of resources to support innovations whose outcomes are expected to improve the capacity of an organization to execute and complete strategic projects more efficiently (Schilling, 2016). Yet the review of the corporation's strategic plans (KPLC, 2021; KenGen, 2021) did not show any identifiable technology innovation strategy in the plans of the corporations in the electric power subsector. Secondly, according to analysis of quantitative

responses of corporation managers, technology innovation strategy has not received adequate investment attention compared to the two other fundamental determinants of execution and completion of strategic projects in the electric power subsector in Kenya. Two consequent recommendations arise from these observations: first, the corporations need to include technology innovation strategy in their strategic plans to enhance efficiency with which strategic projects are completed over the long term; secondly, the corporations need to deliberately invest in technology innovation strategy as a matter of priority as the future of project execution will continue to be technology-led.

Yet the corporations' efficiencies are not only impaired by low investment in and prioritization of technology innovation strategy, but also complexity and organization structure, among other factors. Empirical studies found that efficiency and effectiveness, in completing strategic projects in the electric power subsector in Kenya, would be enhanced if challenges associated with these variables were addressed (Reyes-Ortiz, 2019; Hatch & Cunliffe, 2016; Hardy, 2015). Therefore, it is recommended that as a precedent to all project execution initiatives, prioritization and implementation of technology innovation strategy should be given the attention needed.

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