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Influence of Strategy Implementation Factors on Performance of Kenya Rural Roads Authority

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Abstract:

Despite theoretical literature suggesting that strategy implementation factors have the potential to increase organizational performance, there is currently no study that has investigated the relationship between strategy implementation factors and the performance of Kenya Rural Roads Authority (KeRRA). This paper presented the findings on the influence of organizational structure, resource allocation, and environmental uncertainty as facets of strategy implementation on the performance of the Kenya Rural Roads Authority. The study was guided by Resource-Based, Survival Based, and Contingency Theories in a correlation research design. The study population constituted 47 respondents comprising Engineers (KeRRA's Regional Directors). A total sample of 37 respondents was selected using saturated sampling techniques. The findings revealed that strategic implementation factors, such as organization structure, resource allocation, and environmental uncertainty, collectively accounted for positive variation in performance at KeRRA. Therefore, the study recommends to the management of KeRRA to give more prominence to strategy implementation factors such as organization structure, resource allocation, and environmental uncertainty as they are positively associated with organizational performance. The results of the study can be useful for the policymakers at KeRRA on the best approach to strategy implementation and add new knowledge on strategy implementation practices.

Keywords: Strategy implementation factors, performance, organizational structure, resource allocation, and environmental uncertainty

1. Introduction

Strategy is a process comprising decisions and activities executed and governed by various factors toward organization objectives (Yang Li *et al.*, 2008). Miller (2002) stated that there is 70 percent failure in organization implementation of new strategies. A parallel study has shown that strategic plans exacting 40-60 percent are not achieved as a result of poor planning and implementation (Mankins and Steele, 2005). Strategy implementation is influenced by the following factors, namely: formulation, organizational leadership, organization structure, resource allocation, organizational culture environmental uncertainty, communication, commitment, and shared understanding.

Environmental uncertainty was described by Johnson & Scholes (1999) as concerned with the dynamism and complexity of the environment and its influence on strategy implementation. When the environment is dynamic, there will be a change in environmental variables involving customers, technology, demand and supply, resources, and competition. The organizational structure shows work accomplishment, specialties, and arrangement toward the organizational mission of the workforce. Organizations must develop necessary structures that can assist them in implementing organizational strategies (Lumpkin, 2003). It provides the framework that allows for strategy implementation (Stock, Greis, and Kasarda, 1999). A good relationship between strategy and structure is essential for the implementation of business strategies (Noble, 1999). A study by Gupta (1987), which examined the connectivity in strategy implementation and organizational structure, showed that decentralized structures are more effective than centralized ones. When the organizational structure is adjusted by strategy, there is a likelihood of successful strategy implementation. Tall organization structures lengthen the chain of command (Schaap, 2006).

Resource allocation is the process of distributing resources to achieve the objectives of an organization (Chen, 2002). Willingness to shift resources in support of strategic change is critical to the strategy implementation process. A successful strategy implementation process should be related to available resources in order not to develop a big resource gap. Henry (2008) shows that whereas availability of resources is necessary, left alone resources cannot be useful to an organization unless there is a configuration for organizational competencies. Resources are those inputs that facilitate the functional process of an organization. According to Bozeman and Straussman (1990), resources are classified into personnel, structure, and finance.

Organizational performance concerns the organization's efficient utilization of resources toward mandate realization (Ezigbo, 2011). Analysis of organizational performance considers variables such as efficiency, effectiveness,

customer satisfaction, and accountability among others, visualized in financial or non-financial terms. Financial performance is viewed in terms of organizational sales and profits against financial leverages. Non-financial performance is normally gauged on customer satisfaction, efficiency, safety, effectiveness, and delivery time.

According to the Kenya Roads Act, 2007, Kenya Rural Roads Authority is a State Corporation within the State Department of Infrastructure under the Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works (MoTIHUDPW). It is concerned with the management, development, rehabilitation, and maintenance of roads in rural Kenya. However, the authority has not been consistent in meeting its objectives due to challenges such as inadequate resource allocation, inadequate contractor experience, delayed certification and payment of works, project cost and time overrun, political interference, poor quality control, lack of contractor motivation and increased agency risks (World Bank, 2017). Between 2016 and 2020, the Authority planned and procured 8,841.6 km of roads to be upgraded to bitumen standards (KeRRA, 2018). By the close of the 2020/2021 Financial Year, only 4,208 km of bitumen standard roads had been achieved with revised completion dates (KeRRA, 2021). This has caused delayed completion, cost escalation from claims on idle human and physical resources, and interest on delayed payment. Attempt to improve the performance of the Authority has seen the Government increase stakeholder participation in roads sector implementation (MoTI, 2010). Despite these interventions, the Authority has not successfully ensured accessibility and mobility in rural Kenya. Theoretical literature suggests that strategy implementation factors have the potential to increase organizational performance. However, there is currently no study that has investigated how performance is related to strategy implementation factors in the public sector in Kenya. Consequently, studies on strategy implementation and public sector performance have not been fully explored. The purpose of this study is to establish the influence of organizational structure, resource allocation, and environmental uncertainty as dimensions of strategy implementation on the performance of the Kenya Rural Roads Authority.

2. Literature Review

2.1. Concept of Strategic Implementation Factors

Strategy implementation is the process of putting into practice strategies to enable resource utilization towards opportunities in a business environment. It is a process comprising decisions and activities executed and governed by various factors toward organization objectives (Yang Li *et al.*, 2008). Management is required to ensure focus on how strategies are implemented to avoid bottlenecks causing failure. Various factors influence the process of converting strategic plans into organizational action. Studies show that there is a failure in 50% - 80% of efforts of implementing strategies (Jonk & Ungerath, 2006; Atkinson, 2006).

2.2. Concept of Organizational Structure

An organizational structure is a group of people joined with a focus to achieve a particular purpose (Akande & Ojokuku, 2008). The purpose of an organization structure is to specify tasks to be carried out, how to carry out the jobs, expected standards of performance, and harmonized authority channels. Robins (2005) noted that organizational structure is how division, grouping, and coordination of job tasks are defined. Organization structure is extremely important in an organization as it ensures maximum coordination and proper utilization of resources, providing for work planning, growth, and enhanced innovation. Cheginiet *et al.* (2013) identified organizational structure elements as comprising complexity, formality, and concentration while Teixeira *et al.* (2012) provided the dimensions of an organization in terms of centralization, flatness, specialization, and horizontal integration.

2.3. Concept of Environmental Uncertainty

Environmental uncertainty concerns elements of the environment that comprise the market, technology, and competition (Chin *et al.*, 2014). Change in the rate of consumer demands creates uncertainty in the market environment; however, the product development cycle is affected by consumer requirements (Liu, 2017). When this happens, companies are seen to produce products towards customer satisfaction (Lumpkin and Dess, 2001). This is important for company management since there could be a high rate of change in customer preferences (Wang and Fang, 2012). In the road sector, the forces that influence supply and demand are demographics, economy, land use, and culture. Regions with high economic activities have attracted investment in road infrastructure than areas of less economic interest. Densely populated areas require a dense road network to ease traffic flow in comparison to under-populated areas.

2.4. Concept of Resource Allocation

Various scholars have shown that possession and assignment of differing resources lead to variations in organizational performance in a particular industry (Barney, 1991; Amit & Shoemaker, 1993). Elsewhere, it has also been argued that resource differences are unrelated to performance. It is evident that whereas certain organizations may possess a considerable resource base, its influence is rarely seen in performance. The economic consequences of managerial decisions, being controlled by the level of availability of organizational resources, have been extensively studied (Grossman & Hart, 1986). Researchers such as Talaja (2012), Newbert (2008), Cockburn, Henderson & Stern (2000) and Pearce *et al.* (2012) have posited that organizational resources are important in performance more than any other factors. On the other hand, some researchers posit that resource differences are unrelated to performance. Some organizations possess a large resource base, yet the same does not reflect in their performance (Chandler, 1962).

2.5. Concept of Performance

The organizational performance comprises variables that control effectiveness and efficiency. It involves work outcomes since it provides a connection to the strategic goals of an organization. Financial performance is viewed in terms of organizational sales and profits against financial leverages while non-financial performance concerns variables such as customer satisfaction, efficiency, safety, degree of effectiveness, and delivery time. According to Ambro&Praprotnik (2008) Customer satisfaction concerns the organization's ability to please its customers. Karunaratne&Jayawardena (2010) have detailed how performance is related to customer satisfaction.

2.6. Organization Structure and Performance

The concept of organizational structure and its resultant effect on firm performance is widely studied in different contexts. For instance, Njiru and Nyamute (2018) concluded that organizational structure and complexity affected commercial state corporations' financial performance. Folami and Jacobs (2005) examined how joint task characteristics and organizational contextual variables affected job performance, using a sample from U.S accounting firms in seven states. In Nigeria, Ogboet. *al.* (2015), while examining the relationship between structure and performance of Technical and Service Firms, concluded that in a decentralized organization, there will be improved decision making, productivity will be affected positively and negatively by task routine, and improved efficiency. Chandler (1962) revealed that the organizational strategy informs the structure to be adopted. This finding was later supported by Zaribaf and Bayrami (2010) who established that in most cases top management is concerned with strategy formulation followed by implementation by middle-level managers. However, these studies (Nyamute, 2018; Folami& Jacobs, 2005; Chandler, 1962; Zaribaf and Bayrami, 2010) focused on profit-making organizations but not nonprofit-making public entities as in the case of the current study. Consequently, there is little knowledge on the effect of organizational structure and firm performance in the context of the public sector, particularly in Authorities like KeRRA.

- H_{01} : Organizational structure does not influence performance at Kenya Rural Roads Authority

2.7. Resource Allocation and Firm Performance

The concept of resource allocation and its resultant influence on firm performance is widely studied in many contexts. Ongeti & Machuki (2018) confirmed a big relationship between organizational resources and performance. Gitau *et.al.* (2020) showed the positivity of resource allocation performance of supermarkets in Nairobi County. Ismail *et.al.* (2012) established the positive link between resources, capabilities, and systems and related competitive advantage on organizations. Elsewhere, (Kogan, Papanikolaou, Seru and Stoffman; 2017) established the direct effect of resources on productivity and performance. The investigation by Chi & Bump (2018) on resource allocation processes at multilateral organizations centered on global health concluded that resource allocation helps managers in rating employee workload. Focusing on public organizations Chan (2006) studied resources in form of personal competencies that enable public organizations to achieve above-average results, and Sandhu, *et. al.* (2011) assessed knowledge as a strategic resource for organizations, using a questionnaire addressed to the employees of public organizations. Furthermore, some studies (Gitau *et.al.*, 2020; Chi and Bump, 2018) reviewed concentrated their analysis of resource allocation and its resultant effect on firm performance in other sectors such as the Retail and Global Health sectors which is a different context from the non-profit public sector. Subsequently, the majority of these reviewed past studies (Ongeti and Machuki, 2018; Gitau *et. al.*, 2020; Ismail *et. al.*, 2012; Chi and Bump, 2018; Seru and Stoffman, 2017) did not focus on resource allocation and firm performance, particularly in the public sector or road agencies such as KeRRA where non-financial indicators such as efficiency and effectiveness are crucial. Consequently, little is known about the influence of resource allocation on the performance of KeRRA.

- H_{02} : Resource allocation does not influence the performance of the Kenya Rural Roads Authority

2.8. Environmental Uncertainty and Firm Performance

Empirical studies confirm the environmental uncertainty concept and its resultant effect on firm performance is a subject widely covered by various scholars in different contexts. For instance, Elbanna (2012) studied the effect of environmental uncertainty and hostility on organizational performance and found no relationship between the two variables. Aprisma & Sudaryati (2018) concluded that environmental uncertainty has a negative influence on company performance. Gul *et. al.*, (1993) studied the concept alongside computer usage and Management Accounting Systems (MAS) on small businesses' performance and established that whenever there are high environmental uncertainty conditions that are perceived, MAS information is necessary to enhance decision making towards high performance. The concept of environmental uncertainty has been viewed as moderating factor to the organization's internal factors on performance. Kafetzopouloset *al.*, (2019) got concerned with the moderation of innovation dimensions, while Merschmann & Thonemann (2011) examined supply chain flexibility, and Liu (2017) assessed the moderation of intellectual and social capital. However, several studies reviewed (Kafetzopouloset *al.*, 2019; Merschmann and Thonemann, 2011; Liu, 2017) ignored the direct influence of this concept as a factor of strategy implementation on organizational performance. Various studies (Nagarajanet *al.*, 2013; Darvishmotevaliet *al.*, 2020; Tang and Wang, 2017; Arieftiaraet *al.*, 2017; Huang *et al.*, 2017) have examined the direct impact of environmental uncertainty within firms. The studies reviewed concentrated their analysis of environmental uncertainty in private sectors as opposed to the public sector. Hence, none of the reviewed past studies focused on road agencies such as KeRRA. Consequently, little is known about the effect of environmental uncertainty on the performance of KeRRA.

- H_{03} : Environmental Uncertainty does not influence the performance of the Kenya Rural Roads Authority

Keeping in perspective the aforementioned literature and hypotheses, the following conceptual framework is proposed in this study shown in Figure 1.

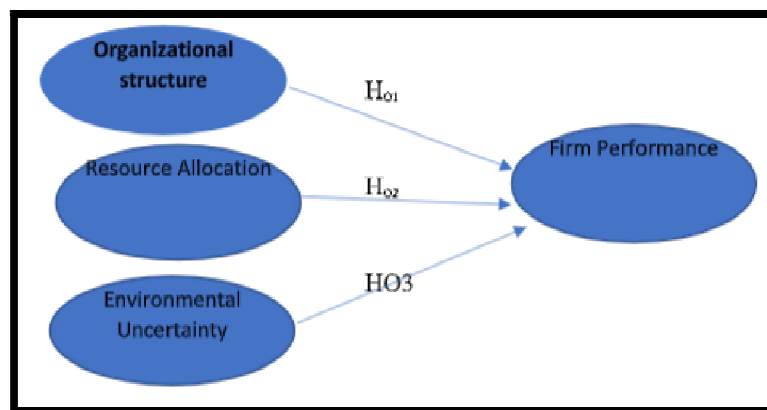


Figure 1: Conceptual Model

3. Research Methodology

The study employed a correlation research design. The study was conducted in 47 Counties in Kenya. According to KeRRA's structure, each county constitutes an administrative region. These are headed by Engineers. Besides the technical department, the regional offices also include supply chain management, Information technology, and accounting departments. This study targeted 47 respondents comprising Engineers (County KeRRA Office Managers) involved in routine road project supervision. Due to a small number of possible study respondents, the study adopted a saturated sampling technique to select the final sample in which a total of 10 respondents were isolated and used for the pilot study as part of a reconnaissance survey. Thereafter, the remaining 37 respondents were targeted for the main study. Cooper and Schindler (2003) provide for a range of 10% subjects, not necessarily statistically selected. The pilot study was essential to pre-test the research instrument to enhance the instrument's validity and reliability. Primary data was collected using pre-validated questionnaires. The questionnaire has five sections, namely: A, B, C, D, and E, dealing with demographics, organizational structure, resource allocation, environmental uncertainty, and performance respectively. A 5-Likert scale was used to rate staff's perception of various strategic implementation issues and their contribution to performance.

On the other hand, secondary data was collected from newspapers, published books, journals, magazines, and company handbooks. The researcher edited the completed questionnaires for completeness and consistency. Data clean-up followed; this process involves editing, coding, and tabulation to detect any anomalies in the responses and assign specific numerical values to the responses for further analysis. The data will then be analyzed using descriptive statistics. To test the hypothesis, the study employed a multivariate regression model to study the relationship between strategy implementation factors and firm performance. The findings were presented using tables and graphs for further analysis and to facilitate comparison, while an explanation of the table and graphs will be given in prose. This generated quantitative reports through tabulations, percentages, and measures of central tendency.

4. Research Findings and Discussions

4.1. Descriptive Statistics

Researchers used descriptive analysis techniques to obtain information regarding the characteristics of respondents. Descriptive analysis is an analytical technique used to explain how the characteristics of the study sample can be described and understood properly. The discussion on the characteristics of respondents in this study will show several aspects of the respondents, such as based on gender, the number of years worked at the institution, education level, and age variation. The gender summary of the respondents, indicated in Table 1 is: eighteen (18) respondents were male representing a sample of 52.9 % of the total study population, while sixteen (16) respondents were female with 47.1 % of the total population. Based on the duration of years worked at the institution, the majority of respondents (82.4 %) reported that they worked for a period of below 5 years. Similarly, 11.8 % reported that they worked for between 11 and 15 years. Only 5.9 % reported that they worked for between 6 and 10 years. From Table 1 below, the majority of the respondents sampled have a strong relationship to formal education with 61.8 % comprising Bachelor's degree holders, while 38.2 % reported that they hold a postgraduate degree. Finally, the distribution of sampled respondents based on their age showed that the majority of respondents (38.2 %) reported that they fall within the age bracket of between 46 and 55 years. On the other hand, only 8.8 % reported that they are over 55 years of age.

Demographic Variable	Category	Frequency	Percentage
Gender	Male	18	52.9
	female	16	47.1
Number of Years Working	Below 5 years	28	82.4
	6-10 Years	2	5.9
	11-15 Years	4	11.8
Level of education	Degree	21	61.8
	Postgraduate (Master's and Ph.D.)	13	38.2
Age of the Respondents	26-35 years	8	23.5
	36-45 years	10	29.4
	46-55 years	13	38.2
	Over 55 years	3	8.8

Table 1: Characteristics of Respondents
Source: Survey Data, (2022)

4.2. Regression Model and Hypothesis Test

4.2.1. Effect of Strategic Implementation Factors on Organizational Performance

To actualize the study objectives, a regression analysis between the three dimensions of strategic implementation factors, namely: Organization structure, resource allocation, environmental uncertainty, and organizational performance, was undertaken. The direction and magnitude of influence or effect of each of the dimensions of strategic implementation factors on organizational performance were eventually established using the regression model whose findings were presented in Tables 2, 3, and 4.

Table 2 gives the model summary which shows that the proportion of variance in the organizational performance, that is explained by the independent variables, is 77% ($R^2 = .770$, $p=0.000$). The coefficient of determination ($R^2 = 0.770$) and the model are acceptable since the F-statistic is significant and suggests that the independent variables jointly influence the dependent variable. The value of Durbin-Watson is 1.658. Generally, the value of the Durbin-Watson statistic ranges from 0 to 4. As a rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates a strong positive correlation, while a value of 4 indicates a strong negative correlation. The computed value is also close to 2, which indicates the absence of serial correlation.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
	.878 ^a	.770	.747	.25388	.770	33.550	3	30	.000	1.658
a. Predictors: (Constant), Organizational structure mean score, Resource Allocation mean score, Environmental uncertainty mean score										
b. Dependent Variable: Organizational performance mean score										

Table 2: Estimated Model of Organizational Performance
Source: Survey Data, (2022)

Table 3 shows the ANOVA results of the estimated model. The data test revealed that $F(3, 30) = 33.550$ at $p = 0.000$, which is an indication that the model fits the research data well. The researcher can, therefore, deduce that all the independent variables (i.e., organizational structure, resource allocation, and environmental uncertainty) jointly explain organizational performance at KeRRA.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.488	3	2.163	33.550	.000 ^b
	Residual	1.934	30	.064		
	Total	8.421	33			
a. Dependent Variable: Mean score of Organization Performance						
b. Predictors: (Constant), Mean score for Environmental Uncertainty, mean score for Organization Structure, Mean score for Resource Allocation						

Table 3: ANOVA Results on Estimated Organizational Performance Model

The regression model was in the form $Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \epsilon_i$ by adding regression coefficient as was shown in Table 4.13. This was later transformed into:

$$Y = 0.132 + 0.279 X_1 + 0.234 X_2 + 0.439 X_3 \dots \dots \dots \text{equation 4.1}$$

$$R^2 = 0.770 (77\%)$$

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.132	.398		.331	.743	.680	.944		
Organizational Structure mean score	.279	.118	.268	2.375	.024	.039	.520	.602	1.660
Resource Allocation mean score	.234	.080	.292	2.911	.007	.070	.398	.759	1.317
Environmental Uncertainty Mean score	.439	.107	.499	4.115	.000	.221	.656	.520	1.922

a. Dependent Variable: Organizational Performance Mean score

Table 4: Coefficients of Independent Variables

Source: Survey Data (2021)

4.2.2. Establish the Effect of Organization Structure Practices on the Performance of KeRRA

The first objective of the study was to assess the influence of organizational structure on the performance of the Kenya Rural Roads Authority. In this regard, practices of the organizational structure were found to have a significant positive influence on the organizational performance of KeRRA ($B=0.279$, $p=0.024$) thereby rejecting the null hypothesis H_{01} , which states that organization structure does not have a significant influence on the performance of KeRRA. This means that a unit change in organizational structure practices causes a 0.279-unit change in organizational performance and the change is significant. This implies that organizational structure is a significant predictor of firm performance at KeRRA.

4.2.3. The Effect of Resource Allocation on Performance of KeRRA

The second objective of the study was to establish the influence of resource allocation on the performance of the Kenya Rural Roads Authority. In this regard, resource allocation practices were found to have a significant positive influence on the performance of KeRRA ($B= 0.234$, $p =.007$) thereby rejecting the second null hypothesis H_{02} , which states that resource allocation does not have a significant influence on the performance of KeRRA. This means that a unit change in resource allocation will cause a 0.234-unit change in performance of KeRRA and the change is statistically significant. This implies that resource allocation as an element of strategic implementation factor is a significant predictor of performance in the context of KeRRA.

4.2.4. The Effect of Environmental Uncertainty on Performance of KeRRA

The third objective of the study was to establish the effect of environmental uncertainty on organizational performance of KeRRA. In this regard, environmental Uncertainty was found to have a significant positive influence on organization performance of KeRRA ($B= 0.439$, $p =.000$) thereby rejecting the third null hypothesis H_{03} , which states that environmental uncertainty does not have a significant influence on the performance of KeRRA. This means that a unit change in environmental uncertainty will cause a 0.439-unit change in performance and the change is significant. This implies that environment uncertainty, as one facet of strategy implementation factor, is a significant predictor of organizational performance of KeRRA.

4.3. Discussion of the Results

The finding that strategic organization structure exerts a significant positive influence on performance of KeRRA has received some support from theoretical literature as well as past empirical studies. For instance, the finding of the current study is like that of Njiru & Nyamute (2018), who, in their study on how Organizational Structure affects Financial Performance, focused on Kenya's Commercial State Corporations, revealed that the performance of commercial State Corporations is influenced by type, and size of the organizational structure. A similar finding was provided by Eze, Bello, and Adekola (2017) in a study titled 'The effect of organization Structure on Performance of Organizations'. Ogboet. *al.* (2015) concurred with the findings of the current study by concluding that in a decentralized organization there will be improved decision making, productivity will be affected positively and negatively by task routine, and improved efficiency and overall firm performance. Moreover, by examining how joint task characteristics and organizational contextual variables affected job performance, using a sample from U.S accounting firms in seven states, Folami and Jacobs (2005) concurred with the current study.

Further, the finding that resource allocation has exerted a significant positive influence on organizational performance of KeRRA was concurring with some past reviewed theoretical literature as well as past empirical studies.

For Instance, the result of the current study is similar to the finding by Ongeti and Machuki (2018) who studied how the performance of Kenyan state corporations relates to the allocation of resources and revealed that in State Corporations Resources provide for 8.3 percent variations in performance. Similarly, the study findings agreed with Gitau, Abayo, and Kibuine(2020) who investigated the extent to which the performance of supermarkets in Nairobi County is influenced by resource allocation and strategy communication. The study concluded that resources positively influenced the performance of these supermarkets. In strategic management of public organizations, the findings of this study complement the studies conducted by Chan and Sandluet.*al*,in the year of 2006 and 2011 respectively. Chan and Sandluet.*al*, in their study, indicated a positive significance of intangible resources such as knowledge and personal competencies in the performance of public organizations. In addition, the current study is similar to that of Ismail *et.al*. Ismail *et.al*, who conducted the study in 2012,considered the correlation between resources and competitive advantage in organizations and found that resources have a positive influence on organizations' competitive advantage with a total variance in competitive advantage accounted for by the Multiple Linear Regression (MLR) model at 56.2%. Similarly, the study finding concurred with the study finding of Kogan*et.al.*, who in the study, conducted in 2017, investigated how growth was affected by resource allocation and found that proper resource allocation results in organizational efficiency.

The finding that environmental uncertainty exerts a significant positive influence on performance of KeRRA has received some support from theoretical literature as well as past empirical studies. For instance, McCabe (1990) investigated how perceived environmental uncertainty (PEU) influenced performance in airlines and found a direct positive link between the two variables. However, the findings of the current study were at variance with those (Elbanna & Elhwerai, 2012), who researched how performance was influenced by environmental uncertainty and hostility and found that there existed no relationship between the variables. The current study concurs with the study finding of Gul *et.al.*(1993) who studied the effect of environmental uncertainty and Management Accounting Systems (MASs) on small businesses and found that under high perceived environmental conditions, MASs information is necessary to enhance decision making and facilitate performance. Moreover, Kafetzopouloset al.(2019) were in concurrence with the current study when they stated that environmental uncertainty has been confirmed as a significant factor upon which organizational performance depends. This current study, however, has contributed to new knowledge in terms of hypothesizing, empirically testing, and establishing the empirical link between environmental uncertainty and firm performance, an area that remained unexplored by past studies, particularly in the context of the public sector road agencies like KeRRA.

5. Summary and Conclusions

These study findings confirm that strategic implementation factors such as organization structure, resource allocation, and environmental uncertainty collectively accounted for variation in performance of KeRRA. The findings further revealed that dimensions of organization structure, Resource Allocation, and environmental uncertainty all had a significant positive influence on performance. This implies that all three dimensions of strategy implementation factors can directly influence the performance of KeRRA. The study concludes that organizational structure, resource allocation, and environmental uncertainty are all critical antecedents of organizational performance.

5.1. Recommendations of the Study

Based on the foregoing findings and conclusions, the study, therefore, recommends the following. First, since organizational structure exerts a positive significant effect on firm performance, management should focus its efforts and resources on improving elements of organizational structure such as formalization, centralization, and coordination as these initiatives enhance the level of performance of KeRRA. Secondly, KeRRA should consider all facets of resource allocation since resource allocation practices are positively associated with a firm's performance. Specifically, they should consider disbursement and adequate budgetary allocations of both human, financial, and other physical resources to allow the road agency to achieve its mandate of improving roads in rural parts of the country. Thirdly, since environmental uncertainty provides a platform upon which organizational performance depends, the firm should embark upon environmental scanning, particularly along the three dimensions of macro-environment, technology and demand, and supply.

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