

Iso Certification and Competitiveness in Public Universities in the Coastal Region of Kenya.

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Abstract: ISO certification is a business strategy aimed at bolstering the way organizations are managed and direct them towards realization of their competitive advantage. It is a strategic business approach that creates standards for business management systems expected to exceed customers' expectations. This study sought to investigate the effects of ISO certification on competitiveness of public universities in the coastal region of Kenya. A total of 100 teaching and non-teaching staff formed the sample for the study, all drawn from the six public universities in the coastal region of Kenya (Kenyatta University, Moi University, Pwani University, University of Nairobi, Jomo Kenyatta University of Agriculture and Technology and Technical University of Mombasa.). The study used SPSS to process the data and statistically analyzed and presented it by means of pie charts, bar graphs and tables. Both descriptive and inferential statistics were used to give an in-depth explanation of the findings. The study also adopted multiple regression models. The study concludes that; People involvement has contributed to the competitiveness of the universities. The universities leadership system currently in place has impacted negatively on its competitiveness. There is continuous improvement in the university and service delivery has similarly been improving, most of the decisions made by the universities are focused on customer needs and also the relationship with the suppliers was found out to be positively affecting competitiveness.

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I. Introduction

In the last decades, several factors have contributed to raising public concern over quality of education in higher institutions of learning. This has led to the emergence of quality measurement and improvement devices such as performance indicators, accreditation, programmes, institutional assessment and quality audits. According to Redmond *et al* (2008), a Quality Management System in its basic concept seeks to; recognize the external quality related requirements specified in Licenses to Trade, guidelines, specified customer requirements, and the chosen management system standard(s).

A 2012 survey of certifications (International Standards Organisation, 2013) showed that Kenya has the highest number of organizations in East Africa achieving ISO certification.

The influence of the ISO certification on competitiveness of institutions of higher learning remains largely unexplored. Various studies focusing on ISO within institutions indicate that there are clear gaps with regard to the linkages on the relationships between the internal infrastructures and the quality management system.

Therefore this paper sought to investigate the effects of ISO certification on competitiveness of public universities in the coastal region of Kenya.

II. Theoretical Literature

The study was guided by two theories which are the institutional theory and Michael porters five forces theory.

The Institutional Theory

Institutional theory is a theoretical framework for analyzing social phenomena, which views the social world as significantly comprised of institutions – enduring rules, practices, and structures that set conditions on action. Institutions are fundamental in explaining the social world because they are built into the social order, and direct the flow of social life. They are the constants that determine the rules of variation. Institutions condition action because departures from them are automatically counteracted by social controls that make deviation from the social order costly. These controls usually associate non-conformity with increased costs, through an increase in risk, greater cognitive demands, or a reduction in legitimacy and the resources that accompany it. (Donsbach, 2008)

The institutional theory describes how institutions survive and succeed through congruence between an institution and the expectations from its environment. It argues that organizations need legitimacy from their

stakeholders. Institutions perform well when they are perceived by the larger environment to have a legitimate right to exist. The institutional view believes that institutions adopt structures and processes to please outsiders and these activities come to take on rule-like status in institutions. Jaffee (2001) concludes that different components of institutional theory explain how these elements are created, diffused, adopted, and adapted over space and time towards achieving improved performance.

Michael Porter's five forces theory

Industry structure and positioning within the industry are the basis for models of competitive strategy promoted by Michael Porter. Competitive strategy must grow out of a sophisticated understanding of the rules of competition that determine an industry's attractiveness. Porter claims, "The ultimate aim of competitive strategy is to cope with and, ideally, to change those rules in the firm's behavior." Porter (1980). The five forces determine industry profitability, and some industries may be more attractive than others. Porter explains that there are five forces that determine industry attractiveness and long-run industry profitability. These five "competitive forces" are: The threat of entry of new competitors (new entrants), the threat of substitutes, the bargaining power of buyers, the bargaining power of suppliers and the degree of rivalry between existing competitors. New entrants to an industry can raise the level of competition, thereby reducing its attractiveness. The threat of new entrants largely depends on the barriers to entry. The presence of substitute products can lower industry attractiveness and profitability because they limit price levels. The cost of items bought from suppliers (e.g. raw materials, components) can have a significant impact on a company's profitability. If suppliers have high bargaining power over a company, then in theory the company's industry is less attractive. The crucial question in determining profitability is how much value firms can create for their buyers, and how much of this value was captured or competed away. Industry structure determines who will capture the value, but a firm is not a complete prisoner of industry structure - firms can influence the five forces through their own strategies. The framework highlights what is important, and directs manager's towards those aspects most important to long-term advantage.

III. Methodology

The study employed multiple regression analysis. The objectives of these analyses were to make a prediction about the ISO certification variable based on its covariance with all the concerned competitiveness. This was done using the Statistical Package for Social Sciences (SPSS). Multiple regressions as a form of inferential statistics analysis were used to determine the relationship between the dependent and independent variables.

IV. Results and Discussions

Reliability Analysis using Cronbach's Alpha

The reliability of the research instrument was first checked using Cronbach's alpha. This was to ascertain whether the instrument was consistent with the study.

Table 4.2 Results of Reliability Analysis using Cronbach's Alpha

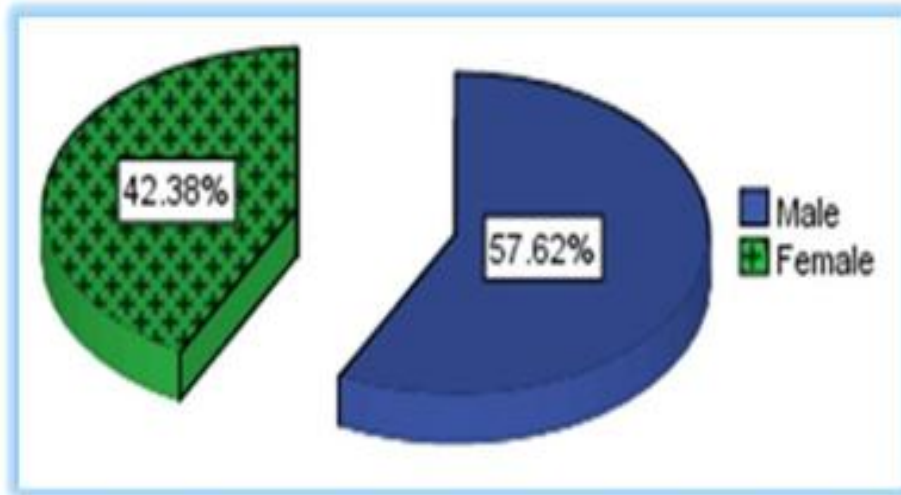
Measure	Value
Average inter item covariance	0.0752
Number of items in the scale	5
Scale reliability coefficient	0.7311

Source: Data Analysis Result 2017

The reliability test results showed that the research instrument was reliable since all the items of variables met the criteria of reliability and as such were appropriate to conduct the statistical analysis. The value of Cronbach Alpha coefficients is generally required to be above 70%. With 5 items on the scale, the average inter-item correlation for the variables under study was found to be 0.0752, and scale reliability coefficient of 73.11%.

Descriptive statistics

Gender of the Respondents

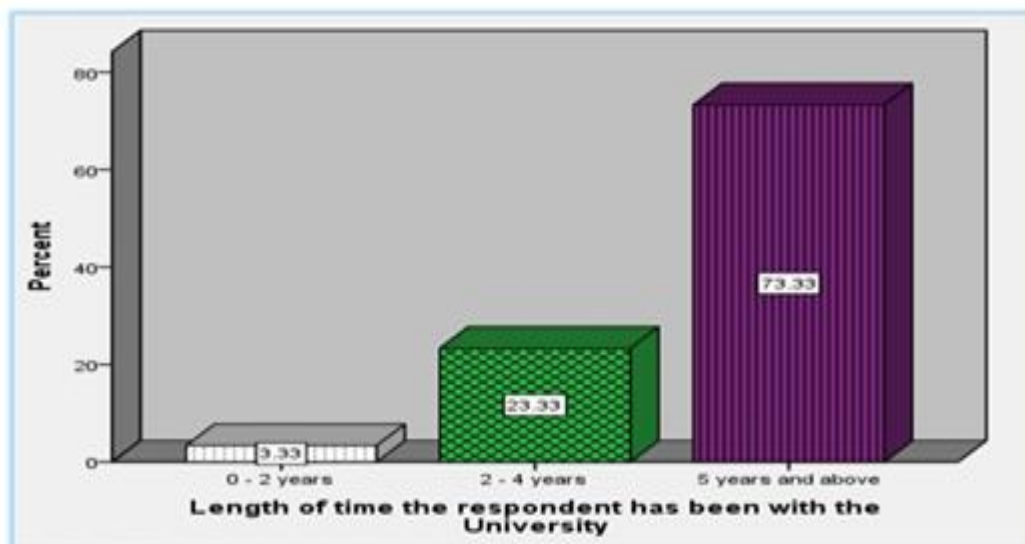


Source: Researcher analysis 2017

Majority (57.62%) (Representing 69 of the total respondents) were male while 42.38% (representing 51 of the respondents) were female. This was a good distribution which depicts a fair balance of gender, accommodating the opinions and views from both sides of the gender divide.

Work Experience of the Respondents in the University

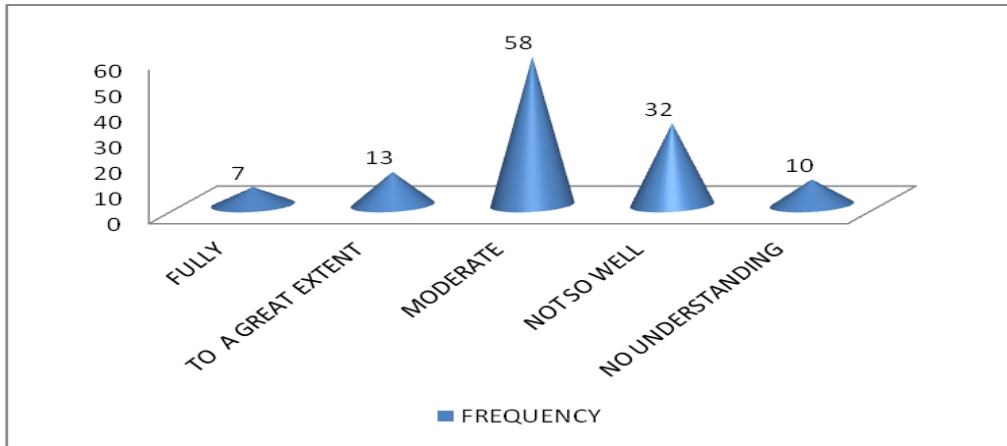
Majority, (73.33%) have worked in the university for five years and above, (23.33%) have worked in the university for between two to four years while only a minority (3.33%) have worked for less than two years. This is an indicator that most of the employees had experience in the universities both before and after the adoption of ISO certification thus knowledgeable.



Source: Research analysis 2017

Understanding of ISO 9001

Majority of the respondents (about 48.3%) indicated that their understanding was to a moderate extent. About 26.7% did not understand so well, about 8.3% said they had no understanding at all with a small but significant percentage of about 5.8 indicated they fully understood.



Source: Research analysis 2017

Effects of research and development

The result from analysis showing a cross tabulation of impact on research and development before and after ISO certification in the institutions under study supports the fact that a majority of the respondents (40%) said that the growth of research and development was moderate before the adoption of ISO certification in their institutions with a big and significant percentage (35%) saying the change was to just a small extent. Contrary after the adoption of ISO certification in the institutions, a majority (85%) felt there was a great effect of research and development with only a small though significant percentage (2.5%) indicating no change.

Effects of Research and Development	BEFORE		AFTER	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Great extent	18	15	102	85
Moderately	48	40	12	10
Small extent	42	35	3	2.5
No change	12	10	3	2.5
	120	100	120	100

Source: Research analysis 2017

Regression Analysis

Regression analysis is concerned with the distribution of the average value of one random variable while other variables which need not be random are allowed to take different values. For the purpose of this study, a multivariate regression model was applied.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884	.799	.694	.74278

Source: Researcher 2017

Predictors: (Constant), Involvement of people, Leadership systems, Continuous improvement, Customer focus, close supplier Relationship

ANOVA^a

Model	Sum of squares	df	Mean Square	F	Sig
Regression	95.265		22.275	80.690	.000a
Residual	55.741	6	.269		
Total	151.006	91			

Source: Researcher 2017

Predictors: (Constant), Involvement of people, Leadership systems, Continuous improvement, Customer focus, close supplier Relationship

Dependent: Competitiveness of public universities

P- value of (0.00) shows that there is correlation between the predictor’s variables and response variable (Competitiveness). A large F ratio indicates that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term, Pallant (2005). A significant

F test indicates the null hypothesis is rejected.

Coefficients of regression equation

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.242	0.258		.930	.335
	X ₁	0.421	0.073	0.406	5.45	.000
	X ₂	-0.314	0.067	0.297	3.78	.001
	X ₃	0.233	0.070	0.181	3.20	.002
	X ₄	0.113	0.043	0.021	0.125	.031
	X ₅	0.372	0.077	0.406	5.44	.001

b. Dependent Variable: Competitiveness

Thus the regression equation is:

$$Y = 0.242 + 0.421INV - 0.314LEADSHP + 0.233IMPR + 0.113CUSTFCS + 0.372SUPPREL + \epsilon$$

Involvement of people, Leadership systems, Continuous improvement, Customer focus, and close supplier Relationship were all statistically significant in determining the effect of ISO certification (p- values < 0.05). The results further indicate that a one percent increase in involvement of people, continuous improvement, customer focus, and close supplier relationship, would lead to an increase in competitiveness by 0.421, 0.233, 0.113, and 0.372, respectively. The results further indicated that a one percent change in leadership system would lead to a reduction in competitiveness by 0.314.

Test of Hypothesis one

The study hypothesized that there was no significant relationship between ISO certification and competitiveness, however, from the regression analysis it was established that ISO certification factors affect competitiveness in public universities in coastal Kenya, therefore we reject the null hypothesis.

V. Conclusion

ISO certification has a significant effect on competitiveness of public universities in the coastal region of Kenya.

People involvement is satisfactory and this has contributed to the competitiveness of University; the university leadership systems having a negative impact on its competitiveness and may be as a result of policies which are redundant and do not support change. There is continuous improvement in the university and service delivery has similarly been improving. The ever increasing internationalization of higher education including the growth in cross-border providers has created the demand for the mutual recognition of qualifications and higher education credits. This should be based on certain quality standards that direct institutions towards quality research and development in education. Therefore, a credible quality management system can enhance research and development and help universities grow their perception and image both locally and internationally. Finally; the universities' students' enrolment, change in their perception and image, growth in research and development, and higher ranking is dependent on an effective quality management system.

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