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Continuous Improvement on Operational Performance of Selected Public Universities in Kenya

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Abstract:

The aim of this study was to establish the influence of continuous improvement on operational performance of selected public universities in Kenya. Descriptive research design was utilized in this study. The target population of this study was five public universities in Kenya. Purposive sampling technique was adopted to select respondents from the five selected public universities. Israel formula was used to calculate the sample size of 44 respondents. The unit of analysis were public universities while unit of observation were employees. Structured questionnaires were used to collect primary data. Likert scale approach was used to measure items of the questionnaire. Descriptive and inferential statistics was used to analyze the data. The analyzed data was presented in tables. This study established that there is a significant positive relationship between continuous improvement and operational performance of selected public universities in Kenya. The study concluded that despite a significant impact of continuous improvement on operational performance, universities in Kenya were embracing continuous improvement practices on a small extent thus the need for public universities to put more emphasize on continuous improvement for global competitiveness. System automation, development of new academic programs, training of employees, service improvement and consumer surveys are all practices that can create a significant impact on operational performance.

Keywords: Continuous improvement, operational performance, and public universities

1. Introduction

In the world of competition, large and small organizations are rethinking on continuous improvement as a strategy of enhancing operational performance (Ikay& Aslan, 2011). Continuous improvement can be viewed as an approach where firms commit themselves in improving services, systems, products and training workers with an aim of satisfying customers (Singh & Mohanty, 2012). Similarly, Khanfar (2011) established that investment in new technologies and employee skills are form of continuous improvement. For global competitiveness of firms, operational performance is considered to be a function of continuous improvement (Javed, 2015). Muzaffar, Salamat and Ali (2012) argued that operational performance is regarded as the accomplishment of a given task measured against preset known standards. Ismyrlis and Moschidis (2015) asserted that operational performance is influenced by continuous improvement. Core practices such as management support, employee training and involvement of key stakeholders in service delivery have significant contributions to operational performance of an organization (Javed, 2015). Effective and efficient operational systems comprise unique tools, techniques, and methods that can help an organization to reduce costs and achieve just-in-time delivery (Abdullah, Uli & Tar, 2009). Operational performance is attributed to increased profits and increased market share, enhanced customer satisfaction, minimal costs of operation, and corporate social responsibilities (ISO, 2016). However, despite their continual operation, majority of the public universities operating in Kenya continued to drag behind due issues of quality management. According to Commission for University Education survey (2016), quality management strategies among public Universities in Kenya have been characterized by many challenges.

1.1. Research Problem

Inability of public universities to meet expectations of various stakeholders is an issue of concern (Magutu et al, 2010). Failure of universities to adhere to Commission for University Education, production of ill-equipped graduates, inability to meet financial obligations and issues of capacity development not only call for continuous improvement approaches but also leadership commitment (UNESCO, 2016). According to KIPPRA (2014), despite universities in Kenya striving to perform better, attaining the global standards is a challenge thus the need for this study to unearth the effect of continuous improvement on operational performance of selected public universities. Yusuf (2013) also established that 68% of students in public universities were unsatisfied as compared to students of private universities in Kenya. Synonymously, ISO (2014) revealed that 78% of institutions of higher learning in developing countries were technologically challenged thus stakeholder dissatisfaction. Even though extensive studies have been conducted on the relationship between continuous improvement and operational performance (Bell & Omachonu, 2011, Mueni, 2014,

Magutu et al., 2010), it is noted that limited studies have been conducted focusing on continuous improvement on operational performance of selected public universities in Kenya thus formed the basis of this study.

1.1. Research Objective

To determine the influence of continuous improvement on operational performance of selected public universities in Kenya.

2. Literature Review

2.1. Theoretical Review

The study was anchored on Total Quality Management (TQM) theory which was founded by Edwards Deming and Joseph Juran (1931). The theory was established on the foundation of customer satisfaction (Arumugam, Ooi & Fong, 2008). Anyango *et al.* (2012) asserted that quality is perceived from different perspectives by different customers. Evangelos and Psomas (2013) opine that TQM policies promotes organizational effectiveness through; promoting stakeholder satisfaction, pursuing continuous improvement; and fostering proactive leadership. Ikay and Aslan (2011) ascertained that quality can only be defined by those who receive the product or service, including stakeholders. Organizational managers should engage their staff in identifying the organization's internal and external stakeholders and by determining the criteria that each uses to judge the organization to be successful. This process suggests that the effective competitive organization is one that satisfies the expectations (Javed, 2015). The theory was applicable in this study on the basis of shedding more light on how public universities should focus on continuous improvement in order to enhance operational performance in terms of efficiency and effectiveness in service delivery.

2.2. Empirical Review

2.2.1. Continuous Improvement and Operational Performance

Singh (2012) revealed that continuous improvement is a practice of competitive firms in the changing business environment. Service firms are to satisfy customer needs and wants in the dynamic business environment if they invest in research and development. Continuous improvement of services or products will enhance organization productivity. Developments of new products that exceed customer expectation always enhance organizational performance. Karthi *et al.* (2012) contended that efficiency and effectiveness of the system is enhanced by continuous improvement of goods and services. Developing new products can enhance organization productivity and boost corporate image. Due to changes in the business environment, firms should emphasize in research and development activities in order to achieve their goals. However, it is noted that that study was confined to ISO certification and firm performance in India.

Kaziliunas (2010) contended that ICT integration in the system is a determinant of quality management practices. Despite the challenge of resistance culture from employees to adopt innovations, technology was the only way organizations can excel. However, the study focused on ICT as a determinant of quality management and performance of parastatals in Kenya. Magutu *et al.* (2010) reported that through continuous improvement practices, public universities in Kenya can not only achieve global recognition but regional excellence in service quality models. Khanfar (2011) indicated that efficiency and effectiveness in service delivery is determined by technology integration that result to improved customer experience. Despite the individual perceptions to quality, organizations need to research and give customers solutions rather than unfulfilled promises. However, it was noted that the study did not examine continuous improvement on operational performance.

Chen (2011) revealed that there existed differences between continuous improvement and organizational performance. The study concluded that companies should conduct surveys on a routine basis to evaluate customer expectations. To compete in today's business world organizations are monitoring the customer satisfaction level so that service quality can be improved continuously. Improved customer satisfaction can lead to customer's loyalty and referral. Employees must possess the required knowledge and skills in order to serve customers in a better manner. However, it is noted that the study was limited to service quality and employee performance among technological firms in China. Anyango, Wanjau and Mageto (2012) posited that employees can contribute to customer satisfaction when they have relevant skills and knowledge to perform. Customers evaluate service outcomes on the basis of their prior expectations and given specifications of a product. Service outcome could be positive or negative based on a comparison between actual service provided and customer's expectations. Customer's perceived value is a significant factor that influences customer satisfaction. However, it is noted that the study was limited to relationship between quality management practices and performance of manufacturing firms in Nairobi.

3. Research Methodology

Descriptive research design was adopted by this study. The target population of this study was five public universities in Kenya. Purposive sampling technique was adopted to select respondents of from the five selected public universities. Israel formula was used to calculate the sample size of 44 respondents. The unit of analysis were public universities while unit of observation were employees.

4. Results

4.1. Descriptive Statistics of Continuous Improvement

The respondents of the study were asked to indicate the influence of continuous improvement on operational performance of selected public universities and the following were the findings as shown in Table1

Statements	N	Mean	SD	T-value	P-values
The university has automated systems	31	4.18	.684	44.42	0.031
The university develops new academic programmes periodically to address changing labour market dynamics	31	4.41	.644	31.45	0.011
Employees are dedicated to improve services	31	4.17	.473	33.23	0.000
Employees are dedicated to develop new products	31	3.83	.311	32.13	0.021
Employees are dedicated to serve customers using modern equipment	31	3.53	.316	24.11	0.000
Employees are always dedicated to discover emerging issues in the higher education sector	31	3.14	.306	11.21	0.000
Employees are ICT illiterate	31	3.08	.255	24.11	0.011
University staff are sponsored in research activities	31	3.03	.239	32.33	0.000
The university conducts periodical market surveys	31	3.38	.537	33.34	0.010
Overall mean score=3.998					

Table 1: Continuous Improvement

As shown in Table 1, most of the respondents to a larger extent indicated that continuous improvement had a significant effect on operational performance of public universities. For instance, automation of systems was said to influence operational performance of public universities with a mean score of 4.18, development of new academic programs with a mean of 4.41, periodical market surveys with a mean score of 4.38. Employee dedication to improve services with a mean of 4.17, employee dedication to develop new products with a mean score of 3.83, employee dedication to serve customers using modern equipment with a mean score of 3.53, employees dedicated to discover emerging issues in higher education sector with a mean score of 3.14, illiteracy of workers on ICT skills with a mean of 3.08 and university sponsorship of workers in research activities with a mean of 3.03.

The results further reveals that at one-sample t-test comparison of continuous improvement mean scores indicates differences that were all statistically significant. The extent of continuous improvement on operational performance varied from one measure to another where university system automation had the highest difference (t-value = 44.42, p-value < 0.05) and employee dedication to discover emerging issues in the higher education sector had the lowest difference (t-value = 24.11, p-value < 0.05). These findings imply that continuous improvement initiatives such as employee sponsorship for research, system automation, new product development, industry analysis, periodical market surveys and employee training on ICT influenced operational performance of public universities in Kenya. These findings are in line with that of Wairimu & Omondi (2014); Yusufu (2013); Singh & Mohanty (2012) who noted that the only ways public organizations can enhance their efficiency and effectiveness is through improving products and services, training workers and developing new products to attract and retain customers.

4.2. Correlation Analysis

Table 2 shows the results of the correlation analysis.

Variable	Pearson Statistics	Continuous Improvement	Operational Performance
Continuous Improvement	Pearson Correlation		
	Significance (2-tailed)	1.000	
	Sample size	0.000	
Operational Performance	Pearson Correlation	.321**	1.000
	Significance (2-tailed)	0.000	31
	Sample size	31	

Table 2: Correlations Results

** Significant is at the 0.01 level (2-tailed)

* Significant is at the 0.05 level (2-tailed)

Table 2 indicates that there exists a positive correlation between continuous improvement and operational performance ($r = .321$, $p < 0.000$) at the 0.05 level in a two tailed test.

4.3. Regression Analysis

Table 3 and 4 present the regression results analysis and regression coefficient respectively.

Dependent Variable	Independent Variables	Beta Value	T-Value	P-Values
Operational Performance	Continuous Improvement	0.244	3.217	0.000

Table 3: Regression Results Analysis

As shown on Table 3, the multiple regression analysis indicates that there is a significant relationship between continuous improvement and operational performance of selected public universities in Kenya ($\beta = -0.244$, $p < 0.05$). These results correspond with the view of Zakuan, et al. (2010) who revealed that process improvement and staff development can have a significant effect on performance of a firms.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.189	1.2235		0.930	0.000
	Continuous Improvement	0.352	0.3425	0.154	2.195	0.001

Table 4: Regression Coefficient

As depicted in Table 4, coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (operational performance of selected public universities in Kenya), that is explained by continuous improvement. After regression analysis the model of the form: $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ became: $Y = 1.189 + 0.352X_1$. This result indicates that taking continuous improvement constant at zero, operational performance will be 1.189 thus meaning that a unit increase in continuous improvement will lead to a 0.352. The significance value of continuous improvement is 0.001 depicting that continuous improvement positively influences operational performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.923	0.852	0.789	0.6273

Table 5: Model Summary

As illustrated in Table 5, the value of adjusted square is 0.789 implying that, there was a variation of 78.9% of effective operational performance with changes in continuous improvement at a confidence level of 95%. R (92.3%) shows that there is a strong correlation between continuous improvement and operational performance.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.003	1	.001	4.867	001 ^b
Residual	0.068	30	.021		
Total	0.071	31			

Table 6: ANOVA Test

The results in Table 6 indicated a good fit for the overall regression model for the data. The F-statistic results show that the predictor variable influenced the dependent variable positively thus confirming that the predictor variable is valid to forecast operational performance of selected public universities. The F-statistic value was 4.867 with a p-value of less than 0.05.

5. Conclusions

The study concluded that continuous improvement aspects such as system automation, development of new academic programs, service improvement, periodical surveys and employee training on ICT skills contributed to overall efficiency and effectiveness of public universities in Kenya. However, it emerged that despite the fact that continuous improvement initiatives contributed to operational performance, public universities were dragging behind in improving their services. Issues of systems improvement were a big challenge as students experienced delays in accessing their marks using online platforms and to some extent unable to ask queries through online platforms. The study identified that continuous improvement in public universities was a rare practice.

6. Recommendations

The study recommended that, top leadership of universities should initiative service quality culture through periodical meetings with workers to create awareness of ISO standards. Further, ICT departments of public universities should seek to understand system challenges by engaging staff and students thus long term solutions. In addition, management of public universities should partner with ICT firms that are competent to develop and upgrade systems for the interest of users from time to time.

7. References

- i. Abdullah, M.M.B., Uli, J., & Tar, J.J. (2009). The relationship of performance with soft factors and quality improvement, *Total Quality Management and Business Excellence*, 20 (77), 35-48
- ii. Anyango, D., Wanjau, K. & Mageto, J. N. (2012). Assessment of the relationship between quality management practices and performance of manufacturing firms in Nairobi. *African Journal of Business and Management*, 2 (5), 1-34
- iii. Arumugam, V., Ooi, K. B. & Fong, T. C, (2008). TQM practices and quality management performance- an investigation of their relationship using data from ISO:2000 from Malaysia. *The TQM magazine*, 20(6), 636-650
- iv. Chen, S. H. (2011). Integrating Service Quality Evaluation Model to Improve Employees Satisfaction for High-Tech industry, *Human Factors and Ergonomics in Manufacturing & Service Industries*, 01, 163-180. DOI: 10.1002/hfm.20294.
- v. Commission for University Education Report (2018). Retrieved from www.go.ke on 23rd October 2017
- vi. Edwards, D. & Joseph, J, (1931). *TQM Theoretical Perspective*. (6th Ed.). Prentice Hall.
- vii. Evangelos, L & Psomas, E. (2013). The effectiveness of the ISO quality management system in service firms. *Total Quality Management and business excellence*, 24 (3), 769-781.
- viii. Evangelos L.; Psomas C. V.; Fotopoulos, D. P. & Kafetzopoulos, (2010). Critical factors for effective implementation of ISO in SME service firms, *Managing Quality management practices: An International Journal*, 20 (5), 440 - 457.
- ix. Ismyrlis & Moschidis (2015). The effects of ISO certification on the performance of Greek firms. *The TQM journal*. 27 (1),150-162
- x. Ikay ,M. S. & Aslan, E. (2011) .The effects of the ISO quality management system on the performance of SMEs', *International Journal of Quality and Reliability Management*. 29 (7)753-778.
- xi. Javed, S. (2015). Impact of Top Management Commitment on Quality Management' *International Journal of Scientific and Research Publications*, Volume 5, Issue 8, August 2015ISSN 2250-3153 www.ijsrp.org
- xii. Khan, R. A. G., Khan, F. A. & Khan, M. A. (2011). Impact of Training and Development on Organizational Performance. *Global Journal of Management and Business Research*, 11 (7),63-68.
- xiii. Kagumba, A. M. & Gongera E. G. (2013). Quality Assurance Strategy on Organizational Performance: Case of Kenyatta University. *European Journal of Business and Management*, 5 (2), 265 - 270.
- xiv. Karthi, S., Devadasan, S. R., Muruges, R., Screenvasa, C. G. & Sivaram N. M. (2012). Global views on integrating six sigma and ISO certification, *Total Quality Management*, 107 (1), 103-24.
- xv. Kaziliunas, A. (2010). Success factors for quality management systems: certification benefits, *International journal of Quality and Reliability Management*, 14 (6), 10-17.
- xvi. Khanfar, S. M. (2011). Impact of Training on Improving Hotelling Service Quality. *Journal of Business Studies Quarterly*. 2(3), 84-93.
- xvii. KIPPRA (2014). *The implementation of ISO Practices and Performance of Public Universities in Kenya*. Published Report. (Retrieved on 23, August, 2017)
- xviii. Kyalo, M. J. (2013). *The Effect of ISO 9001:2008 Certification on Process Quality: A Case Study of Kenya Power and Lighting Company*. MBA Research Project, University of Nairobi, Kenya. Kenyatta University. Retrieved from Google Scholar on 17, May 2017.
- xix. Magutu, P.O., Mbeche, M.I., Nyaoga, B.R., Nyamwange, O., Onger, R., N., & Ombati, T.O. (2010). Quality Management Practices in Kenyan Educational Institutions: The Case Of The University Of Nairobi. *African Journal of Business& Management AJBUMA*), 1, 14, 28.
- xx. Mueni M. (2014). *The Relationship between Quality and Performance of Higher Institutions of Learning in Kenya*. MBA Thesis. Kenyatta University, Kenyatta University. Retrieved from Google Scholar on 17, May 2017.
- xxi. Zakuan, N. M., Yusof, S. M., Laosirihongthong, T. & Shaharoun, A. M. (2010). Proposed relationship of TQM and organizational performance using structured equation modelling. *Total Quality Management*, 21(2), 185-203.
- xxii. Singh, R. & Mohanty, M. (2012). Impact of Training Practices on Employee Productivity: A Comparative Study. *Inter science Management Review*, 2 (2), 2231-1513
- xxiii. Wairimu T.Y & Omondi, B. R. (2014). *The relationship between quality management and organizational performance*. MBA Thesis. Kenyatta University.
- xxiv. YusufuJ. G. (2013). *The Impact of Quality Management on Performance of Manufacturing firms in Kenya*.MBA Thesis. Kenyatta University. Kenyatta University. Retrieved from Google Scholar on 17, May 2017.