EFFECT OF PARTNERSHIPS AND COLLABORATIONS ON PERFORMANCE EXCELLENCE IN UNIVERSITIES IN KENYA

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Abstract
Globally education plays a fundamental role in human capital development in both developed and developing countries. Consequently, the performance of the higher education institution worldwide is of great interest to any stable state. Universities play a key role in ensuring access to inclusive and equitable quality education and promotion lifelong learning opportunities for all in line with Sustainable Development Goals. In Kenya there has been a growing concern over the performance of her universities. Some of the issues of focus are diluted quality of teaching, financial instability, inadequate staffing and inadequate facilities. Performance gap is also evidenced by low ranking in various global university rankings. Though it is eminent in literature that performance excellence of any organization depends on a number of factors; social factors, environmental and culture among others, drivers of performance excellence in universities in Kenya have been under researched. This study aimed at exploring the influence of university partnership and collaborations to performance excellence of universities in Kenya. A survey was carried out on 12 Universities in Kenya. The population of interest was the 40 public and private Universities that were accredited in Kenya as at May 2016. A sample size of 277 management staffs was selected using Yamane formula and proportionately allocated to the six private and six public Universities. Primary data was collected through the administration of self administered semi- structured questionnaire. The unit of measure were the departmental heads comprising of the Deans, Directors, Chairpersons, and Heads of section. A response rate of 86.6% was realized. Statistical package for Social Sciences (SPSS) was used to undertake data analysis including; descriptive statistics, Principle Component Analysis (PCA) and Bivariate Linear Regression. Kolmogorov-Smirnov (K-S) test of normality, Durbin Watson d test for autocorrelation and

correlation coefficient (r) test for linearity were used to assess data for regression assumptions. Model fitness (R-Square), F statistics and regression coefficients were generated. The bivariate regression results indicated that collaboration and partnership explain approximately 28.3% of the variations in university performance. Further the results indicate that the regressor has a positive and statistically significant influence on university performance. These results imply that collaborations and partnerships present an opportunity for university to universities to enhance their performance.

Keywords: university Partnership and collaborations, HEIs performance excellence

1.1 Introduction

Higher Education Institutions (HEIs) play valuable role to the economic development; they are mandated with impacting and disseminating knowledge and ideas required as resource for the national development through student education, they are primary source of knowledge which is the most valuable assets in the knowledge economy (Lester, 2005; Cloete, Bailey & Pillay, 2011). In the Global arena, these institutions are significantly recognized for their level of contribution to any country's gross domestic product (GDP) (Hatakenaka, 2004). According to Bloom, Canning & Chan (2006), education is globally accepted as a driver of the economic development and determinant of countries economic position in world economy. HEIs have the mandate of creating awareness, knowledge and skills required for a sustainable future, they prepare professionals, leaders, managers and teachers required by the society; they promote democracy in governance, enhance social mobility, improve quality of life, contribute to entrepreneurial development and labour generation (Cortese, 2003; Jalaliyoon & Taherdoost, 2012). To continuously fulfil the intended mandate, these institutions have to remain competitive and continuously realign themselves with the emerging global trends. In order to remain competitive HEIs have tried to adopt various strategies and excellence model. The European Foundation Quality management excellence model (EFQM) is one the model that identifies resources and partnership as one of the drivers of performance excellence. Similarly some researcher have also identified partnership and collaboration as key driver to performance of HEIs (Wang *et* al., 2013; Salmi, 2009). Though completion of HEIs has been growing globally, performance trends in world university ranking has shown USA based universities dominating on the lead followed by Europe with African universities trailing far behind (Parr, 2014; Bothwell, 2016). The poor performance of African universities has thus been disquiet for African leaders.

1.2 High Education in Kenya

The Kenya Vision 2030 "recognizes the critical role played by Research and Development (R&D) in accelerating economic development in all the newly industrializing countries of the world" (Republic of Kenya, 2007). The Vision summarises Kenya's long-term development strategy, it details the goals of the economic, social and political. It aims at transforming Kenya into a "newly industrializing middle income country providing a high quality life to all its

citizens by the year 2030" (Republic of Kenya, 2007). The Vision further emphasis on enhancing quality and globally competitive education and research as one of the goals envisaged under the social pillar of the Vision. To realize economic development as enshrined in the Vision, the country needs to prepare a well-trained and educated workforce who can be champions in modernization as well as industrialization (Nyangau, 2014). This is based on the fact that performance of the universities has an impact on the economic development it states (McCormack *et* al., 2013).

In pursuit of the Vision, and having identified HEIs as one of the critical player in the realization of the Kenya Vision 2030, the Government increased access to higher education through upgrading tertiary colleges to University colleges and subsequently to fully fledged universities. Expansion of the universities in Kenya has equally come with a number of quantifiable benefits including increasing access to education and opening up remote towns where these universities were established. Kenya HEIs are however faced with a myriad of challenges that are negatively affecting their performance. Among the challenges identified by a number of researchers include: inadequate funds, inadequate teaching and learning resources, decline in quality, large class sizes, poorly equipped libraries and laboratories, high student to staff ratio, unsatisfactory co-curricular activities, poor governance and high competition for students, heavy workload, staff turnover, which consequently have a negative impact on their performance (Mbirithi, 2013; Gudo *et* al., 2011; Nyanga'u, 2014; Okioga, Onsongo & Nyamboga, 2012).

Challenges being experienced in Kenya's HEIs create an obstacle to the realization of her dream of transforming the country from a subsistence economy towards a knowledge based economy as articulated in the Vision 2030 (Republic of Kenya, 2007). Nyanga'u, (2014) observes that, many other newly-industrialized countries such as China, Brazil, Taiwan, Singapore and Korea have gone through similar challenges but eventually managed to record good success. This has been possible through continuously identifying drivers of performance excellence in their HEIs. Partnership and collaboration has been one strategy for most of the leading universities to broaden their resources through forging network that help them to build synergies. Similarly, the performance gaps facing Kenya's high education system can also be addressed through identifying drivers that are essential to surmount the problem facing them. This study explored the influence of partnership and collaboration to performance excellence in universities in Kenya.

1.3 Statement of the Problem
Universities play a key role in eensuring inclusive and equitable quality education and promotion lifelong learning opportunities for all in line with Sustainable Development Goals. In Kenya's Vision 2030, the development framework for Kenya as a country foresee a key role of providing a globally competitive, quality education, training and research for Sustainable Development However, many Universities and other Higher Education Institutions (HEI's) worldwide have failed to achieve the expected performance excellence, this is demonstrated by the many challenges being experienced by these Universities including; frequent student unrests, financial

constraint, poor academic quality, poor global ranking, high staff turnover, inadequate research and research dissemination. Among other critical challenges been experienced by HEIs in Africa and also globally include Quality and relevance, poor research and innovations, financial austerity, failure to meet the increasing demand for the University Access and especially by the government sponsored students, staff turnover and limited infrastructure and other learning facilities (Yizengaw, 2008). Kenyan universities are not exceptional; there have been an outcry over their performance gaps characterised by inadequate learning facilities, high student to lecturer ration decline in quality, high work load, curricular that are not matching market needs, large class sizes, unsatisfactory sporting activities, (Chacha,2004; Gudo *et* al., 2011; Mbirithi, 2013 & Nyangau, 2014). Previous research has focused more on challenges facing HEIs creating a gap on then what drives their performance excellence. This study therefore sought to explore the influence of partnership and collaboration on performance excellence and recommend strategies that can be applied to achieve and performance excellence.

1.4 Research Objective
The objective of the study was to analyse the influence of partnership and collaboration on performance excellence of universities in Kenya.

2.1 Literature Review

2.1.1 Theoretical literature Review
A system as described by Daft, Kendrick & Vershinina (2010) comprises of different closely related parts that function together to achieve a common goal. A system operates through using input from external environment and giving back some output to the external environment (Daft, Kendrick & Vershinina, 2010). System theory can be viewed as having five components that interact with one another; inputs, processes, outputs, outcomes or feedback and the environment. Organizations are open system otherwise ignoring the environment will result into a failure. Open system theory is premised on the fact that the environment within which the organization operate strongly influences it. University as open system needs to interact with the external environment to thrive (Daft *et* al., 2010). Partnership and collaboration can form a good platform for organisations to interact with external environment. Organizations achieve sustainable excellence through having key concepts that forms a common language for the management in their effort to achieve excellence (Uygur & Sumerli, 2013). European Foundation Excellence Model (EFQM) comprise of five enablers including leadership, people, policy and strategy, partnership and resources and processes which has influence on results including people results, customer results, society results and key performance results. The "enablers" cover what the organization does and the "results" is the organizations performance in relation to its strategies and set targets. The model has been applied by some of the Universities such as Sheffield Hallam University, UK and Dearne Valley College who have adopted their Higher Education Excellence Model from the EFQM Model to develop good management practices (Sheffield Hallam University, 2003). According to the model, to support the organizational policies and strategies and effectively implement their processes, organizations have to plan and manage the external

partnerships, suppliers and the internal resources (EFQM, 2013).

2.1.2   Literature Review

Partnership in education development has been described as "mutually beneficial relationships betweentwo or more institutions, including businesses, industries, universities, non-governmental organisations (NGOs), school systems and service organisations" (Alpert, 2009). An effective education partnership is described by Wanni, Hinz & Day (2010) as a dynamic collaborative process that brings mutual benefit though not necessary equal to the parties involved in partnership. They partners share the ownership of the project and their relationship is based on on respect, transparency and reciprocity. Effective partnership in HEIs are characterised by improved curricula, increased research publication and the number of research projects (British Council, 2015).

Incorporation of university-industrial relation collaborations and partnerships into the university academic programmes is one way of way through which the universities are responding to change to maintain a competitive advantage. Tumuti wanderi & Lang'at-Thoruwa (2013) observes that university collaborations and industrial relation are rapidly becoming a common practise world over making the Partnership and collaborations part of universities agenda. Partnership is an important aspect of benchmarking; through partnership organization are able to share experiences, this help them to build synergies and strengthen weak areas.

A study undertaken in UK and US to determine the areas of interaction of companies and Universities revealed that UK and US based universities are able to interact with Universities at various areas including; informal contacts, students recruitments, conferences, publications, testing and standards, consultation by University staff, joint research, project development, licensing of University held patents, and internships. According to Perkmann & Salter (2012), companies are increasingly recognizing that for them to have successful innovation they need to work with universities due to their diverse source of skills and talents. One such case is partnership between MIT and ford. MIT has been in partnership with Ford since 1998. This partnership has contributed significantly to the improvement of the ford vehicles in areas of safety, energy, power, modelling and vehicle autonomy which would have been impossible without the expert advice. Partnership has given MIT an alternative source of funding supplementing the government funding, close contact with industries gives students the opportunities to solve real problem as they get opportunity to engage with industries (MIT's Industrial Partnership Report, 2003 & MIT Facts, 2015). MIT has more than 700 companies working with academic departments and students, some of these companies are; Boeing, BMW, Ford, BP, Samsung, Siemens, Shell, Novartis and many other globally leading companies with 19% of the MIT research funding coming from the industries ranking first in Industry-financed research and development (MIT Facts, 2015).

Similar initiative are observed with University of Tokyo, according to Taylor (2014) the University has been keen on the globalization and partnership initiatives as key driver of their

success. While undertaking a study on University–Industry Partnership for MIT, Tokyo and Cambridge, Hatakenaka (2015) observed that the Universities which are widely networked are able to learn the real problems facing the industries and offer solutions based on experience. These networks enhance relevance in teaching since the Universities are able to teach based on up–to-date information and the future of the industry. Their interaction with industries expose them to the current needs of the industries and they train based on such information equipping their graduates with immediate solution of the emerging challenges. Networking plays a fundamental role research agenda, by noting that it gives the University a chance to conduct research that will have an immediate application of their discoveries, this is referred by literature of science as "Pasteur's Quadrant" in this regard scholars undertake research and at the same time pursue its applications. Analysis of MIT, Cambridge and Tokyo, revealed that all the three Universities are well networked but differed in terms the level of activities, how easily individual academic would partner with industries and have active relationships depend on University policy on partnership affairs (Hatakenaka (2015). A similar successful collaboration as observed by Sebastian & Khan (2013) is the joint research Academy in Mumbai in India of Australia's Monash University (Monash) and Indian Institute of Technology Bombay, IITB, the collaboration model aim at sharing talent to address challenges that are experienced by the two universities. It uniquely focuses on a number of areas including postgraduate training with a goal of creating a high impact global citizen. Through the collaboration it is able to use best researchers from both institutions to address some particular thematic areas, one of the major area is PhD training where student are enrolled and jointly supervised graduating with a joint degree.

Higher education in Africa rank low as partner for cooperation implying they are not regarded as viable partners for internal education alliances (Knight, 2008). Creso (2013) however note that university-industry partnerships are becoming increasing recognised as critical for development in Africa. The funding and governance issue in Africa has constrained research which then limits the industry partnership in Africa (Creso, 2013). A study by Tumuti, Wanderi & Lang'at-Thoruwa (2013) on partnership between Kenyatta University and Equity Bank reveal that the partnership has been of great benefit to the two parties through reaching the community and transforming life of many people. The study showed that the bank is able to benefit in selling their product and on the other hand the students get first hand experiences and are prepared to handle the challenges. According to Tumuti *et* al. (2013), bridging the space between the academia and the industry through collaborations will help in improving the standard of living in the society as well as contributing to the national development goals. Through partnership the student are kept abreast with the emerging trends in the market and the industries raising the quality of training in the universities. To attain a middle-level income economy as envisioned in Vision 2030, university- industrial relation must work together in developing an innovative human capacity required in a knowledge based economy.

2.1.1   Conceptual Framework

Based on existing empirical and theoretical literature, this study conceptualized that the strength of university partnership and collaboration would influence the performance excellence of a university. Partnership and collaboration was therefore the stimulus and university performance excellence was the response variable.
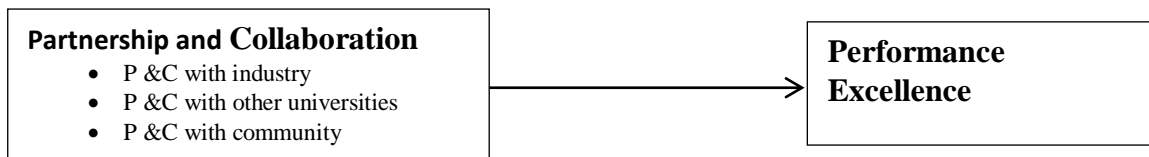
Partnership and Collaboration		**Performance Excellence**
• P &C with industry • P &C with other universities • P &C with community	⟶	

Figure 1.1: Conceptual framework

3.1 Research Methodology

This study was guided by positivist philosophy and therefore tested the model of university excellence and employed a descriptive research design. A descriptive study determines and describes the characteristic of the variable used in the study without manipulate the variable (Sekeran, 2003; Swanson & Holton, 2005). The design used a survey method using self administered, semi- structured questionnaire for data collection. A survey research aims at collecting data from population representative which is then generalized within a random error (Saunders & Lewis, 2012). Triangulation methodology was adopted in this study where both quantitative and qualitative techniques were used. In qualitative approach, existing literature was reviewed, theories, excellence models and cases of studies of top universities. The reliability of the instrument was assessed using Cronbach alpha coefficient .Factors analysis was used to improve the construct validity of the tool, The target population was 40 public and private Universities that were accredited in Kenya as at May 2016. A sample of 12 Universities, 6 private and 6 public was selected using purposive sampling based on the willingness to participate in the study. A sample of 277 respondents was selected using Yamane formula and proportionately allocated to the 12 universities. The unit of response was the departmental heads comprising of the Deans, Directors, Chairpersons, and Heads of section. Primary data was collected through the administration of structured questionnaire. Statistical package for Social Sciences (SPSS) was used to undertake both descriptive statistics (means and standard deviations) and also inferential analysis, Bivariate Linear model was tested for suitability before the analysis.

4.0 Discussions and Results
4.1 Response Rate

A total of 277 questionnaires were proportionately distributed to all the sampled universities. Out of the total distributed questionnaire 240 were filled and returned giving a response rate of 86.6% which is as considered excellent. A response rate of 60% percentage is considered adequate as recommended by Saunders & Lewis (2012). From the 240 returned questionnaires 10 were rejected during the data analysis. A total of 230 usable questionnaires were retained for further analysis.

4.2 Reliability of Partnership and Collaboration

Reliability coefficients normally range from 0.00 to 1.00, the higher the coefficient the reliability. Cronbach's alpha is the most widely used measure of reliability (Tavakol, *et* al., 2011). Table 4.1 shows the reliabilities for the items before factor analysis was 0.852 and 0.922 after factor analysis. The Cronbach's Alpha in both cases was above 0.7 implying they were reliable, it also demonstrate that the tool validity based on the fact that reliability is closely related to validity (Kimberlin and Winterstein, 2008). Reliability test was undertaken to ensure the instrument for measure can be used with confidence, a reliable instrument work well under variance conditions and time giving consistence results (Cooper & Schindler, 2006).

Table 4.1: Reliability Test Results

Variable	Before factor Analysis		After factor Analysis		
	Number of Items	Cronbach's Alpha	Number of Items	Cronbach's Alpha	Component
Partnership and Collaboration	10	0.852	9	0.922	1

4.3 Test of Sampling Adequacy

Factor analysis was undertaken to reduce on the number of dimensions and retain the most important for each variable. Prior to undertaking factor analysis, Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were examined to evaluate the factorability of the components. KMO varies between 0 and 1 ($0 < KMO < 1$) when KMO >0.5, the sample is termed adequate (Tabachnick and Fidell, 2012).

Table 4.2 below shows the KMO was above 0.50 levels implying that the variables had an acceptable degree of sampling adequacy for factor analysis.

Table 4.2 Factorability Test Results

	Variable	Variable Type	KMO	Approx. Chi-Square	Bartlett's Test of Sphericity	
					df	Sig.
1	Partnership and Collaboration	Independent Variable	0.908	1398.238	45	.000

4.4 Drivers of Partnership and collaboration

Principal component analysis with varimax rotation was conducted on 10 statements on partnership and collaboration to assess their loading. Factors whose communality was below 0.4 low were dropped during the rotation retaining nine (9) dimensions for further analysis. Costello & Osborne (2005). After rotation the retained nine items loaded to one component Partnership and Collaboration. All retained items loaded between a low of 0.678 and a high of 0.862. Comrey and Lee (1992) refer to loading after rotation above 0.63 as very good. The results of factor analysis are presented in Table 4.3

Table 4.3: Component Matrix for Partnership and Collaboration

Component Matrix[a]	Component 1
PC8:University has made remarkable contribution to the society trough partnership and collaborations initiatives	.862
PC2:The University has established active local partnership and collaboration with industries	.848
PC3:The University has established active local partnership and collaboration with communities	.815
PC7: Partnership and collaboration has contributed to the branding of the University.	.801
PC5:The University has established active international partnership and collaboration with industries	.792
PC4:The University has established active international partnership and collaboration with Universities	.783
PC1:The University has established active local partnership and collaboration with other Universities	.760
PC9:Teaching and research is enhanced through collaboration and partnerships	.738
PC10:Students are easily attached in relevant industries for their practical experience	.678

Extraction Method: Principal Component Analysis.[a]
a. 1 components extracted.

4.5 Test of Regression Assumptions

The test of independence for partnership and collaboration was undertaken using Durbin-Watson (d) statistic. Durbin-Watson *d* statistic tests the presence of autocorrelation. Durbin-Watson statistics ranges from 0 to 4, with a value near two (2) indicating non-autocorrelation and a value near 0 indicating positive autocorrelation and a value towards 4 indicating negative auto-correlation. The result for partnership and collaboration was 1.766 which was within the acceptable range of 1.5 to 2.5 for independent observation (Garson, 2012). To assess normality this study used and statistical test Kolmogorov-Smirnov (K-S) test (Razali & Wah, 2011; Ghasemi & Zahediasl, 2012). The independent variable was tested for linearity using correlation coefficient (r). The test results showed that a positive and significant correlation of (r= 0.532)

between the stimulus and the response variable. Table 4.4 shows the results of the normality test with p-value of .200* which indicate a normal distribution of the performance.

Table 4.4 Normality Test Result for Performance Excellence

Kolmogorov-Smirnov[a]

	Statistic	Df	Sig.
Performance	.054	230	.200[*]

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

4.6 Statistical Model

The model fitness for Partnership and collaboration is presented in Table 4.5. Table 4.5 shows that R-Square of 0.283 meaning that approximately 28.3% of the variability in University performance excellence can be explained by the variation in partnership and collaboration.

Table 4.5: Model fitness for Partnership and Collaboration

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532[a]	.283	.280	.3470634

a. Predictors: (Constant), PC
b. Dependent Variable: Performance

The ANOVA for partnership and collaboration is presented in Table 4.6 shows F-statistic of 90.049 and a P-value of 0.000. The result indicates that at significance level of α=0.05 partnership and collaboration is statistically significance since the p-value less than p=0.05.

Table 4.6: ANOVA for Partnership and Collaboration

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.847	1	10.847	90.049	.000[b]
	Residual	27.463	228	.120		
	Total	38.310	229			

a. Dependent Variable: Performance
b. Predictors: (Constant), PC

The Table shows that the bivariate model of partnership and collaboration and performance excellence was statistically significance. This implies the more and effectively better networked

a university is, the more it enhanced is the performance excellence. These findings are consistence with Hatakenaka (2015). After undertaking a study on University–Industry Partnership for MIT, Tokyo and Cambridge, he observed that the Universities which are widely networked are able to learn the real problems facing the industries and offer solutions based on experience. The findings are validated by findings from MIT which is one of the worlds leading University. MIT has more than 700 collaborations with companies such as Boeing, BMW, Ford, Samsung, shell and other world reputable companies (MIT, 2015; MIT Facts, 2015). A study by Tumuti *et* al. (2013) on partnership between Kenyatta University and Equity Bank revealed that, the partnership was beneficial to the community as well as to enhancing the student skills and experience.

Table 4.7 displays the regression coefficient results for partnership and collaboration; Partnership and collaboration has coefficient of 0.435with an associated p value of 0.000. The coefficient of partnership and collaboration has an estimated standard error of 0.046.

Table 4.7 Regression Coefficient for Partnership and Collaboration

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.898	.065		13.816	.000
PC	.435	.046	.532	9.489	.000

The regression model equation for the relationship between regressor and dependent variable was therefore;

Y= 0.898+ 0.435 Partnership and Collaboration

The regression model indicates that a unit change in collaboration and partnership will results to a 0.435 change in performance excellence in a university.

5.1 Conclusion and Recommendations

The results indicate there is appositive and significant influence of partnership and collaborations on performance excellence in universities in Kenya. The results implies the more active partnership and collaboration activities with other universities, industries and community the universities have, the more favorable is their performance excellence. Systems theory play a key role when an institution interact with the external environment in that it is able to build synergies and build their resources. The universities should invest in, build synergies and maintain active partnership and collaboration with industries, other competitive universities and the community. These partnerships will create platform where partners and collaborators broaden their knowledge sharing and idea generation. Through partnership and collaborations with industries, other universities and community universities might have the opportunity to understand

stakeholder's needs leading to improved programmes as well as platform for disseminating their policy research output and application of their innovations. Partnership and collaboration also broadens the network opportunities for student placement enabling students to be able to acquire hands-on skills that and thus enhancing quality of their graduate.

Limitation and Future Research

The study was limited to the 40 public and private chartered universities registered by the Commission for University Education (CUE, 2016). The chartered universities were taken to represent the other unchartered universities and university colleges which may limit the generalizability because with their status they may be experiencing different form of challenges that hinder their performance compared to the fully fledged universities. The study respondent was limited to Deans, Directors, CoDs and HoDs inform of survey questionnaires thus limited to how fairly the respondent were in answering the survey questions. Deans, Director, Head of Department and chairman of department hold leadership position, this may limit the generalizing the finding while using a different unit of measure such as the lecturers or Administrative staff who are their immediate support staff.

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