# INFLUENCE OF BALANCED SCORECARD ON ORGANIZATIONAL PERFORMANCE IN INSTITUTIONS OF HIGHER LEARNING IN KENYA. A CASE STUDY OF UNIVERSITY OF NAIROBI

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#### **Abstract**

The Balanced Scorecard has been accepted by the business world as a promising tool for the performance measurement of an organization at the firm level, this study sought to explore its influence on organizational performance in selected institution of higher learning Kenya and in particular at the University of Nairobi\*.

The factors considered in the study includes: the influence of customer knowledge, financial performance, internal business processes and business perspective on performance in the organization. The study employed descriptive survey in which data was collected and analyzed using SPSS.

The results obtained indicated a positive relationship between the balanced scorecard and organizational performance with performance depending on the four perspectives. The author recommends the adoption of balanced scorecard by all institutions of higher learning in Kenya as a means of improving organizational performance.

Keywords: Organizational performance, Perspectives, Balanced scorecard and Institution of higher learning.

### 1. Introduction

The public institutions are characterized by the need to translate primary goals, into concrete actions, secondary goals, or scorecards (Atkinson et. al., 1997).

\*The University of Nairobi is the premier institution of higher learning in Kenya, a community comprising 4200 members of both teaching and non-teaching staff.

This can be done by improving efficiency and effectiveness a goal which can be attained through good performance. To ensure performance, different performance measurement criterion have been proposed and used in the past. Among the criterion is the financial measures which have been criticized of doing little to ascertain whether a government agency is delivering its mission (Kaplan and Norton, 2001). To bridge this demerit a number of non-financial performance metrics have been proposed. Medori and Steeple (2000) noted that non-financial measures are more timely, measurable and precise than financial ones. The non-financial measures are meaningful to the workforce so aiding continual improvement. Implementing and measuring non-financial indicators presents problems. To resolve the problems, Kaplan and Norton (1992) developed the notion of the balanced scorecard. Balanced scorecard is regarded as a complement to, rather than a replacement of financial measure which institutions should embrace in their day to day activities.

There are considerable number of organizations that have not embraced the balanced scorecard and thus affecting the competitiveness and non-achievement of competitive advantage (Kaplan and Norton, 2001). However, there is hardly any empirical study that has been conducted to determine the influence of balanced scorecard on institutions of higher learning this study therefore seeks to determine this factor.

Greatbanks and Tapp (2007) have reviewed literature on the impact of balanced scorecard in a public sector environment with an aim to provide empirical evidence of the impact measurement has on organizational performance. McAdam and Bailie (2002) report on research exploring the longitudinal alignment between performance measures and business strategy where they confirm that performance measures derived from strategically important projects of an organization are perceived to be more successful. McAdam and Bailie further suggest that business improvement models, such as the balanced scorecard, are particularly appropriate for ensuring the strategic alignment of measures. Lipe and Salterio (2002) report some interesting findings from studies which compare the effect of displaying performance measures within a "balanced scorecard" format, particularly with inexperienced participants. Chan (2004) presents data from a large-scale survey of municipal governments in the USA and Canada, and cites factors which appear to influence the success or failure of implementation. In the UK, McAdam *et al.*, (2005) observe the increasing pressure upon public sector organizations to demonstrate performance improvements and comment that the public sector is now devoting more attention, time and money to performance measurement than ever before.

The balanced scorecard comprises of four interrelated perspectives which are the basis on which this study evaluated the effectiveness of the balanced scorecard. The perspective include; financial, customer, internal business, and innovation and learning perspectives. The perspectives, it is argued, are composed of leading and lagging indicators. The former drive performance, that is measures of internal business, innovation and learning, and the latter benefit from performance drivers, which are indicators addressing financial and customer issues. The balanced scorecard constitutes a systematic attempt to measure the relationship between the results and the operating activities as well as a powerful instrument to communicate a firm's goals and objectives to operating managers (Atkinson and Epstein, 2000).

## 1.1 Customer Perspective

The Customer Perspective identifies and defines the value proposition for the targeted market segments and measures the company's success in the chosen segments. Having customer-centric business strategies enable the exploration of the best mutual opportunities for customers and companies with the result inspiring employees to focus their efforts towards the overall purpose and direction of the organization (Curry and Kkolou, 2004). In developing metrics for satisfaction, customers should be analyzed in terms of kinds of customers and the kinds of processes for which we are providing a product or service to those customer groups. Companies would not know how good their services are until they ask their customers (St. Clair, 1997). The balanced scorecard emphasizes the need for organizations to translate their basic mission statement on customer service into specific measures that reflect the factors that are of importance to customers. In order to increase information sharing with customers, customer satisfaction and loyalty, organizations have to have closer relationships with them (Kaplan and Norton, 1992). Central to the concept of customer satisfaction, is the need to effectively address all aspects that constitute customer satisfaction. Four aspects act as key performance indicators for the measurement of customer satisfaction, namely; the core service or the service product, human element of service delivery, systematization/standardization of the service delivery process which is a non-human element and

the software capes which refers to the infrastructure and facilities. The criticality of these four factors in influencing customer perceptions has been well acknowledged in the customer management and service quality literature (Sureshchandar *et al.*, 2001). It is along this reasoning the author of this study seek to determine how customer knowledge influences performance in the institutions of higher learning.

### 1.2 Business perspective

In this study the influence of internal business processes on organizational performance in institutions of higher learning is assessed. In this context the business perspective refers to internal business processes and aims at measuring the areas of internal excellence required to deliver customer satisfaction. The business processes are a mechanism through which performance expectations are achieved (Amaratunga *et al.*, 2001). The performance of internal processes helps to create and deliver the value proposition for customers through the use of employees and other strategies as they are leading indicators of subsequent improvements in customer and financial outcomes (Kaplan and Norton, 1996).

Business process perspective should not be viewed along the traditional aspects of costs; time and quality only but also include effectiveness, efficiency and people who have an interest in it, in other words stakeholders as stated by Kueng (2000).

## 1.3 Financial perspective

This perspective deals with those factors through which an organization can create sustainable growth in shareholder value and evaluates the profitability element of the strategy. As Sureshchander *et al.*, 2001 state that every business exists in order to make profits financial perspective performance provides the ultimate definition of an organization's success. The financial perspective will indicate whether an organizations strategy, implementation and execution are contributing to bottom line improvement (Kanji and Sa, 2002).

The financial perspective is not only useful to the profit driven organizations per se but also useful to the non-profit making organizations. This test can also be adopted when evaluating the benefits of management initiatives in a broad economic sense. Therefore the financial performance parameters would emerge if the organization excels in other perspectives. It shows the results of the strategic choices made in the other perspectives (Amaratunga *et al.*, 2001). The perspective therefore reflects an organization's output criteria and should include both monetary measures and the idea of value creation.

### 1.4 Learning and growth perspective

The learning and growth perspective identifies the capabilities in which the organization must excel in order to achieve superior internal process that creates value for customers and shareholders. The perspective is intended to measure a company's capacity to innovate, continuously improve and learn and it includes employee training and corporate cultural attitudes related to both individual and corporate self-improvement. In a knowledge-worker organization, people, the only repository of knowledge, are the main resource. In the current climate of rapid technological change, it is becoming necessary for knowledge workers to be in a continuous learning mode. Metrics can be put into place to guide managers in focusing training funds where they can help the most. In any case, learning and growth constitute the essential foundation for success of any knowledge-worker organization. Kaplan and Norton (2001) emphasize that 'learning' is more than 'training'; it also includes things like mentors and tutors within the organization, as well as that ease of

communication among workers that allows them to readily get help on a problem when it is needed. It also includes technological tools; what the Baldrige criteria call "high performance work systems.

#### 2. RESEARCH METHODOLOGY

### 2.1 Research Design

The author employed the descriptive study design where a semi-structured questionnaire was used as a tool to get data for a detailed analysis of the research problem. The descriptive study design is a process of collecting data in order to test hypothesis or to answer questions concerning the current status of subjects in the study and also attempts to describe such things as possible behaviour, attitudes, values and characteristics Mugenda and Mugenda (1998).

# 2.2 Target Population

Borg and Gall (1996) and Best and Kahn (1998) define a target population as all the members of a real or hypothetical set of people, events or objects to which researchers wish to generate the results of the research. The University of Nairobi (UoN), Kenya Science Campus has over 100 employees. The targeted group for the study was all employees of the UoN, Kenya Science Campus. The population was divided into; Top level management, Academic, Non-Academic and Middle level as shown in table 2.1.

### 2.3 Sampling Design

According to Mugenda & Mugenda (1999) there are two sampling methods, Probability and Non-probability. Probability is a technique used to select a reasonable number of subjects, objects or cases that represents a population and where every subject gets an equal chance of being selected. It provides an efficient system of capturing in small groups, the variations or heterogeneity that exists in the target population.

#### 2.4 Sampling Frame

A list containing all sampling units is known as a sampling frame. From the population frame the required number of subjects, respondents, elements or firms will be selected in order to make a sample. The study grouped the population into four strata i.e. top level managers, academic, non-academic and middle level staff.

The number of subjects for the study was determined from the total population as shown in Table 2.2.

# 2.5 Data Collection Instruments and Collection Methods

Primary data was collected and used in this research. The data was obtained from questionnaires. Questionnaires were given to the subjects from the sample selected, who gave their personal response by filling in the questionnaires that were administered through a drop and pick method A questionnaire was used to collect primary data. Closed-ended questions were used to collect specific information on organizational decision dynamics. They were characterized by the condition that the respondents are limited to a fixed set of responses.

## 2.6 Pilot Testing

To evaluate effectiveness of the questionnaire as a data collection instrument, a pilot test was conducted on 4 respondents to enable the researcher amend the questionnaire where necessary.

## 2.7 Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was coded to enable the response to be grouped into categories. Descriptive statistics was used mainly to summarize the data. This included percentages and frequencies. Tables were used as appropriate to present the data collected for ease of understanding and analysis.

#### 3. Results and Discussion

The population sample studied was 15% of the University of Nairobi employee population. Thus the questionnaires were administered to 150 respondents. The questionnaire response rate as indicated in table 3.1 was 72% of the sample units while the incomplete questionnaires were excluded from the data analysis process. This response rate was a fair representative and conforms to Mugenda and Mugenda (1998) stipulation that a response rate of 50% is adequate for analysis and reporting, a rate of 60% is good and a response rate of 70% and over as excellent.

### 3.1 Customer Perspective and Organizational Performance

## 3.1.1The level of customer perspective among the staff of the UoN

There were six items that focused on customer perspectives and the respondents were expected to rate each item. The scores of each respondent were aggregated to obtain a composite score of customer perspective and the maximum expected score was 12 while the minimum was 2. A high score indicated higher customer perspective in the organization while a low score indicated low customer satisfaction. The following benchmarks were used for interpretation of the level of customer perspective in the organization:

### **Customer Perspective score range**

>9

3.5-6.9

< 3.5

# **Interpretations**

High customer perspective Average customer perspective Low customer perspective

The results presented in table 3.3 show that the organization had a high customer perspective. These results show that University of Nairobi performs a little better on customer perspective as regards its various customers. There is growing acceptance that institutional administration must understand and address the wants, needs and requirements of those it serves. Taking the customer view means focusing on responsiveness, timeliness and service quality from the customer's point of view. It is undoubtedly true that customer perspective is the most important aspect of any organization. According to Curry and Kolou 2004, recent management philosophy shows that there is an increasing realization that customer focus and customer satisfaction plays a decisive role in determining the future of any business.

## 3.1.2 Perception of the level of organization performance of the university among its staff

The organizational performance was measured using 22 items that focused on issues of; institutions' strategy, quality of services, assessment of services, continuous improvement of processes, employee competences and feedback among others. The respondents rated the statements on a five point scale as follows; strongly agree (5), agree (4) not sure (3), disagree (2), and strongly disagree (1). The scores of each respondent were aggregated to obtain a composite score of organizational performance with an expected maximum of 110 and minimum of 22 scores. A high score indicated higher organization performance while a low score indicated low organization performance. The following benchmarks were used for interpretation of the level of organizational performance;

Organisational performance score range	Interpretation
>82.5	High organization performance
55.0 – 82.4	Average organization performance
<55.0	Low organization performance

The data obtained was analyzed by calculating the mean organization performance scores for each of the two organizations and the results are presented in table 3.4 which indicates that, overall, the staff in the University perceived their organization performance as high (86.64).

### 3.1.3 The relationship between the customer perspective and organization performance

To determine the influence of customer perspective on organization performance, simple regression model was used. The results of the model (table 3.5) indicates that the customer perspective is a statically significant predictor or organization performance at (t=6.762, p<0.05) with a strong model fit  $(R^2=0.51)$  which imply that focusing on the customer perspective contributes up to 51% of organizational performance. The null hypothesis is rejected and in conclusion, focusing on the needs of the customer is an important contributor to performance in institutions of higher learning. In the University assesses its performance from the perspectives of both customers and who receive services like students, faculty, staff, as well as stakeholders who judge their effectiveness and have a direct impact on their success or failure like legislators, donors and other grant agencies

## 3.2 Financial perspective and Organizational Performance

### 3.2.1 The level of focus on financial perspective in the institution

The financial perspective was measured using five items and respondents were expected to score statements using five point rating scale of; strongly agree (5), agree (4), not sure (3), disagree (2) and strongly disagree (1). The individual scores for each respondent were aggregated into a composite score with an expected maximum of 20 and a minimum of 5. A high score indicated higher focus on financial perspective while a low score indicated a low focus on financial perspective. The following benchmarks were used for interpretation of the level of focus on financial perspective.

Financial perspective score range	Interpretation
>12	High focus on financial perspective
8.5 - 11.9	Average focus on financial perspective
<8.5	Low focus on financial perspective

The data obtained was analyzed by calculating the mean financial perspective scores for each of the two organizations (table 3.6). The results show that UoN is in the category of average focus on financial perspective.

#### 3.2.2 Influence of Financial Perspective on Organizational Performance

To determine the influence of financial perspective on organization performance, simple regression model was used. The results are presented in table 3.7

The results in table 3.7 show that focus on financial perspective was a statically significant predictor or organization performance at (t=4.994, p<0.05) with a strong model fit ( $R^2$ =0.358) which implies that focusing on the financial perspective contributes up to 35.8% of organizational performance. The null hypothesis is rejected and in conclusion, focusing on the financial perspective of institutions of higher learning is important contributor to performance in institutions of higher

learning. This result agrees with the Kanji and Sa, (2002) conclusions who state that the financial perspective will indicate whether an organizations strategy, implementation and execution are contributing to bottom line improvement.

## 3.3 Internal Process Perspective and Organizational Performance

### 3.3.1 Internal Process Perspective

The internal process perspective was measured using six items and respondents were expected to score statements using four point rating scale of; strongly agree (5), agree (4), not sure (3), disagree (2) and strongly disagree (1). The individual scores for each respondent were aggregated into a composite score with an expected maximum of 30 and a minimum of 6. A higher score indicated higher focus on internal process perspective while a low score indicates a low focus on internal process perspective. The following benchmarks were used for interpretation of the level of focus on internal process perspective;

Internal process perspective score range	Interpretation
>18	High focus on internal process perspective
12.5 – 17.9	Average focus on internal process perspective
<12.5	Low focus on internal process perspective

The data obtained was analyzed by calculating the mean internal process perspective scores. And the results presented in table 3.8. The show that overall the University is in the category of average focus on internal process perspective.

### 3.3.2 Influence of Internal Process Perspective on Organization Performance

The result (table 3.9) from simple regression model show that focus on internal process perspective was a statically significant predictor of organization performance at (t=4.825, p<0.05) with a strong model fit (R<sup>2</sup>=0.351) which implies that focusing on the internal process perspective contributes up to 35.1% of organizational performance. The null hypothesis is rejected and in conclusion, focus on the internal process perspective is an important contributor component of organization performance. The above results indicate that the institution is practicing good internal operational measures which focus inward into the internal workings of their faculties and on those process and activities that deliver critical services to both internal and external customers.

### 3.4 Innovation and Learning Perspective and Organizational Performance

#### 3.4.1 Innovation and Learning Perspective

The innovation and learning perspective was measured using four items which were scored by the respondents. The individual scores for each respondent were aggregated into a composite score with an expected maximum of 7 and a minimum of 1. A higher score indicated higher focus on innovation and learning perspective while a low score indicates a low focus on innovation and learning perspective. The following benchmarks were used for interpretation of the level of focus on innovation and learning perspective;

Innovation and Learning score range	Interpretation
>5	High focus innovation and learning perspective
3.5 - 4.0	Average focus on innovation and learning
	perspective
<3.5	Low focus on innovation and learning
	perspective

The data obtained was analyzed by calculating the mean on innovation and learning perspective scores. The results are presented in table 3.10 shows that overall the University is in the category of high focus on innovation and learning perspective.

### 3.4.2 Influence on innovation and learning perspective on organizational performance

To determine the influence of innovation and learning perspective on organization performance, simple regression model was used. The results are presented in table 3.11 show that focus on innovation and learning perspective is a statically significant predictor of organization performance at (t=4.308, p<0.05) with a moderately strong model fit (R<sup>2</sup>=0.290) which implies that focusing on innovation and learning perspective can contribute up to 29% of organizational performance. The null hypothesis is rejected. In conclusion, focusing on the innovation and learning perspective is an important component of organization performance. From the study, extent to which the institution allows interaction of student/trainees with faculty, seminars, workshops, special events and guest lectures and if it had impact on the quality of learning was found to be the most important statement in relation to the learning perspective.

# 4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Conclusions

It is evident in the research that the four factors under scrutiny possess certain inherent features by which they influence organizational performance. The results have indicated strong relationships between all the independent and the dependent variable.

The study found out that customer perspective can contribute to 51% of the organizational performance with respondents viewing the perspective as the most important component of the four balanced scorecard perspectives to organizational performance. The study has established that there is a strong relationship between customer perspective and organizational performance with the perspective scoring highest of all the other perspectives tested

The study revealed that focus on internal business perspective can contribute to 31.5% of organizational performance. The study found this to be an average score depicting a relationship between internal perspective and organizational performance.

From the study, it was found that innovation and learning perspective can contribute 29% of organizational performance. The results obtained a mean score of 5.07 which had been categorized as value below 5 showed that the perspective and organization performance had a high rating.

It is quite evident that the perspectives influence organizational performance and therefore the study concludes that the balanced scorecard influences organizational performance in institutions of higher learning. It is therefore evident that the balanced scorecard is not only a measurement system, but also a management tool as it enables organizations to clarify their vision and strategy and translate them into goal or actions. It is therefore concluded that organizations that use the score card are able to manage and implement their strategy, monitor and evaluate their activities especially in the public sector where performance reporting based on balanced scorecard principles is an important mechanism for demonstrating accountability for results.

From the study, conclusions can be drawn that the most significant advantage of the use of the balanced scorecard is that it provides a wider development of metrics that are closely connected to the strategic goals of the institution. Organizing an appropriate set of metrics through an academic scorecard provides a useful way to conceptualize and display the overall education and financial performance of certain units within the organization.

#### 4.2 Recommendations

The study recommends adoption of balanced scorecard by all institutions of higher learning in Kenya. This is because the study has revealed that the four perspectives all have an influence on organizational perspective.

The study recommends that further research be done on other institutions of higher learning which have not embraced use of the balanced scorecard. This would augment this study for whereas this is an excellent management tool that measures all aspect of an organization, many institutions of higher learning has not yet embraced it.

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**Table 2.1: Target Population** 

Category	Frequency	Percentage
Target Population	1268	100
Sample size	106	8.4

Table 2. 2: Number of subjects for the study from the total population

Category	ory Frequency		Percentage
Top Level Management	100	10	0.8
Academic	360	33	2.6
Non-Academic	408	39	3.1
Middle level staff	400	24	1.9
Total	1268	106	8.4

**Table 3.1: Response Rate** 

Questionnaires	Number	Percentage	
Completed	108	72	_
Incomplete	14	9	
Unreturned	28	19	
Total	150	100	

**Table 3.3: Customer Perspective Scores** 

Institution	n	mean	Std. Error	Std. Dev.
UoN (KSC)	14	9.7	0.339	1.267

**Table 3.4: Organization Performance Score** 

Organization	n	Mean	Std. Error	Std. Dev.	
UoN (KSC)	13	85.23	3.890	14.025	

Table 3.5: Relationship between customer perspective and Organization Performance

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Model	β	Std. Error	t	P-value
(Constant) Customer	10.898	11.332	0.962	0.342
(Constant) Customer perspective score	8.011	11.332	6.762	0.342
Table 3.6: Financial	Perspective S	Score		
University n		Mean	Std. Error	Std. Dev.
UoN (KSC) 14	4	9.71	0.425	1.590

Table 3.7: Relationship between financial perspective and organization performance

Model	β	Std. Error	t	P-value
(Constant)	46.938	8.190	5.731	0.000
Financial perspective	4.034	.880	4.994	0.000
score				

**Table 3.8: The internal process score** 

University	n	Mean	Std. Error	Std.Dev.
UoN (KSC)	14	17.36	0.660	2.468

Table 3.9: Relationship between internal process perspective and organization performance

Model	β	Std. dev	t	P-value
Internal process	23.493	13.239	1.775	0.083
perspective score	3.580	.742	4.825	0.000

**Table 3.10: Innovation and Learning Perspective Scores** 

University	n	Mean	Std. Error	Std.Dev.	
UoN (KSC)	14	5.07	.28640	1.07161	

Table 3.11: Relationship between innovation and learning perspective and organization Performance

Model	β	Std.Error	t	P-value
Constant	45.949	9.668	4.753	.000
Innovation and learning perspective score	8.064	1.872	4.308	.000