

INTERNAL PROCESS, LEARNING PERSPECTIVE OF BALANCE SCORECARD AND ORGANISATIONAL PERFORMANCE

A CASE OF TATA CHEMICALS MAGADI LIMITED, KENYA

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Abstract

The objective of this study was to determine the effect of internal process on organisational performance and to investigate the effect of growth and learning on organisational performance. The study adopted causal research design. Out of the target population of 350, a sample of 175 management level staff was selected comprised of 10 Heads of Department, 16 Managers and 149 Senior Staff. The study adopted stratified sampling techniques and from each stratum, simple random sampling techniques were adopted. Data collection was from primary and secondary sources. Primary data was gathered using Interview Guides and Questionnaires. Secondary sources included relevant documents and reports. Data was coded and clustered for subsequent statistical analysis. Linear regression analysis was used to test the hypotheses. Internal business process perspective ($\beta=0.771$; $t=5.870$; $p<0.001$); and growth and learning perspective ($\beta=0.344$; $t=3.874$; $p<0.001$); $p<0.001$). The multiple regression model expressing this relationship was significant ($F= 28.186$; $P <0.001$). The study therefore concluded that each of the two perspectives of the Balanced Scorecard had a positive relationship with organisational performance and could potentially increase the revenue base of the organisation. The study recommends that by adopting Balanced Scorecard the organisation will reduce product/service cost per unit and also reduce selling/general administration cost.

Keywords: Balance scorecard, internal process perspective, learning perspective, organization performance

INTRODUCTION

The Balance Score Card is multi-dimensional as it incorporates both financial and non-financial measures enabling its results have both reporting and predictive value. The singular success of BSC is its ability to align current action to strategic outcomes through a blend of leading and lagging measures. The chosen operating activities and strategic outcomes are dependent on an organisation's mission, vision and stage of development. Kaplan & Norton (2005) also in their review of North American Insurance firms namely National Insurance Company identified the challenge of lagging indicators in the BSC as a measurement tool of performance for an insurance company and determined appropriate lead indicators that compensate for the lagging effect and to empower the BSC as performance measurement tool. Opiyo (2010) in her study on the application of BSC on employee job satisfaction at Cooperative Bank of Kenya Limited focused on the benefits of BSC aligning the operations to strategy by effecting performance measurement. Although the emphasis was strategic alignment, the component of performance measurement was highlighted, as a key driver of the alignment.

The essence of formulating competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes. Porter(2002) has observed that, industry structure has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm.

Firms exist within a dynamic environmental context that demands constant engagement to ensure adequate adaptation by the firm. The strategies a firm adopts have to be cognisant of the ever changing environment and seek to align business practices to environmental demands through relevant strategies. The author further asserts that the goal of competitive strategy for a business unit in an industry is to find a position in the industry where the company can best defend itself against these competitive forces or can influence them in its favour. The information age environment for both manufacturing and service organisations requires new capabilities for competitive success. According to Robert S. Kaplan (2005), the ability of a company to mobilize and exploit its intangible or invisible assets has become far more decisive than investing and managing physical, tangible assets.

Porter (2003) has further suggested the five force model and in this model the author provides emphasis on all the relevant factors that an organisation should consider. The author further says that for an organisation to succeed it needs to take into account the firm, its competitors, its suppliers, its customers and also its products' substitutes. If all these are not

monitored properly and the linkages not understood correctly, then it can impede the performance of an organisation.

The Balanced Scorecard was developed in the USA in the beginning of the 1990s by Kaplan and Norton (2002) having criticised the existing methods for assessing business performance for being too narrow and looking back instead of looking forward. From this starting point, the authors created a method which they named the “Balanced Scorecard”. This method aims at making the business strategy more measurable and concrete. Additionally, it forces the business managers to think about what the strategy and vision are really about and what actions lead to fulfilling the ideas named in the strategy and vision. The key differentiator of the Balanced Scorecard in performance measurement is its ability to combine both lagging indicators (financial perspective) with leading indicators (customer and Growth perspectives). The BSC is context specific because the performance objectives between firms vary and are dictated by the priorities of the firm at the moment.

Organizational Performance

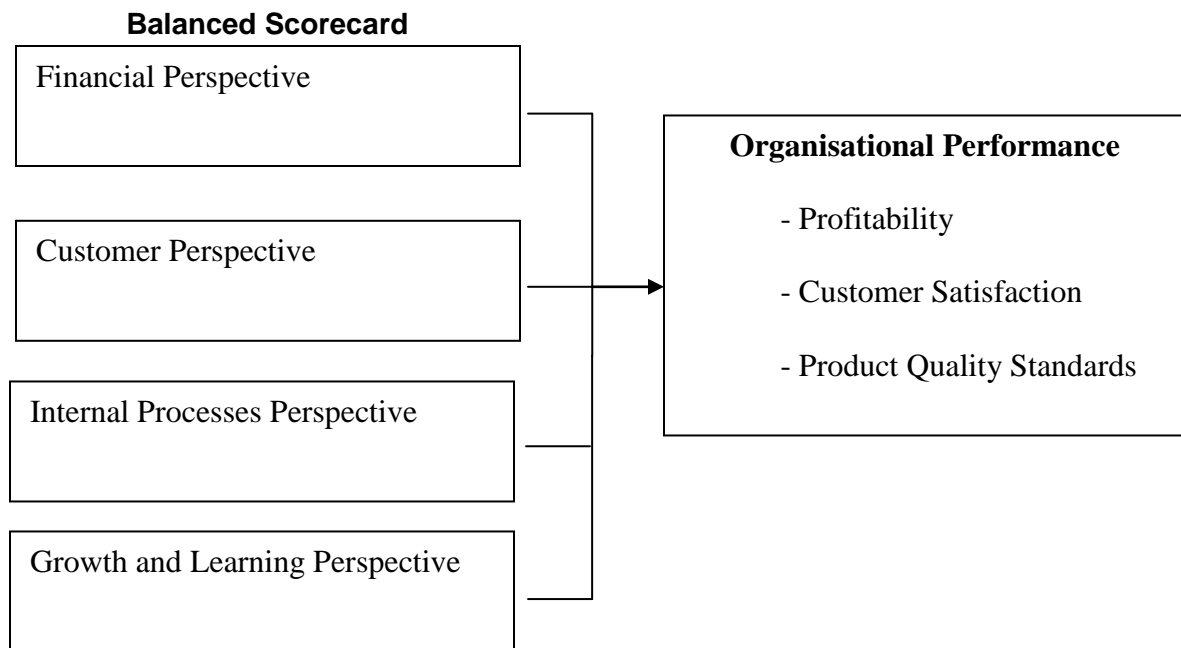
According to Chen (2002), organisational performance means the “transformation of inputs into outputs for achieving certain outcomes. With regard to its content, performance informs about the relation between minimal and effective cost (economy), between effective cost and realised output (efficiency) and between output and achieved outcome (effectiveness)”. There are various ways to understand organisation performance but in this project report, it has been judged upon the growth of the company and sales performance which lead towards the growth. Sales performance can be explained as all the activities or investment carried out in the firm in the given period of time. It can be measured by total amount of revenue collected for the goods sold. Growth revenue defined as total amount of money collected by the company for the goods they sold in a specific time and this amount is calculated before any expenses are subtracted. Effectiveness of the organisation depends on the three basics performance determinants. Efficiency and process reliability, human resource and relations and Growth and adaptation to environment, Yuki (2006). Efficiency is defined as a term practiced by organisation or firm to use people and resources to carry out important operations in way which minimises the costs. When the resources will be used in a proper way as compared to the competitors the cost of operation will decrease and the profit margin will increase. Efficiency is important when the competitive strategy of the firm offers products and services at lower rates than the competitors. Human resource relation is defined as trust, organisational commitment, collective identification and cooperation among the employees, (Bass 1990 Yuki and Tabler 2002). Innovative adaption

includes increase in market share, sales growth from year to year, generating and maintaining loyal customer base.

The business processes perspective is primarily an analysis of the organisation's internal processes. Internal business processes are the mechanisms through which organisational performance expectations are achieved. This perspective focuses on the internal business results that lead to financial success and satisfied customers. Therefore, managers need to focus on those critical internal operations that enable them to satisfy customer needs Kaplan & Norton, (2002). Organisations should decide at what processes and competencies they must excel and specify measures for each. Key internal processes are monitored to ensure that outcomes will be satisfactory. The measures should also link top management's judgment about key internal processes and competencies to the action taken by individuals that affect overall corporate objectives. Further (Kaplan & Norton, 2005) notes that these linkage ensure that employees at lower levels in the organisation have clear targets for actions, decisions and improvement activities that will contribute to the organisation's overall mission. Customer and internal business process measures identify the parameters that the organisation considers most important for competitive success.

A BSC approach looks to measures that drive value creation and how the measures in each perspective interrelate. Growth and learning perspective provides the infrastructure to enable ambitious objectives in the other three perspectives to be achieved, Kaplan and Norton (1996). The two further note that the three principle categories in this perspective are employee capabilities, information system capabilities, motivation empowerment and alignment. This perspective has the effect of highlighting the importance of communicating and linking people with the purpose through education, goal setting and reward from achieving the required performance. These four perspectives are not all-inclusive. Differing strategies of organisations dictate what should be included in the scorecard. This is the beauty of the BSC. It can be adapted and expanded to include metrics on leadership, Van De Vliet, (1997), supplier relationships, Partridge & Perren, (1997), workforce diversity, Knouse & Stewart, (2003), the strategic readiness of intangible assets, Kaplan & Norton, (2004a), community investment, Kaplan & Norton, (2004b), and/or corporate social responsibility, Crawford & Scaletta, (2005). Indeed, Kaplan & Norton (1996) suggest any stakeholder interest which defines a business unit's mission should be included in the BSC. It is important to recognize the hierarchical nature of the BSC. Kaplan & Norton's basic model assumes that financial performance is the ultimate goal of a business (Bryant, Jones & Widener, 2004).

Figure 1: Conceptual Framework



The conceptual framework postulated that Balanced Scorecard once adopted could be used to measure the extent of progress within the firm. As the above diagram depicts, lead indicators in the growth & learning, internal, and customer perspectives drive future financial performance. In effect, financial measures merely report the outcomes from past actions in the lower levels in the hierarchy. The key to the successful implementation of the BSC was to find the cause-and-effect linkages that create value. Further investment in employee training (learning & growth perspective) had an impact on profitability, customer management, product quality standards and other business processes (internal perspective), which, in turn, created greater customer satisfaction (customer perspective). The study conceptualized that Balanced Scorecard reinforced organisational performance.

Statement of the Problem

The concept of the Balanced Scorecard is premised on the need for lagging (Financial Indicators) and leading indicators that enable a holistic measurement of performance of the organisation. The performance measurement principles of this tool are premised on the Open System Theory of management and the Resource Base Perspective theory of the firm. Traditional performance measurement systems appear not to be providing managers with the information they need to measure and manage the all-important competencies that drive competitive advantage. Opiyo (2010) study on the application of balanced scorecard on

employee job satisfaction at Cooperative Bank of Kenya Limited focused on the benefits of BSC aligning the operations to strategy by effecting performance measurement. Though the emphasis was strategic alignment the component of performance measurement was highlighted, as key driver of the alignment. A survey of insurance firms in Kenya done by Abwao, V (2002) highlighted empowerment of staff arising from embracing information technology as a key element in the learning and growth perspective of the Balance Score Card. This research explored the performance measurement dimensions of the BSC at an industry level. A study by Mucheru, (2008) in the application of Balanced Scorecard in performance management among commercial banks is the only industrial study of financial services conducted on the application of BSC as a performance management tool. Although there are many studies on the Balanced Scorecard in Kenya, there is clearly a big gap in the study of the Chemical Manufacturing industry. The effect of the Balance Score Card as a performance measurement tool in the Kenyan Chemical Manufacturing industry is yet to be studied. The research question therefore is: What is the effect of Balanced Scorecard on organisational performance? This research would improve on the way companies in the chemical manufacturing industry in Kenya manage their organisations.

Objectives of the study

1. To establish the effect of internal process perspective on organisational performance of TCM.
2. To investigate the effect of growth and learning perspective on organisational performance of

RESEARCH METHODOLOGY

This study adopted a causal research design. According to Ogula (1998), survey studies are normally intended to describe and report the way things are. This involved collecting information by interviewing or administering questionnaires to a sample of individuals hence suitable for extensive research. This design enabled the collection and analysis of both quantitative and qualitative data. The target population comprised of 350 respondents.

A sample of 175 management level staff was selected using Yamane's formulae

$$n = \frac{N}{1 + Ne^2}$$

Where; n=optimum sample size

N=number of employees at Tata Chemicals Magadi

e=probability error

In the study, $N = 350$ $e = 5\%$ (at 95% confidence level). The sample size was 175 management level staff. The study population comprised ten (10) Heads of Department, sixteen (16) Managers and one hundred and forty nine (149) Senior Staff.

Data collection was from primary and secondary sources. Primary data was gathered using Interview Guides and Questionnaires. Secondary sources included relevant documents and reports.

ANALYSIS AND RESULTS

Application of Balanced Scorecard

The respondents were asked to state if they were familiar with the use of Balanced Scorecard as a performance measurement tool. The results showed that they were. This suggests that there was a high level of awareness among the respondents and therefore the entire organisation on the existence of the Balanced Scorecard as a tool to measure performance.

Table 1: Familiarity with Balanced Scorecard

Statement	%	Mean	SD
The customer perspective element of BSC adequately measures customer satisfaction in your firm	75.0	3.3750	.86787
The business process element of BSC adequately measures the performance of internal process in your firm	87.5	4.2500	.66986
The Growth and learning element of BSC adequately measures the ability of your firm to innovate and adopt the environment	62.5	4.0000	.87706
The financial performance measures of the BSC adequately measures the success of the operations in meeting the strategic objects	75.0	3.6250	1.00480

Table 1 shows the results on the Balanced Scorecard appraisal as applied in the company. As the results show, the study found that 75% of the respondents agreed that the customer perspective element of the Balanced Scorecard adequately measured customer satisfaction in the organisation. The mean of 3.37 also shows that most of the respondents were in agreement with the same.

The study found that 87.5% of the respondents agreed that the business process element of Balanced Scorecard adequately measured the performance of internal process in the organisation. This is strongly corroborated with the mean value of 4.25 which also suggests that indeed the agreement among the respondents was high on this aspect.

The study also revealed that 62.5% of the respondents agreed that the growth and learning element of the Balanced Scorecard adequately measures the ability of the firm to innovate and adapt to the environment. The mean score of 4.0 also confirms that indeed most of the respondents agreed with this statement.

The study found that 75% of the respondents agreed that the financial performance measure of the Balanced Scorecard adequately measures the success of the operations in meeting the strategic objectives. This is strongly corroborated with the mean value of 3.62 which suggests that most of the respondents were in agreement with this statement.

The effect of internal processes on organisational performance

The third research question of this study was derived from the third research objective. The respondents had to indicate the extent to which they consider their organisation to improve its performance through internal process operations objectives, the results are presented in table 2.

Table 2: Seeking Continuous Internal Process Improvement

Seek continuous process improvement				
		Percent	Valid Percent	Cumulative Percent
1	Very Well Achieved	3.4	3.4	3.4
2	Well Achieved	27.0	27.0	30.3
3	Fairly Achieved	42.7	42.7	73.0
4	Weakly Achieved	19.1	19.1	92.1
5	Not Achieved	7.9	7.9	100.0
Total		100.0	100.0	

Majority of the respondents 42.7% indicated that seeking continuous internal process improvement was fairly achieved within the organisation.

During the interview sessions the respondent observed that they have constituted a technical team to identify key areas that could help in strengthening organisational performance apart from fully implementing the score card as a holistic guide for growth.

According to Gekonge (2005) as quoted by Kairu et.al (2013) internal processes perspective focuses on the internal business results that lead to financial success and satisfied customers. To meet the organisational objectives and customers expectations, organisations must identify the key business processes at which they must excel. These key business processes are monitored to ensure that outcomes will always be satisfactory. The internal processes perspective reports on the efficiency of internal processes and procedures. The

premise behind this perceptive is that customer-based measures are important, but they must be translated into measures of what the organisation must do internally to meet its customers expectations (Kaplan & Norton, 1992). Al-Najjar & Kalaf (2012) are of the view that internal business processes provide the organisation with the means by which performance expectations may be accomplished. The study further sought to establish internal process perspectives on organisational performance, the results are presented in table 3.

Table 3: Internal Process Perspectives on organizational performance

Internal Process Operations Perspectives	N	Mean	Std. Deviation	Variance
Seek continuous process improvement	137	3.01	0.959	0.92
Deliver services aligned with resources and prioritised core activities	137	3	0.989	0.977
Valid N	137			

Seeking continuous process improvement had the highest mean of 3.01. It was closely followed by delivery of services aligned with resources and prioritised core activities. This finding indicated that the organisation ought to adopt new technologies to modernise their internal process operations which could lead to increase of revenue.

During the interview sessions respondents felt that by implementing the Balanced Scorecard, there was a cost implication and that they needed to invest in technology in terms of software that could assist them on analysis, this meant training some staff on how to use the software and probably investing on new laptops for that purpose that is if they were to get close to accurate results with regard to the position of the organisation, doing this manually was very hectic and that is one of the reasons as to why the score card had not done very well at TCM.

According to Kaplan & Norton, (2005) customer and internal business process measures identify the parameters that the organisation considers most important for competitive success. They further note that these linkages ensure that employees at lower levels in the organisation have clear targets for actions, decisions and improvement activities that will contribute to the organisation's overall mission.

Hypothesis Testing

H₀₁: There is no significant effect of internal process perspective on organisational performance of TCM.

H₁: There is a significant effect of internal process perspective on organisational performance of TCM.

Internal business process perspective values were ($\beta=0.771$; $t=5.870$; $p<0.001$); We therefore reject the null hypothesis and accept the alternative hypothesis that states there is a significant effect of internal process perspective on organisational performance.

The effect of growth and learning perspective on organisational performance

The fourth research question of this study was derived from the fourth research objective. The respondents had to indicate the extent to which they consider the organisation would achieve success through learning and growth objectives, the results are presented on table 4.

Table 4: Workforce having appropriate skills required to perform their duties

Workforce has appropriate skills required to perform their duties				
		Percent	Valid Percent	Cumulative Percent
1	Very Well Achieved	7.9	7.9	7.9
2	Well Achieved	27.0	27.0	34.8
3	Fairly Achieved	40.4	40.4	75.3
4	Weakly Achieved	16.9	16.9	92.1
5	Not Achieved	7.9	7.9	100.0
Total		100.0	100.0	

Majority of the respondent 40.4% fairly believed that workforce has the appropriate skills required to perform their duties. This finding indicated that the organisation needs to improve on staff training especially on management tools.

During the interview sessions respondent were of the opinion that if the Balanced Scorecard was well implemented, a culture of high performing management teams would be realised and therefore exceeding the set targets in time.

According to Etim & Agara (2011), learning and growth consider the flexibility of a firm and its adaptability to change in the business environment, how fast new technology is deployed to counteract change in business environment, total firm capabilities and innovativeness. According to Kaplan & Norton (1992), a company innovative ability, learning and improvement skills tied directly to the company's value and growth. Wood & Sangster (2002) further look at this perspective as the one which identifies the human relations, technological and general systems infrastructure that the organisation must develop if it is to achieve long-term growth and organisational improvement. Appropriate measures would include those relating to the level of relevant employee skills, how up to date the organisation's information technology systems and

programs are, and the ability of the organisation's system architecture to provide the information in an efficient, timely and cost effective way. The study sought to establish the learning and growth perspectives on organisational performance, the results are presented in table 4.5.

Table 5: Learning and Growth Perspectives in organisational performance

Learning and Growth Perspectives	N	Mean	Std. Deviation	Variance
Workforce has appropriate skills required to perform their duties	137	2.9	1.034	1.069
Employee undergo training to gain valuable new skills	137	2.78	1.02	1.04
Creates positive work climate (employee satisfaction, constant communication, and alignment with goals and mission of Organization)	137	2.83	1.141	1.301

All the responses recorded a mean of between 2.65 and 2.90 which implies that they were fairly and well achieved. This further confirms the findings that there is a weak link on the effectiveness of the organisation especially on the learning and growth perspective. The organisation needs to embrace learning and growth initiatives which are crucial in designing and evaluating effectiveness. This will help improve on learning and growth efforts which will help improve service delivery.

During the interview session the respondent s felt that the scorecard had embedded a culture of responsibility and ownership in some of the managers especially those who review the scorecard every quarter in order to determine whether progress was being made towards achieving the set targets.

Kaplan and Norton acknowledged that the learning and growth measures are the most difficult to select; therefore they suggest the following measures as examples: employee empowerment, employee motivation, employee capabilities, and information systems capabilities (Al-Najjar & Kalaf 2012). Atarere & Oroka (2014) go further to explain the learning and growth perspective as below; this perspective ensures that an organisation will continue to have loyal and satisfied employees in the future and to continue to make excellent use of its resources. The organisation and its employees must therefore keep learning and developing. Hence, capabilities that an organisation need to create long term growth and improvement should be encouraged.

H₀₂: There is no significant effect of growth and learning perspective on organisational performance of TCM.

H₂: There is a significant effect of growth and learning perspective on organisational performance of TCM.

Growth and learning perspective values were ($\beta=0.344$; $t=3.874$; $p<0.001$). We therefore reject the null hypothesis and accept the alternative hypothesis that states there is a significant effect of growth and learning perspective on organisational performance. The study sought to investigate the challenges faced with the implementation of a BSC management tool; the results are presented in table 6.

Table 6: Challenges of using balanced scorecard to measure performance

BSC Challenges	Not at all	Least Extent	Moderate	Great extent
Management too busy solving and implementing short term goals	0%	42.9%	14.3%	42.9%
Inadequate top management support	0%	14.3%	85.7%	0%
Lack of highly developed information system to support balanced score card	0%	28.6%	14.3%	57.1%
Lack of linkage of balanced score card to employee reward	0%	42.9%	57.1%	0%
Balanced score card is time consuming to develop	0%	0%	42.9%	57.1%
Lack of skills and know how in developing and implementing balanced score card	0%	0%	57.1%	42.9%
Organisational politics	0%	14.3%	57.1%	28.6%
Change management strategies	0%	14.3%	57.1%	28.6%
Revenue constraints	0%	0%	85.7%	14.3%
Implementation of balanced score card is cost prohibitive	0%	0%	0%	100%
Difficult to evaluate the importance of various measures	0%	28.6%	57.1%	14.3%
Difficult to define and measure outcome Measures	0%	0%	100%	0%

Majority of the respondents 100% stated that implementation of BSC was cost prohibitive; this finding indicated why BSC was not properly implemented in the organisation.

During the interview session respondents stated that several challenges were faced when the BSC was introduced, the cost implication of BSC was cited to be the biggest challenge. To start with, there was resistance to change, since there had not been an individual performance management tool in the organisation before. Hence, the employees viewed the technique with suspicion. This is especially because an individual's performance is used as a basis for remuneration (year-end bonus) and consideration for promotion.

They further stated that, there had been a challenge in knowledge on the part of the staff since most were not able to formulate objectives adequately. This was attributed to insufficient training. They felt that if the staff and the line managers that were responsible for the scorecard were not conversant with the technique, the objectives, measures and targets end up either being unrelated to the vision or cannot be measured. However there was consensus among those interviewed that it had been difficult to measure the qualitative aspects of the business which was difficult to assign a value even though they constituted the overall organisational performance. Issues like employee morale, which though important for the attainment of the bottom line score could not be quantified.

Multiple regression analysis was performed to identify the predictors of organisational performance as conceptualised in the model. A step wise variable selection was used in the regression analysis and Table 7 provides the summary measure of the model.

Table 7: Coefficients for predictors of organizational performance

Organization	Models	Unstandardised		Standardised	T	Sig	
		Coefficients		Coefficients			
		β	Std.Error	Beta			
TCM	1	Constant	3.938	0.013	-	4.178	.000
		Internal Perspective	0.771	0.127	0.158	5.870	.025
		Growth Perspective	0.344	0.089	0.077	3.874	.02

In the above model, t values are significant for two independent variables in TCM at 0.001 for IP.025 and GP .02 levels. Both variables have a positive coefficient which means that Organizational Performance increases with the variables. Hence the directional hypothesis for the two perspectives has been accepted.

Linear regression equation adopted was as follows:

$$Y = 3.938 + 0.771 X_1 + 0.344X_2 + 0.013\epsilon.$$

H₀₁: Internal process perspective in balanced scorecard model has significant positive impact on organizational performance. The sig value (0.025) of beta of the internal process perspective (IPP) is less than 0.05, the test is significant, hence the hypothesis is accepted which shows that there is significant effect of internal process perspective (IPP) on organizational performance. Moreover the positive value of beta coefficient witnesses the positive influence of IPP on organizational performance.

H₀₂: Learning and growth perspective in Balanced Scorecard model has significant positive influence on organizational performance. The sig value (0.02) of growth and learning perspective (GP) is less than 0.05 which shows that the test is significant; therefore, hypothesis is accepted which shows that there is significant effect of GP on OP (OP). The organizational performance is, therefore significantly influenced by the growth perspective (GP) of Balanced Scorecard.

The study a revealed that the growth and learning element of Balanced Scorecard adequately measures the ability of the organisation to innovate and adopt to the environment.

From the findings of the study it can be concluded that Balanced Scorecard increased the revenue base of the organisation. The benefits of Balanced Scorecard outweigh the costs if implemented fully, efficiently and effectively and that it complements the financial measures of past performance with operational measures that drive future performance and growth.

CONCLUSIONS AND RECOMMENDATIONS

The study found that the financial performance measure of the Balanced Scorecard adequately measures the success of the operations in meeting the organisational objectives. The study therefore recommends that by adopting Balanced Scorecard, the organisation will reduce product/service cost per unit and also reduce selling/general administration cost.

The study found that the business process element of Balanced Scorecard adequately measured the performance of internal process in the organisation. The study recommends that there is need to improve customer-organisational relationship by responding to customer complaints/suggestions and offering after-sale services.

The study found that the customer perspective element of Balanced Scorecard adequately measured customer satisfaction in the organisation. The study recommends that after sales services should be introduced this includes administration of customer payments and resolution of customer problems/complaints.

The study also revealed that the growth and learning element of Balanced Scorecard adequately measures the ability of the organisation to innovate and adopt to the environment. The study recommends that constant training of staff to master existing ways of doing the job as

well as adopting new ways and making staff attend internal and external workshops and seminars on new trends relating to the job and industry should be put in place.

LIMITATION OF THE STUDY

The study was conducted in a chemical manufacturing company where the stakeholders had different views concerning Balanced Scorecard and its implementation therefore leading to varied qualitative interpretation however quantitative results were relied on as the basis of interpretation.

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