

TABLE OF CONTENTS

Heading	Page
CHAPTER ONE- INTRODUCTION AND BACKGROUND	
1.1 Introduction.....	6
1.2 Background to the Study.....	7
1.3 Importance to the Study.....	8
1.4 Statement of the Problem.....	10
1.5 The Hypothesis of the Study.....	10
1.6 Research Questions.....	11
1.7 Objectives of the Study.....	11
CHAPTER TWO-LITERATURE REVIEW	
2.1 Productivity- Definitions.....	12
2.2 Approaches to Measuring Productivity.....	13
2.3 Productivity Through Training.....	15
2.4 Total Factor Productivity-Theory and Practice.....	16
2.5 Competitive Development Of Countries.....	21
2.6 Factors Influencing Productivity.....	22
2.7 How do you Improve your own Performance.....	27
2.8 Productivity and Quality in Business and Industry.....	27
2.9 Performance Management Systems and Productivity.....	29
2.10 Total Quality Management and Productivity.....	34
2.11 The Balanced Score Card.....	41
CHAPTER THREE-RESEARCH DESIGN	
3.1 Overview.....	45
3.2 Sources of Information.....	46
3.3 Sampling Techniques.....	46
3.4 Methodology.....	47
3.5 Units of Investigation.....	47
3.6 Data Analysis and Interpretation.....	48
3.7 Limitations of the Study.....	48
3.8 Sampling Design and Data Collection.....	48
3.9 Method of Data Analysis.....	49
CHAPTER FOUR-PRESENTATION OF RESULTS	
4.1 Introduction.....	50
4.2 Strategic Planning.....	50
4.3 Leadership Practices.....	52
4.4 People Practices.....	54
4.5 Service Delivery Improvements.....	57
4.6 Relationship with Suppliers.....	56
4.7 ISO 9000/2001.....	59

CHAPTER FIVE-CONCLUSION AND RECOMMENDATIONS

5.1	Conclusions.....	61
5.2	Recommendations.....	61
	References.....	68

List of Tables

Table 4.2	Leadership Factors
Table 4.3	Performance Based Rewarding Factors
Table 4.4	Service Delivery Techniques

DECLARATION

I, Benjamin Tobedza, declare that the dissertation for the Masters Degree Of Masters Administration at the University Of North West hereby submitted, has not previously been submitted by me for a degree at this or any other university, that it is my work in design and execution that all materials herein have duly acknowledged.

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BENJAMIN TOBEDZA

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Benjamin Tobedza
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LIST OF ABBREVIATIONS

BNPC	Botswana National Productivity Centre
CTO	Central Transport Organization
PE	Public Enterprises
PMS	Performance Management System
MWTC	Ministry of Works, Transport and Communication
PWD	Public Works Department
KPI	Key Performance Indicators
WITS	Work Improvement Teams
MIS	Management Information System
AIDS	Acquired Immune Deficiency Syndrome
UCS	User Charging System
FMS	Fuel Management System
ISPI	International Society for Performance Improvement
TFP	Total Factor Productivity
NPI	National Productivity Institute
TQM	Total Quality Management

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.0 INTRODUCTION

The study examined strategies for improving productivity within the Central Transport Organization (CTO). This study was conducted in Gaborone at the Central Transport Organization (CTO) department in the Ministry of Works, Transport and Communication of Botswana. It was based on a probability sample of five CTO workshops selected through a simple random sample design, with additional units purposively chosen namely, the Gaborone Regional workshop, Police and Pool vehicle workshops, Sebele and Francistown Auto/Plant workshops. The sample was based on a target population of 110 study elements comprising Senior, middle workshop managers, including the general staff.

The CTO was established as a fully-fledged department in 1972 when the Public Works Department (PWD) was expanded to become the Ministry of Works Transport and Communication (MWTC). It was mandated to provide transport services to various government departments/ministries through its different divisions. The divisions are: Fleet, Mechanical, Supplies, Management Information Systems (MIS), Accounts and Administration. The Departments operate on a commercial basis and levies charges for services provided to all users. However, the organization has never been able to cope with the ever-growing demand for goods and services from its government sister agencies and other stakeholders. This challenge is increasingly compounded by a fast-growing economy, increased social activities and the HIV/AIDS epidemic.

All these issues have created a need for the CTO to improve quality and productivity of its services to meet these customer demands. To achieve this end, the management of the organization will have to make a set of informed choices on strategies and measurement techniques to monitor and improve productivity levels.

To measure productivity, an approach based on capital, labour productivity and human resource skill and capacity will be employed. Consequently, efficient and effective performance will be measured by, among others, the existence and the level of implementation of Performance Management Systems, a Performance Based Reward System, and Work Improvement Teams.

Therefore, the methodology adopted will be comprehensively qualitative and analytically descriptive. In this case, both primary and secondary sources of data were employed. Structured data collection instruments were used to gauge perceptions on availability and accessibility of resources to support technical and management processes in their pursuit for excellent performance.

The Republic Of Singapore has been acknowledged worldwide for the successful implementation of productivity initiatives. In this paper there will be substantial reference to the models used in Singapore as a learning process and sharing of ideas from best practice.

1.1 BACKGROUND TO THE STUDY

The major policy objective of any country is to produce enough food and services for its people. Productivity provides the means to achieve this objective. In this way, productivity represents the efficiency and effectiveness with which the nation's labour and capital are used. According to Botswana National Productivity Centre (BNPC) (2003), productivity can be regarded as the rate of value added from any productive industrial activity. Hence productivity growth provides the means for sustainable economic growth and increases the standard of living. Thus a good productivity measure should be able to provide a full and precise illustration of overall economic and institutional efficiency and effectiveness.

In the Third World countries, economic growth is derived from augmenting factor inputs used, as has been happening in Botswana. This has resulted in high growth rates enjoyed in the 1970s and 1980s. But as the economy grew, it increasingly becomes a daunting task to increase output by making additional factor inputs. At this point it becomes necessary to use scarce resources efficiently and effectively in order to achieve more output by using constant amounts of inputs. Hence inspire a Total Factor Productivity (TFP)-led growth.

For the most of the past decade, the government of Botswana has always desired to attain an innovative, competitive and productive status in the global market by developing proactive policies and standards. Therefore the need to improve productivity has since been at the epicentre of these development policies, standards and global competitive edge. The government of Botswana, in recognition of these issues, has systematically set forth a rollout performance improvement initiative to direct and inculcate a sense of competitiveness and productivity within the Civil Service, including the CTO organisation.

According to the CTO Strategic Plan (2003/9), the daunting task for the entire government and the CTO in particular is the inadequate improvement of the service delivery, inefficiency and lack of improved productivity. The PMS deliverables of the Ministries Strategic and operational Plans have been introduced as a guide for performance; hence these may serve as a vehicle monitoring and improving performance of the organisation against its strategic objectives and goals. In addition, a set of important questions might be addressed to assist in determining the scope and the profundity of the management resource and capacity within a service-oriented organisation like the CTO.

What are the crucial factors that will stimulate and sustain productivity for the CTO? What are the strategies available to improve its performance and excellence? What management and operational style should be incorporated to bring about the desired level of efficiency and effectiveness? What method of service delivery will ensure individual accountability and productivity?

These questions are central and crucial for the proper comprehension of the process and paradigm of productivity theory, practice and improvement strategies. These questions are relevant to a service delivery institution like the CTO. According to the BNPC Annual Report (2001/02), the success of the implementation of the productivity strategies will depend on a number of key factors involved in service delivery, including labour, capital and value-adding human resource element. The report adds that the basis for improved service delivery will also derive from the requisite management dynamics and paradigm

shift in the organisational transformation that a service strategy necessarily entails. The report further argues that emphasis should be on regular monitoring and evaluation of processes and deliveries. Through regular reviews, departments should be able to measure performance against targets.

According to Nengwenkhulu (2002), it is not enough to concentrate on the ratio of output to any one input as an indicator of changes in performance. Even the fundamental two-factor theory of production indicated that such changes happen either through substitution between capital and labour or through the development of new input-output relationships. Therefore, he argues that an analysis of productivity has to take cognisance of the existing interrelationships of all factor inputs. He further adds that this cannot occur within a rigid framework of predetermined production function of the form $Q = f(K, L)$,

Where Q means quantity

K means capital

And L means labour,

in which the co-efficient of K and L are fixed by specification.

1.2 IMPORTANCE OF THE STUDY

Botswana is one of the African countries where the level of service delivery is deemed low and suggests that a lot has to be done to improve the situation. Major parastatals have been heavily criticized by the private sector for inefficiencies in executing their duties.

Most companies have expressed their frustrations at dealing with governmental organisation due to:

- Delayed response
- Little or no feed back
- Poor quality of work done
- The attitude of the assisting staff members, leading to morale and motivation issues
- Poor service level and response time

The Botswana Government has introduced initiatives across all organisations that were aimed at improving the scenario. These included:

- The Botswana National Productivity Centre: A productivity resource centre that was set up to enhance productivity initiatives and make Batswana aware of all productivity issues,
- Performance Management Systems approach: this involved setting teams with specific deliverables and how they would attempt to measure and improve productivity

It is crucial that all these government's effort are well managed in order to ensure a better service delivery to other departments and to the nation at large.

It is in this context that I believe a close study of one of governments department will give the reader a fair view of the problems and limitations of the working systems in Botswana.

The CTO department has been chosen since its one of the busiest governmental organisations and it will serve as a good sample.

1.3 OBJECTIVES OF THE CENTRAL TRANSPORT ORGANIZATION (CTO) AND ITS OPERATIONS

The major objectives of CTO are summarized as follows:

- To deliver a reliable and sustainable transport services to Government Ministries and Departments
- To deliver excellent quality of vehicle maintenance and repair service
- To deliver maintenance and repair services with minimum impact on the environment
- To continuously improve and implement an efficient and effective work performance structure
- To improve and maintain higher customer satisfaction levels at all times

1.4 OPERATIONS OF THE CTO

CTO, as an organisation, has been divided into individual divisions. Each department is led by a divisional head that is responsible for the overall operations and is the owner for the required activities and deliverables.

Six Divisions are responsible for handling the major operations of the organisation:

- The Fleet Division is responsible for procurement and allocation of vehicles to all Government Departments, running of vehicles pools at all stations, disposal of all boarded vehicles, plant and machinery through public auction, investigation of accidents of government vehicles and recommending remedial action. In addition, the Division operates a charging system and is engaged in assisting departments to optimise their fleet utilization by carrying out annual reviews of their fleet establishment.
- The Mechanical Division is responsible for servicing, repairing and maintaining all government vehicles and plant. It is also mandated to develop project infrastructure and assist the Fleet and Supplies divisions with technical and expert inputs.
- The role of the Supplies Division is to acquire, store, distribute and dispose motor vehicle spare parts, petroleum oils, and lubricants and other items. The division is currently undertaking various projects such as dead stock, fuel management and inventory reduction.
- MIS Division is responsible for the computerisation of specific activities related to CTO operations. This involves procurement and disposal of all computing equipment, development of computerized systems, and training of users, provision of user support and liaising with service providers. Currently the division mans a computerized Fuel Management System (FMS), which will feed fuel consumption to the User Charging System (UCS)

- The Accounts Division has an overall mandate to provide efficient and professional service to CTO and other departments and the employees in matters pertaining to finance and accounts functions.
- The Administration Division plays an equally important role in providing coordination of administrative activities between divisions, Ministry of Works and other sister departments.

1.5 STATEMENT OF THE PROBLEM

The CTO is unable to render an effective and efficient service to its clients namely government sister departments, Ministries and other stakeholders.

1.6 THE HYPOTHESES OF THE STUDY

The researcher strongly believes that lack of sound and effective managerial skills; lack of well-trained technicians at the workshop floor level and their education may have a direct link to assumed low levels of performance. As a result, there is a suspicion that available MIS and information and technology may not be fully utilised to improve productivity efforts.

1.6.1 Problems Identified

1.6.1.1 Performance Systems

The Performance system is not fully operational. Even though there are efforts by the central government to encourage the use of PMS in different departments, there is little or no evidence to this regards at CTO. The recommended system from the government is not being followed here.

1.6.1.2 Work Plan

There is a lack of planning to improve service delivery. The top-bottom planning is not fully executed and therefore the process is not completed, especially at lower levels.

1.6.1.3 Involvement In Decision Making

There is insufficient involvement of middle managers in key decision. Most decision come finalised from the executive and usually with little or no input m mid level management. Therefore some decision may be out of context with the operations of the organisation

1.6.1.4 Training And Manpower Development

Training and manpower development plans on both technical and administration staff are well coordinated

1.6.1.5 Quality Leadership

There is a lack of quality and efficient skills in leadership and management.

1.6.1.6 Performance Pay Structure

The absence of pay structure that is directly related to performance has been identified as one of the limitations towards full attainment of high productivity.

1.6.1.7 Culture

There is a lack of management techniques and strategies to influence positive and conducive work culture and environment.

1.7 RESEARCH QUESTIONS

In an effort to establish the most variable strategies of increasing productivity in service delivery at the CTO, this study will focus itself on the following hypotheses:

- 6.1 There is a lack of participation in decision-making at middle management level
- 6.2 There is a lack of motivation at floor workers level
- 6.3 Workshop workers are poorly paid
- 6.4 There is a lack of bonus structure based on the rate of production
- 6.5 There is a lack of a set of assumptions about productivity improvement at management level

1.8 OBJECTIVES OF THE STUDY

The main objective of the study is to identify and establish productivity strategies, with a view to improving CTO service delivery systems

Specific Objectives are given as follows:

- i. Identify productivity needs for the CTO
- ii. Identify productivity strategies available to the CTO
- iii. Reveal perceptions regarding the CTO productivity with special stress on government sister agencies and other stakeholders (e.g. members of the public)
- iv. Identify factors affecting productivity in the CTO
- v. Measure perception and understanding of productivity concept among the CTO Senior Managers, Workshop Managers and other employees

1.9 LIMITATIONS OF THE STUDY

The researcher confined his study to work related issues only. Further expansion on the work culture in Botswana, the background of the interviewee, other socio-economic factors were not considered in the exercise. These may have an impact on the level of productivity in the workplace, but then they were not filtered through in this study due to lack of resources.

In Chapter Two that follows, we will cover in detail the literature on productivity and all related concepts.

CHAPTER TWO

LITERATURE REVIEW

2.0 PRODUCTIVITY

The definition of productivity has taken on different meanings by different school of thought, depending on the objective of analysis and the purpose of an activity. However, there is no one-size-fits-all definition of productivity. The Botswana National Productivity Centre (2004) defines productivity as an experience characterized by efficient and effective delivery of goods and services to satisfy human needs. Proceedings of the Seminar on the Management and Improvement of Productivity within the SADC regime, defined productivity as, "a measure of output produced by human labour aided by factor inputs such as capital, land and technology".

Kudar (1999) defines productivity as the ratio of output to inputs. He adds that productivity is not merely a synonym for production efficiency. Once you reach 100 percent, you cannot improve efficiency. The same condition does not hold for productivity. Productivity he argues can always be improved because the relationship between output and input can always be improved. In addition, Kudar says that "Productivity is the efficient and effective management of all resource flows across the boundary of the firm during a set time".

Ramsay (2001) further defines productivity as "optimised utilisation of all resources, investigation into the best known resources and generating new resources, through creative thinking, research and development and by use of all possible improvement techniques, method and approaches for the production and distribution of quality of goods and services"

It is clear that there is minimal consensus in relation to what productivity means within different scenarios and circumstances. Management has always been unclear regarding what should be included as output and input for productivity analysis. In service oriented organizations, as well as government agencies the concept of productivity is always vaguely understood. However, Kudar insists that productivity is management's way of responding to the demand for quality outputs sought by customers. He adds that management's challenge is to find better ways of blending the various resources available to achieve quality outputs demanded and therefore achieve a competitive edge in the business. In this way, Kudar believes that this will enhance the changes of future economic survival by attracting more resources to expand and grow.

According to the BNPC (2001), Total Factor Productivity (TFP) is a joint measurement of productivity trends of both capital and labour at the same time. The report states that TFP captures the effects of qualitative improvements that allow outputs to increase without any additional inputs. It demonstrates the efficiency and effectiveness with which all factors of production – labour and capital and intermediate inputs – are jointly used to produce outputs, as opposed to only showing the interaction between the outputs and one of the inputs being used. Thus productivity is mainly a measure of the effect of improvements in the quality of inputs and how they are used to make smarter and better use of presently existing resources. In this way, the report asserts that productivity reflects, "the combined

effects of technical progress, improvements in the workforce, improvements in management practices and economies of scale.”

2.1 APPROACHES TO MEASURING PRODUCTIVITY

2.1.1 Productivity Measure

This report focuses on the comprehensive productivity measure known as total factor productivity (TFP). This measure attempts to include all outputs and all inputs used in the production process. It gives a more accurate picture of performance than partial productivity measures such as labour productivity. A TFP index is generally defined as the ratio of an index of output growth divided by an index of input growth. Growth rates for individual outputs and inputs are weighed together using revenue and cost shares, respectively. Changes in the TFP index tell us how the amount of total output that can be produced from a unit of total input has changed over time.

Productivity measurement has long been of interest to economist. Along with increases in factor endowments and changes in the terms of trade, productivity improvement (the change in the amount of output per unit of input) is a major determinant of economic growth and national welfare.

There are several different approaches to measuring productivity. At the most basic level, productivity change is often approximated by changes in labour productivity (output per worker or per hour worked) because the requisite information is usually readily available. However, relying on labour productivity measures can produce misleading results as other inputs such as capital may be being substituted for labour. If this is happening, observed labour productivity will be increasing rapidly but when all inputs are taken into account, overall productivity will be increasing far less rapidly and, in the extreme case, may even be going backwards. To overcome this deficiency, it is necessary to look at the quantity of all outputs produced relative to the quantity of all inputs used.

This comprehensive productivity measure is known as total factor productivity (TFP) and should ideally include not just labour and capital inputs but also land, natural resource, inventory and all other inputs. Failure to include all inputs can also lead to biased result as the economy may in effect appear to be getting a “free lunch” by excluding the increased use of certain inputs. Most productivity studies tend to concentrate on labour and capital inputs and some analysts recognise the incompleteness of their input recovery by referring to the resulting measures as “multifactor” rather than “total factor” productivity measure.

The concept of total factor productivity was introduced into the economics literature by Tinbergen (1942) and Stiger (1947). A much-cited 1957 paper by Solow provides a useful frame of reference for the main empirical approaches to measuring TFP. The estimates of productivity provides in Solow’s paper are computed as a residual: the residual that results from separately evaluation the contributions of specified input factors to output growth and then subtracting these measured contributions from the total growth of output. The resulting residual difference is referred to sometimes as “the Solow residual”

The growth accounting definition of TFP focused the attention of economists on trying to explain the reasons why output generally grows faster than measured inputs. This methodology can be used to produce a balance sheet showing the contributions of each input factor to economic growth. The production function is the conceptual link between growth accounting and some of the other approaches to productivity measurement. One of these is the measurement of productivity using estimates coefficients from production, cost or other related producer behavioural equations. This is the econometric approach. TFP can also be measured as a ratio of output and input quantity indexes in what is known as the index number approach to productivity measurement.

2.2 The Slow Growth Accounting Approach

Solow (1957) represents the production function as

$$(1) \quad Q = F(K, L; t).$$

In this specification is an output quantity aggregate (usually taken to be real gross domestic product in the national accounting framework), K and L are aggregate measures for the capital and labour inputs to the production process, and t denotes time. Solow states explicitly that the variable t 'for time' appears in F 'to allow for technical change'. Having introduced t in this way, he goes on to explain.

"I am using the phrase 'technical change' as a short-hand expression for any kind of shift in the production function. Thus slowdowns, speed-ups, improvements in the education of the labor force, and all sorts of things will appear as 'technical change.'"

This definition of technical change in no way singles out the adoption of new production technologies or management methods. Nevertheless, Solow's methodology and findings were framed so that they marshalled the expertise of microeconomic theorists and experts in national income accounting for the stated purpose of measuring and analysing US economic efficiency and productivity: two vital concerns of business and political leaders. In short, Solow succeeded in harnessing the power of economic theory and measurement in the service of an urgent national cause that many view as closely linked to technological progress, economic growth, and competitive business success.

One basic way of defining productivity is "output divided by input" (O/I). If Company X uses 100 units of input to produce 100 units of output; their productivity ratio is 1. To interpret this formula in economic terms, one can substitute dollars for the input and output units, i.e., \$100 of output divided by \$ 100 of input produces the same productivity ratio of 1. Using money as a measure of value makes it possible to compare dissimilar inputs and outputs.

Productivity change –the measure of productivity this paper address-refers to the change in the productivity ratio over time. If in the above example the ratio of outputs was measured at a later date and was found to be \$200/\$100, the new ratio would be 2. The change in productivity would be $(2-1)/1$ or 100 percent. A problem with this formula is that if Company X achieved this improvement in productivity and responded by cutting the price of its output in half, the measured productivity change would be zero even though there was a real improvement.

Productivity is defined by (O/I), requires that the units be measured in some manner. The early applications of productivity measurement address simple, repetitive jobs of short duration. Several measurement techniques were developed for this purpose, including the well-known time-motion and stopwatch studies. Such techniques were to measure frequent actions that are easily observed and counted.

As long as the workforce consisted largely of manufacturing jobs, these techniques were adequate. The early measurement techniques, however, are not well suited to "white-collar" work because such work is not repetitive or simple. White-collar workers become a large fraction of the workforce, and their number will continue to grow. Therefore, the productivity of an increasingly large part of the workforce cannot be measured by traditional methods.

Although it has only recently been given a specific name, knowledge work has been around for centuries. Throughout history there have been managers who were paid not for what they produced, but for what others produced. This is an example of knowledge work in a very basic form.

Today the variety of knowledge workers ranges from managers to analysts to programmers to lawyers. The common denominator of these professions is their use of knowledge in their work.

2.3 PRODUCTIVITY THROUGH TRAINING

Human capital, knowledge, and skills are increasingly important competitive assets within firms. Employee training sponsored by the firm is therefore perceived as one of the most important measures to gain and keep productivity. Especially in highly developed countries' economy that is based on a relatively high share of well-qualified employees who frequently work in flexible, complex and diversified quality production derives its main competitive advantages from human capital.

The positive impact of training on firm productivity in some organisations is not undisputed, however. Some employee training may not contribute to increases in productivity because it is used as a sorting device for employers in order to determine who is promoted or as a tool to increase incentives, motivation or to reduce turnover (de Koning, 1994). Several commentators argue that vocational and continuing training in developed countries provide employees with knowledge only temporarily needed, for example, if infrequent maintenance or re-organisation is necessary (Roth, 1997). This kind of training is primarily directed at increasing flexibility in emergency situations instead of continuous productivity increases. Therefore workers frequently have redundant cognitions and part of their skills is not used in daily work. Training may also just be a necessity when the workforce is not adequately qualified and organisations are forced to retain workers internally instead of facing high labour turnover costs and a shortage of skilled workers on the labour market. It will be shown that the empirical evidence in organisations on the productivity effects of training is not conclusive and has considerable gaps and therefore the issue is not clear a-priori and still open for empirical evaluation.

A growing number of pages seeks to measure the effect of employer-provided training on productivity using representative firm-level data from several sectors in the economy. Usually a positive, (and sometimes significant) effect of training on productivity is found in these studies. The measurement of productivity effects of training may suffer primarily from two biases. First, firms that offer training may also be structurally more productive due to time invariant unobserved factors such as management quality, the exposition to technical change, a more active personnel department or better management – employee relations. This is called unobserved heterogeneity. Second, transitory shocks like the introduction of a new technology or a deterioration of market conditions could change productivity and induce changes in training efforts at the same time.

Several papers estimate the productivity impact of training in every parsimonious specifications. This paper demonstrates that the inclusion of a broad variety of additional firm characteristics and of especially of different personnel measures improves the estimation and reduces the measured productivity impact. Estimations excluding these variables therefore may suffer from omitted variable bias and the training measure may pick up productivity effects of other variables that are like some personnel measures frequently closely correlated with training (Wolf and Zwick, 2002).

2.4 TOTAL-FACTOR-PRODUCTIVITY. THEORY AND PRACTICE

2.4.1 Definition Of TFP

According to a report on the Asian Economic Survey 1995 in the Asian Wall Street Journal (9 Oct 1995):

“Total factor productivity is a measure of economy’s overall efficiency, though not what most people think of as “productivity “.

2.4.2 The Concept

A good starting point for understanding TFP is the labour productivity measure. As mentioned in the previous section, labour productivity does not depend only on the contribution of workers. It is the end result of two major factors: first, the amount of capital employed per worker; and second, TFP

$$\text{Labour productivity} = \frac{\text{Output}}{\text{Labour}} = \frac{\text{Capital}}{\text{Labour}} + \text{TFP}$$

What exactly is TFP? It is defined as the output generated per unit of combined inputs, viz, labour, capital (including land) and intermediate inputs such as materials, energy and services. Usually, only inputs of labour and capital are considered. This is particularly so as the economy level, as labour and capital are the two basic resources and because of data limitations.

$$\text{TFP} = \frac{\text{Output}}{\text{Labour} + \text{capital}}$$

Compared to equation 1.2, capital is a new element in the denominator. What it means is that while labour productivity is a partial productivity measure, TFP is a total productivity measure.

As most measures of TFP take into account only labour and capital, the term “multifactor productivity (MFP)” is sometimes preferred by those concerned with measurement. To them, TFP suggests that all inputs are taken into account in its computation – that is, the denominator of the TFP ratio includes all inputs. As MFP does not give such a connotation, it is considered more accurate. Nevertheless, TFP continues to be used more widely.

TFP reflects the efficiency and effectiveness with which factors of production – labour and capital (and intermediate inputs) – are jointly used to produce the output of goods and services. As opposed to *quantitative* increases in the amount of capital investments per worker, in equation 1.3, TFP captures the effects of qualitative improvements that allow output to increase without any use of additional inputs. In short, it means making smarter and better use of the resources available.

2.4.3 Practical Examples of TFP

To illustrate what TFP is all about, take the example of an automobile plant in the United States (US). A study found that the two shifts in the same plant had different productivity levels. Although the same machinery and in the 1960's, much of the work done on TFP was empirical in nature. The notable contributors were Edward Denison, John Kendrick and Dale Jorgenson. In 1961, Kendrick introduced the neutral term of TFP. This term was subsequently accepted by many economists to capture all the qualitative improvements in inputs, not just technological and advancement in the narrow sense. Since then, economists have recognised that TFP is the single most important factor driving the economic growth of countries as they reach a developed stage.

2.4.4 Recent Thinking – Endogenous Growth Theory

Another important development that impacts the understanding of TFP occurred in the mid-1980s. A group of theorists, led by Paul Romer, questioned the explanation that long-run growth was exogenously driven. Hence, they constructed what is called an endogenous growth model where the key factors of growth were determined within the system, model where the key factors of growth were determined within the system, rather than exogenously by variables such as unexplained technological progress.

A key characteristic of endogenous growth models is that diminishing returns need not necessarily occur from employing more capital. Knowledge creation is seen as a result of investments, and this leads to higher TFP. Moreover, the learning by one producer may raise the TFP of others through a process of spillovers of knowledge. An important notion is that the level of technology can be advanced by purposeful activity, such as R&D expenditures. Hence, the models have possible implications on the management of TFP and desirable government policy.

2.4.5 Why TFP Matters

2.4.5.1 Importance of Productivity

The need to increase labour productivity is now well known. Almost every book on the subject devotes a section to the various reasons why productivity should be raised and its benefits. In Singapore, the importance of labour productivity has been widely promoted since the launch of the Productivity Movement in 1981.

Because TFP is a key component of labour productivity, an increase in the former would lead to an increase in the latter. Hence, both matter for similar reasons-the need for improving TFP arises from the same reasons as increasing labour productivity....

At the national level, it is generally agreed that the main source of a rising standard of living is productivity growth. However, the magnitude of its contribution is not widely realised.

2.4.5.2 The Extraordinary Contribution of Productivity Growth

Productivity growth provides the most obvious benefit – it contributes to the general standard of living of a society. This benefit of productivity growth is so self-evident and well known but what is not widely known is just how much productivity growth has contributed to living standards. Indeed, even when the facts are described, the magnitude of the changes is so great that they resist comprehension.

Perhaps some sense of the immensity of the productivity achievement of the past 150 years is imparted by contrast with the preceding centuries. Everything we know about standards of living in ancient Rome suggest that they were not lower, and in many respects may have been higher, than in 18th century England.

It is true that by the middle of the 18th century and even during the Middle Ages there had been substantial technology changes in the workplace and elsewhere. Yet none of these led to rates of productivity growth anywhere comparable to those of the 19th and 20th centuries. From the evidence available, it seems that Britain's average growth rate of labour productivity could not have been materially larger than 0.1% over the 10 centuries since 700 AD. This figure contrasts dramatically with an average annual growth rate well in excess of 2% per annum for the world's leading industrial countries for the period 1870 to 1979.

The importance of productivity can be appreciated better by looking at the penalty for being a productivity laggard. As the prices of tradeable inputs such as raw materials, fuel and capital are dictated by the world markets, they would be about the same for all countries. Because of this, competition would put pressure on the productivity laggards to lower their wages and hence their purchasing power relative to those in other countries. In short, when a country persistently lags behind others in productivity growth, it has no choice but to compete in the international market largely by providing cheap labour – that is, by offering low living standards as a chief attraction for investors and as the strategy to sell exports at a low price.

Aside from advertising such problems, productivity growth finances the investments needed to achieve widely accepted social goals and improvements in the quality of life. Gains from higher productivity pay for better public education, housing and health care, without a reduction in private disposable incomes.

2.4.5.3 Contribution of TFP to the Economy

As a component of labour productivity, TFP plays a vital role in determining the economic success of a nation. But why the recent emphasis on the importance of TFP in Singapore? The key reason is that TFP becomes the major source of competitiveness and growth as a country develops.

2.4.5.4 Imperative for Competitiveness

The OECD has defined national competitiveness as “ The degree to which a country can under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term”.

2.4.5.5 Role Model: How did Singapore win the productivity war

Singapore: a *small*, open economy. *Small* in terms of land size as well as population, Singapore naturally has a small domestic market. Singapore is also small in terms of resources - the country virtually possesses no natural resources. Given these limitations, it is not difficult to understand why imports and exports are vital to Singapore. Thus the term open – Singapore engages heavily in and is highly dependent on international trade. The world market is where it buys its resources and sells its products - Singapore has an international trade to GDP ratio of three. Therefore its economy, compared to those of larger countries, has all the more reason to remain competitive.

A competitive Singapore means that it will continue to attract foreign investments, sustain a high level of exports and enjoy high economic growth. Internationally, it will be recognised as a significant economic player.

Since the early 1980s, the issue of international competitiveness has gained widespread prominence and become a top of policy makers. The reason is that more countries, and in greater magnitude, are engaging in international trade. There is greater awareness of the importance of interdependence among countries to achieve economic goals. This can be seen by the opening up of markets such as China and Indochina. Being competitive in the international arena is critical for economic growth especially for Singapore.

Maintaining competitiveness is made more challenging by the fact that it is relative. A country is not alone in the competitiveness race; its ranking depends on how fast others advance. Simply maintaining a steady improvement does not guarantee that a country can maintain its competitiveness, because its competitors may be making greater strides.

2.4.5.6 TFP: Key to Competitiveness

A country's competitiveness depends on the possession of factor inputs and the process in which the inputs are transformed. Internationalisation accelerates the competitiveness

process. The World Competitiveness Formula (see page 24), which forms the basis for assessing countries in The World Competitiveness Reports, captures these elements.

The first part of the formula comprises the competitive assets. The key link between the possession of natural assets and competitiveness is the transformation of the former into competitive assets. This is achieved through the education and skills upgrading and deepening of the workforce; development of higher – capability equipment and machines embodying new technology; and building of modern and efficient infrastructure to support economic activities.

The second part of the formula comprises the competitive process, which are quality, speed, customisation and service. The process of transforming assets into results is affected not only by management decisions and business actions at the company level, but also by the institutional mechanisms and policies at the national level.

When assets and processes are managed and transformed efficiently and effectively, TFP increases, and the end result is higher quality products and excellent services, and /or lower costs. Any nation that is able to produce goods and provide service at low costs and high quality will be competitive in international markets. This means that it will be able to sell its exports as well as generate greater demand for them. The end result is an increase in total output of goods and services, which is what economic growth is about.

The cause- and effect relationship is not unidirectional, running from TFP to competitiveness. Instead of a static relationship, there is in fact a dynamic feedback loop as greater competitiveness leads to an enlarge economic pie for distribution. The greater amount of wealth generated in the economy allows higher wages for workers and larger profits for companies. Profits can be re- invested in the form of more assets and better processes. The cumulative effect leads to even higher TFP growth which fuels the process that results in greater competitiveness.

2.5 COMPETITIVE DEVELOPMENT OF COUNTRIES

The experience of the developed countries shows that TFP improvement- as opposed to sheer physical expansion of the inputs used – becomes the major source of economic growth as an economy reaches a developed stage. This is reflected in Figure below, which presents the sources of economic growth. Improvements in TFP contributed close to half of economic growth in the developed countries compared to a third in the developing countries

Table 1 Economic Growth Vs TFP

Economy	Economic Growth (%)	Labour & capital	TFP (%)
Developed	5.4	51	49
Developing	6.3	69	31

Source Colleso, Michael (2000): Kaizen Strategies for Improving Team Performance: London, Prentice Hall Publications, pp20 –22

- Notes: 1. Developed - Average for 12 developed countries
 2. Developing – Average for 20 developing countries
 3. Periods covered span 1930 to 1980

According to results displayed in Table 1, a higher rate of economic growth correlates inversely with the percentage TFP. This means that a lower growth economy will achieve a higher TFP than a developed economy for the same effort of input. The same relationship applies to the labour and capital input.

Singapore is now in the third stage of economic growth. From the labour – driven and investment – driven phase of development, economy has moved into the innovation-driven.

Stages of Development

I	LABOUR – DRIVEN (1960s – 1970s)	Employment -----	GROWTH
II	INVESTMENTS – DRIVEN (1980s – Early 1990s)	Capital -----	GROWTH
III	INNOVATION DRIVEN	TFP -----	GROWTH

Singapore's economic growth in the past was due largely to labour and capital accumulation. In the 1960s and 1970s, economic growth in the nation was fuelled by sheer increases in the number of people employed. Labour-intensive industries were encouraged in order to address the high unemployment problem. In the late 1970s, Singapore started to face a tight labour market and rising wages. As a result, capital-intensive industries replaced the labour-intensive ones that had become less competitive. The economy moved from labour-driven to capital-driven growth.

Now, in the late 1990's, given that global competition for capital has become more intense, Singapore will find it more costly to continue increasing capital intensity. Furthermore, increases in physical capital which are not accomplished by other corresponding improvements lead to diminishing returns after a certain point. Economic growth must now be fuelled by TFP growth; it must be innovation-driven.

2.5.1 Singapore's TFP Performance

Singapore's TFP growth in the past was low. During the 1970's, the average annual TFP growth was negative, pulling down the country's overall (labour) productivity growth and economic growth. This improved to 1.9% during 1981 to 1995, contributing 40% to the productivity growth of 4.5%.

Now that Singapore is in innovation-driven phase of development, it is imperative that TFP growth is sustained at a robust rate. The target is an average annual TFP growth of 2%, so as to sustain productivity growth at 4% and thus achieve the targeted economic growth of 7%.

2.6. FACTORS INFLUENCING PRODUCTIVITY

2.6.1 Productivity and Business Objectives

Many people would define a business in terms of making profits, but such definition is too narrow. In a broader sense, the first valid business purpose is to create a customer (Drucker 1974). He says every business must satisfy its customers or it will fail.

It is the customer who determines what a business is. It is the customer alone whose willingness to pay for a good or service converts economic resources into wealth, things into goods. What the business thinks it produces is not of first importance – especially not to the future of the business and complicated, and costs a lot of money! But it isn't quality; it's incompetence. What the customer thinks he is buying, what he considers value, is decisive—it determines what a business is, what it produces, and whether it will prosper. And what the customer buys and considers value is never a product. It is always utility, that is, what a product or service does for him.

A business converts economic resources into something else. It may do so well or poorly. At this level, productivity is the balance between all production factors that will give the greatest return for the least effort. Productivity at the organizational level is considered separately from productivity at lower levels.

The customer buys utility, and productivity associates outputs with inputs. Productivity, at the organization level, may be considered a measure of how well the company satisfies the customer's utility. Therefore, productivity measurement shows how well a company is doing. This does, not, however, tell anything about *why* the company is performing the way it is. To discover why, productivity must first be examined at lower levels such as the work group, which are best suited for using productivity measures as an indication of change.

Knowledge work is the area that offers the greatest opportunities to increase productivity. In the past, the production line received a lot of attention because it was relatively easy to analyze and measure. On the other hand, management does not clearly understand what goes on in white-collar work areas, or how to match white-collar personnel needs to future business needs (Strassman, 1985; Shackney, 1989).

The production environment has been measured heavily and continues to dominate productivity efforts in spite of evidence that the returns on further refinements do not equal those possible in the white-collar environment.

2.6.2 Employee motivation in the workplace

The job of a manager in the workplace is to get things done through employees. To do this the manager should be able to motivate employees. But that's easier said than done! Motivation practice and theory are difficult subjects, touching on several disciplines. Human nature can be very simple, yet very complex too. An understanding and appreciation of this is a prerequisite to effective employee motivation in the workplace and therefore effective management and leadership.

Articles of motivation theory and practice concentrate of various theories regarding human nature in general and motivation in particular.

2.6.3 Motivation is the key to performance improvement

There is an old saying you can take a horse to the water but you cannot force it to drink; it will drink only if it's thirsty – so with people. They will do what they want to do or otherwise motivated to do. Whether it is to excel on the workshop floor or in the “Ivory tower” they must be motivated or driven to it, either by themselves or through external stimulus.

Are they born with the self-motivation or drive? Yes or no, they can be motivated, for motivation is a skill which can and must be learnt. This is essential for any business to survive and succeed.

Performance is considered to be a function of ability and motivation, thus:

- Job performance = f (ability) (motivation)

Nengwekulu (1996) asserts that the ability in turn depends on education, experience and training and its improvement is a slow and long process. On the other hand motivation can be improved quickly. There are many options and an uninitiated manager may not even know where to start. As a guideline, there are broadly seven strategies for motivation.

- Positive reinforcement / high expectations
- Effective discipline and punishment
- Treating people fairly
- Satisfying employees needs
- Setting work related goals
- Restructuring jobs
- Base reward on job performance

These are the basic strategies, through the mix in the final “recipe” will vary from workplace situation to situation. Essentially, there is a gap between an individual’s actual state and some desired state and the manager tries to reduce this gap.

Motivation is, in effect, a means to reduce and manipulate this gap. It is inducing others in a specific way towards goals specifically stated by the motivator. Naturally, these goals as also the motivation system must conform to the corporate policy of the organization. The motivational system must be tailored to the situation and to the organization. Pearson (1995).

Surprisingly, factors such as pay, benefits and working condition were given a low rating by both groups. So after all, and contrary to common belief, money is not the prime motivator. (Through this should not be regarding as a signal to reward employees poorly on unfairly.)

2.7 EMPLOYEE REWARDS

2.7.1 Introduction

The previous section dealt with motivation theory and practice. There is no doubt that motivation is the crux for good performance, but there is no clear cut answer to the question of how to motivate. The previous pages gave a glimpse of the answer through various theories and practices.

Money is a factor in motivating people and this section concentrates on this. Reward systems are discussed in general and later in specifics in terms of payment by results. Various schemes for financial motivation are also described.

2.7.2 The value of money

This is, perhaps, saying the obvious. But it still needs to be said, for a perusal of the previous section may give the impression to the contrary, at least judging from Maslow's concept. Refreshing as it is, if the theory was completely valid then, at least in affluent countries, economic incentives should have lost all their force. This, we know is not correct.

According to Peter Drucker (1974) there is no one shred of evidence for the alleged turning away from material rewards. Antimaterialism is a myth, no matter how much it is extolled. In fact, they are taken for granted that their denial may act as a de-motivator. "Economic incentives are becoming rights rather than rewards."

There is no doubt that we live in a money-motivated world. Any amount of human relations cannot compensate for a lack of monetary reward. If the reward is right, good human relations will give that extra zest to a team, motivating them to give of their best efforts. Insufficient monetary reward cannot be compensated by good human relations.

Even dedicated footballers do not think of playing for England, they merely pay "lip service" to it ; the financial rewards of playing for their clubs far exceed those received from playing from their country. Cricketers and rugby players no longer play at Wimbledon, the "Mecca" of lawn tennis, because the reward was not attractive.

It is no different in the industrial world. Strikers for better salary and rewards do still occur. All this despite the claim of psychologists that security is the prime need of a person, as indicated in the previous section. Has the sense of values changed with time? But we are not concerned here with the philosophical angle, but with hard facts of life in a commercial world.

Self-motivation can go only so far and it needs to be constantly reinforced by rewards. In particular, merit must be measured and rewarded regularly, if it is to be encouraged and sustained. The "gold banana" in Foxboro has its origin in just an ordinary banana which one of the pioneers could muster on the spur of the moment when he discovered extraordinary performance by one of the employees (see next section)

2.8 HOW MOTIVATION AFFECTS PRODUCTIVITY IN AN ORGANISATION

In general it is believed that people will be more productive if properly motivated. The criteria for Organizational Performance Excellence (OPE) as derived from the Botswana Excellence Model BEF (2004) has set out two major organizational factors namely Leadership and Business Criteria. The behaviour and actions of the executive team and all other leaders should inspire, support and promote a culture of performance excellence. In this way, they will add value to the processes of productivity by formulating, deploying, reviewing and turning policy and strategy into plans and actions

Through sound and cohesive marketing structures, the organization should be able to determine the needs, requirements and expectation to enhance relationships and establish satisfaction levels of customers and markets. These efforts could only be achieved if management has a strategy to release the full potential of its people through incentives, performance reward system and by providing a conducive, work environment. In addition the organization will need to manage and use its resources and information effectively and efficiently in order to add value to the production of its services, and above all perform competitively within national, regional and global markets. Furthermore, the organization needs to continuously engage itself in performance improvements of management, by identifying, reviewing and equally improving its processes.

Bharadwaj (1999) draws our attention to three basic instruments available to management to achieve productivity improvements. These involve human resources, capital/technology and measurement. He argues that people are productivity agents and value adding because it is people who will actually perform tasks and make decisions that will bring about productivity improvements through the system. At the same time technology will provide better ways of handling tasks, reducing the amounts of factor inputs and achieve more outputs of a better quality. Measurement is an important component in the production dynamics, because it enables management to systematically monitor and evaluate changes in the mix of outputs and inputs.

In the context of a government service-oriented agency, like the CTO, productivity could be assumed to be achieved if a service has been provided efficiently, meaning timely, effectively implying constant cost or reduced cost of service delivery and high quality in terms of set standards. Precisely, this is how the government management would like to understand and acknowledge the concept of productivity as heralded by BNPC.

According to International Society for Performance Improvement (ISPI), a Cause Analysis is "done to determine what impact the work environment (information, resources and incentives) and the people (motives, individual capacity and skills) are having on performance". In using Cause Analysis, the performance analyst answers a basic question with a finite set of answers: "for these gaps in performance, which cause or causes explain why gaps exists?" ISPI as always advocated Cause Analysis as a step in their respective human performance technology improvement methodologies. However, Langdon (2000) argues that Cause Analysis is imprecise and does not necessarily take into account the change in performance; rather it encourages jumping to solutions while presenting itself as a scientific method.

According to Phetogo Report (2000), the human element should be at the root of any productivity study. The report adds that the quality of the workforce is a comprehensive and all-encompassing framework for analysing diverse classes of workers and managers. The workforce performance should cover the relative productivity of the workforce and take cognisance of all available resources in the workplace and the nature and quality of management as well as government support for manpower development and training. The report further highlights some important workforce characteristics in productivity analysis, such as work ethics, as demonstrated in the level of employee industriousness and propensity towards work. Workforce organisation and practices, such as the degree of worker militancy, active participation in decision making, the proclivity to use collective bargaining and the subsequent adherence to consensus accruing therefrom are among important considerations in productivity studies.

The International Labour Organisation's (ILO) World Employment Report 1999 reveals that good industrial labour relations may be critical factor in improving productivity. Conversely, conflicts with employees over rights and other concerns may affect production. The report believes that employees' active participation in decision-making is crucial for institutional creativity and performance. The role of labour-management relations remains a universally topical and relevant issue in today's organizational management and productivity. Understandably, the core discussion has been that labour-management relations that are based on a "co-operative model and embrace the use of collective bargaining provide conditions that are conducive to improving productivity." Globally, many enterprise studies seem to give credence to this conclusion. In fact there is an indication of increased attention being given to productivity improvement work and the role-played by the organized employee pressure groups and partners in change processes.

According to the NPI (1995), organisations experiencing lower productivity levels at best become, "stale and less viable," this is however, a management posture indicative of a shortfall due to a failure to make informed and relevant decision or an omission to take appropriate market research and therefore fail to identify and understand customer needs and requirements. The report further asserts that such failures will subsequently lead to serious under-utilization of human resources. This will in turn result in workforce insecurity in the face of retrenchment threats. Obviously, an insecure staff will sooner become de-motivated. Therefore de-motivated employees will tend to perform less productively. It argues that productivity is improved through people, through their participation, through improved working environment, through more effective methods and tools to perform tasks and through a better understanding of employee-task allocations within the organisation. In the report, human resources are deemed the most critical success factor and that their performance could be accelerated through providing them with safe working conditions, getting to know them, keeping them abreast of the organisational changes and training them to be productive-conscious.

According to Pearson (1995), a key idea of productivity is that of improvement in efficiency and effectiveness in order to achieve beyond expectations. Senior management involvement, leadership and focus are critical success factors for the development and implementation of a productive workforce. Pearson also indicates that for management to fully carry out a progressive productive program, it has to include the following:

- Positive fault correction; practical corrective adaptive and preventive actions

- A root cause assessment system to identify the real causes for institutional foibles and identify under-performing employees for improvement
- Relevant quantitative measurement techniques for feedback reporting and assessment of performance trends
- A way of quantifying clientele needs and requirement and translating these into achievable objectives and goals
- Utilizing, developing and empowering employees; treating these resource as capital
- Developing plans and cherishing constant improvement
- Developing and undertaking efficient project and process management

There is now a growing interest in the use of performance measurement in the government of Botswana (BNPC, 2003). Appraisal performance in government is necessary because it serves as an audit for the organisation concerning the productivity of each worker (Masood, 1993). Such a management control system, based on key job design system components that define what the job is, enables the administrator to specify what the worker has done, is doing and must do at a certain productivity level. However, a performance appraisal in government organisations is very complex because of their nature. They provide intangible services and as a result, the assessment process might be more subjective. Once the validity, legitimacy and functionality of these measures has been established, the system could effectively modify dysfunctional work behaviour, communicate to workers management expectation on the quality and quantity of their work, assess their future and recommend appropriate manpower training and development in order to achieve even higher productivity levels.

2.9 MOTIVATION FOR HIGHER PRODUCTIVITY

The improvement of productivity of a system largely depends upon the sustained motivation of people in the enterprise to achieve identified goals and work in symphony towards obtaining desired results. The participation process in managing an enterprise, while it has been widely discussed over a few decades, does not seem to have taken roots as an established process of management. The formal management education process in many instances has shown inadequacy in developing the right attitudes. And "I know it all" syndrome especially in developing countries inhibits the participation process. Of course it must be appreciated that the cultural ethos of a society plays an important part; some cultures being more difficult to deal with than others. With either naturally developed "smartness" or with formal management education, many managers in advantageous positions of authority are able to make impressive presentations and are tempted to use such skills as an alternative for action and achievement of goals. Many managers have capability to verbalize the latest from Harvard, Sydney, Manila, and develop unstained capacities to advise, "What others should do". Some managers may even tend to criticize others while making quick and witty remarks, believing it to be the index of smartness. In fairness one should realize that it is not only the formally qualified manager who may engage in such unproductiveness, but others may also do so. It is rather disappointing when a formally qualified executive adopts such attitudes, as they are

supposed to have been trained in being productive. To make policies that lead to productivity, one should have the ability to see what is not visible to the naked eye. These may not be formally and adequately taught in its full perspective in management and kindred schools, such as participative management, harnessing the full potential of human resources and the like.

An important part of the participative process in the management of an enterprise is the building of an environment of trust. The building blocks in this facet of human endeavour have to be laid step by step. In spite of all the will on the part of management to establish an environment of trust, the very process of establishing this, if unduly hastened or improperly pursued, the efforts could fail. The failings of the long past will have to give way to the foundations of future understanding and the establishment of trust. One mistake could undo a great deal of affords should emerge a situation which permits people to express themselves without fear, but to do so with mutual respect. Thus the process should continue and the stages of introduction a participation plan worked out. The benefits of such a process may then be realized, as experienced by organizations.

In today's experience, the importance of worker participation programme has been seen by many companies. Employee ownership of companies without participation does not seem to fully help in the improvement of productivity and competitive advantage. The Economist reports-"Most studies of worker owned companies carried out during the past decade agree on one key point. By itself, employee ownership-regardless of the size of the stake-confers very little competitive advantage. But by combining employee ownership with 'worker participation' the firms tend to pull ahead of their rivals. (Worker participation, another much misused phrase, means involving all employees in corporate change: it thus stretches from putting workers on the Board, to delegating power to delegating power to teams on the factory floor). On average, various studies have shown that companies which combine employee ownership with participation seem to grow about ten percent faster than they did before the buy out. A Report by former labour secretary John Dunlop emphasizes that worker participation programs are 'fragile and difficult to sustain'. This may help explain why so few employee owned companies have attempted to implement them. Part of the problem is getting workers and managers to communicate with each other. Only a handful of big American employee owned firms have non-management employees sitting on their Board. But offering workers seats on the Board is not by itself enough. Management and employees must also agree on formal mechanisms to bring about other forms of worker participation such as extra training, quality circles and employee advisory committees.

Many managers and consultants world-wide have contributed in the area of motivation for higher productivity. Their contributions are considerable, and space limitations in a project of this size would make it rather difficult to deal with them at length. Among consultants notable in the area of motivation for enhanced productivity is Tor Dahl and Associates in USA AND The Performance Group in Norway. These dynamic organizations headquartered in Minneapolis and Oslo respectively and operating in many countries world-wide are noted for their work with senior managers faced with significant organizational challenges. Their work entails planning and implementing major changes such as new strategies, redesigned organizational structures, business process improvement, new information structures, and the creation of "high involvement" workplaces - all focused towards better productivity through people.

The following outlines their Philosophy and approach –

“Peak performance is often beautifully simple. There is no waste of motion or energy, but continuity that ensures no waiting or down time. There is knowledge and focus, and an elegance that transcends and transforms. Let us illustrate some key aspects of peak performance and the promise that it holds for individuals, organizations and countries.

2.10 HOW DO YOU IMPROVE YOUR OWN PERFORMANCE

Continuous performance improvement occurs at both the corporate and individual levels. What would you say if someone told you that you could improve your basic performance level by 30 percent? By 60% or more? The process described here reveals a simple, straightforward way to reach significantly higher levels of performance.

Performance improvement begins when individuals are able to make knowledgeable choices of what they do. That is, they are able to do the right things the first time and all the time. They are aided in making these choices when they know certain principles that distinguish productive people from non-productive people. By studying your performance and applying these simple principles, you can average performer or a superior performer. But, what explains the performance gap between the superior and the average performer? Most of insights that define this gap are in minds of the superior performers, and they are hard earned. They exist in form of anecdotes, stories, lessons learned and rules formulated. To have access to these, Tor Dahl and Associates and The Performance Group enter their minds with questions that reflect all or most of the dimensions that explain human performance.

Performance improvement happens when individuals are able to experience and benefit from the collective performance histories of many individuals. Among a group of say, 100 bright, reflective and experienced employees in organization, some 2000 – 3000 human years of performance history can easily be collected. When this experience is shared and absorbed, performance for the total group can increase dramatically.

Experience has shown that when individuals are exposed to this reservoir of information, their performance can easily improve by 30-60 percent , or more. Their approach starts with the assumption, well known to every manager, that the resources for accomplishing a given task are limited. New resources typically cannot be made available. Every employee has the potential to add value. Resources not yet fully utilized can increase overall performance substantially, and it becomes a matter of doing more with what you have.

2.11 PRODUCTIVITY AND QUALITY IN BUSINESS AND INDUSTRY – ITS BENEFITS

The complexities in dealing with the issues of enhanced productivity are due to both a variety of influencing factors within the enterprise as well as the enterprise's interaction external to it in the economic and social environment. For example, low remuneration invariably does not provide the motivation for higher productivity. Juxtaposed to this, paying higher wages and an inadequate concern for human progress may not adequately motivate people either. On the other hand even after paying above average remuneration, if an enterprise in the same business activity or in the near vicinity of its location,

enhances the fringe and others benefits, it could influence the motivation of the work force in the enterprise. Experience has shown that on many occasions solutions to productivity problems have been directed to deal with symptoms many a time only partially perceived rather than dealing with their root causes with a view to evolving a preventive strategy. Productivity improvement could be carried out even without the measurement of productivity. But to assess the benefits of any input to improve productivity of an enterprise, an appropriate and comprehensive measurement system is needed. The impact and benefits information technology should be taken full advantage of in developing productivity measurement systems. The use of simulation technology should be encouraged in scenario construction for planning productivity goals of the future and working out action plans to achieve such goals. Productivity measurement by itself is rather static and of little use, unless it is adopted for productivity improvement and to provide a continuous feed back for management decision making. It will then be dynamic in the management process. The process of Productivity Measurement is to qualify, monitor and control the results in relation to productivity goals and targets

2.11.1 Value Add Process

The productivity of an enterprise is a function of a number of factors and variables. In the operations of manufacturing or service organization, there is the value adding process. If the cost adding value is less than the value added, the enterprise makes a surplus or profit. On the other hand, if the value added is less than the cost value added, there is deficit or loss. In more simple terms, "profit" may be expressed as the difference between income and expenditure.

2.11.2 Input versus Output

Income depends upon the unit selling price and volume of goods/ services sold. Expenditure is the value of the resources used as input to produce the goods/services. Since managers of an enterprise responsible for operations have to deal effectively with transformation of the inputs into outputs and improve the performance of the organization, their decisions are pivotal to income (or revenue generation) and expenditures (or inputs) which affect surplus or profit.

Operations managers are primarily responsible for producing quality goods acceptable to the customer at the lowest unit cost, which should be less than the unit selling price. The higher this difference i. e. (unit selling price minus unit cost) the more marked is the profit or surplus in relation to a specific quantity produced. The unit selling price is a function of factors such as level of competition, demand, quality of product/service and the like. The unit cost, on other hand depends on factors such as quality and cost of input resources, human, material, utilities/services and productivity of the transformation process in converting the input resources into the finished products/ services. Productivity measurements identify the effectiveness or otherwise of the transformation process chain in converting the input resources into finished goods/ services. Quality measurements deal with how well a product or service meets customer needs.

Enterprise productivity has an important impact on many national issues such as inflation, national and international competition, and level of employment, national budgets, balance of payments and the like.

A survey conducted by the Institute of Industrial Engineers in the United States of America revealed that 60 percent of industrial executives believed that productivity is one of the two or three most serious issues facing the nation. The majority of executives surveyed believed that low productivity has consequences such as :-

- Increased difficulty in selling products and services both domestically and in foreign countries.
- Decline in standard of living and international influence.
- Difficulty in meeting health, educational and social welfare goals.

Productivity and unit costs have an inverse relationship; i.e. enhanced productivity reduces unit costs which can have snowballing effect to increase sales, thus increasing the output of the value adding system leading to more jobs. Japan, Germany, Korea, Taiwan and Singapore are among the countries that have shown how increased productivity helps in achieving an enhanced competitive position internationally.

Whatever be the activity one is engaged in such as – Manufacturing; Mining; Services; Recreation; Transportation; Travel and Tourism; Government, or Local; Banking; Utilities and the like – Productivity and Quality play a vital part. All functions of Management such as Operations, Finance, Personnel, Technical, Marketing – whether in a profit making, non profit making or Government enterprise need to operate with improving levels of Productivity. Productivity and Quality are two sides of the same coin. Products and services have to be offered with the desired quality at an affordable price. Tomorrow should be better than today.

2.12 PERFORMANCE MANAGEMENT SYSTEMS AND PRODUCTIVITY

The Performance Management System will change employees' commitments to their jobs and to any organization. It continuously cultivates increased performance, systemically. Using the Performance Management System tools, employees receive the support they need for success, and you will see a 10- to 20-fold Return-On-Investment!

Once they learn the Performance Management System, the staff will become committed to the profitability and productivity of your company. A genuine meeting of the minds occurs between employees and managers throughout your firm, on a regular basis.

The Performance Management System installs an infrastructure that has provided outstanding, measurable results for employees, managers and executives in countless government agencies. Here are some of the dramatic results reported from organizations using the Performance Management System technology over the last two decades:

- Greater productivity and quality
- Increased retention and job satisfaction
- Reduced mistakes and costly revisions
- Improved communication, understanding and teamwork
- Vital information getting to those who need it for business decisions

- Increased team spirit between employees and managers

Generate a company or department mission statement that is truly designed by and for staff. This working optimum performance standard will guide all work activities for their company, division or team, while providing management with the ultimate productivity benchmark.

Sustained quality and impeccable results come when an individual's or team's daily activities are aligned with values and goals that have meaning and make a difference to the company, its customers and its community.

Many of today's organizations suffer from high turnover, low morale, employee "burnout", management misdirection and a general loss of quality work and productivity. In essence they lack purpose.

With "downsize" the watchword of the day, many employees find themselves clocking much longer work weeks, but are they really working more or merely efforting? (Work is defined as energy expended to produce results; efforting is just expending energy.)

All too often in businesses today, staff members do not really know what they should be doing, what impact their activities carry and what value (if any) they provide to the world.

The process of economic globalization has transformed the competitiveness of enterprises, of sectors or branches of activity, and of national productive systems, into one of the main -if not the most important of all- factors conditioning the economic and social development of nations, and thereby the welfare degree of its people.

In this context, productivity -an essential element determining the degree of competitiveness of the above units- acquires fundamental significance. Productivity must be interpreted as the efficient use of all productive resources, and increases in productivity imply a more rational, rather than more intensive use of such resources.

Raising productivity basically means working better, not harder. Consequently, the two main forms of raising productivity -technological innovation and improved work organization- are not possible without prior or simultaneous training of the labour force. Nevertheless, not only training is required to attain higher productivity. There are other factors that also encourage or inhibit a raise in productivity, which have to do with the general conditions under which work is performed. Such prerequisites are epitomised in the concept of decent work, promoted by the ILO, which may be defined as productive work carried out with freedom, equity, safety and dignity, with due protection of the workers' rights, adequate remuneration and social protection. Training, productivity and decent work are therefore three closely intertwined notions. The strong links between these concepts have far-reaching consequences for the action of vocational training institutions (VTIs). As their main goal is to contribute to the development of their respective countries' human resources, and thereby foster their economic and social development, the issue of productivity must have an outstanding and explicit place on their vocational training plans and agenda. VTIs will in that manner attain their ultimate object, namely, improving men's and women's possibilities of accessing decent work

2.13 TOTAL QUALITY MANAGEMENT AND PRODUCTIVITY

The TQM philosophy of management is customer-oriented. All members of a total quality management (control) organization strive to systematically manage the improvement of the organization through the ongoing participation of all employees in problem solving efforts across functional and hierarchical boundaries.

TQM incorporates the concepts of product quality, process control, quality assurance, and quality improvement. Consequently, it is the control of all transformation processes of an organization to better satisfy customer needs in the most economical way. Total quality management is based on internal or self-control, which is embedded in each unit of the work system (technology and people). Pushing problem solving and decision-making down in the organization allows people who do the work to both measure and take corrective action in order to deliver a product or service that meets the needs of their customer.

Managers and experts disagree about how to effectively apply TQM to their organizations. Some advise that customer satisfaction is the driving force behind quality improvement; others suggest quality management is achieved by internal productivity or cost improvement programs. In other applications, TQM is considered a means to introduce participative management.

The Japanese, in general, concentrate on customer satisfaction with a focus on understanding customer needs and expectations.

2.13.1 Quality Improvement vs. Quality Assurance

It is important to avoid equating quality improvement with quality assurance. Quality assurance is a system of activities designed to ensure production that meets pre-established requirements. It gives the customer a guarantee of quality by measuring product conformance with process and performance specifications. Quality improvement refers to all efforts directed to increase effectiveness and efficiency in meeting accepted customer expectations. It is a continuous process to achieve a better understanding of the market; to innovate products and processes; to manage and distribute material and products; and to provide service to customers. The success of quality improvement is based on the understanding of every member of the organization concerning the needs of their customers (internal and external). Maintenance of that understanding requires continuing dialogue and negotiation with the customer and measurement of one's products and services against the customer expectations.

2.13.2 Shifting Paradigms in Businesses

The emerging quality movement in the United States represents significant paradigm shifts in company cultures and business operations. Typically, the culture of the United States is characterized by the paradigm of "rugged individualism". Our history reflects the contribution of many revered individuals. This model of the world sees people as both the source of and resolution of problems. In this paradigm, solutions to problems might be seen as fixing people (i.e., training employees to improve their attitudes). In this view, the survival of a company may rest in calling upon the right "star performer", like Lee Iacocca. Whereas quality control emphasizes that organization survival is contingent upon the effectiveness of the systems of the organization.

In quality management there is a rule of thumb called the 85/15 Rule which suggests the root causes of 85 percent of organizational problems is faulty systems and that few

problems are the result of the behaviors of employees. This philosophy may meet opposition in many companies where the current policies, procedures and systems are more traditional. That is holding each individual accountable instead of viewing the systems in which they work as the producer of quality.

It follows that the traditional management practices of managing-by-objectives (MBO) with a hierarchy of objectives and standards that are passed down in the organization from the top, is another paradigm. The quality philosophy with a shift in focus from internal results to customer expectations is another view of the business world.

Leaders will not turn quality into a competitive advantage if they behave as if TQM is a simple technique that can be bought and introduced within a traditional management framework. It is widely believed that installing an elaborate quality assurance system will not lead to employee commitment to quality. Such efforts are based on the assumption that processes and tasks that lead to the desired quality are already understood. A consequence may be employees feeling pushed into compliance without understanding the criteria or challenging their effectiveness. Importantly, expectations and market demands change as do the technology, materials and/or knowledge utilized.

In light of the above, the impact of the traditional paradigms on current policies, procedures, and systems in organizations is likely strong. Implementing Employee Involvement (E.I.), systems will require commitment from top management as well as from all employees. That commitment may often involve a change in attitudes. It will also involve the management of change in the organization. Guiding the change process requires an understanding of the present organizational cultures, attitudes, structures and systems.

2.13.3 Quality

A popular slogan of the quality movement is "quality begins with the customer." The premise being if customers are the people who receive our work then only they can tell us what they want and how they want it. The quality that comes out of a process is affected by the quality of what goes in and what happens at every step along the way. It follows that we must build quality into every step, process, and system to produce quality in the outcome. To do this, we must collaborate with internal and external suppliers and communicate with internal and external customers to determine their needs.

Attainment of quality in products and services at competitive prices requires an emphasis on doing the right things (products and services that reflect target features based on the needs of intended customers) and doing the right things right (using efficient processes).

2.13.4 Benchmarking

Benchmarking is the comparison of the processes and systems of a given business function across companies. It can be applied to any area of an organization. It is a way for managers and employees to compare their functional performance to that of other companies, particularly those that excel, and identifying why they may differ. Benchmarking can be defined as:

- Measuring your performance against that of best-in-class companies
- Analyzing how (methods) the best achieve their performance level, and
- Using the information as the basis for evaluating your own targets, strategy, and applications.

Involvement and improvement are not limited to employees. In some cases, customers and suppliers are involved in-group problem solving.

2.13.5 Teams and Teamwork

When TQM is successful employees at every level participate in decisions affecting their work. The most common vehicle for employee participation is a team. Teams range in scope and responsibility from problem-solving groups to self-managed work teams that schedule work, assign jobs, hire members, and set the standards and volume of output. A participative work culture is encouraged when quality becomes everybody's responsibility.

2.13.6 Customer Satisfaction

The philosophy that TQM is customer-oriented and its goal is to satisfy the customer seems straightforward. However, the expectations and needs of the customer may not be clearly expressed or well defined and may be difficult to measure. Measurement of attitudes as well as systems is required if the ultimate appreciation of quality lies with the customer's subjective comparison as suggested by Deming and other experts.

The literature offers some clarification. This issue was addressed by distinguishing three basic classes of customer wants:

- What customers say they want? Customer demands are frequently translated into specifications without exploring their meaning in regard to how the product or service will be used. Neglecting to explore how the customer intends to use the product or service can lead to poor or improper design.
- The customer's expected quality consists of expectations the customer does not verbalize because they assume them to be evident: such as the product must be safe. Extensive interviews may not even elicit these expectations. Yet, customers will be dissatisfied if the product or service does not meet these assumed expectations. Even so, if the expectations are built into the product, customers will hardly notice. These expectations are so pervasive that the customer takes them for granted.
- Exciting quality consists of attributes of the product or service contributed by the supplier. The customer may not expect them as characteristics, but they recognize them as improvements and like them. For example, a car with an electrical system that shuts off the headlights when the ignition is turned off, even when the driver forgets, has such an attribute. A customer will appreciate that safeguard many times over and appreciate the manufacturer's foresight while driving and owning the automobile.

2.13.7 Measurement of Customer Satisfaction in the Service Sector

Another potential difficulty in the measurement of satisfaction is an appreciation of the differences between the nature of work in manufacturing and in the service sector. In the service sector, customer's overall appreciation of quality depends on both product quality and the quality of the service process. This service process is defined as "the wholeness of the transactions between the service agent and the customer resulting in the selection, delivery, and/or consumption of the product."

Previous research has shown that customer satisfaction in the service sector is related to the following criteria:

- The subjective comparison between customers' expectations before they received the service and their actual experience with the service.
- Quality evaluations both of the service process and service outcome.
- The level at which regular service is delivered and the level at which exceptions or problems is handled.

It will be important to monitor and evaluate employee behavior as well as the attributes of the technical outcomes. For example, in the restaurant business, the quality of the treatment of customers by waiters and other staff can diminish or enhance the quality and presentation of the food. Developing standards and systems to enable and support employees in the front line deal in a satisfactory way with their customers will be essential (i.e., training, equipment, such as telephones and computer terminals, floor plans and storage). Obviously, neglecting the needs of the employees for respectful treatment, supplies, and resources will reduce the quality of their input and their output.

Employees in a total quality culture will continually improve their systems working with their managers and quality experts (i.e., quality assurance, facilitators, and engineers) in order to excel at meeting the needs of customers both inside and outside the organization. To do that effectively, workers must go to their customers to gather information using scientific methods. However, the analysis of customer expectations will always require interpretation. Subsequently, these interpretations must be translated into product and service specifications. In the end, the executive staff must make strategic choices about the customer expectations that the organization is willing and able to meet.

2.13.8 Strategies on Implementing TOM

Organizations that are successful at implementing employee involvement practices use a strategy to get a match between the practices and the organization culture (i.e., the unique values, beliefs, and behaviors of people in the organization that explain how individuals and groups work together to get things done). Experts and the GAO study results suggest the strategy should include:

- Readiness Assessment to identify: 1) barriers to implementation of E.I. and the associated practices, and 2) the present climate or culture. Such information can help decision-makers to make choices about the practices that best fit the ability of the organization to adapt to them. Typical methods include interviews, questionnaires, focus groups, observation, and examination of records.
- Communication of specific goals for employee involvement set by management. Support is demonstrated through such means as policy statements, rewards, sharing work-related information and publicizing efforts and accomplishments in employee newsletters.
- Training to enable managers and employees alike to learn the skills required for E.I. practices. For example, supervisors and employees may need training in group leadership, providing feedback, and problem-solving in order to work together effectively on improvement efforts in teams.

Evaluation of the program features and effects include formal measurement of target results and monitoring the implementation and support of employee participation in planning, problem solving and decision-making.

If an organization has the internal support of professionals or can hire those with the expertise to do employee attitude surveys, performance analysis, and statistical analysis, this is considered a participative approach to a readiness assessment.

Organizational development consultants and facilitators can provide support to decision-makers starting E.I. programs by conducting orientation sessions and surveys. This is done to assist the decision-makers in evaluating the readiness of their organization for employee involvement practices such as "Teams", an approach used frequently.

There are advantages to using outside experts to conduct an employee attitude study. Some of the considerations include:

- Individuals trained in organization dynamics and survey research will likely obtain more in-depth and accurate data because of their skill at interviewing, study design and analysis.
- Employees often feel the data will be treated in a confidential way if an external person gathers, analyzes and reports it. People may be more candid and cooperative in providing information.

An external person may have a clearer perspective of what is occurring in the organization because they do not have any vested interest in the results. Total Quality is a description of the culture, attitude and organization of a company that aims to provide, and continue to provide, its customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with things being done right first time, and defects and waste eradicated from operations.

Important aspects of TQM include customer-driven quality, top management leadership and commitment, continuous improvement, fast response, actions based on facts, employee participation, and a TQM culture.

2.13.10 TQM and Customer Satisfaction

TQM has a customer-first orientation. The customer, not internal activities and constraints, comes first. Customer satisfaction is seen as the company's highest priority. The company believes it will only be successful if customers are satisfied. TQM is sensitive to customer requirements and responds rapidly to them. In the TQM context, 'being sensitive to customer requirements' goes beyond defect and error reduction, and merely meeting specifications or reducing customer complaints. The concept of requirements is expanded to take in not only product and service attributes that meet basic requirements, but also those that enhance and differentiate them for competitive advantage.

Each part of the company is involved in Total Quality, operating as a customer to some functions and as a supplier to others. The Servicing Department is a supplier to downstream functions such as purchasing and accounts service, and has to treat these internal customers with the same sensitivity and responsiveness as it would external customers.

2.13.11 TQM leadership from Top Management

TQM is a way of life for a company. It has to be introduced and led by top management. This is a key point. Attempts to implement TQM often fail because top management doesn't lead and get committed - instead it delegates and pays lip service. Commitment and personal involvement is required from top management in creating and deploying clear quality values and goals consistent with the objectives of the company, and in creating and deploying well defined systems, methods and performance measures for achieving those goals. These systems and methods guide all quality activities and encourage participation by all employees. The development and use of performance indicators is linked, directly or indirectly, to customer requirements and satisfaction, and to management and employee remuneration.

2.13.12 Continuous Improvement

Continuous improvement of all operations and activities is at the heart of TQM. Once it is recognized that customer satisfaction can only be obtained by providing a high-quality product, continuous improvement of the quality of the product is seen as the only way to maintain a high level of customer satisfaction. As well as recognizing the link between product quality and customer satisfaction, TQM also recognizes that product quality is the result of process quality. As a result, there is a focus on continuous improvement of the company's processes. This will lead to an improvement in process quality. In turn this will lead to an improvement in product quality, and to an increase in customer satisfaction. Improvement cycles are encouraged for all the company's activities such as product development and the way customer relationships are managed. This implies that all activities include measurement and monitoring of cycle time and responsiveness as a basis for seeking opportunities for improvement.

Elimination of waste is a major component of the continuous improvement approach. There is also a strong emphasis on prevention rather than detection, and an emphasis on quality at the design stage. The customer-driven approach helps to prevent errors and achieve defect-free production. When problems do occur within the product development process, they are generally discovered and resolved before they can get to the next internal customer.

2.13.13 Fast Response

To achieve customer satisfaction, the company has to respond rapidly to customer needs. This implies short product and service introduction cycles. These can be achieved with customer-driven and process-oriented product development because the resulting simplicity and efficiency greatly reduce the time involved. Simplicity is gained through concurrent product and process development. Efficiencies are realized from the elimination of non-value-adding effort such as re-design. The result is a dramatic improvement in the elapsed time from product concept to first shipment.

2.13.14 Actions Based on Facts

The statistical analysis of engineering and manufacturing facts is an important part of TQM. Facts and analysis provide the basis for planning, review and performance tracking,

improvement of operations, and comparison of performance with competitors. The TQM approach is based on the use of objective data, and provides a rational rather than an emotional basis for decision making. The statistical approach to process management in both engineering and manufacturing recognizes that most problems are system-related, and are not caused by particular employees. In practice, data is collected and put in the hands of the people who are in the best position to analyze it and then take the appropriate action to reduce costs and prevent non-conformance. Usually these people are not managers but workers in the process. If the right information is not available, then the analysis, whether it be of shop floor data, or engineering test results, can't take place, errors can't be identified, and so errors can't be corrected.

2.13.15 Employee Participation

A successful TQM environment requires a committed and well-trained work force that participates fully in quality improvement activities. Such participation is reinforced by reward and recognition systems which emphasize the achievement of quality objectives. On-going education and training of all employees supports the drive for quality. Employees are encouraged to take more responsibility, communicate more effectively, act creatively, and innovate. As people behave the way they are measured and remunerated, TQM links remuneration to customer satisfaction metrics.

2.13.16 A TQM Culture

It's not easy to introduce TQM. An open, cooperative culture has to be created by management. Employees have to be made to feel that they are responsible for customer satisfaction. They are not going to feel this if they are excluded from the development of visions, strategies, and plans. It's important they participate in these activities. They are unlikely to behave in a responsible way if they see management behaving irresponsibly - saying one thing and doing the opposite.

2.14 ORGANISATIONAL SCORE CARDS: BALANCED AND STAKEHOLDER SCORECARDS

2.14.0 Abstract

Organizations, even those that are profit-oriented, are usefully viewed as a web of relationships between and among various stakeholder groups. Indeed, an organization may be defined as a "nexus of contracts." These "contracts" or relationships are marked by contributions from the various stakeholders in return for inducements provided by the organization. Over the long haul, the success of an organization is a function of the extent to which the needs and requirements of its various stakeholders are integrated and balanced, without sacrificing any one to the other. There is, in this arrangement, mutual influence and accountability.

Organizations are well served by making use of scorecards reflecting this mutual accountability between the organization and its stakeholders. Such scorecards are known as "Stakeholder Scorecards."

2.14.1 Executive Interest in Organizational Performance

The recent popularity of an approach to performance measurement known as the balanced scorecard suggests a continuing interest in measuring and improving organizational performance. This interest is coupled with a concern that financial performance not receive undue emphasis. Hence, as its name implies, the balanced scorecard is a device for balancing concern about the financial performance of an organization with concern for other aspects of performance (e.g., customer satisfaction, employee learning and growth, and internal processes).

The "Stakeholder Scorecard" is a stakeholder-based approach to assessing organizational performance. It focuses on assessing how well the organization is integrating and responding to the needs and requirements of its stakeholders. It seeks a balance, too, but not between financial and other measures of performance; it seeks to balance the relationships between the organization and its key stakeholder groups.

2.14.2 Organizations and Performance

Organizations are usefully viewed in many ways: as devices for meeting individual and societal needs; as collections of processes; as assemblages of people; as structures of authority; and as legal entities, capable of owning property and engaging in ongoing commerce, to name a few. It is also the case that organizations differ from one another. Those that are closely held differ in significant ways from those where ownership is diffused among thousands of shareholders. Both these differ markedly from non-profit and government organizations, where, generally speaking, profits and owner or shareholder wealth are of no concern.

Stakeholders remain stakeholders only so long as the inducements received from the organization make it worthwhile to provide the contributions sought.

It is worth noting that what is a contribution and an inducement varies with one's perspective. Take a simple example of an employee who exchanges labor in return for pay and benefits. From the organization's perspective, the labor is a contribution and the pay and benefits constitute the inducement. However, from the employee's perspective, the labor provided can be viewed as an inducement given the organization in return for the contribution of pay and benefits. It is this relative nature of contributions and inducements that makes the exchange reciprocal and makes accountability mutual.

The long-term success of any organization is a function of the extent to which the needs and requirements of its various stakeholders can be integrated and balanced, without permanently or completely sacrificing any one to the other. This arrangement is not unilaterally defined; indeed, as noted above, it is marked by mutual influence and accountability. Thus, the ultimate balancing act in any organization is the one whereby the needs and requirements of the organization's stakeholders are reconciled and integrated.

Many organizations are well served by making use of scorecards that reflect the mutual accountability and influence between the organization and its key stakeholders. It should be noted, however, that what is being presented here is essentially "a good idea," not a report on a widespread practice

2.14.3 Balancing and Integrating Stakeholder Needs and Requirements

Stakeholders may be thought of as groups of individuals or organizations significantly affected by what goes on at an organization, with a stake in having it go well, and for whom the organization wants things to go well in return. In other words, the relationship is reciprocal. The organization gives and gets something. So do the stakeholders. There is some kind of quid pro quo.

Some basic stakeholder groups are identified and are briefly described in subsequent paragraphs. These reflect the stakeholder groups identified as part of an effort to develop an Accountability Scorecard at the author's company, Educational Testing Service, and should not be viewed as a prescriptive set of stakeholder groups applicable to all organizations.

2.14.4 Differences Between Stakeholder and Balanced Scorecards

There are two important differences between a Stakeholder Scorecard and a Balanced Scorecard.

2.14.4.1 One: Architecture

The balanced scorecard was originally developed as a means of offsetting what was viewed as undue, almost exclusive, emphasis on financial results as the measure of an enterprise's health and performance. The balanced scorecard is aptly named; it attempts to balance measures of financial performance with measures of performance related to the customer, internal operations, and learning and innovation.

The four categories on a balanced scorecard are very broad and could accommodate a wide range of specific measures. The question arises: Which measures to use? Kaplan and Norton, the balanced scorecard's creators, suggest that the measures on a company's scorecard should be ones that will communicate and drive the company's strategy. Using the balanced scorecard this way makes it a strategy deployment tool, not just a gauge of the organization's health or performance. Moreover, if the balanced scorecard is used only to drive strategy, and if it drives the wrong strategy, the organization won't know unless there are other gauges of organizational health and performance.

The balanced scorecard can be referred to as a diagnostic control system. Other kinds of control systems include belief systems, interactive control systems, and boundary systems. The point here is that no scorecard is, by itself, an adequate control system.

The goal of the Stakeholder Scorecard is to identify and make use of measures that reflect the health and performance of the organization. Again, the question arises: Which measures to use?

It has been observed that the ultimate measure of an organization's success is the extent to which it serves all of its constituencies better than its competition.

Clearly, this entails integrating, balancing, and satisfying the needs, wants, and requirements of the organization's stakeholders. This concept of stakeholder satisfaction has been adopted as the basic principle upon which the architecture of the Stakeholder Scorecard is based. Hence, the four categories of clientele, staff, suppliers, and management (this latter group being referred to herein as the "Stewards" of the enterprise).

2.14.4.2 Two: Perspective

Another key difference between the balanced scorecard and the Stakeholder Scorecard lies in the number of perspectives involved. The Stakeholder Scorecard attempts to answer the question of "How are we doing?" from the perspectives of all the key stakeholders, of which senior management or the Stewards of the enterprise is only one.

To appreciate the significance of this shift in perspectives, it helps to consider what organizational theorists have termed the "contributions-inducements" relationship that exists between an organization and its members.

Members (e.g., employees, suppliers, and even customers) contribute to the organization in return for certain inducements. Employees, for example, might contribute by performing assigned work, producing specified results, or simply making available time and energy to be expended as directed. The inducements employees receive might include pay, benefits, opportunities, recognition, and the prospect of continuing employment. Suppliers might contribute favorable terms in exchange for prompt payment, larger orders, or long-term relationships. Customers, of course, contribute money, as do lenders, investors, and donors. Customers receive goods and services; lenders and investors hope to receive a return on their loans or investments. Money received from customers, lenders, and investors is used as part of the inducements offered to other stakeholders (e.g., to pay employees and suppliers).

2.14.5 Developing A Stakeholder Scorecard

The first step is to identify the key stakeholder groups. In general, these will consist of clientele (constituencies served), employees, suppliers, and the stewards of the enterprise. Others might include the community at large, regulators, lenders, donors, and so on. A simple list naming and defining each stakeholder group will do.

Next, for each stakeholder group, identify the contributions received from the group and the inducements offered the group in return. For employees, the contributions might include being willing to perform assigned tasks, reliability, improvements to work processes, and so forth. Inducements likely include such factors as acceptable pay and benefits, a secure earnings stream, recognition, and other factors. A two-column form, with the name of the stakeholder group at its top will serve to capture the list of contributions and inducements for each group.

Once the contributions and inducements have been identified, the next task is to prioritize the two, that is, identify the most important contributions and the most important inducements. If the lists are not terribly long, it will help to rank order them.

Then, determine basic measures of the important contributions and inducements. The issue here is to identify ways of assessing the extent to which the contributions and inducements are acceptable to those receiving them. It is important to check perceptions of inducements with the relevant stakeholder groups.

Finally, put the measures into effect and determine what they say about the extent to which the contributions received satisfy the needs and requirements of the organization and the extent to which the inducements provided meet the needs and requirements of the various stakeholder groups. Significant gaps indicate areas requiring attention.

2.15 CONCLUSION

We have discussed at length the various concepts on productivity. The wide variety of text gathered was aimed at ensuring a wider coverage of issues so that we can confidently recommend the best practice to C.T.O.

We also briefly discussed ways and means of measuring productivity in the workplace.

It has been seen that there are a couple of concepts that affect the level of productivity in an organisation.

These were identified as:

- Motivation in the workplace
- Performance management systems learning in an organisation
- How productivity compares with quality
- The total factor productivity
- How training improves and contributes to the level of productivity in the workplace
- How Total Quality Management is important in achieving high level of productivity
- The role of Balanced Scorecards

Also briefly discussed is the classical case of Singapore.

In chapter 3, we are going to deal with methods of how the data was collected and the way data was analysed. The design within which the different data collection methods fall will be discussed.

CHAPTER 3:

RESEARCH DESIGN

In this chapter, we shall look at the design that was used to carry out this research. We shall explore the information sources used and explain the rationale of using them. Techniques and methodology used will be explored also.

3.1 RESEARCH DESIGN

The research design used in this project looks at the methods, procedures, sampling techniques and instrumentation used in the research. It also encompasses data collection, data analysis and problems or limitations encountered in the collection.

The study has been designed in a descriptive and analytical manner. There was high-level observation, which allowed for a lot of critique and comments from the researcher. The questionnaires were structured; this satisfied the descriptive research design that was undertaken.

The areas covered were mainly in the southern part of Botswana workshops, which included: Gaborone Main Workshop, Lobatse, Kanye and Jwaneng. Due to limited resources, the areas covered were restricted to this area only.

3.2 SOURCES OF INFORMATION

The information gathered was from both primary and secondary sources. The researcher tried to be as wide as possible in collecting the information.

Several government departments in Botswana were used as sources. The BNPC, CTO, University Of Botswana (UB) Research Centre, UB Library, The National Institute Of Research are some of the key sources used.

There were some unpublished thesis and articles, which were used as secondary data. Primary data was obtained through the use of the interview and participant's observation was used through holding informal discussions with the respondents.

3.3 SAMPLING TECHNIQUES

This study will be based on a probability sample of 5 CTO workshops selected through a simple random sample design, with additional and purposively chosen study units, namely, Gaborone Regional workshop, Police and Pool vehicle workshops, Sebele and Francistown Auto/Plant workshops. These have been so selected because of their larger technical, administrative, resource capacity and management involvement. From all the 10 selected units, all 10 workshop managers and other senior personnel will be identified, including 10 staff members from each workshop. This will make an overall study sample size of 110 study elements. The 2003/9 CTO Strategic Plan provided a sampling frame of CTO workshops in Botswana.

Workshop observation methods will involve three techniques: questionnaire interviews, focus group discussion and visual observation.

The study will outsource a larger part of its information base from secondary sources such as literature on productivity from BNPC pamphlets and annual reports, government productivity reports, international journals, workshop papers, experience papers shared from seminars, media commentaries, business magazines and other relevant materials. Primary sources will include structured questionnaire, which will be administered to CTO senior managers, workshop managers and other staff.

The structured questionnaire for the study included the following modules:

- Strategic Planning
- Employee Welfare
- Asset Management and Technical Competence
- Management Information System
- Management/Leadership Skills
- Service Delivery Improvement

The sample size of the study was 110 participants. Four of the fifteen CTO workshops were used for the study. A list from the CTO employee master file was obtained from the personnel department and used for random selection within identified departments e.g. a department, say workshop, would be chosen and then the head count determined. A random selection of the employees would then be selected.

The tool used in this study is a questionnaire consisting of forced choice sort of questions

Participants' observation and a structured interview schedule were used to collect primary data. All the workshops identified for the sample were visited and the senior managers in each were approached for assistance in selecting the interviewees.

A structured interview/questionnaire administered by the researcher were found to be appropriate because respondents were very busy due to workloads and therefore the researcher had to be there to record the answers. The other benefit for the direct research was that if there were any clarifications to be done, the research would then clarify there and there. This will minimise the delay on results compilation and hence conclusion and recommendation.

The study has employed a non-probability sampling procedure, which involves the first available, appropriate units within the total population of managers for the workshops in the identified areas. This can then be taken to represent the whole organisation.

3.3.1 Data Collection

The interview schedule was administered to one set of respondents. The interview schedule was aimed at collecting factual data on CTO Managers' responses on their perceptions on productivity issues.

Informal discussions were held with most managers in order to give the researcher enough information that will quip them for the completion of the thesis. A combination of structured and unstructured interviews and participants' observation were found to have provided reliable data.

The managers and other staff members were approached the day before the interview in order to allow them time to prepare for the interview (spare time). They were then given the questionnaires and guided by the researcher in filling out the sheets. We had to insist that they fill the whole sheets in one sitting so that we could move on to the next interviewee.

3.4 METHODOLOGY

The methodology used was very systematic and user friendly. The methodology was qualitative, as described by *Morse (1992) and Kim (1993)*. The four workshop managers in the respective areas were chosen as coordinators. They were requested to coordinate and ensure that other managers in the workshop cooperate with the interviewer. The managers in the workshops have provided leadership in their areas on productivity issues as guided by PMS. They are taken to be the role models in PMS issues and therefore better response and responsibility were expected from them.

The choice of the qualitative approach is dependent upon the questions, which were asked from the target group. Therefore to get a meaningful insight into and from the data, the questionnaires were structure to ascertain opinions of the managers on the most important issues, which could affect their capability to function effectively.

In order to fulfil the overall objective of this research report, the following divisions have been considered when designing the questionnaire: fleet, mechanical, supplies, MIS division and accounts and administration.

Consultation with different stakeholders and service providers helped to identify what the key areas of investigation should be. At the same time, involvement of executive management in discussions helped me in the data generation, and results analysis.

The results from the research will provide evidence need to advocate for sustainable interventions that will help CTO achieve desirable productivity level.

The researcher will be able identify feasible interventions and best practices needed for the decision makers to implement and recommend other strategies. This will be possible because of the extensive collaboration with stakeholders.

The participatory research methodology employed enables local people to share, enhance and analyse their situations, and plan and act. It supports decentralised planning and democratic decision making, as well as placing value on social diversity, sustainability, enhanced employee participation and empowerment.

3.5 UNITS OF INVESTIGATION

The units used in the sample were workshop staff in the chosen workshops in the southern part of Botswana. In the study, the units used were 110 members, drawn from these workshops.

Each of the members was given a questionnaire to complete in order to get a professional point of view of experience and recommendations, as how to improve the implementation of the varied productivity variables.

3.6 DATA ANALYSIS AND INTERPRETATION PROCEDURE

The data was analysed both qualitatively and quantitatively. The qualitative analysis in this study involves the presentation of data in a thematic form: i.e. data was organised around common themes.

Qualitative analysis involved discussions of data from the interview schedule and the researcher's point of view.

3.7 METHOD OF DATA ANALYSIS

Data entry, processing and analysis will be undertaken at computer facilities of Data Technology and Research Company using Epiinfo Word processor or SPSSPC+ in Gaborone.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.0 INTRODUCTION

In this section of the paper, we will analyse the results and bring up commentary on issues from the survey.

This section should be read in conjunction with Appendix 1, which shows the different levels of questionnaires and the response from the interviewees.

The section will be broken down as guided by the different sets of questionnaires in appendix 1.

4.1 STRATEGIC PLANNING

According to Table 1 below, on aggregate, senior managers at the CTO affirm the existence of vision & mission statement in their organisation. Under the response category "YES" the senior managers recorded an aggregate level of response of 91 %. This is a progressive response level given the fact that quality and productivity reforms started in essence only recently for CTO. Furthermore, the aggregate response includes other elements of the vision such as planning process, long-term goal, focus on quality, focus on mission and the role of stakeholders. It is also a progressive level of response when the quality and capacity of their corporate governance is taken into account. It is worth noting that individual response level for specific factors under planning were influenced by emotional status within work environment.

Refer to appendix 1 under general questions and strategic planning sub-sections

Table 1 - Strategic Planning Factors

Factors	Frequency	(%)
We have a vision/mission statement	100	100/110=91%
We have a PMS in place & fully functionally	60	60/110=55%
We rated performance for the past 3 years as:	Very Good	30/110=28%
	Satisfactory	48/110=43%
	Unsatisfactory	32/110=29%
Our PMS very highly support productivity improvement strategies	65	65/110=59%
CTO has available and accessible strategies	Yes=83	83/110=75%
	No=27	27/110=25%

4.1.1 Vision and Mission

It can be read from the table that the senior management within CTO have a clear sense of the vision and mission of the organisation. This means they fully understand where the organisation is going, the overall bigger picture, and long and short term objectives of CTO.

4.1.2 P.M.S.

They further acknowledge that the PMS is in place and fully functional. This is shown in the percentage of sixty at senior management level. It came out from observation that some managers are disillusioned and demoralised by slow progress within the organisational hierarchy, this may translate into de-motivation in the workplace.

4.1.3 Strategy Availability And Performance Rating

From the strategy point of view, senior and middle management believe that CTO attempt at meeting its key objectives in the past three years has been satisfactory. Twenty eight percent believe that the achievement has been extraordinary; forty three believe the performance was average, while twenty nine percent believe there was dismal delivery.

4.1.4 General Comments

However, when it comes to regular reviews of the key performance elements essential for planning, such as communication and planning processes, the CTO ranked below average. Therefore CTO focus on customers as a key strategy for competitiveness is very consistent. On individual response levels, the managers had affirmative responses roughly more than 50% for "Attitude/morale of employees", " Cost associated with poor quality" and " the effectiveness of the planning process".

We should understand that the factors of planning are crucial inputs for any organisation's planning process. It is essential that while environmental scanning is a qualitative and subjective exercise, it should be supported by quantitative organisational data.

Long-term planning exists at the CTO. Aggregate response of over 90% is very progressive indeed. It indicates progress towards the traits of winning organisations. The results also suggest strongly that planning is a structured exercise at the CTO. These findings indicate that the CTO is in agreement with national trends with respect to strategic planning and the will to implement PMS.

4.2 LEADERSHIP PRACTICES

Brief Summary

The following table (table 2: Leadership Factors) summaries the responses of senior managers of the CTO to assess whether management has been able to make quality leadership efforts, so as to create the right environment of creative thinking. Management showed a level of response exceeding 60% on one factor- creation of friendly environment and fair practices of judgement, which obtained a firm 65%. The encouragement of culture

of trust, involvement and commitment follow at 70%. Proactively pursuing continuous improvement is affirmed with a 90% consensus.

This parameter deals with the mindsets and behaviours of leaders as well as their relationship with the organisation. The success of leadership practices and outcomes is also a function of the mindsets and behaviours of employees. The most critical consideration is the acceptance of accountability and responsibility for one's actions. Employees have a part to play meaningfully. They cannot be allowed to experiment with value adding business processes without accepting responsibility and accountability in terms of rewards and consequences.

Aggregately, the CTO is improving in this area of quality leadership as reflected in aggregate response level for "strongly agree", "disagree", "don't know" at 59 percent, 27 percent and 5 percent respectively. There is a critical mass of leaders at the CTO leading the transformation to higher standards.

Since this issue deals with mindsets, behaviours and relationships, one can conclude on the basis of the findings below that there is steady progress towards high standards at the institution. There is critical mass of senior managers to drive new leadership practices. These percentages are sufficient for movers and shakers in support of new leadership styles. Some institutions have had to do with many small percentages when they started their initiatives.

It can be seen from the table that there is generally high level of trust within CTO employees and commitment at senior level is evident. This is shown from table by the seventy percent response on the employees who strongly agree.

Table 2- Leadership Factors (n=110)

Factors	Strongly Agree (%)	Disagree (%)	Don't Know (%)
Top managers create friendly work environment	60	10	30
Strongly believe in practices of fair judgement/impartial adjudication	55	30	15
Timely inspire employees through trust, patience and commitment	70	30	0
Strongly encourage team-work	59	21	20
Strongly encourage innovative and creative ideas to bring about desired productive change	70	30	0
The CTO is committed to continuous improvement in performance	90	10	0
Has made efforts to reduce downturn due to brain drain	20	80	0
Aggregate			

4.2.1 Creation of Friendly Environment and fairness.

The members of staff believe firmly that senior managers create a friendly corporate atmosphere which is very conducive. This is reflected in Table 2 by the 60% of the sample size who are in agreement.

There is a worrying percentage of thirty which are not sure of the management's attempts in creating a conducive environment. This study was limited to the three options only, but the interviewees mentioned other factors like favouritism, nepotism in promotions and further study recommendations and other ethnic and political alignment. Due to the limitations, these were not perused further.

This may be reflected in the next set of questions which wanted to outline whether employees believe management treated them fairly and are impartial. The same sort of analytical thinking is still reflected here, employees echoed the same treatment as outlined above.

4.2.2 Trust, patience and commitment by management

The general staff complement firmly believes that they are inspired by senior management by the level of commitment they show. They believe that management show trust in them when given individual assignments and these really show that management is ready and willing to empower them. The exercise of patience also reflects in the score of 70%. Generally, this is a good sign of a good and workable corporate culture that CTO is cultivating.

4.2.3 Team Work

Employees feel that management is letting them down by not fully encouraging team work. The response at 59% is very discouraging when comparing with other factors that were measured. This may also be somehow related to other factors like informal groups based on ethnic and political alignment as reflected earlier in the text under work environment factors.

The interviewees felt that senior managers at times openly mention the weakest links in the team; this therefore kills the team morale. They felt that management must change the strategy at addressing team work, this may involve: role swapping, team building exercises and staff recognition efforts.

4.2.4 Creativity

70% of the workforce feel that managers give them the opportunity and room to apply their creative and innovative ideas in the workplace in order to bring about desired change. This may act as a motivating factor in the workplace and may contribute positively to the increased level of productivity.

Studies in the past have shown that if junior level employees are allowed the freedom to exercise and implement their ideas, they increase their sense of belonging and ownership of tasks.

4.2.5 Continuous Improvement and Staff Retainment

Management of CTO is really trying hard and is committed to continuous improvements in the workplace. The major problem at keeping this ongoing is the staff resignation for greener pastures. CTO, being a government department, does not have policies that allow to counter offer employees recruited by other companies. Also there is no policy on a continuous salary alignment with other corporate organisation.

This therefore places CTO at danger of brain drain with little or no structures in place to counter this.

These interpretation can be seen from the results in table 2; 90% of the workforce feel CTO is in the right path towards continuo's improvement, while 20% feel efforts are being made to block brain drain.

4.3 PEOPLES PRACTICES

4.3.0 Brief Summary

This is a continuation on the theme from the previous parameter. The premise is that in order to ignite self-accusation amongst any organisation's greatest asset-people, nothing should be left to chance.

Key elements that assist employees to move towards attending to process, taking responsibility and seeking continuous learning should be identified nurtured and assessed regularly. The themes of clarity of purpose, morale, communication, fairness, recognition, participation and a healthy environment are relevant once more. If people are indeed any organisations greatest asset, do we regularly undertaken climate surveys to find out barriers to this asset's ability in delivering superior performance?

In this section of the study, we will be looking at employee welfare factors, as outlined in table three.

4.3.1 Employee Welfare

Our discussion will revolve around issues related to employee welfare and a commentary will follow hence with.

Table 3 – Performance-based rewarding factors

Factors	Popularity (%)
Overtime	80
Reward for diligence on resource use	65
Performance based incentives	75
Manpower and training plan adequately implemented	45
Skills appreciation	60
HSE issues taken seriously	35
Reward for special skills	65

The survey findings have widely asserted key employee welfare issues and factors which world-class institutions regard as essential for creating productive work environments

We must understand that the people factor is invariably hard issue to grasp. It requires enormous commitment from senior management leadership for meaningful output. It is also hard because senior managers must first make an effort to comprehend its dynamics in terms of profound skills and knowledge about both organisational behaviour and human relations. It clear from the results that while there is progress, a lot still needs to be done in the area of human resources and organisational transformation to realise the full potential of the people asset at the CTO.

Table 3 looks at some of the most prevalent “pay for performance” schemes found in various globally competitive institutions. The most popular pay-for-performance scheme for the CTO according to table 3 is performance-based incentives”. Other schemes, which exist, are “overtime” and “reward for diligence use of resources”. Clearly “pay-for-performance” is more prevalent in the private sector where the link between salary and performance dates back to time immemorial.

At the CTO however, the situation has been different because of their association with the civil service. Given the fact that salaries of parastatals up to now are controlled by the Wages Policy Committee in the ministry of finance and development Planning, the fact that some senior managers indicated that there was some form of incentive-based reward systems represent significant progress in the this area. Clearly, this area requires special attention.

Employee recognition and reward are very important in today’s competitive business environment. Organisations should continuously review the manner in which they reward outstanding performance. In particular, it is important that benefits of quality and productivity are shared equitably all stakeholders of a business operation.

4.3.2 Overtime

Overtime as a tool aimed at increasing productivity shows to be very popular at CTO. Of the sample size asked, 80% believe that overtime will have a very big impact in the level of productivity in CTO. Some sentiments echoed by the other 20% are that people may accrue their daily jobs so that it can be done outside working hours. They may open the system to abuse and undue increase of someone’s salary. They are therefore against this idea. Overtime is usually charged at a rate higher than the normal rate, it usually is a good incentive to work overtime.

4.3.3 Reward for Diligence on Resource Usage.

This is very critical in any organisation; it must be emphasized that workers who utilise resources in the most diligent manners should be recognised and rewarded. In this measure, 65% of CTO staff believes that management recognize and reward them for this. This is a fare response when looking at the fact CTO is governed by stiff government rules and regulations. It can be therefore assumed that the results reflect management’s innovations and creativity.

4.3.4 Performance Based Incentives

The world over is moving toward performance based pay. This leads to the new parameter of performance based incentives.

This system attempts to increase productivity by incentivising ones target. This is done by coming up with targets and attaching some rewards (mostly financial) to it. 75% of CTO staff believes that this is the way to go. They believe that for productivity to improve drastically, they have to directly relate rewards with performance.

4.3.5 Implementation of Manpower and Training Plan

This is one key area where the response was surprisingly low. Employees feel that they are on a quarterly basis required to draw up their personal development and training plans, but these are never followed.

Constant follow up with line managers usually bear no fruit, as employees are always told that everything is in the pipeline. These really de-motivate employees as their expectations are hardly met and they are expected to wait one year after another.

The implementation process is usually blamed on the executive management, but a close scrutiny reveals that even at those level decisions are slow to be taken. The executive management relies on the Board and the board usually meet quarterly. Therefore the 45% popularity figure shows a good reflection of staff disappointment in this field.

4.3.6 Health, Safety and Environment Issues

This is another area which registered low marks. The employees feel that their health and safety issues are never given priority. The environment they work in, appreciation of the external environment and environment impact are some of the things management seems to neglect and fails to prioritise.

Employees feel that whenever there are issues concerning the above, management just take them for granted and are never given the weight they deserve. They then feel that they are more at risk when they at work than at home. The councils' health and safety inspectors are known to be very lose when they audit government departments.

4.3.7 Reward for Special Skills

This attracted a popularity figure of 65%. It is widely believed in government departments that artisan related skills are more rewarded than other general skills.

CTO being made up of engineers and artisan, they feel that they are comparatively rewarded better than their counterparts in other ministries.

The other 35% is made mainly by administrative and finance staff.

4.4 SERVICE DELIVERY IMPROVEMENTS

4.4.0 Brief Summary

In this section we are going to look at some of the core functions that impact the service delivery of CTO to its user departments.

It must be noted that this part of the study will bring results that will be key to the productivity improvements.

One quality technique that may be used is the certification to ISO 9001/2000. CTO at present is preparing to be certified after failing the test in the past

This will cover a wide range of issues as shown in table 4 below.

Table 4: Service Delivery Techniques (n=110)

Technique	Agree (%)	Don't Know(%)	Disagree(%)
Availability and accessibility of suppliers	90	5	5
Adequate IT infrastructure to support delivery	55	15	30
Sufficient Workshop space and equipment	55	5	40
Qualified staff to repair all models	50	0	50
Funds availability	75	5	20
Strong supplier relationship	45	30	25
Looking forward to ISO 9001	45	35	20

4.4.1 Availability and Accessibility of Suppliers

The workforce at CTO strongly believe that in our local market, there are enough suppliers to cater for our daily needs. Most suppliers in this regard will be motor industry related supplier, from tyres, spanners, spare-parts to the actual vehicles.

From the 90% results, it shows that employees are quite happy with the supply they get from companies who are contracted to supply various vehicle related goods.

This also encompasses their accessibility. It shows that CTO ha a big access towards its suppliers. This is very encouraging, when looking from this aspect alone.

4.4.2 IT Support for Delivery

Just half of the employees believe the information technology is there to support their functions.

This support comes in the form of: response when a computer breaks down, assistance when fuel management system malfunctions, and support in terms of training and hardware service provision.

They believe that IT is half the time not willing to fully assist as they feel that they are called to attend simple and straightforward small problems.

When, say, fuel pumping machines do not function due to wrong passwords, IT will drag its foot to rectify the problem as they will point out that it's the user's problem and not theirs. This impacts badly on the overall service provisioning of CTO.

4.4.3 Workshop space and equipment

Another surprising revelation found here is that, though earlier on it has been established that accessibility and availability of suppliers is very satisfactory, the equipment level in the workshops is very low.

This may be due to high level of stock theft leading to reluctance by management to replace without intensive investigations. Workshop employees feel that there is no adequate space and this may even lead to safety risks.

The impact that comes from the 55% rate has not been linked to output from the workshop due to limited resources.

4.4.4 Qualified Staff

Workshop employees feel that the entire workforce is not qualified or trained enough to meet the required productivity levels. This is revealed in the results which show that 50% feel the employees are fully qualified while the other 50% is competent to repair all models that CTO carry.

CTO carry normal car makes including Toyota, Isuzu, Mazda, Mercedes Benz and BMW. These are models that are very common in the Botswana market.

It can therefore be safely interpreted that the level of skill possessed by CTO workshop staff is questionable.

4.4.5 Funds Availability

The teams believe that the Government is fully supporting CTO in terms of budget requirements.

75% feel that the problems CTO face is not due to lack of money to finance the operations of the workshop. They feel in this area the response is more that satisfactory.

Though most companies elsewhere have funds as the most limiting resource, this is not the case with CTO, or at least the perception held by staff members.

4.4.6 Relationship with Suppliers

It can be concluded from the results above that though there is high availability and accessibility of suppliers, the problem with low stocks and output is the relationship they have with their suppliers.

Supplier management is one of the key areas to fully acknowledge in the supplier management process.

The problem with CTO, according to staff, is that they usually pay after agreed terms and will ask for invoice reprints four/five times before they actually make a payment. This never go down fine with suppliers, they in turn try to "punish" CTO by delivering late, not prioritising their order, and short delivering. This shows that CTO might not be leveraging on their spending power they have over those suppliers.

4.4.7 Are You Ready For ISO 9000/2001

It is very disappointing to learn that 35% of the workforce has no clue on the importance of ISO. Senior management has to seriously run an awareness campaign.

CHAPTER 5:

CONCLUSION AND RECOMMENDATIONS

5.0 Overview

This qualitative survey revealed that despite limited records in relation to management and productivity improvement efforts within the CTO, there is enough evidence of the foregoing in the CTO management ranks:

- Several performance improvement efforts have been undertaken to enhance productivity and involvement for better performance.
- Leadership and workforce management practices that buttress and encourage quality practices.
- Significant advances have been made in the areas of employee partnership, employee enablement and employee participation

Apparently, the management at the CTO have gotten into multifaceted performance improvement initiatives. In this survey, it is shown that there are signs of advances towards world-class practices in the service delivery system at the CTO.

In a nutshell, the survey has documented that:

- More than 80% of the senior managers at the CTO have asserted the existence of performance improvement initiatives in their organisation. In addition, they have broadly focused on quality standards and customer satisfaction. However, they reported no efforts to introduce new employee reward systems and new salary structures as a form of productivity incentive.

Senior managers of the CTO are aware of the major global changes sweeping the world and Southern Africa in particular. They are also aware to the greatest concerns of competition and customer service. These were the highly emphasised concerns for all managers. Additionally, over 90% of the senior managers are confident that their organisation will survive the current customer sophisticated demands.

There exists at the CTO an all-inclusive and structured systems and processes for planning. There is a resonant agreement that planning focuses on quality and productivity for competitiveness. The CTO rated leadership and planning the most key management practices to achieve superior performance. Consequently, quality was considered of utmost importance.

The CTO management and other staff are generally aware of their areas of leverage for competitiveness. They identified these process technology and people's skills and abilities

as major advantages relative to competitors. They also identified quality policy/procedures and the ability to improve services as an area of leverage for competitiveness.

The most prevalent technique used by the CTO for improving the performance of their value-adding processes is PMS. All the other techniques and other management practices including performance-based systems are hardly used.

There is a critical mass of senior managers to drive emerging leadership practices within the CTO's management system. Sixty percent top managers support the transformation from the vertical organizational structure to horizontal type of structure that will reveal the value-adding components of the institution, which is team-based.

People practices to ignite creativity and commitment for superior performance are promoted at the CTO. Aggregate response levels for "strongly agree" 60% for all staff. Progress on this parameter is always gradual as advances in people practices are gradual as they involve mindsets, behaviours, relationships and modification of structures and system.

Productivity-based incentives are the most popular "pay for performance" schemes for rewarding performance amongst the CTO management in general. Other progressive and world-class schemes such as gain sharing also exist.

Benchmarking is popular at the CTO. This is recorded 80% popularity. It is undertaken locally and internationally, as well as within and outside own institution. Customer service, operating processes and technology are some of the common areas of benchmarking.

The most common technology used at the CTO is information technology in the form of local area network (LAN) and electronic data interchange (EDI) for communications. Government policy is rated the most important barrier to achieving improved business performance by the institution. IT department support is questioned by user departments.

The only major constraints for productivity within the CTO where there is consensus is; limited funds for new projects, poor remuneration, strained staff, stakeholder collaboration, infrastructure improvement and lack of comprehensive incentive package.

There is, however, a common purpose to achieve organisational goals and objectives as evidenced by relatively high aggregate response.

There is modest progress for both ennoblement and participation towards world-class. There are however, individual areas where there is a marked advancement for both areas. These two areas are always gradual.

Overall, the CTO is on the right track towards providing world-class service delivery to its clientele. Several performance improvement initiatives have been undertaken. There is evidence of leadership and human resource management practices that support quality and productivity and that employee partnership ennoblement and participation exist. However these performance improvement efforts may take much longer before they produce the desired results, because they involve behaviour change processes, structures and systems that must be adapted. This naturally takes a lot of resources and commitment from management leadership.

5.1 RECOMMENDATIONS

5.1.0 Background

The Botswana Government is in a warpath to improve the level of efficiency and productivity across all the ministerial departments. This has been addressed at very high level, including the Office of the President. There is more pressure than before for all governments to perform to expected standards.

Other departments, in the same drive, have engaged consultancy groups to try to come with better ways of improving the situation.

There are other initiatives that are being tried:

5.1.1 Privatisation

Some key government departments have been identified as key candidates for the privatisation exercise. Air Botswana, the monopoly air courier company, is already on the way to privatisation. Foreign companies are bidding to come as strategic partners.

5.1.2 Liberalisation

Organisations which have been enjoying full monopoly in specialised industries will cease to enjoy those. The government is liberalising and opening gates and barriers of entry to other competitors.

It is hoped that parastatals will improve their level of productivity in readiness for the competition. Botswana Telecommunications Corporation will start having fixed line competitors as early as July, 2005.

It is against this background that this study was carried out.

The following are recommended:

5.1.3 CTO Revamped Strategy

The writer recommends that CTO as an organisation adopts a different high level strategy that is geared toward addressing

- High level productivity
- More customer focussed
- Results orientated
- People issues in the workplace

The management style should be more involving and should reach out to all levels of the structure. This therefore suggests a more flat structure as compared to the vertical one.

Performance management initiatives should also be more conspicuous to all layers of the organisational structure. The results should be more visible and must be shared and celebrated by all.

The communication level within the organisation should be taken to high levels. All employees must feel part of the bigger team and must feel that their contributions are acknowledged.

5.1.4. Teamwork

It has been picked from the research that team work scored very low as compared to other techniques. The writer recommends that team work should be priority in CTO annual productivity initiatives and this should be taken as a continuous exercise.

It needs very strong and brave leadership to dispel myths that contribute to poor teamwork within the organisation. These include that people work together because they are of the same political party, are from the same church, are from the same village etc.

People must be educated on the benefits of team work as opposed to individual efforts.

Consultancies should be drawn in, if need be. Retreats and team building exercises should be the norm in the company.

5.1.5 Supplier Management

This is one area that has to be managed carefully. CTO as a large corporate and key consumer for most suppliers must exercise its power and take full control of its supply chain management.

Issues of delayed invoices should be addressed at senior accounts management level in order to allow for efficient accounts payable system. This will then give CTO the leverage to control its suppliers and dictate terms.

This organisation floats tender worth millions of Pula every year, this shows that the consumption level is very high. This must translate into high supplier control.

5.1.6 Health, Safety and Environmental Issues

This shows from the survey that people concerns are not a priority at all. It is recommended that CTO executive management should push people agenda up its organisational strategies.

In any organisation, the most important resource is the people. If the people resources are not taken care of, then productivity level will hit rock bottom level.

Safety issues should be given attention and employee needs be addressed.

5.1.7 Overtime

It is strongly recommended that CTO introduces overtime pay. This will ensure that work is completed within agreed targets. This will increase the level of output and efficiency in the workplace.

A reminder is sent out that there should be measures in place that will guard against abuse of the system.

5.1.8 Training Plans

Training plans that are agreed by line managers and their staff during performance reviews should be realistic and be ready for implementation.

It is recommended that CTO must stick to its annual manpower and training plan as identified by senior management. These plans shouldn't be seen as another document that will gather dust in the shelves. It must be translated into a working document that is owned by all in the organisation.

5.1.9 Incentives Schemes

Incentives drive productivity levels in any organisation. It has been seen from the results that incentives schemes have a great potential to produce results.

A recommendation goes that there should be more performance based schemes should be introduced in order to motivate the workforce and make them earn for work done.

This will also address issues of brain drain and staff retainment.

5.2 CONCLUSION

Several productivity literatures have been used in the compilation of this document. A case study of Singapore success story has been referred to many times and benchmarking with CTO used.

Total factor productivity, a new productivity concept, has been dealt with at length. The balanced scorecard was also discussed with a view to further improve productivity in C.T.O.

It has been clearly revealed that Central Transport Organisation shortfalls are revolving around people issues: perceptions, reward, recognition and safety in the workplace. These are issues that can be addressed at high level without investing too much financially, these only requires refocusing of training and other human resources. The writer therefore sees CTO as an organisation that can easily compete against any service provider in the same industry as long as proper systems and process are in place.

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APPENDIX ONE: QUESTIONAIRES

QUESTIONNAIRE ONE: PERFORMANCE AND PRODUCTIVITY STUDY INSTRUMENT

Note: Please complete this questionnaire in reference to a specific branch only. For example, Kanye CTO branch.

Identification:

(Please note that this information (A-C) will be treated as confidential. We need it for data collection only and it will not appear in the report).

A. Organization/Company name and plot number:

B. Mailing address:

C. Who completed this questionnaire (position)?

Profile:

1. How many people are employed on these premises?

Less than 10	1
10-49	2
50-99	3
100-199	4
200-499	5
500 and above	6

General Questions:

1. Do you understand the question of productivity?.....Y/N
2. Are you aware of strategies to improve productivity in your organisation?....Y/N
3. Does the government introduction of PMS a daunting experience for you?...Y/N
4. Do you think that PMS is a perfect instrument to enhance productivity?.....Y/N
5. What do you think are the major constraints for productivity improvement in your organisation? (For each rate 1-10)
 - i. Brain drain []
 - ii. Funds for new projects []
 - iii. Management capacity []
 - iv. Employee motivation []

- v. Management style []
- vi. Poor remuneration []
- vii. Inadequate Human resource training []
- viii. Low morale []
- ix. Customer demand []
- x. Quality of your services []
- xi. Non-standard fleet []
- xii. Strained staff []
- xiii. Level of Information Technology []
- xiv. Government policy []
- xv. Stakeholder collaboration []
- xvi. Low industries base []
- xvii. Establishment infrastructure []
- xviii. Supplies of Equipment []
- xix. Privatisation []
- xx. Appraisal system []
- xxi. Conditions of service []
- xxii. Incentives []

QUESTIONNAIRE TWO: STRATEGIC PLANNING QUESTIONS

- 6. Do you have a vision/mission statement for your organization? Y/N
- 7. Do you have performance management systems in place? Y/N
- 8. How do you rate your performance over the past 3 years? (tick)
 - i. Very good []
 - ii. Satisfaction []
 - iii. Unsatisfaction []

- 9. Does your PMS support productivity improvement strategies?
 - i. Very highly []
 - ii. Moderately []
 - iii. Not at all []

- 10. Which of the following is the best-input mix to achieve higher productivity levels?
 - i. Customer/ Supplier/ employ inputs []
 - ii. Customer/ Employee inputs []
 - iii. Customer/ Supplier inputs []
 - iv. Supplier/ employee []
 - v. All of the above []

- 11. What strategies are available and accessible to CTO?

List.....

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12. What instruments do you use to access your own performance?

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.....
.....

QUESTIONNAIRE THREE: PEOPLE PRACTICES

Employee Welfare

{1 = Strongly agree, 2 = Don't know, 3 = Disagree}

1. We have a manpower-training plan, which is adequately implemented. []
2. Individual innovators & skills are highly appreciated. []
3. Performance reward systems is already being effectively implemented. []
4. The organization has an operating occupational Health or Safety section, which is performing adequately. []
5. Which of the following does your organization use to encourage high performance? (Tick Appropriately)
 - a) Overtime []
 - b) Reward for diligence on resource use []
 - c) Pay for special skills []
 - d) Performance base incentives []
 - e) (Specify).....

QUESTIONNAIRE FOUR: SERVICE DELIVERY IMPROVEMENTS

{1 = Strongly agree, 2 = Don't know, 3 = Disagree}

1. Our supplies orders are easily available and accessible. []
2. We have adequate IT infrastructure to support service delivery. []
3. We have sufficient office accommodation. []
4. There are enough funds for transport to the expectation of customers. []
5. We have enough experienced staff to repair latest models of vehicles. []
6. We have low staff turnover due to satisfactory salary. []
7. We have enough resources due to better financial budget. []
8. Consistency in user demand and model acquisition have set standard for our performance. []
9. We have a well-established mechanism for measuring the standard for performance quality of our services. []
10. We strongly collaborate with our suppliers []
11. Are you already certified with the ISO9000 series. []

QUESTIONNAIRE FIVE: LEADERSHIP PRACTICES

{1 = Strongly agree, 2 = Don't know, 3 = Disagree}

1. Does the senior/ workshop manager work hard enough to create a friendly work environment for the employees? []
2. Does management strongly believe in practices of partial/ fair judgement? []
3. Does management timely inspire employees through trust, patience and commitment? []
4. Does management encourage and team work all the time? []
5. Does management all the time encourage innovative pr creative ideas in order to bring about the desired change for productive reasons? []
6. Is the organization committed to continuous improvement in performance? []
7. Does your organization attempt to prevent exodus if staff to reduce down turn due to brain drain? []
8. Does your organization hold regular technical/ staff meetings to review work progress? []
9. Do you have operational HIV/AIDS counselling committees? []
10. Does the organization regularly hold stakeholder meetings? []

QUESTIONNAIRE SIX: MANAGEMENT INFORMATION SYSTEMS (M.I.S.)

To what extent do you feel the following IT utilities have contributed positively towards the improvement of performance & productivity in your organization?

{1 = Strongly agree, 2 = Don't know, 3 = Disagree}

- | | | |
|-----|----------------------------------------------------------|-----|
| 1. | Local Area Network for electronic data | [] |
| 2. | Government Data Network Connection. | [] |
| 3. | Computerized Vote Ledger | [] |
| 4. | Mail Server. | [] |
| 5. | Just-In-Time (JIT) | [] |
| 6. | Automatic inspecting & testing of the repaired fleet | [] |
| 7. | Automatic inspecting & testing of the incoming vehicles. | [] |
| 8. | Automated storage & retrieval | [] |
| 9. | State-of-the-Art cutting equipment | [] |
| 10. | Computerized and Robotic machines | [] |
| 11. | Computer Aided Engineering. | [] |

QUESTIONNAIRE SEVEN:MANAGERIAL VALUES

What management values do you think exist in an organization that has inspired you as an individual towards productivity?

(Tick your selections)

- a) Integrity []
- b) Trust []
- c) Team spirit []
- d) Corporation []
- e) Perseverance []
- f) Endurance []
- g) Accountability []
- h) Gender sensitivity & equality []
- i) Customer focus []
- j) Responsiveness []
- k) Quality []

What managerial skills do you possess to inspire/ motivate other workers? (Tick your choices)

- a) Leadership []
- b) Workers relations []
- c) Customer focus []
- d) Ability to plan & organize []

For better performance and productivity what are the most important productivity ingredients?

(Rate in order of importance 1 – 6)

- a) Service differentiation ____
- b) Promptness ____
- c) Quality ____

- d) Supervision _____
- e) Effectiveness _____
- f) Innovation _____

What do you think is the most hindrance towards productivity?
 (Rate in order of significance) (1 – 10 rating: 10 being the most important and 1 being the least)

- a) Exodus of staff []
- b) Inadequate local skills & competencies []
- c) Dependence on contractors []
- d) HIV/AIDS []
- e) Resistance to change []
- f) Improper HRM structure []
- g) Conditions of service []
- h) Poor salaries []
- i) Lack of incentives []

Which of the following has had a significant impact in your productivity levels?
 {1 = Strongly agree, 2 = Don't know, 3 = Disagree}

- a) Introduction of PMS (Y/N)
- b) Introduction of IT/ MIS (Y/N)
- c) Skilled manpower (N/Y)
- d) PBRs (N/Y)
- e) Cost recovery management []
- f) Stakeholder contribution []
- g) Human Resources Management []
- h) Performance management & work improvement Integration []
- i) Occupational Health & Safety management []
- j) HIV/AIDS mitigation []
- k) Customer satisfaction strategy []
- l) Time management strategy []
- m) Budget control []
- n) Process management []
- o) Information & communication management []
- p) Cost recovery management []
- q) Just-in-time []
- r) Asset management []
- s) Preventative maintenance []

