

**CRITICAL SUCCESS FACTORS OF PERFORMANCE MANAGEMENT IN
GLAXOSMITHKLINE KENYA LIMITED**

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of Degree of Master of Business Administration,
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DECLARATION

I hereby declare that this is my original work and has not been submitted for presentation and examination for any award of degree in this university or any other university.

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DEDICATION

I dedicate this study to the people who have given me a life full of love and support beyond measure or remembrance. My Dad (Jackson), mum (Monica), sisters (Caro, Claire and Christine) and brothers (Tony and Justine).

God bless you all.

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God bless you all.

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ABSTRACT

Performance Management System (PMS) is a lean management tool that an organization uses to ensure efficient flow of a product or service. It seeks to ensure that resources are well balanced and utilized throughout the various functions of the organization and the teams involved thoroughly understands their expected input viz a vis the output. Glaxosmithkline (Gsk) embraced PMS three years ago in view to be the most efficient supply chain in the pharmaceutical category.

The main objective of this study was to determine Critical Success Factors (CSF) that have driven the implementation of this system at Gsk. Specifically, was to find out what has been achieved so far and the challenges the organization is facing in the implementation of this system.

The finding from this research point out that value proposition, zonal understanding, tiered accountability, standard work and root cause problem solving are the key drivers for the embedment of PMS in the organization. On the contrary, rapid response in real time and transformation of lag measures to lead measures are yet to take effect in the organization. It was also key to note that the organization has undergone challenges in the implementation of this system key among them being training resources required, cluster best practice simulation and organization structure change to suit the resurging strategy, Worthy to note that there are now key talented people who are championing the various fronts of PMS.

The main conclusion from this study is that PMS can work best if there is focus on the implementation of its key pillars with proper training and development of staff who are either directly or indirectly involved in its implementation. This study recommends periodic auditing of the system to ensure that all the projects are kept on truck and if there are any challenges, they are solved earlier within. Further, there is need to develop a financial model to work out the payback period of these key projects.

ABBREVIATIONS

CSF	Critical Success Factors
Gsk	Glaxosmithkline
KAM	Kenya Association of Manufacturers
PM	Performance Management
TPM	Total Productive Manufacturing
TQM	Total Quality Management
WCM	World Class Manufacturing
WIP	Work In Progress

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Traditional PMSs are frequently based on cost and management accounting. These techniques were developed in the late nineteenth and early twentieth century to meet the needs of expanding manufacturing industries. The concepts were fully formalized in the 1930s and since then have been the basis of manufacturing PMS. In recent years, enormous changes have taken place in technology and production techniques that have made traditional PMS (management accounting based) no longer useful. These out-of-date techniques are at best irrelevant and at worst positively harmful.

There are five main problems with traditional management accounting techniques which according to (Maskell, 1991) are cost distortion, inflexibility, hindrance to progress in World Class Manufacturing (WCM) and subjection to the needs of financial accounting reports are not directly related to the manufacturing strategy are not meaningful for the control of production and distribution operations and are irrelevant and misleading to pricing decisions.

Traditional cost accounting is concerned with cost elements. The pattern of cost elements has changed in recent years, and this detailed analysis is less important. Also, the distinction between direct and indirect costs (and variable and fixed costs) is not as rigid as it used to be and, as a result, traditional methods of apportioning overheads can significantly distort product costs.

Traditional management accounting reports do not vary from plant to plant within an organization and they do not change over time as business needs change. Therefore, cost accounting reports are usually received too late to be of value and, as a result, are usually viewed with disdain by operations managers because they do not help them with their job and can be used to blame the operations manager when variances are negative, Pinto J. and Slevin (1987). Traditional methods of assessing the pay-back on capital projects can

impede the introduction of WCM, and can cause managers to do wasteful and unnecessary tasks to make the figures look good. Also, concentrating on machine and labor efficiency rates encourages the production of large batch quantities and cost accounting requires a lot of detailed data that can be costly to obtain. Too often cost accounts are regarded as a subsidiary ledger of financial accounts. To be of value, management accounting systems must be based on different methods and assumptions than on the financial accounts. These methods apply to such issues as inventory valuation, overhead absorption and accounting periods. Due to these problems of management accounting techniques, PMS based on these techniques are considered to be invalid for manufacturing industries today.

Other reasons why there is a need for new PMS in manufacturing industries include customers are requiring higher standards of quality, lower product cost and shorter lead times. Performance, flexibility and management techniques used in production plants are changing significantly. As enterprises introduce WCM techniques, they need new methods of PMS to control their production plants. Traditional, PMS are having gaps for the measurement of WCM practices as they do not supply the business with the required information to compete in their industry.

1.1.1 Critical Success Factors

Several definitions of CSF exist and representing one of the most frequently cited definitions, Rockart (1979) uses ideas from Daniel (1961) and Anthony et al. (1972) in defining CSF as the “limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization”. Consequently, Rockart (1979) stresses that these particular areas of activity should be carefully and constantly managed by a company. In a similar fashion, Bruno and Leidecker (1984) define CSF as those characteristics, conditions or variables that when properly sustained, maintained or managed can have a significant impact on the success of a firm competing in a particular industry, while Pinto and Slevin (1987) regard CSF as factors which, if addressed, significantly improve project implementation chances. According to Esteves (2004) however, both of these definitions fail to address the comprehensive concept

proposed by Rockart (1979), which seeks to identify an ideal match between environmental conditions and business characteristics for a particular company.

1.1.2 GlaxoSmithKline in Kenya

Gsk Nairobi occupies about 33,000 square meters of land situated on Likoni Road in Industrial Area, and currently employs about 180 employees. The site was originally opened in 1960's as an Over The Counter (OTC) medicine factory, producing brands such as hedex, panadol and gastro-intestinal powders. In 1995, the site was extended a soft credit of £2.5 million to expand the Nairobi CH (Consumer Healthcare) site to cater for the consolidation of manufacturing facilities upon the acquisition of Sterling Health by SmithKline Beecham. This, therefore enabled the construction of the current lucozade and ribena fill-pack line, the installation of the aseptic tetrabrik machine, the current oral care and emulsions section and the expansion of warehousing capacity.

In 2002, operations were consolidated on Likoni site after the GlaxoWellcome and SmithKline Beecham merger and pharmaceutical liquids were introduced. The site houses three business units global manufacturing and supply, pharma and consumer commercial. Key brands on the site are OTC medicines such as panadol range, hedex range, gastro-intestinals; actal tums, ENO and andrews liver salt, respiratory track. Others include cofta, aquafresh range and extreme clean, pharmaceutical liquids, emulsion, piriton expectorant, scotts range and nutritional health drinks such as lucozade energy and ribena range both in bottle and tetrapak packaging

Prior to merger integration, traditional approach to operational improvement was in use to drive continuous improvement. Tools mainly used were Quality Control (QC), Total Quality Management (TQM), and zero defects. These strategies were disjointed, costly and mainly focused on cost cutting. This led to the ever increasing challenges in the environmental arena.

The TQM is a management approach to long-term success through customer satisfaction. In a TQM approach, all members of an organization participate in improving processes,

products, services and the culture in which they work. The methods for implementing this approach come from the teachings of such quality leaders as Deming (2000), Ishikawa (1985) and Juran (1967). A core concept in implementing TQM is Deming's 14 points, a set of management practices to help companies increase their quality and productivity.

Create constancy of purpose for improving products and services; adopt the new philosophy; cease dependence on inspection to achieve quality; end the practice of awarding business on price alone instead, minimize total cost by working with a single supplier; improve constantly and forever every process for planning, production and service; institute training on the job; adopt and institute leadership; drive out fear; break down barriers between staff areas; eliminate slogans, exhortations and targets for the workforce; eliminate numerical quotas for the workforce and numerical goals for management; remove barriers that rob people of pride of workmanship, and eliminate the annual rating or merit system.

Institute a vigorous program of education and self-improvement for everyone. Put everybody in the company to work accomplishing the transformation. QC is a process by which entities review the quality of all factors involved in production. This approach places an emphasis on three elements such as controls, job management, defined and well managed processes, performance and integrity criteria, and identification of records. Competence such as knowledge, skills, experience, and qualifications. Soft elements, such as personnel integrity, confidence, organizational culture, motivation, team spirit, and quality relationships. The quality of the outputs is at risk if any of these three aspects is deficient in any way. The QC emphasizes testing of products to uncover defects and reporting to management who make the decision to allow or deny product release, whereas quality assurance attempts to improve and stabilize production (and associated processes) to avoid, or at least minimize, issues which led to the defect(s) in the first place.

Zero defects, pioneered by Crosby (1967), is a business practice which aims to reduce and minimize the number of defects and errors in a process and to do things right the first time. The ultimate aim will be to reduce the level of defects to zero. However, this may

not be possible and in practice and what it means is that everything possible will be done to eliminate the likelihood of errors or defects occurring. The overall effect of achieving zero defects is the maximization of profitability. More recently the concept of zero defects has led to the creation and development of six sigma pioneered by motorola and now adopted worldwide by many other organizations. Zero defects approach has been criticized to be very costly.

In 2002, there was merger integration between SmithKline Beecham and GlaxoWellcome to form Gsk. At the time, the organization was faced with the ever increasing challenges of intense competitor activity, reduction in growth and market share losses, tighter margins and profit erosion, execution shortfalls, in spite of solid business strategies failure to sustain gains from improvement activities and resistance to culture change essential to continuous improvement.

1.2 Statement of the Problem

The current industry practice has Total Productive Maintenance (TPM) and Total Quality Management (TQM) as approaches to WCM and most industries in Kenya have used these approaches to achieve WCM. The PMS is a relatively new term in the local market, previously Gsk has used TQM as a mode to WCM but the scope of TQM was not addressing all the challenges the organization faced in its drive to achieve WCM. Thus two years ago, the organization embraced PMS.

Like any other approach to WCM, there are challenges in implementation but the benefits are wide apart depending on the success of Implementation. The main objective of this study was to evaluate the role of PMS in WCM. It endeavored to find out the net effect of PMS in achieving WCM.

Musau (2006) on “Continuous quality improvement climate survey a case study of Colgate Palmolive Kenya” established that TQM improvement initiatives did not achieve significant improvement in quality and performance. Hence, TQM in its entirety cannot sustain the organization from an end to end perspective. Odero (2000) sought to establish

the existence of non-quality situations in the training process at Kabete Technical Training College. She identified the root causes of poor examination performance in diploma courses and came up with improvements in TQM – a pre-requisite of lean sigma

1.3 Objectives of the Study

The main objective of this study is to evaluate the role of PMS as applied in Gsk. The specific objectives were to:

- (i) Evaluate the CSF of PMS in WCM
- (ii) Identify the CSF that have driven PMS at Gsk
- (iii) Highlight the challenges in implementation of PMS at Gsk

1.4 Value of the Study

The findings of this study shall contribute to PMS literature in general and to WCM literature in particular. This may provide some ideas for other researchers to execute more research in the field of the PMS and WCM techniques implementation.

There has not been much research on PMS techniques implementation in WCM, in less developed countries in general, and Kenya in particular. Thus, this paper contributes to knowledge toward implementation of PMS in WCM.

A significant contribution of this study will provide guidelines for the successful implementation of PMS in WCM by Gsk, which can be used as a template for other manufacturing companies and to Gsk as this is yet to be implemented in the whole supply chain.

1.5 Scope of the Study

This was a case study approach and most of the data and statistics were retrieved from Gsk. Data collection was done through primary and secondary sources, the secondary data sources were retrieved from company publications, technical documents, and sub-annual reports of the company. Primary data was collected through questionnaires

administered to the staff directly involved in the implementation and management processes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Performance Management

In order to achieve sustainable growth through continuous improvement, business enterprises must review their past performance and implement effective future plans. A PMS helps organizations make decisions about continuous improvement by displaying past performance on a timely basis. While the research discussing the roles of a PMS (de Lima et al., 2009) summarizes the roles by using different perspectives, this study defines the role of a system by clarifying its contribution to a final goal in business organizations.

2.2 Performance Management Framework

To establish a rigorous “check” step in the Plan, Do, Check, Act (PDCA) cycle and optimize decisions based on performance, organizations need to choose appropriate performance indicators. Specifically, performance indicators are quantitative measures of business objectives. The examples of performance indicators include product-by-product sales, regional sales, customer satisfaction and capacity utilization. Performance indicators differ by organization, industry and mission. In addition, in order to align individual performance indicators with a final goal, business enterprises can organize indicators based on a PMS framework. One of the most well-known frameworks is the Balanced Score Card (BSC) (Kaplan and Norton, 1992). Based on the survey conducted by a consulting firm, “approximately 50 percent of fortune 1,000 companies in North America and about 40 percent in Europe use a version of the BSC” Gumbus and Lyons (2002). Since BSC framework was proposed more than a decade ago, more detailed and holistic frameworks have been invented. For example, the Manufacturing System Design Decomposition (MSDD) approach (Cochran et al., 2001) illustrates relationships between low-level tactics and high-level goals by using a design matrix. The performance prism (Neely et al., 2002) is equipped with the perspectives of employees and suppliers and legislators. The value performance framework (Alexander, 2007) clearly explains financial indicators such as revenue growth and cost of capital. Some research combines existing frameworks and perspective, such as the business system design decomposition

framework expanding MSDD approach (Taticchi et al., 2009) and the conceptual PMS model integrating organizational views and individual views (Brudan, 2010).

2.3 Review of Relevant Studies

Literature on PMS is very limited. The only reason for this could be the fact that no single best practice framework exist for the implementation of WCM principles, as each framework will necessitate the creation of different PMS (Mey, 2011). PMS and WCM are quite new in Kenya. There is not much research done relating PMS and WCM in the Kenyan industry, although there is research on WCM in the industry mostly relating to implementation and adoption.

According to (Ndeto, 2008), in his survey of adoption of WCM in Kenya's manufacturing sector gives some information on the challenges of adopting WCM in the Kenyan industry. The study sought to find out how companies are responding to these challenges by surveying the adoption of WCM by Kenyan manufacturing companies. The study adopted a descriptive survey and involved data from a sample of 40 firms who were members of Kenya Association of Manufactures (KAM). The findings by Ndeto (2008), indicated that WCM principles that were rated as more important or most important by most respondents included TQM, focus on the customer, and focus on cost control, policy of continuous improvement, reduced product cost, and reducing delivery time. In addition those that were rated less important by most of the respondents included reducing time to market, supply chain management, optimization of existing Information Technology (IT) systems and investments. The challenges that were most significant to a majority of the firms included lack of understanding of the approaches and existing initiatives in place of WCM, nature of manufacturing facility and attitude of the board and staff. Other challenges that he considered were lack of communication, inability to quantify the benefits, cost of implementation and multiple business locations. In his conclusion he states that the reason why such a concept is not implemented is because management fails to recognize the importance of WCM and the benefits offered because of the lack of proper justification methodology.

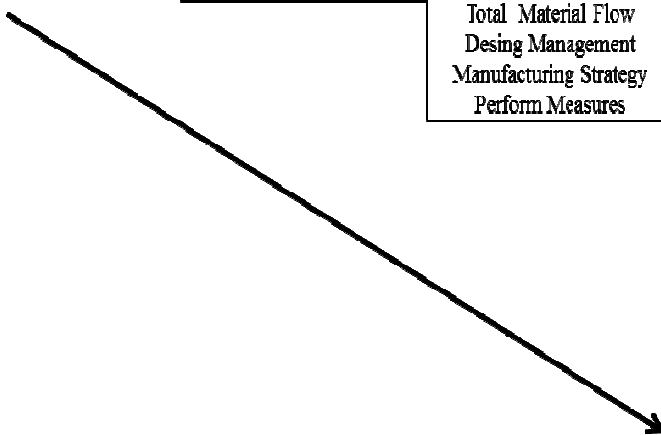
A different study on the implementation of WCM practices by Ngeta (2009) confirms the same challenges on implementation but pinpoints the high level of WCM adoption in the industrial sector. The study investigated the level of adoption of WCM practices among quoted companies in Kenya. Specifically, it assessed the benefits and challenges that implementers face in the implementation process. Her study found out extensive adoption in the industrial and allied sector but lesser adoption of WCM practices in both commercial, service, finance and investment sectors. In terms of WCM practices the study found 94 percent of firms applying WCM practices with TQM ranking highest across all sectors. Firms realized cost reduction, improved product quality and reduced lead time upon adopting the practices. However, she acknowledges that company culture and staff attitude posed the most challenges in implementation process.

Internationally, there is a lot research on WCM and Schonberger (2008) first introduced the concept of WCM, the term was seen to embrace the techniques and factors as summarized in Figure 2.1 below. The substantial increase in techniques can be related in part to the growing influence of the manufacturing philosophies and economic success of oriental manufacturers from the 1960s onwards. What is particularly interesting is that while there is a degree of overlap in some of the techniques, it is clear that relative to the elements that were seen as constituting WCM in 1986, the term has evolved considerably (De Felice, Petrillo, & Monfreda, 2013).

In regard to PMS and WCM internationally the most outstanding research is by Maskell (1991) in his publication 'Performance Measurement for World Class Manufacturing'. In today's manufacturing environment according to Maskell (1991), cost based measures are no longer the only basis for decision making in enterprises. Enterprises now require performance measures that are based along other competitive dimensions, such as time and quality to aid in decision making.

Figure 2.1: Methodologies that Have Contributed to World Class Manufacturing

1980	1986	1989	1991	1996
JIT/Kanban TQM TPM TQM Cellular Manufacturing MRPII	JIT/Kanban TQM TPM TQM Cellular Manufacturing MRP II CIM Empowerment Kaizen	JIT/Kanban TQM TPM TQM Cellular Manufacturing MRP II CIM Empowerment Kaizen Technology Management System Management Training Total Material Flow Desing Management Manufacturing Strategy Perform Measures	JIT/Kanban TQM TPM TQM Cellular Manufacturing MRP II CIM Empowerment Kaizen Technology Management System Management Training Total Material Flow Desing Management Manufacturing Strategy Perform Measures Benchmarking Structure & Culture Innovation Strategy Corporate Strategy Group Technology Batch Size Reduction Non Financial Measures	JIT/Kanban TQM IPM TQM Cellular Manufacturing MRP II CIM Empowerment Kaizen Technology Management System Management Training Total Material Flow Desing Management Manufacturing Strategy Perform Measures Benchmarking Structure & Culture Innovation Strategy Corporate Strategy Group Technology Batch Size Reduction Non Financial Measures Simultaneous Engineering BPR Vendor Quality Supplier Partnership



On the other hand, (Dixon, Nanni, & Vollmann, 1990) argue that irrespective of the competitive priorities enterprises pursue, successful measurement systems should share five characteristics which are; mutually supportive and consistent with the business operating goals, objectives, CSFs and programs; convey information through as few and as simple a set of measures as possible; focus on measures that customer can see; allows all members of the organization to understand how their decisions and activities affect the entire business and support organizational learning and continuous improvement.

2.4 Summary of Research Gaps

As stated in the beginning of this chapter, there is very limited research on PMS in WCM. Aside from Maskell (1991) that actually did create a benchmark for research in the field of PMS and WCM, the other studies concentrate more on the implementation of WCM as a whole in different industries. Locally, Ndeto (2008) and Ngeta (2009) both focus on implementation and adoption of WCM in Kenyan industries. They lay out the various success and challenges that arise from the implementation or adoption of WCM in Kenyan industries. In terms of WCM principles, the two studies did not go into detail on the actual impact of the principles in the successes of WCM.

Both studies rank TQM as the most implemented WCM principle in Kenyan industries. Ndeto (2008) goes further to enlist the other principles employed in the Kenyan industries as focus on the customer, and focus on cost control, policy of continuous improvement, reduced product cost, reducing delivery time, reducing time to market, supply chain management and optimization existing IT systems and investments.

An omission by both studies is the principle of PMS which is an integral pillar in modern WCM practice. Both studies do not give any indication as to the impacts of PMS on successes of WCM adoption in the Kenyan industries. As much as both studies agree on TQM as the most implemented principle, they do not give any indication as to its direct impact in the successes of WCM. Overall the studies are general in nature, they give the general impacts and challenges and an overview of adopted principles in general but they do not pick any specific principle or pillar and elaborate in its direct impacts on WCM.

In light of the above, this study has looked into PMS in WCM as its focus and unlike the two previous studies mentioned examined impact on WCM. The study looked into the current status of PMS application, management practices, critical driving and resisting forces toward PMS implementation in WCM and successful implementations of PMS in WCM.

It is important to note that the literature points to the fact that lack of careful implementation of WCM is almost certainly doomed for failure as indicated by the challenges faced in the adoption and implementation. In order to successfully implement WCM, it is necessary to view it from a strategic point of view. Table 2.1 below gives a summary of review of the relevant studies done.

Table 2.1: Summary of Review of the Relevant Studies

Research Title	Research Objective	Key Findings	Research Gaps
Ndeto (2008) Adoption of WCM in Kenyas' manufacturing sector	To find out how companies are responding to supply challenges in WCM	(i) There was lack of understanding of the approaches and existing initiatives in place of WCM, nature and location of manufacturing facility, attitude of board and staff. (ii) Communication challenges. (iii) High cost of implementation	(i) Methodologies to manage and sustain improvement were not well articulated. (ii) In adequate project justification methodologies

<p>Ngeta (2009)</p> <p>Level of adoption of WCM practices among quoted companies in Kenya</p>	<p>Benefits and challenges that implementers face in the implementation process</p>	<p>(i)94 percent of the firms applying WCM practices have ranked TQM high across all the sectors.</p> <p>(ii) Firms realized cost reduction, improved product quality and reduced lead time upon adopting the practices</p>	<p>There was less adoption of WCM practices in commercial services, finance & investment sectors</p>
<p>Maskell (1991)</p> <p>Performance measurement for WCM; a model of American companies</p>	<p>Measures and methodologies used in performance measurement</p>	<p>Cost based measures are no longer the only basis for decision making. Enterprises now require PMS that are based along other competitive dimensions</p>	<p>The researcher did not indicate on the approach to use in the implementation of performance measurement</p>

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes and outlines the research methods used in order to achieve the objectives outlined in chapter one. Specifically, this chapter describes the research design, population of the study, sampling design, data collection, data analysis and methodology employed.

3.2. Research Design

The research strategy that was used in the empirical research is a case study. Cooper and Schindler (2008) describe a case study as a powerful research methodology that combines individual and sometimes group interviews with record analysis and observation. Researchers extract information from company brochures, annual reports, sales receipts, newspaper articles, along with direct observation and combine it with interview data from participants. The objective is to obtain multiple perspectives of a single organization, situation, event or process at a point in time or over a period of time (Cooper and Schindler, 2008). This research was concerned with an in-depth study of PMS at Gsk, unit of analysis was the functional areas involved in the implementation and use of PMS. The case study looked out for cause-and-effect relationships, and search for explanatory theories of the phenomena. For (Yin, 2003) this situation offers the most suitable conditions for adopting the case study as the research strategy of choice.

3.3. Selection of the Case Study Organization

The selection of the cases was based on two issues. The first reason for the selection of this case study was a matter of access. Research access was fairly easy to obtain, researchers stress the difficulties in obtaining access to private companies, when investigating organizational and internal issues, as this could undermine 'the interests of the powerful'. In this particular study, the researcher was part of staff thus access to documentation and participants was not an issue.

The second reason for selection of this case study was availability of data. The issues under investigation in this study are fairly well documented in relation to Gsk. This allowed for ready data that can be analyzed to arrive to conclusions.

Data collection was done through primary and secondary sources. The secondary data sources were retrieved from company publications, technical documents, and sub-annual performance reports of the company. Primary data was collected through questionnaires. In testing for the CSFs that have driven PMS, an interview schedule (Appendix I) for senior management (heads of departments) in charge was administered. When testing for challenges the organization is facing in implementation of PMS the researcher prepared a questionnaire and administered it to the staff involved in the day to day implementation of the process.

The target population was all employees of Gsk Nairobi both top and middle level management. However, accessible population was drawn from personnel directly and indirectly involved in management and implementation of PMS. This description constitutes seven members of staff drawn from procurement, supply and planning, production, finance, engineering, operations excellence and safety all of them were issued with a questionnaire. Non probability sampling was used to select the specific correspondents from the Gsk community or population. The sample consisted of all of Gsk staff who fit the description above.

3.4. Data Analysis

The data obtained was analyzed and presented in the form of tables and graphs. In determining the current status of PMS applications and management practices at Gsk the study presented data analyzed from the company documents in graphs. Information highlighting critical success factors that have driven PMS and information on the challenges facing the organization in the implementation of PMS was presented in tables and graphs.

3.5. Validity

In case study research, internal validity can be established by the use of case analysis, cross case analysis, pattern matching, assurance of internal coherence of findings, expert peer review, and the development of diagrams, illustration and data matrices to demonstrate the internal consistency of the information collected (Yin, 2003). This study employed the same on the analysis of company reports and documents to ensure an internal sense of validity. External validity is defined as the scope to which the research findings can be replicated beyond the proximate research case studies or generalizability (Yin, 2003). This particular study, since it was a single case study, used the thick description of case study data base to achieve its external validity.

3.6. Ethical Considerations

The principle of respect for human dignity was observed during data collection. This principle included the right to self-determination and to full disclosure. Respondents' rights to self-determination was honored because respondents decided independently, without any coercion, whether or not to participate in the study; they had the right not to answer any questions that cause discomfort; to disclose or not to disclose personal information and to ask for clarification about any aspect that caused some uncertainty. The right to full disclosure was respected as well as the respondents' rights to participate or to refuse to participate in the study. Table 3.1 below shows a summary of the research design and methodology.

Table 3.1: Summary of Research Design and Methodology

Objective	Data / Information	Purpose	Analysis / Technique	Display
Evaluate CSFs of PMS in WCM	Secondary data	To provide insight into what has already been done	Descriptive	None
Identify the CSFs that have driven PMS at Gsk	Primary data	Determine the factors that have influenced PMS at Gsk	Descriptive	Summary table of the responses
Highlight the challenges in the implementation of PMS at Gsk	Primary data	Highlighting challenges Gsk is facing while implementing PMS	Descriptive	Summary tables of the responses

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter deals with data analysis and discussion of the results. First, the chapter describes the data and also discusses the CSFs of PMS as applied in Gsk.

4.2 Description of the Data Collected

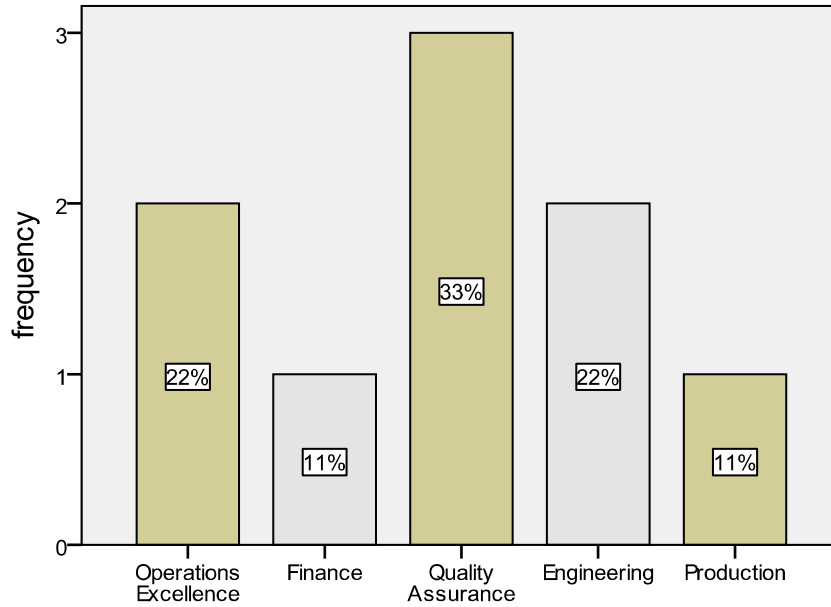
The secondary data obtained was from the company record from the period of January 2011 to August 2013. The primary data for the second and third objective was collected within the month of September 2013. The statistics discussed below are mean, mode and standard deviation. The analysis proceeds with a descriptive statistics of the each of the factors of PMS.

4.3 Employees Profile

This section discusses the results of the general information about the employee including the period the employee has been in the firm, gender, employee's status in the organization and the education level. These characteristics appeared to have some moderating influence on PMS more so on the period the employee had stayed in the organization.

Majority of the respondents worked at quality assurance (33 percent), followed by those who were in operation excellence (22 percent), engineering (22 percent), finance (11 percent) and production (11 percent) as shown in Figure 4.1 below. This was skewed basically to ensure the data collected was rich since the quality department was running TQM before the company adopted PMS.

Figure 4.1: Functional Classification of the Organization



The Table 4.1 below indicates that half of the respondents (50 percent) were in middle management positions, respondents in top management and first level supervisory tied each representing 20 percent, only 10 percent of the employees were in non-managerial position.

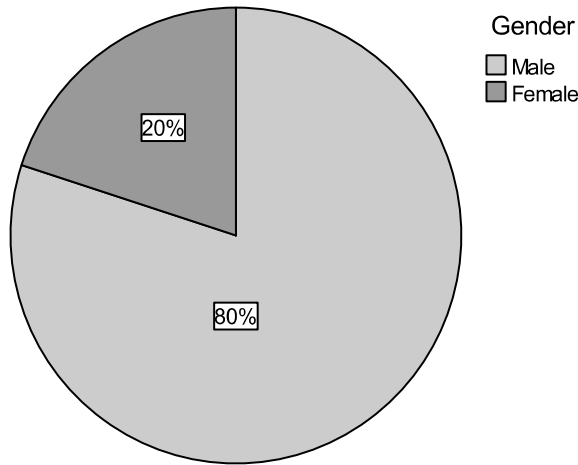
Table 4.1: Employee Position in Organization

Position in Organization	Frequency	Percent
Top management	2	20
Middle management	5	50
First level supervisor	2	20
Non managerial position	1	10
Total	10	100

Among the overall respondents, 20 percent were female while 80 percent were male as shown in Figure 4.2 below. Since the sample was drawn at random, it can be concluded

that there were more male employees compared to female employees. A goodness of fit test with regard to gender yielded a chi value ($\chi^2=3.600$, $p=0.058$) which was not significant. Figure 4.2 below shows the classification of the respondents classified by gender.

Figure 4.2: Classification of Respondents by Gender



This implies that the gender proportions in the sample as drawn did not differ significantly from the population proportions which were set at 50 percent (equal proportions of male and female as expected in the population).

The summary statistics from the Table 4.2 below shows that all respondents were in age category 25 to 35 years.

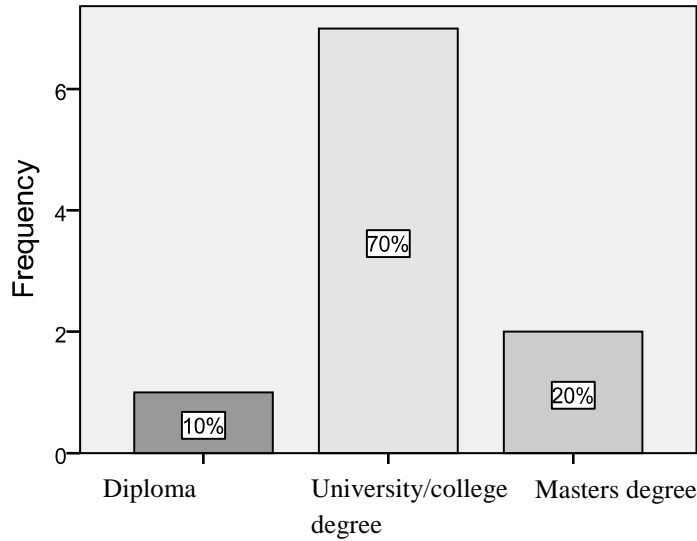
Table 4.2: Respondents Age in Years

Age category	Frequency	Percent
25-35	10	100

As shown in Figure 4.3 below, university level of education was the most common (70 percent), followed by masters' education (20 percent), then secondary level (10 percent). Going by what was discussed in the literature review, it can be concluded that a large

percentage of the employees were well educated and as a consequence, would not influence PMS negatively.

Figure 4.3: Classification of Respondents by Level of Education



As shown in Table 4.3 below majority (60 percent) of the respondents had spent 3 to 5 years working in the organization, 20 percent had worked for 1 to 2 years, 10 percent had worked for 6 to 10 years. The remaining 10 percent had spent over 10 years in the organization.

Table 4.3: Number of Years Worked in Organization

Number of Years Worked	Frequency	Percent
1-2	2	20
3-5	6	60
6-10	1	10
>10	1	10
Total	10	100

4.4 Results and Discussion on the Study Objectives

The following section discusses the findings of the study in light of the research objectives with respect to CSFs that have driven PMS at Gsk, the findings relating to the Identification of CSFs that have driven PMS at Gsk are represented in Figure 4.4 and Table 4.4 below. When asked whether employees clearly articulated the business goals that are important to them, majority of respondents (90 percent) responded yes and only 10 percent said no.

Figure 4.4: Articulation of Important Business Goals

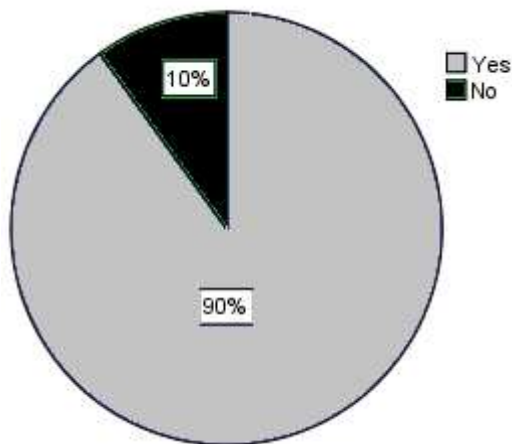


Table 4.4: Critical Success Factors to Articulation of Business Goals (Percent)

Critical Success Factor	Strong	Moderate	Weak	No Effect
Level that you have translated business goals in to team target	40	60		
Level of visuals developed which trend performance against team targets.	40	60		
Role link to other functions in the organization.	10	90		
Collective contribution to business level.	20	80		

The aim was to determine how certain statements that related to the identification of CSFs that have driven PMS at Gsk were ranked by the respondents. This includes

translated business goals, trend performance, role link, collective contribution to business level. The statements were structured so as to reflect either effect or no effect. The accepted responses were strong effect, moderate effect, weak effect and no effect. Majority of employee’s respondents had the idea that there is a link in roles, with a 90 percent response to yes simply means that the teams have a clear understanding of value proposition, business goals and zonal understanding as shown in Table 4.5 below.

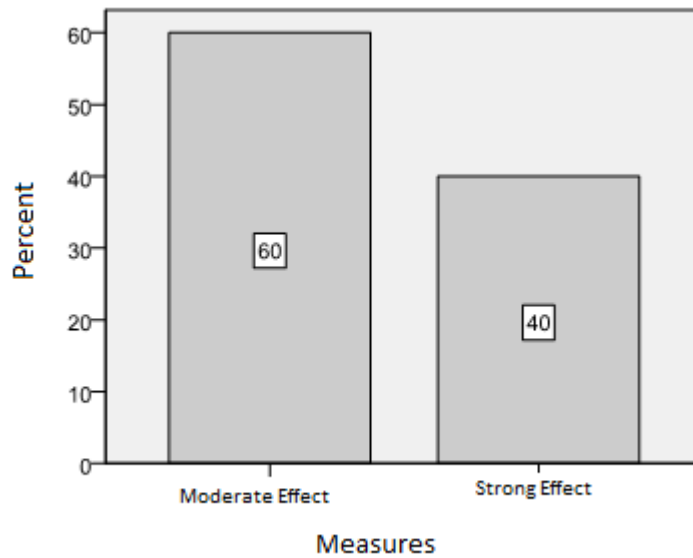
Table 4.5: Level of Problem Articulation

Level of problem articulation	Frequency	Percent
Weak effect	1	10
Moderate effect	6	60
Strong effect	3	30
Total	10	100

In summary, majority of the respondents (60 percent) were of the opinion that the level of problem articulation was of moderate effect. 30 percent of the respondents were of the opinion that the level was of strong effect while 10 percent felt that it was of weak effect. The distribution had an overall mean of 3.50 and a standard deviation of 1.08 thus, there was a moderate approach to solving out issues as they happen as the team interviewed felt the rapid response to solve out breakdowns and other related down times is yet to take a pronounced effect.

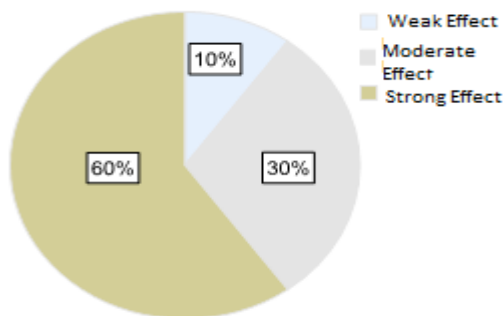
As Figure 4.5 shows, a significant number of respondents (60 percent) felt that the level of ‘lag’ translation into meaningful lead measures was moderate while 40 percent of the respondents felt it was strong, as such the team showed a lack of understanding of how their day to day activities can influence the lead measures which they are in charge of.

Figure 4.5: Level of 'Lag Measures' Translated Into Meaningful Lead Measures



When asked to explain how the team can influence the lead measures and when to take corrective measures, majority of respondents (60 percent) responded said they had strong effect, 30 percent moderate effect while the remaining (10 percent) had weak effect as shown in Figure 4.6 below.

Figure 4.6: Team Influence on Lead Measures



When asked to rate the level of transformation of lead measures into visible controls with clear targets majority of 60 percent of employees responded that the level was of strong effect while 40 percent felt that the level was of moderate effect as shown in Table 4.6 below. This distribution had a mean of 4.20 (strong extent) and a standard deviation of

1.033. Visual controls as a key tool in a PMS has yet to be implemented in some departments especially in QC.

Table 4.6: Level of Lead Measures Translated into Visible Controls

Level that lead measures turned into visible controls	Frequency	Percent
Moderate effect	4	40
Strong effect	6	60
Total	10	100

Among those who responded, the majority rated abnormal conditions extend and the standards for corrective actions as an influential CSF to a moderate extent with some rating it to a strong extent. Most of the respondents were of the idea that there is strong evidence that routine shop floor meeting takes place with very few rating it at moderate level. This brought out the idea that there is indeed shop floor meeting taking place by the site leadership team but the standard work on this has yet to be initiated hence the variation in the of the level of acceptance as seen from the respondents in Table 4.7 below.

Table 4.7: Management Confirmation Through Leader Standard Work (Percent)

Critical Success Factors	Strong	Moderate	Weak	No effect
Abnormal conditions extend and the standards for corrective action	40	50	10	0
Visible evidence that routine shop floor meetings takes place.	70	30	0	0
Commitment and successes from the shop floor	80	20	0	0
Extent of relevant parties' engagement throughout the process.	50	50	0	0

Commitment and successes from the shop floor were the most influential success factors. Among those who responded, the situation was tied between those who rated extent of relevant parties' engagement throughout the process as a moderate success factor, and those who rated it as a strong success factor, as Table 4.8 below shows.

Table 4.8: Values of Management Confirmation Through Leader Standard Work

Critical Success Factors	Mean	Standard Deviation
Abnormal conditions extend and the standards for corrective action	3.7	1.16
Visible evidence that routine shop floor meetings take place.	4.4	0.966
Commitment and successes from leader standard work	4.6	0.843
Extent engagement of the relevant parties throughout the process.	4	1.054

From the mean values, commitment and successes from leader standard work exerted the greatest level of influence on CSF, with the highest mean value of 4.6. Also, the low standard deviation of 0.843 indicated a high clustering around the mean of the distribution. This implies that there was close agreement among the respondents as to the efficacy of commitment and successes from leader standard work as a CSF.

Extent of coaching to help teams improve performance was rated by most respondents as a CSF to a strong extent. However the situation was tied between those who rated it as a moderate and weak success factor as Table 4.9 shows.

Table 4.9: Tiered Accountability (Percent)

Critical Success Factor	Strong	Moderate	Weak	No effect
Extent of coaching to help teams improve performance	40	30	30	0
Team description role level and the role of others in solving issues in real time	20	60	20	0
Tiered accountability and process escalation	40	40	20	0
Role definition.	30	70	0	0

Most of the employees who responded described the role of their teams and the role of others in resolving issues in real time to a moderate effect. Among those who responded, the situation was tied between those who rated tiered accountability and escalation process understandability as strong success factor and those who rated it as a moderate factor. Role definition was rated as a moderate success factor by most of the respondents.

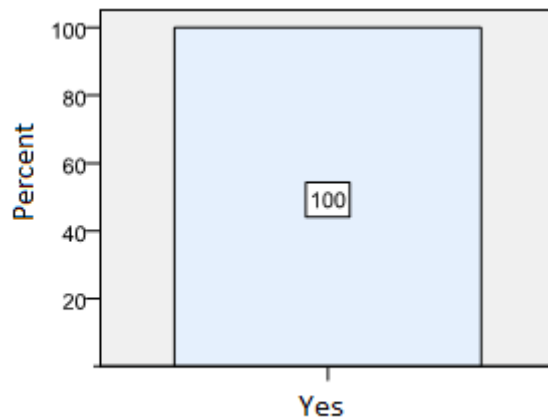
From the mean values, tiered accountability, escalation process understandability and role definition exerted the greatest level of influence on CSFs, with the highest mean value of 3.6 as shown in Table 4.10 below. Also, the low standard deviation of 0.966 of role definition indicated a high clustering around the mean of the distribution. This implies that there was close agreement among the respondents as to the efficacy of role definition as a CSF.

Table 4.10: Mean and Standard Deviation Values for Tiered Accountability

Critical Success Factors	Mean	Standard Deviation
Extent of coaching to help teams improve performance	3.5	1.354
Team description role level and the role of others in solving issues in real time	3.2	1.033
Tiered accountability and escalation process understanding	3.6	1.265
Role definition.	3.6	0.966

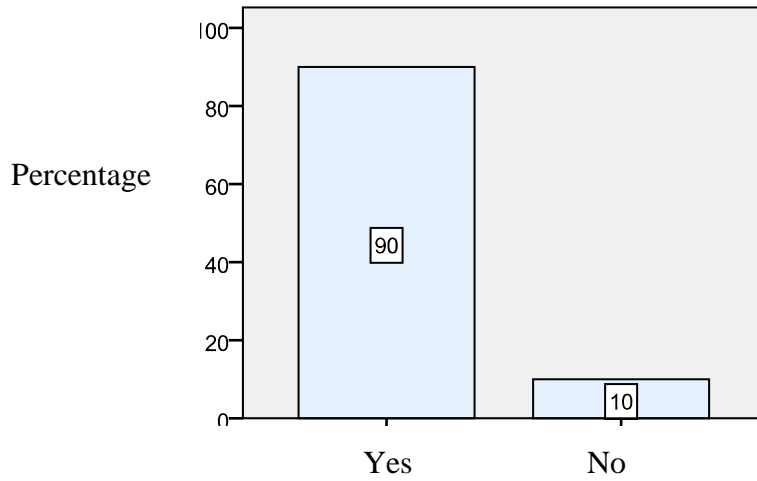
All the respondents were of the idea that there is no comparison done between actual performance and the expected performance in real time to reveal the gaps there-of as shown in Figure 4.7 below. This too is a CSF that has not been articulated to.

Figure 4.7: Performance Gap Analysis



Majority of the respondents (90 percent) rated action assignment and tracking of individuals through completion as quite an embedded process in the organization through tiered accountability and escalation process from tier one through tier three. (See Figure 4.8)

Figure 4.8: Tracking of actions in Tiered Accountability



Definition of process and methods for choosing performance standards was cited by the highest percentage of individuals as being the challenge most of them encountered in implementation of PMS. This was followed by availability of training, benchmarking against similar organizations, use of customer/stakeholder feedback in developing standards and coordination measures taken as shown in Table 4.11. Standards and measures coverage of capacities, processes and outcomes was the greatest challenge encountered by every respondent.

Table 4.11: Challenges Impeding Successful Implementation of Performance Management System (Percent)

	Yes	No
Definition of process and methods for choosing performance standards	89	11
Availability of training to help staff	80	20
Benchmarking against similar organizations	78	22
Standards and measures coverage of capacities, processes and outcomes	10	0
Use of customer/stakeholder feedback in developing standards	70	30
Coordination measures taken	70	30

Availability of specific measures for established performance, clarity of definition of measures, quantitative unit of measure definition was cited by the highest percentage of individuals as being the challenge most of them encountered while doing performance standards and targets as shown in Table 4.12 below.

Table 4.12: Performance Standards and Targets (Percent)

Performance Standards and Targets	Yes	No
Availability of specific measures for established performance	80	20
Clarity of definition of measures	90	10
Quantitative measures unit of measure definition	80	20

The next level of analysis aims at determining whether there was any association between CSF and challenges the organization was facing in the implementation of PMS. In order to accomplish this, the chi square test of independence which tests the association between two sets of categorical variables, were computed. Only the output from the statistically significant findings was presented in the body of the discussion.

Table 4.13 below contains the chi-square score for (labeled Pearson chi-square), the table's degrees of freedom, and the p-value associated with the obtained chi-square score. Clarity of definitions of measures had a statistically significant association with the level of education, years worked in organization and problem level and solving, ($\chi^2=10.000$, $df =2$, $p=0.07$), ($\chi^2=10.000$, $df =3$, $p=0.019$) and ($\chi^2=10.000$, $df =2$, $p=0.007$). This implies that this association did not occur by chance but rather that there was a conscious influence by the education and years worked in organization and problem solving in the implementation of PMS.

Definition of process and methods for choosing performance standards was statistically significant with articulated business goals that are important ($\chi^2=9.000$, $df =1$, $p=0.003$), Benchmarking against similar organizations was also statistically significant with the level of translating business goals into team target ($\chi^2=5.143$, $df =1$, $p=0.023$), there was association between collective contribution to business level with use of customer/stakeholder feedback in developing standards and definition of process and methods for choosing performance standards. The association was statistically significant ($\chi^2=5.833$, $df =1$, $p=0.016$) and ($\chi^2=3.938$, $df =1$, $p=0.047$) respectively.

Table 4.13: Test for Association

	Pearson Chi- Square (χ^2) Value	df	Asymp. Sig. (2- sided)
Education level versus clarity of definition of measures	10.000a	2	0.035
Years worked versus clarity of definition of measures	10.000a	3	0.019
Problem level solving versus clarity of definition of measures	10.000a	2	0.007
Articulated business goal versus choosing performance standards	9.000a	1	0.003
Abnormal conditions versus choosing performance standards	9.000a	2	0.011
Leadership commitment and successes versus choosing performance standards	3.938a 9.000a	1 1	0.047 0.003
Action assignment versus choosing performance standards			
Bench marking versus translated business goals	5.143a	1	0.023
Bench marking versus performance comparison	3.938	1	0.047
Bench marking versus visible evidence	5.143a	1	0.023
Role risk versus choosing performance standards	9.000a	1	0.003
Collective contribution versus choosing performance standards	3.938a	1	0.047
Collective contribution versus customer feedback	5.833a	1	0.016
Coordination measures versus team influence	10.000a	2	0.007
Coordination measures versus lead measures turned into visible controls	6.429	1	0.011
Coordination measures versus team description role	6.032a	2	0.049

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main objective of this study was to evaluate the role of PMS as applied in Gsk. The specific objectives were to evaluate the CSF of PMS in WCM, identify the CSF that have driven PMS at Gsk and what challenges the organization was facing in the implementation of PMS. PMS is a model an organization willingly chooses to adopt in order to achieve its vision. It emerged from the study that there are critical foundations that the organization must put in place to ensure that this model takes off and is embraced by all employees in the organization.

Most employees especially senior management felt that tiered accountability process is well established with 40 percent being in favor with a strong effect another 40 percent moderate effect and 20 percent weak effect. This means that there is a considerable reduced communication through emails as teams now embrace daily stand-up meetings on the shop floor thus increasing Gsk's productivity.

Middle level management coaching by the site leadership team was observed to be a CSF with a combined 70 percent range from moderate to strong effect. This goes to raise the site capability in succession management and business continuity process. Gsk has yet to rate its goals in order of their urgency, this can easily confuse teams as to what they should focus their energies on besides causing a misguided resource allocation.

Lack of a defined process and methods of choosing performance standards, weak structures of staff training, non benchmarking against similar organization and low uptake of customer/stakeholder feedback in developing standards were observed as the most challenging elements Gsk was facing in its implementation of PMS.

5.2 Conclusion

Tiered accountability process is well implemented through the organization where production process flow is tracked and all the issues impending this are urgently resolved. However rapid response to issues has yet to take off, this means that even through the process of issue reporting the response rate needs to improve. Zonal understanding could also play a key role in improving the rapid response to issues since the teams could have clear understanding how their in action is affecting the lead measures of the other department in the organization.

Lag measures in the organization are yet to be fully translated into lead measures to enable the teams to understand what they are in control of and how their actions contribute towards organization achieve its goals. There is a significant level of implementation of standard work that is critical to processes on the shop floor. More training on PMS is required more especially on the shop floor.

Employees' behaviors should be anchored on the PMS this can be achieved through articulating the most important goals into their personal development programs. This will act as an enabler in perception change and with time erodes the negative perception of PMS.

5.3 Recommendations

The role out of PMS like any other project requires a lot of discipline and the leadership team should set the pace with which everybody is expected to move at. Thus, the leadership of the organization has to lead by an example in the implementation of the PMS. There is need to introduce periodic auditing system to ensure that the organization is on truck in its implementation process. This will in return expose the gaps of the process and create an opportunity for further improvement. There is need also to establish a financial system of calculating the payback period of all the projects that go into PMS.

PMS does not solve all the issues the organization is facing, thus there is need to marry the system with other models like BSC for an organization to reap maximum benefits, Yamashina H. (1994)

5.4 Limitations and Further Research

This research was limited in various aspects; one is non availability of data from key stakeholders, the organizations' suppliers and customers to have an end to end perspective on the implementation of the PMS. The research focused only on Gsk global manufacturing business, could be more interesting to have a view on what happens in the consumer and pharmaceutical business of the organization. This could enable the researcher have a clear understanding on the level of implementation of the PMS.

From the results of this study, further research is necessary in comparing the effectiveness of different methodologies of WCM. The areas of potential research include a comparison of PMS with established methodologies such as TPM and the application of PMS in the service industry such as banks and government organizations.

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APPENDICES

Appendix I: Research Questionnaire

Section 1: Employee Organization Profile

Please tick the most appropriate functional area

1. Which functional area of the organization do you work?

- Operations Excellence;
- Finance;
- Planning;
- Quality Assurance;
- Engineering

Section 2: About Yourself

Please tick the most appropriate information about yourself

2. Your position in the organization

- Top Management
- Middle Management
- First level supervisor
- Non Managerial position

3. Your Gender

- Male
- Female

4. Your age in years

- Less than 25
- 25 – 35
- 36 – 47
- 48 – 54
- More than 54

5. Your highest level of education

- Diploma
- University/College degree
- Masters Degree
- PhD
- Other (please specify): _____

6. Number of years worked in organization

- Less than 1 year
- 1 – 2 years
- 3 – 5 years
- 6 – 10 years
- Over 10 years

Section 3: Identification of Critical Success Factors that have driven Performance management at Gsk

7. Have you clearly articulated the business goals that are important to you?

- Yes No

8. To what level have you translated business goals into team targets?

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 5 | 3 | 2 | 1 |
| Strong | Moderate | Weak | No |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. To what level have you developed visuals which trend performance against team targets

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 5 | 3 | 2 | 1 |
| Strong effect | Moderate effect | Weak effect | No effect |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. How well is your role linked to other functions in the organization?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. To what level is your collective contribution to the business?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. To what level can you articulate your problems and what is being done to solve them?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. To what level have you translated the business goals aligned 'lag' measures into meaningful lead measures?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. The team can explain how they can influence the lead measures and when to take corrective action?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. To what level are lead measures turned into visible controls with clear targets?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

16. To what extent can you describe abnormal conditions and the standards for corrective action?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Is there visible evidence that routine GEMBA takes place?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Is there visibility of commitments and successes from GEMBA and are they visible?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. To what extent are the relevant parties engaged throughout the process?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect

20. To what extent have you used coaching to help teams improve performance?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. To what level can your team describe their role and the role of others in resolving issues in real time?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Does your team understand the tiered accountability and escalation processes?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. How well has each role been defined with clear purpose and responsibility within the tiered accountability process?

5	3	2	1
Strong effect	Moderate effect	Weak effect	No effect
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Do you compare actual performance with expected performance to reveal gaps?

Yes No

25. Are problems revealed, resolved and actions prioritized according to business goals in your department?

Yes No

26. Do you assign actions to individuals and track them through to completion?

Yes No

Section 4: Highlighting the Challenges the Organization is facing in the implementation of Performance Management System

1. Do you use performance standards that reflect the intended outcomes of your activities?

Yes No

2. Do you set specific performance targets to be achieved in a certain timeframe?

Yes..... No

3. In determining performance standards, measures, and targets for WCM:

a. Have you defined processes and methods for choosing performance standards, measures, and targets?

Yes No

b. Is training available to help staff determine performance standards and targets?

Yes No

d. Do you benchmark (compare yourself) against similar organizations?

YesNo

e. Do your standards and measures cover a mix of capacities, processes, and outcomes?

Yes..... No

4. Do you use customer/stakeholder feedback to develop your standards and targets?

Yes No

5. Are measures selected in coordination with other programs, divisions, or organizations to avoid duplication of efforts or setting different standards and targets for the same measure?

Yes No

6. On performance standards and targets:

a. Do you have specific measures for all of your established performance standards and targets?

Yes..... No

b. Does every measure have a clear definition?

Yes No

c. Is a clear unit of measure defined for quantitative measures?

Yes..... No

7. What could be done to enhance implementation of Performance management?

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8. What are the barriers to the implementation of Performance Management?

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Thank you!