

Project Title: The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India Fertilizer Company

This dissertation is for competing the requirement to obtain master degree in college of Business Administration Specialization of Business Administration (MB)

**College: Business Administration** 

A'SHARQIYAH UNIVERSITY

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1441 AH/ 2021 AD

# Acknowledgment

The acknowledgment shall be written as clarified below in English, as well as the decision of the judgment and defense committee.

# Acknowledgment

I acknowledge that the source of the scientific content of this dissertation has been determined and that it is not provided for any other degree, and that it reflects the opinions of the researcher, which are not necessarily adopted by the donor.

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# **Dissertation Approval**

# Project Title: The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India Fertilizer Company

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**DECLARATION** 

I Khalfan Said Khalfan Al harthy proof reading that, I have completed Dissertation project titled

as

The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India

Fertilizer Company. Which is submitted in partial fulfillment of the requirements for the degree

of Master in Management Master of Business Administration from A'Sharqiyh University.

During 2018-2021 The, information presented in this project is original work and does not form

any part of the project undertaken previously to the best of my knowledge.

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# Project Title: The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India Fertilizer Company

Dear Sr.

This is Great pleasure to inform you that I have complete all subjects of Master in Business Administration and fulfilment all the requirements related the degree.

Prepared by

Khalfan Said Khalfan Al Harthy

10/03/2021

#### **Dedication**

In the last moments of completing my master's Degree studies, I offer my thanks and gratitude to ALLAH, his ability, facilitate the path of knowledge, and enlighten us with guidance. I recognition of the blessing of parents and as they always wanted me to search for the knowledge of books and patience in seeking highness.

I do not forget the virtue of my mother thanking ALLAH for her endeavor to follow us in the path of scholars and the path of the knowledgeable, for she has me love and gratitude, and for my father, ALLAH forgave his sins and made the highest levels of Heaven, his position is the most important role in preparing me and enlightening me of the requirements of life and raising his concern to raise the position of the nation among the nations, so he has supplication as long as I live.

I do not forget in this opportunity that my dear wife and my children support and bear the issues of my studies and to be the real example for them in their future.

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With thanks and appreciation

Researcher: Khalfan bin Said bin Khalfan Al-Harthy

#### الأهداء

في اللحظات الاخيره من إكمال دراسة الماجستير, لا يسعني إلا أن أزجي أحر الشكر و العرفان للمولى جلت قدرته بأن سهّل لنا طريق العلم و نور لنا سبل الهدايه. وإعترافا ببركة الوالدين و كما أرادوا لنا دائما البحث في أمهات الكتب والصبر في طلب العلا, فلا أنسى فضل والدتي شكر الله سعيها في الأخذ بنا مسلك العلماء و طريق العارفين فلها مني الحب والإمتنان. و لأبي غفر الله ذنوبه وجعل الدرجات العلا من الجنة مكانته الدور الأهم في تهيئتي و تبصيري متطلبات الحياه و رفع الهمه لرفع مكانة الأمه بين الأمم فله الدعاء ما أحييت. ولا أنسى في هذه السانحه وقوف زوجي العزيزه و أبنائي و تحملهم عناء دراستي ولكي أكون مثلا لهم في مستقبلهم.

كذلك لا يسعني إلا أن أقدم التحيه الممزوجه بالورود لكادر التعليم و السلك الإداري و زملائي الطلاب في جامعة الشرقيه لما هيئوا لنا كل سبل الراحه و توفير أدوات التعليم المختلفه, فلهم عاطر الثناء و الوصال.

وشكر خاص لمشرف هذه الرساله الدكتور صالح السناوي الذي ساهم بكل الطرق لإظهار هذه الرساله لتكون عند مستوى التطلعات ولتكون إنعكاسا لجهد مبذول عسى أن تغيد الطلاب في قادم الأيام.

مع الشكر و التقدير

الباحث: خلفان بن سعيد بن خلفان الحارثي

#### **ABSTRACT**

The main objective of the current research paper is emphasized on enhancing the productivity of employees, which is studied with reference to a candidate organization that is "Oman India Fertilizer Company SAOC, (OMIFCO)". In addition, through this study, the researcher aims to improve employee's level of performance and productivity through setting and implementing Key Performance Indicators (KPI's), which are developed through creative human resource management strategies. Furthermore, the so proposed and implemented KPI's are measured in terms of creativity and innovation on regular intervals to ensure enhanced productivity. Therefore, to achieve the objectives of present research paper, relevant and authenticated literature reviews are included in the study, which are pertaining to productivity and performance. Furthermore, through this research, the researcher aims to answer the research questions, which are related to the effects and factors that facilitates in stimulating and creating an atmosphere, which helps in increase productivity.

The research methodology of the present research is designed in such a way that it facilitates to answer the research questions. The employees and managers working in the candidate company are involved in the study in order to develop realistic approaches and KPI's. Further, the researcher exerts best efforts to propose creative and innovative KPI's. However, through this process, emphasize is laid on performance evaluation and training in organizations, especially in the context of fertilizer industry. In addition, the researcher links training programs with the results of performance appraisal systems, to ensure their competitiveness in the market.

Thus, the result of this thesis shows that strong relationship between implementation KPI and productivity there is relationship between measurement KPI and productivity. Through the Statistic analysis, the three variables help this research to come out with strong and confident date collected from Omifco Organization. The results of this research are intended to be incorporated in the candidate company and they form the source for the completion of the researcher's master's degree. In addition, the current research forms a potential source to delegate some important details, which helps the company's managers to understand the employee's requirements in order to improve productivity. Moreover, this research would be a potential source for the college library that can be reviewed by future researchers in case of similar context.

**Keywords:** Performance measurement, performance implementation, productivity, OMIFCO, Oman India Fertilizer Company

#### الملخص

إن الهدف الرئيسي لورقة البحث هو التركز على تعزيز إنتاجية الموظفين ، والتي تتم دراستها بالرجوع إلى منظمة مرشحة وهي "الشركة العمانية الهندية للأسمدة ش.م.ع.م (أوميفكو)". بالإضافة إلى ذلك ، من خلال هذه الدراسة ، يهدف الباحث إلى تحسين مستوى أداء الشركه والتي تم تطوير ها من خلال إستراتيجية إدارة الموارد البشريه للموظف ومدى إنتاجيته من خلال وضع و تنفيذ مؤشرات الأداء الرئيسيه .

علاوة على ذلك ، يتم الأخذ بالأدوات المقترحة والمنفذة من حيث الإبداع والابتكار على فترات منتظمة KPI's للموظف لضمان تحسين ولتحقيق أهداف ورقة البحث الحالية ، يتم تضمين مراجعات الأدبيات ذات الصلة والموثقة في الدراسة ، والتي تتعلق بالإنتاجية والأداء. وكذلك ، يهدف الباحث من خلال هذا البحث إلى الإجابة على أسئلة البحث المتعلقة بالآثار والعوامل . التي تسهل في تحفيز وخلق جو يساعد في زيادة الإنتاجية.

تم تصميم المنهجيه لهذا البحث بطريقة تسهل الإجابة على أسئلة البحث. يشارك الموظفون والمديرون العاملون في الشركة المرشحة في الدراسة من أجل تطوير مناهج واقعية ومؤشرات الأداء الرئيسية. علاوة على ذلك ، يبذل الباحث قصارى جهده لاقتراح مؤشرات الأداء الرئيسية الإبداعية والمبتكرة من خلال هذه العملية ، يتم التركيز على تقييم الأداء والتدريب في المنظمات ، وخاصة في سياق صناعة الأسمده. بالإضافه الى ذلك يربط الباحث بالبرامج التدريبية و بنتائج أنظمة تقييم الأداء الضمان قدرتها التنافسية في السوق, وإن نتائج هذا البحث التي من خلالها يطمح الباحث على نيل درجة الماجستير فإنه يهدف الى دمج نتائج هذا البحث في الشركه والإستفاده لتطوير الأداء العام. . بالإضافة إلى ذلك ، يشكل البحث الحالي مصدرًا محتملاً لتفويض بعض التفاصيل المهمة ، مما يساعد مديري الشركة على فهم متطلبات الموظف من أجل تحسين الإنتاجية. علاوة على ذلك ، سيكون هذا البحث مصدرًا محتملاً لمكتبة الكلية يمكن للباحثين في المستقبل مراجعته في حالة وجود سياق علاوة على ذلك ، سيكون هذا البحث مصدرًا محتملاً لمكتبة الكلية يمكن للباحثين في المستقبل مراجعته في حالة وجود سياق مشابه.

الكلمات الرئيسيه للموضوع: قياس الأداء ، تنفيذ الأداء ، الإنتاجية ، أوميفكو ، الشركة العمانية الهندية للأسمدة وضع وتنفيذ مؤشرات الأداء الرئيسيه والتي يطلق عليها KPI

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# **List of Abbreviation**

Sr. No	Abbreviatio n	Full Name	Page No
1	OMIFCO	Oman India Fertilizer Company	17-20-24-46-71-79
2	KPI	Key Performance Indicators	17-21-28-29-31-34-35-46-55- 71-75-76-77-78
3	HR	Human Resource	17-24-35-38-71-76
4	KRIBHCO	Krishak Bharati Cooperative Limited	20
5	IFFCO	Indian Farmers Fertilizer Cooperative  Limited	20
6	MT	Metric Ton	20
7	OECD	Organization for Economic Co- operation and Development	24
8	RI	Result Indicators	28
9	PI	Performance Indicators	17-21-28-29-31-34-35-46-55- 71-75-76-77-78
10	KRI	key risk indicator	28-29
11	Rls	Restless legs syndrome	28
12	Pls	primary lateral sclerosis	78
13	SPSS	Statistical Package for the Social Sciences	41-43-46-75-76

#### **CHAPTER 1:**

#### INTRODUCTION

#### 1.1 BACKGROUND

In the contemporary world, performance measurement has occupied a credible role both in terms of organizational environment as well as in terms of academics (Aki et al., 2011). On the other hand, prosperity in business world is equally important, which is gained through competitiveness and it can be achieved through progressive productivity. The concept of performance measurement and productivity has always remained a matter of great significance from the very beginning of industrialization (Roshan and Jenson, 2014). Nevertheless, both the concepts go hand in hand, in order to realize sustainable competitive advantage, and the organizations that do not adhere to these concepts experience the effects of marginalization. Further, productivity is an elementary concept, which governs the activity of production and it is directly related to profitability of the organization (Adebayo et al., 2012).

Neide (2012) stated that since the 1980s there has been an increasing emphasis on the importance of HR measurement. Further, HR performance measurements have a direct impact on the organizations growth, hence these standards are ought to be both forward-looking as well as backward-looking and focused on the entire HR system, not just on individual practices. Generally, an organizations performance measurement defines the objectives and strategies of the higher departments that strive to achieve success over consecutive years by enhancing job satisfaction, which helps the growth of productivity. Nowadays, it has become equally essential to know the employee's behaviors and their accompanying effects over the work and how they contribute for the development and growth of the firm in, which they are employed. The inculcation of performance standards, development of employee skills and the evaluation of employee's productive hours have in turn facilitated to raise the level of productivity within the company in order to reach the predefined goals.

Numerous scholarly work and researches have been carried out in reference to performance measurement and productivity in various industries as well as in fertilizer industry across the world (Soumita, 2017). Whereas, in the context of Oman there are hardly any studies that are conducted in the similar subject area, which is with reference to fertilizer industry, because there

are hardly very few fertilizer industries in the country. Eventually, the results of this research would prove to be substantial resource to enhance productivity and implement performance measurements with reference to fertilizer industry, especially in the context of Oman.

#### 1.2 Brief Overview of OMIFCO

Oman India Fertilizer Company SAOC (OMIFCO) is a proactive outcome of an initiative, which was horded by two distinct governments, one among those is the Government of Oman, and the other one is Indian Government. The companies that represented the Oman government was Oman Oil Company SAOC (OOC), which is a well-reputed firm that has served the country through various endeavors like hydrocarbon sector, fuel retail sector, distribution and logistics of fuel, petrochemicals and fertilizers. Whereas, the other two companies that are represented the government of India were Krishak Bharati Cooperative Limited (KRIBHCO) and Indian Farmers Fertilizer Cooperative Limited (IFFCO), which are mainly involved in the production of various kinds of fertilizers and chemical compositions for the growth of agricultural products. Therefore, these bodies have amicably agreed and ratified a contract to establish two ammonias and twourea production plant in the industrial area of Sur, which is an industrialized region of Sultanate of Oman. Thus, the merger of three gigantic firms namely: OOC, KRIBHCO and IFFCO has led to the evolution of OMIFCO. Since, the companies have capitalized in bringing up the fertilizer plant; their stakes are divided as 50%, 25% and 25% among OOC, KRIBHCO and IFFCO, respectively. OMIFCO aims to produce Anhydrous Ammonia through their two Ammonia Plants with a production capacity of 2x1,750 MT/Day. In addition, OMIFCO intends to produce Granular Urea through their two Urea Plants with a manufacturing volume of 2x2,530 T/Day (OMIFCO).

#### 1.3 PROBLEM STATEMENT

This section of the study focuses on reviewing the current situation of OMIFCO, which is elaborating the problems of limitations within the company framework. This section highlights the influence of ongoing processes and outcomes of the measures KPI that taken by the company. In the later sections of the report, benchmarking of company's standards is carried out against the international productivity and performance management in order to assess the gaps in the existing system moreover; the suggested solutions to bridge these gaps as a part of this

research. Moreover, efforts are put-forth to explain the impact of the general system, which is exercised by the company. The current performance level of the employees is included in this report to highlight the problem area. This section also entails about the ineffective measures adopted by the company in order to satisfy the employees to increase their productivity that yielded in unfruitful outcome.

"Most of the OMIFCO employees are not aware about the performance measurement system (KPI – Key Performance Indicators) which measures the productivity of an employee and links it to the scorecard of the organization. The present KPI of the organization focus on the departmental level KPI instead of the organization as a whole, this leads to negligence of the employees with respect to the performance system. Generally, the expectations and common objectives are circulating via brochures and emails, which is in a simple and incomplete form this diverges the focus of the employees from the actual expectation.

In addition, there persists a major constraint of lack of communication amongst the staff and the HR team. The issue of communication also exists amongst the employees and their managers, which directly influences the employees' behavior and his efficiency. Thus, this gap in communication has therefore affected the company's overall productivity. Moreover, due to communication gap between various management levels has led to establishment of ineffective performance measurement standards. This has resulted in unsuccessful assessment of the actual performance of an employee against the desired level of expectation. Eventually, these persistent issues have affected the profitability of the company and has paved new avenues for its competitors to capture the market share.

One important aspect lacking in the performance measurement system is that the system is linked to bonus but it is not linked with total productivity of the organization, which makes an employee focus about his individual KPI rather than the organizations productivity." (AlKalbani, 2021)

Nevertheless, to address the problem statement, the current research tries to find some solutions through previous studies and researches carried out this field.

### 1.4 RESEARCH QUESTIONS

- What is relationship between Implementation KPI and Productivity?
- What is the relationship between Implementation KPI and measuring KPI?
- What is the relationship between measuring KPI and Productivity?

#### 1.5 RESEARCH OBJECTIVES

- To identify and determine as to what extent the KIP's that are proposed in the current research facilitate to handle the issues of productivity in OMIFCO, which are raised due to ineffective communication.
- To establish a relationship between KPI's and boost the productivity of OMIFCO, in order to sustain and thrive in the competitive market of fertilizer industry with reference to the market of Oman.
- To establish a relationship among performance measurement practices that can be adopted by OMIFCO and enhanced level of productivity in employees in the context of Oman.

#### 1.6 SIGNIFICANCE OF THE STUDY

The findings of this study are very significant, which can be presented to the private labor market, especially to those countries, which depend up on production. The researcher has conducted a detailed study to understand the factor and methods to increase productivity through introducing performance system that contributes to the evaluation of employee's level of productivity. However, it also facilitates to remove all the factors that may affect their performance and productivity negatively. Thus, the outcomes of the research can be implemented to manage performance measurement practice and increase productivity in the fertilizer production company of OMIFCO. Through this dedicated study on Oman Indian Fertilizer Company, this research reviews the effectiveness of the performance system through the specific and clear questions of the group of employees and compare them with the existing system. Thus, by measuring the performance, the gaps are identified, which is the most significant aspect of the research.

In addition, other researcher in the stream of performance measurement and the ones aiming to enhance productivity would find this study significant, because it would enhance the knowledge and provide potential information in the current area of study.

#### 1.7 OPERATION DEFINITIONS

#### 1.7.1 Productivity

Organizations rely on many factors to enhance their reputation in the local and international markets through two main factors: efficiency and productivity at work, because they are the real capital of the organization. The efficiency and productivity are closely related to the environment in which the employee works and through which they express their creativity, knowledge, and expertise to raise productivity at a low operating cost. Therefore, when efficiency of production increases, the capacity of the production also increases through improved processes of production. On this basis, we can study definitions of productivity or operation and its aggregation.

#### 1.7.2 Productivity as a Ratio between Outputs and Inputs

Muriel (2016) restated the findings of famous French economist Albert Aftalion (1876 - 1956), productivity is the ratio between total production, which is achieved at a given instance of time and the supporting factors that are used during production.

According to Grossman (2018), the concept of productivity was redefined, which was earlier stated by a famous industrialist Solomon Fabricant (1899 - 1937), productivity is the total amount of production per person within an hour is taken into account by considering the quality component.

Jorgenson (2015) redefined the concept of production that was stated by John W Kendrick (1917 – 2009), productivity is the ratio of real production to the amount of real physical inputs.

# 1.7.3 Productivity as a Degree of Efficiency

According to OECD Manual (2017), productivity is a measure of the degree to, which materials are converted into commodities. Further, productivity is a measure of efficiency or proficiency to transform resources into goods and services that fulfills the requirements of customers.

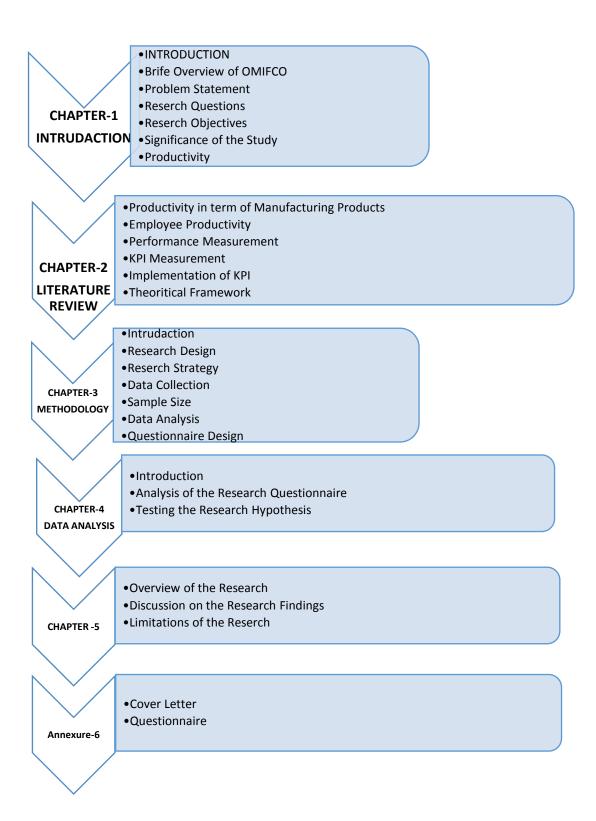
Moreover, productivity is noted as a relative issue, which expresses the quantity of total produce that is in proportion to theoretical measure in contrast to the degree of efficiency.

#### 1.7.4 Productivity as Resource Efficiency

According to OECD Compendium of Productivity Indicators (2019), Organization for Economic Co-operation and Development in Paris: productivity is the extent to, which resources are used according to a specific criterion. Further, as productivity continuous to improve its resultant efficiency enhances and the resources such as: labor, machinery and raw materials are utilized in an approach, which is more efficient.

The operational definitions that are defined in the above subsequent sections are effectively used in the current study, which is based on "The effectiveness of performance on employee productivity: In a case of Oman India Fertilizer Company". Further, the concept of productivity is explained both in terms of manufacturing and employee productivity, because the chosen company is involved in the process of manufacturing large capacity of fertilizers by employing human resource to complete the targeted amount of production.

#### 1.8 Dissertation Structure



### 1.9 RESARCH HYPOTHESES

- H1- There is significant strong positive relationship between Implementation KPI and Production.
- H2- There is significant positive relationship between Measurement KPI and Production.
- H3- There is significant positive relationship between Measurement KPI and Implementation KPI.

#### **CHAPTER 2:**

#### LITERATURE REVIEW

Literature review is the second section of the current research paper and it concentrates on entailing or including various researches with reference to performance measurement, and productivity, which facilitates to develops a theoretical framework to support the current study. The concept of performance measurement and productivity has occupied a significance in each organization, so there are many studied in the subject area based on its significance. Henceforth, some of the potential literature review are quoted in the present research.

#### 2.1 PRODUCTIVITY IN TERMS OF MANUFACTURING PRODUCTS

Evaluation of productivity is one of the most critical elements in both public and private organizations to achieve the objectives of the company. It also facilitates to raise the efficiency of the employee and it is an elementary aspect for the overall development. Moreover, the overall productivity of an organization determines its annual profitability, increase in sales, enhanced market share, establishes repute, increases production to satisfy the demand, etc. (Pooja and Col.Sachin, 2015).

According to Pekkola et al (2014), productivity is nothing but a standard determining component, which measures the efficacy of production. In addition, productivity can be stated as a proportion of inputs and outputs, which is involved in the process of manufacturing a product. For instance: the total output against every single quantity of production. However, both inputs and outputs are put together in order to calculate the total outcome of production. Further, every unit of inputs and outputs adds significance to the economical values. When the amount of outputs and inputs are deducted from the production cost, the actual revenues are calculated based on cost verses sales. Therefore, it is a common practice to measure the overall efficiency in the process of production to analyses the targets to be achieved through a well-set or well-planned production strategy.

According to Sreekumar et al (2018), the term productivity implies "the quantity produced against the final quality and performance of the output goods with the help of total amount of resources utilized". However, productivity is referred as how efficiently and commendably a

product is produced. Nevertheless, efficiency in the context of production can be referred as accomplishing the process of manufacturing in a right way through deploying adequate resources to achieve the desired results. Productivity of an industry facilitates in achieving expected quantity that is required to comply the demand of the market and gain profitability from different stages of production until the product reaches out to the end user. The productivity of the final product depends on two criteria's, which are inputs and outputs of quantity to get the results, which is a finished product. Hence, the elements involved to achieve the desired level of productivity is supported by allocated costs, which are illustrated in Figure – 2.1 that starts from defining the price of the product on the basis of resources cost and overheads to finalize competitive the market price.

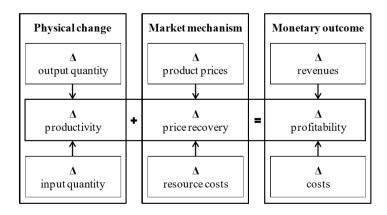


Figure 0-1: Productivity a factor affecting the profitability of an organization

Sources: Sreekumar et al (2018)

#### 2.2 EMPLOYEE PRODUCTIVITY

Employee productivity and its improvement is the primary objective of all the organizations that intends to compete, sustain and thrive. However, as the intensity of employee productivity increases both employees and its organization have a positive impact, for instance: as productivity increases the organization heads towards promising economic development, enhance level of profitability and healthier growth in social perspectives. Normally, productivity of employees is relatively assessed by the average amount of output they produce within per day working hours of an organization. Further, the productivity level of employees can be measured by the quantity of products produced by a single employee within finite working hours or a predefined time schedule (Hanaysha, 2016).

In addition, most of the organizations experience the issues of low employee productivity and aspire to improve it through effective employee engagement. Additionally, employees who are perform well in their organizations are considered to be productive and such employees are rewarded with better remuneration or annual returns and career growth opportunities (Sharma and Sharma, 2014). Furthermore, improved level of employee productivity enhances the organizations sustainable competitive advantage by shrinking down the manufacturing cost and enhancing the product quality. However, the overall accomplishments of an organization depend directly on the productivity of their workforce; hence, it has become a most significant concept in the world of business (Hill et al., 2014). Hitherto, the above-mentioned benefits of employee productivity encourage organizations to promote it through positive motivation, in order to increase the sustenance level of organizations.

#### 2.3 Performance Measurement

Performance measurement has become a significant topic for both industrialists and academics, which are trying to identify the stage of being identifiable as a specific subset in operations management. In the most recent research by Hackett Group (2019), suggests that the balanced scorecards have become a widely accepted and used performance measurement tool all across USA and other developed countries. However, despite its popularity, there are evidences that not all performance measurement initiatives are successful. Other researchers have claimed that 70% of attempts to implement performance measurement systems tend to fail or not achieve the desired results.

Therefore, the objective of the current papers is to contribute a better understanding about performance management, which influence the successful development of performance measurement initiatives through reviewing the literature and try to avoid failures that has occurred previously.

# 2.3.1 What is Performance Measurement

Performance measurement is a technique or a method, which is implemented by a company to observe potential characteristics or factors that persists within its processes or system. Adequate and relevant data are gathered to comprehend how their company's process or system are functioning, and eventually so retrieved data is used to develop strategic moves and it is used to

arrive at decisions. In general, performance is quantified and contrasted to the aims of an organization, thus the resultant factor is known as performance measurement. Therefore, the outcomes of performance measurement produce valuable data, which illustrates or sets a milestone as to how the organization has to schedule or arrange its working procedures to achieve efficiency. In addition, the performance measurements results enable organization to align its resources that helps in achieving effectiveness (Choong, 2014)

Performance measurement is termed as a practice of measuring and determining the effectiveness of a course of action or an accomplishment (Ivanov and Avasilcăi, 2013). According to Micheli and Mari (2013), performance measurement indicates the employment of various magnitudes of procedures and processes to achieve effectiveness. The various magnitudes employed to achieve excellence involves both fiscal and non-fiscal measures, it also comprises performance measures in terms of both interior and exterior in order to quantify and measure the actual achievements. Further, these measures facilitate to forecast the future objectives.

Nevertheless, it is not possible to achieve performance measurement in isolation. However, it is acceptable only in contrast to a context, which is effective and the one that can be assessed consistently. Previously, performance measurements were critiqued for evaluating performances in contrast to an incorrect context or framework of orientation, but in the present scenario, there are prevalent and extensive provisions for the principle or conviction that it has to be fostered through relevant strategies (Goshu and Kitaw, 2017).

Most of the organizations endure and continue to work on the operations, which have incorrect measures. In addition, there are hardly few organizations that categorically monitor their KPI's in a phased manner and it is because, merely few of them recognize the actual hidden KPI's due to ignorance and lack of attention towards key aspects. In fact, KPI's are or four kinds and they are as follows:

- Key Result Indicators (KRI's) these indicators state how the organization has attained a particular successful circumstance.
- Result Indicators (RI's) signifies what was performed, achieved or fixed in the past, which in fact measures the accomplishments.
- Performance Indicators (PI's) states what has to be achieved in the near future.

- Key Performance Indicators (KPI's) – affirms what exactly has to done to accelerate performance.

However, all the four performance measures establish a relationship, which can be explained through onion analogy and its pictorial representation is depicted in Figure -2.2.

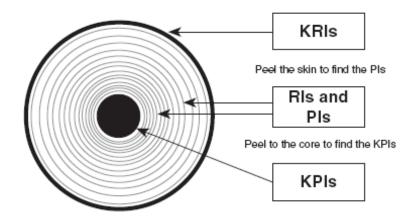


Figure 0-2: The four kinds of performance measures

Source: Parmenter, (2010)

The outermost layer represents KRI's, which portrays brief information of the conditions that includes the inputs that were incorporated to achieve a particular objective. It also entails how the processes were controlled from the initial stage of operations to its completion stage. However, unlike the layers of onion, the outermost layer is a dry skin, whereas the innermost layers are fleshy and full of nutrients. Nevertheless, as the onion layers are peeled, additional informations are retrieved or gathered. The subsequent layer signifies distinct result and performance indicators. Further, the core of the onion is KPI, which is a treasure of measures that emphasizes on the improvement of performances and aims to achieve the objectives. Hence, the measures that persists in the KPI's are considered vital for the accomplishment of the organization's objectives. The KPI's within the core are generally the most recent ones to the organization, which has to be concentrated to increase productivity (Parmenter, 2010).

## 2.3.2 Need to Measure Performance

In the present day's contemporary world of competition, there are wide variety of reasons for companies to opt for performance measurements. Performance measurement stipulates or delivers a dependable procedure, which determines and ensures the effective functioning of the organizations system. Moreover, in the present day's monitory conditions and the economic aspects, it is mandatory to maintain transparency, clarity and a great demand to verification; hence, performance measurement plays a potential role in assessing the business performance. Eventually, the above given reasons stimulate organizations to implement and adopt performance measurement processes to generate and display an organization progress report in terms of achievements and performances. Besides the above-mentioned reasons there are other principal circumstances for adopting performance measurements and they are as follows:

- Performance measurement facilitates to highlight what is happening, which helps in distinguishing and quantifying between the actual and desired level of performance.
- It enables to develop a boundary line, which guides the organization to gauge its performance before it opts to make necessary improvements.
- Helps in taking appropriate decisions, which is centered on the contextual data.
- It acts as a medium to supervise the changes and make sure that continuous developments are carried out substantially (Choong, 2013).

#### 2.4 KPI MEASUREMENT

A Key Performance Indicator (KPI) is a measurable value, which determines how effectively a company is heading towards achieving key business objectives. According to Parmenter (2015), KPI is a topic, which is often discussed but it is rarely defined. Thus, KPI's can be defined as the process of quantifying the efficiency and effectiveness of an action. Moreover, according to Ishaq et al. (2013), KPI's are physical standards or principles that are commonly used to gauge aspects such as product quality, performance of employees at work with contentment and commitment, delivery reliability, contentment of employees and customers, safety measures at work, etc.

However, their lies a significance connection between setting KPI's and commitment of employees towards standing accountable towards fulfilling those KPI's (Iveta, 2012). Further, according to Intra Focus (2014), strategic contribution accounts almost half of HR's total influence on business performance and there are predefined steps, which are ought to be followed while setting KPI' and they are illustrated in Figure – 2.3.

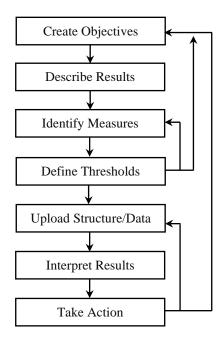


Figure 0-3: Systematic method to set KPI's

Source: Intra Focus, (2014)

In addition, scorecard is a tool, which facilitates to measure the growth factors against the predefined set of KPI's. Pekuri et al. (2014), made a key point that differentiates the scorecard from other business performance measurement frameworks in the marketplace and it was: most of the people build a list of performance measurements that are non-financial and perceive that they have a balanced the scorecard, but a scorecard generally narrates a story about the company's strategy in terms of financial strategies that facilitates to achieve progress in business. Rather, the biggest mistake of organizations is that they perceive that scorecards are just some measurement. In fact, scorecards are the ones, which monitor and control the activities that are executed by the employees and records the aftermaths or outcomes that results from those activities.

Kang et al (2016) declared that the elements in the HR scorecard are key leading indicators that determines the success ratio of workforce. Key performance indicators are commonly assigned to each perspective of the strategic map, and later on KPIs are set for different levels of HR management, as such, they have become a significant benchmark in the entrepreneurial sector.

Further, KPIs are perceived to be valuable and beneficial only when they are applied consistently and comprehensively. Further, the participation of the employee in the decision-making process facilitates the senior management to develop KPI's and scorecards, which in turn affects productivity of employees and the organization progressively. However, the results of KPI's vary according to the abilities and aptitudes of employees and in their understanding towards the set KPI's.

#### 2.4.1 <u>Innovative Measures</u>

Innovation is a most potential aspect, which determines the growth and performance of an organization. Moreover, through innovation, most of the constraints can be resolved in a fair, just and systematic process. Further, in few researches, innovative measures are elucidated, as the capabilities to foster or propose effective solutions, in order to overcome the constraints in a creative and effective manner (Siddiqi and Qureshi, 2016; Nappi and Kelly, 2018; Villazón et al., 2020).

Moreover, according to Velimirović et al. (2011), innovative means of measuring KPI's at regular instances (i) helps to extend value proportion to the consumers in the target market and it also (ii) helps to fulfill the expectations of stakeholders by means of handsome returns.

Whilst, KPI's are measured, it is difficult to operationalize the innovative measures (Villazón et al., 2020). However, in an innovative means of measuring a KPI there are four dimensions, which were empirically recognized by various researchers and they include: (i) *Innovative strategies* – in order to generate innovative strategies, it is essential to emphasize on the incorporation of latest technologies, exhibit optimistic leadership traits, and focus on the market trends, which helps to manage and regulate the performance of employees (Barczak and Kahn, 2012). (ii) *Knowledge management* – is all about the securing thoughts or concepts that are generated as various formal and informal activities take place, which further motivates or triggers innovative aptitudes (Lee and Markham, 2016). (iii) The *organizational culture and structure* – are the most prevalent factors that determine the growth or decline of innovative instinct amongst employees. (iv) The dimension of *portfolio management* – is all about evaluating, assessing and examining the ideas that are with reference to any activities, such as improvement of operations, product development, etc. However, whilst evaluating and assessing

ideas, assessment tools are used, which helps to identify the best choice of concepts/ideas that further enables to align strategies (Nappi and Kelly, 2018).

## 2.4.2 <u>Creativity in Measuring KPI's</u>

Measuring KPI's at regular instance of time facilitates the management to control the performances of employees. The KPI measurement system is considered creative, if all the organizational objectives are taken into consideration, whilst the control measures are fostered or improved. Further, a KPI is perceived to be creative, if KPI metrics are incorporated, whilst developing, implementing and measuring KPI's. Consider the KIP metrics that has, include quality, schedule, cost, safety and risk factors, which has to be considered with a view to support the development of the KPI system in a creative manner, in order to have a profound influence over the performance (Villazón et al., 2020; Parmenter, 2015).

#### 2.5 IMPLEMENTATION OF KPI'S

Vuolle et al (2014) emphasized that one of the criteria, which is emphasized during the implementation of KPIs is the ability to differentiate between strategy-driven metrics and the right vanilla metrics. Selection of the wrong metrics for KPIs can significantly damage or even submarine a performance management initiative. Further, it was opined that metrics are a powerful force that has the capacity to drive-in a positive change within an organization, but only if the right metrics are developed, practiced and implemented. However, wrong metrics can cause confusions and distress within an organization and lead to failure of processes and demoralizing employees. Further, Shen (2013) described characterize the traits of good KPIs, eventually according to his study effective KPIs are the ones, which have the following traits:

- Sparse: It is always better to have few KPIs, which are well structured.
- Drillable: Users can drill into the details of the KPI's.
- Simple: Users of the KPI have a clear understanding towards them.
- Actionable: Users know how to affect the outcomes.
- Owned: KPIs have an owner.
- Referenced: Users can view origins and context.

Correlated: KPIs drive desired outcomes.

- Balanced: KPIs consist of both financial and non-financial metrics.

- Aligned: KPIs do not undermine each other.

- Validated: Workers cannot circumvent the KPIs.

#### 2.5.1 Creative Strategies

Successful implementation of KPI's completely relies on how creative the KPI strategies are. The triumph of the KPI strategy is not ascertained by its documentation or definition, rather it is determined by developing profound objectives and establishing a correlation between set KPI's (Intra Focus, 2014). Further, according to Lavy et al. (2017), creative strategies have a positive impact on the organizational performance, because the strategic decisions are made after assessing the pros and cons of a strategic implementation through a periodic assessment. In addition, performance measurements that are devised through creative strategies often extend prospects to evaluate and assess the present and past performances, facilitates to formulate strategies for future activities, helps to compare and contrast performance amongst the existing facilities, and finally helps to achieve the organizational objectives.

#### 2.6 Performance Indicators and Productivity

Yin et al. (2014) identified specific targets that has to be predefined while setting performance indicators, hence those targets include: productivity, profits, quality, safety and project performance. However, productivity was the primary target when compared to other achievable, which had to be concentrated while developing KPI's. Further, it was emphasized that organizations, which gauge and monitor their performance consistently tend to generate better outcomes, when the concerned departments that exert more emphasize over the improvement of productivity and endeavor to cut down costs.

In addition, there is no point to set KPI's blindly; they are often a derivative of an organization's objectives. Nevertheless, for the consistent improvement of KPI's, it is essential to predefine the goals based on the feedback of an organization's employees; eventually these measures facilitate to improve productivity. Furthermore, the predictability of cost and time, defects, and client satisfaction regarding products and services are the potential aspects, which has to be considered a primary parameter in defining KPI's, if and only if the organization intends to enhance

productivity. However, the performance of a company is measured with the perspectives of safety, profitability, and productivity (Keck et al., 2014).

Moreover, KPI's stimulate the work environment and develop the intellect and creativity of employees and thus, these factors reflect the overall performance and increase productivity. Nevertheless, the participation of employees is always better, because approaches that are developed with their involvement turns out to be productive. Further, managers of the candidate company are also an integral part of this research methodology, because their participation is indispensable for the growth of employee productivity. In addition, managers are the fundamental players, who are responsible to evaluate employee's actual performance against the desired level of performance that is set through this research, which are in the interest of the candidate company. Eventually, it facilitates to increase the productivity of the company (Stefanovic, 2014).

# 2.7 THE RELATIONSHIP BETWEEN KPI MEASUREMENT AND ITS IMPLEMENTATION

One of the key challenges with performance management is selecting "what exactly has to be measured". The priority here is to focus on quantifiable factors that are linked to the drivers of success in a business sector. These are known as key performance indicators (KPIs). After measuring the performance and it is fit within the firm, the human resource has to implement it, as an official document to use it as a record as well as it has to be utilized as a decision-making tool (Kaganskia et al., 2017).

The most important factor about KIP's is that the productive and flourishing metrics of one organization cannot be implemented into another company's operations, because it does not produce the desired results, despite both the organizations are enduring and sustaining in the similar field of operations. Apparently, it is evident enough that the KPI's success purely relies on its consistent gauging and measuring abilities (Schmidt et al., 2016). Metrics of each organization has to be regulated and altered consistently based on its structure, manufacturing procedures and flow of information from internal or external sources. As such, every organization has to trail or shadow their particular KPI's and do not pay emphasize on their competitors KPI's despite they are more successful. However, organizations can compare their

KPI's in contrast to their competitors KPI's at the correct instance of time and circumstances to inculcate or implement partial and positive aspects as per the needs of their specific production pattern (Sahno et al., 2015). Thus, there persists a coordination between KPI's measurements and its implementation.

# 2.8 THE RELATIONSHIP BETWEEN IMPLEMENTATION OF KPI'S AND PRODUCTIVITY

Many studies have been conducted that assess the performance of the manufacturing companies, mainly from the production and labor point of view. Especially when it comes to improving productivity through implementing KPI's, the issues of quality are the preliminary factors, which have to be analyses before implementing the metrics of the scorecard. Factors such as barriers in procurement, logistics, supply and demand has to be taken into consideration to avoid problems such as incorrect replacement of material, which is caused due to prolonged delivery. However, a scorecard has scales/metrics on, which a particular aspect is gauged that are accepted by the managing or the governing committee of the organization as the most significant and lagging KPI's of the organization (Cortes et al., 2016).

However, organizations do not aim to achieve productivity just in the manufacturing process, rather they emphasize on the productivity of capital, labor, machinery, lead processes, etc. In fact, when an organization aims to implement KPI's, then the productivity of overall factors is taken into consideration. Further, costs that are involved in the process are primary aspects, which an organization counts on before a KPI is presumed to yield productive results (Horváthová et al., 2015).

A measure commonly used by industries is an integrated performance for measuring different factors to increase productivity. In order to measure the effectiveness of any maintenance system, the organization has to measure its productivity and identify the areas of improvements to produce efficiency (Pekuri et al., 2011).

# 2.9 THEORETICAL FRAMEWORK

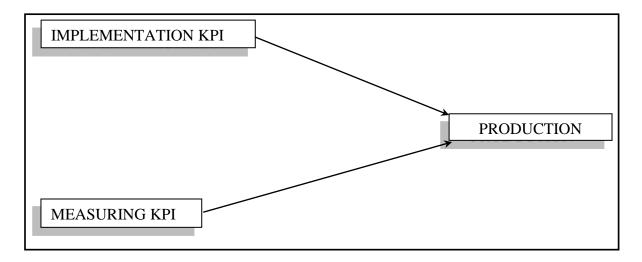


Figure 0-4: Theoretical Framework of the current research

#### **CHAPTER 3:**

#### **METHODOLOGY**

#### 3.1 Introduction

The methodology that are used in the current research papers are organized in a systematic way in order to reach the research-oriented objectives by considering the significance of establishing a program for job evaluation and activation through effective involvement of Human Resources Department. The data for the research are collected through questionnaire and interviews by interacting with employees and managers, thus through this process the researcher collect relevant information that is necessary to determine the results of the research. The current research uses survey method, where structured questions are circulated among the selected sample size. Further, the current research is a *quantitative study*.

#### 3.2 RESEARCH DESIGN

In the current research papers, survey is the research technique, which is used to gather research data. The survey questions are designed in such a way that it collects information about the status of KPI's, which are implemented in Oman Indian Fertilizer Company. In order to stipulate a comprehensive image of the issues pertaining productivity and performance with reference to the implemented KPI's.

Therefore, through the *questionnaire* and *meeting* with the chosen survey respondents from the candidate company, which is OMIFCO, the research data is collected. Moreover, employees of different departments are selected in order to collect their review to develop better KPI's for the betterment and interest of OMIFCO. Eventually, through the survey, significant factors such as: valuable inputs and ideas of employees to improve the current KPI's are collected. Thus, through the survey results the researcher aims to improve the quality of the operations, productive, and performance of OMIFCO, which is the primary objective of the company as well as the research. In addition, the survey results are expected to answer the research questions as to how KPI handles productivity, identifying the relation between KPI and productivity, as to why KPI effect productivity, and facilitate to identify the best performance measurements that can be implemented in the fertilizer industry. However, the results of this study will contribute the

company's management to understand the abilities of its employees, which facilitate to deal with the company system and to develop their KPI is in a better way, which in turn improves skills and job performance of employees.

Consequently, this study is expected to create a positive atmosphere within OMIFCO, which facilitates employees to perform progressively within their organization and feel empowered by participating in the decision-making process.

#### 3.3 RESEARCH STRATEGY

A research strategy proves to be a systematic instrument for collecting quantitative data from the chosen sample size. The research findings are purely based on the evaluation and analysis of the data collected through the survey questionnaires and face-to-face meetings with the survey participants (Bryman and Bell, 2015). However, disregarding the fact, that quantitative research at times is considered not dependable when compared to qualitative research, due to its difficult processes, but it remains to be most effective one. Consequently, it is proven to deliver methodical and efficient measures for variations, which the researcher can use as constant measuring grounds (Apuke, 2017).

Through a clear plan of action and a time limit for completion of the research, the following work would be carried out to complete the research successfully:

- Choose the objectives of the research that fits the situation and work environment where the researcher works.
- A schedule of work has been determined with the titles and the period of its expiry.
- Identify the necessary references to read them and commensurate with the importance of research.
- Information has been collected and linked to the research work with a motive to substantiate the current study with authenticated literatures.
- Work methods, strategy and quality of research is maintained consistently throughout the study to uphold the value of the research.
- Information analysis.
- Results and recommendations are made as per the findings of the research.

The questionnaire, which is used for the current research, has been designed, assessed and dispersed to the research participants through Google Forms. In fact, Google forms are authenticated online surveying tool, which are designed to comply the needs of researchers. However, through Google forms the researcher has the liberty to customize and tailor the research questions. Nevertheless, through this medium, respondents also have space to answer the research questions with total liberty, because their identity is not revealed. In addition, the data analysis process becomes much easier with the availability of online surveying tools like Google Forms. Therefore, the researcher to gather research data utilizes this specific survey tool. Moreover, it is easy to draw conclusions through Google Forms because they generate reports and graphs for every individual question, which makes it easy to analyses in an effortless way. In addition, Google Forms have inbuilt spreadsheets, which integrates all the data in a compact form though it is collected from research participants located in different places. Besides, easy availability of data it becomes easy to customize the data and draw conclusions from them, which are according to requirements of the research (Junio, 2018).

#### 3.4 STUDY POPULATION AND SAMPLE

The main source of data for the research are through questionnaires and face-to-face interviews with the research respondents. In addition, data is collected through various literature sources and knowledge of some facts through the previous experiences. Eventually, those facts are presented in the current research.

#### 3.5 SAMPLE SIZE

The sample size for the research remains the employees of OMIFCO. There are nearly 600 employees currently working in the company. Eventually, the sample size for the current research is calculated by using the below given formula:

Sample Size = 
$$\frac{(Z-Score)2 * Standard of Devation * (1-Standard of Devation)}{(Margin of Error)_2}$$

Thus, based on the formula, the population size would be 102 survey respondents who are chosen randomly. In addition, confidence level is presumed to be 95% and a margin of error at 10% is taken into consideration by the researcher. Thus, based on the above calculations a sample size is produced, which is 102 employees of OMIFCO.

The research questionnaire would be distributed to the employees, who are working in public and private sectors through an electronic link via google forms and it is shared by a social media application.

#### 3.6 DATA ANALYSIS

SPSS is the best data analysis tool, which is developed to facilitate researchers to analyses the research data with total accuracy. According to Kpolovie (2017), SPSS is believed to be the most suitable statistical analysis software to support the analysis of any sort of dissertation data. Nevertheless, SPSS is commonly used for quantitative researches in order to do regression analysis. Eventually, these are certain reasons as to why the researcher has selected SPSS package to conduct the current research work.

# 3.7 QUESTIONNAIRE DESIGN

Almost all the questions of the questionnaire are closed questions and all the questions that would be raised before the survey participants are enclosed in Annexure-2. Moreover, the cover letter seeking the approval of research participants is enclosed in Annexure-1. The questionnaires structure is depicted in Figure - 3.1.

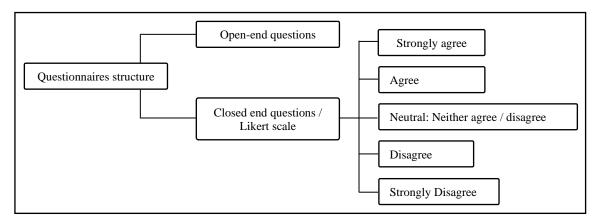


Figure 0-1: Structure of the Research Questionnaire

The research questions of the current research are designed in a thoughtful manner by keeping in mind the actual objectives of the research. Eventually, while structuring the questionnaire, complete emphasize was paid on assessing as to how the implementation of KPI's would help in enhancing productivity of an organization.

# 3.8VARIABLE MEASUREMENT

The theoretical framework of this research consist of two independent variables, which is KPI implementation and KPI measurement and one Independent, which is Productivity. The measurement of the variables and constructs of this study has been carried out based on statement and measurement from previous study.

Table 3.8: scale of variable measurements

Sr.No	Variables	Measurement Level	Values
1	Gender	Nominal	1=Male 2=Female
2	Age	Interval	Years
3	Qualification	Nominal	1=Diploma 2= Bachelor 3=Master
4	Business sector	Nominal	1=Government 2= Private 3= Own Business
5	Experience	Nominal	1=Less than 5 years 2= Less than 5 years 3= 5 - 10 years 4= Above 20

#### 3.8.1 Likert Scale

Various kinds of rating scales have been developed to measure attitudes directly (i.e. the person knows their attitude is being studied). The most widely used is the Likert scale (1932).

In the final form, the Likert scale I used five-point scale which is used to allow the individual to express how much they agree or disagree with a particular statement as shown in the table below.

The response categories in Likert scales have a rank order, but the intervals between values cannot be presumed equal.

Therefore, the mean (and standard deviation) are inappropriate for ordinal data (Jamieson, 2004) Statistics you can use are:

- Summarize using a median or a mode (not a mean as it is ordinal scale data); the mode is probably the most suitable for easy interpretation.
- Display the distribution of observations in a bar chart (it cannot be a histogram, because the data is not continuous).

Table 3.9: Likert Scale

Totally agree	Partially Agree	Neutral	Disagree	Totally disagree
1	2	3	4	5

### 3.9 Validity and Reliability

### 3.9.1 Validity

One of important method before starting distribute the original questionnaire to the Target group, the questionnaire must be both valid and reliable. The questionnaire has been sent to the specialists of questionnaire calibrating to make research questionnaire confident.

The questionnaire began with a set of questions about Demographic and the three variables that

Were included in the research, productivity -KPI measurement and KPI implementation. After preparing the questionnaire, it was sent to a group of specialists in calibrating and documenting the questionnaires through several criteria, including - the relevance of the research to this questionnaire - the compatibility of the three elements with the research and its importance - the method of the questionnaire formula. The correlation of the questions with the three factors - the consistency and correlation of the questions titled search, and after contacting the specialists, the questionnaire was modified, deleted, or reformulated so that a unified questionnaire was drawn up that takes the recommendations required to be made. The result before change in questions in all three variables shown in table 3.9.1. After made change in questions as per specialists of questionnaire calibrating in all three variables the Cronbach's Alpha increase as shown in table 3.9.2

# 3.9.2 Reliability

Reliability refers to how consistently a method measures something. If the same result can be consistently achieved by using the same methods under the same circumstances, the measurement is considered reliable. The reliability indication shows how the technique for the test measure factors of study to make it reliable and accrue.in this study shown in table 3.9.1 how three variables with five items in each variable scored as used Cronbach's Alpha.

Table 3.9.1: Reliability after change Variable Questions

Sr. No	Variable Name	Number of Item	Cronbach's Alpha
1	IMPLEMENTATION KPI	5	0.813
2	MEASUREMENT KPI	5	0.790
3	PRODUCTION	5	0.831
Total	3	15	0.876

### 3.9.3 A pilot study

"A pilot study is one of the important stages in a research project and is conducted to identify potential problem areas and deficiencies in the research instruments and protocol prior to implementation during the full study" A pilot study used for somethings can do it in proper way or not based in data collected and examined and processed it. A pilot study has a specific design and features; it is conducted on a smaller scale than the main or full-scale study or we can consider it as a small research. The pilot study is important for improvement of the strength, quality and efficiency of the main study. In addition, from hand, it is conducted in order to assess and support the data collected from different source and from another hand make the research required process and build researchers' experience with the study methods. The pilot study focus on the misconceptions of research and the ethical aspect of study, additionally, how to interpret the results of a pilot study is also introduced in this review. The Data from the 3 variables and 15 questions were entered into a computer into the Statistical Package for Social Sciences (SPSS) program, with specific codes used for each questionnaire item. Data were analyzed using SPSS version 26.

#### **CHAPTER 4:**

#### DATA ANALYSIS AND FINDING

#### 4.1 Introduction

This chapter focuses on discussing and analyzing, the results of the data that is obtained/collected after the circulation of the research questionnaire. A statistical data analysis software that is generally known as "Statistical Package for the Social Sciences", (SPSS) has been used by the researcher, in order to analyze the research data of the current study. The results of the questionnaire are modified into statistical data, because SPSS analyses only numerical data. It further facilitates to test the validation and reliability of the survey data (Alchemer, 2021). Further, as per the sample size, the willing research respondents within a span of 30 days received around 102 responses.

#### 4.2 ANALYSIS OF THE RESEARCH QUESTIONNAIRE

The questionnaire on the research topic "The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India Fertilizer Company" is comprised of two sections in the survey questionnaire. Further, the data that is collected through the questionnaire is analyzed in this section.

#### 4.2.1 General Profile of the Research Demographic Variable, Section – A

Section – A, focuses on collecting general information about the research respondents, which is analyzed in this section.

#### 4.2.1.1 <u>Gender</u>

From the analysis of gender, it is inferred that 83.3% and 85 Frequency of the survey respondents are male, whereas 16.7% of them are female. The results of both frequency and descriptive analysis are tabulated in Table -4.1. In addition, Figure -4.1 encloses a histogram graph, which depicts the frequency and standard deviation results that are put together, in order to develop better understanding.

Eventually, from the analysis of the research respondents' gender, it is inferred that majority of the respondents are men due to most of organization worker are men, whereas the participation of female respondents is less in contrast to the male respondents.

Table 0-1: Frequency and Descriptive Analysis of the Survey Participants Gender

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Male	85	83.3	83.3		
	Female	17	16.7	100.0	1.17	.375
	Total	102	100.0			

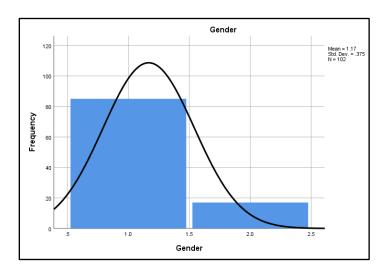


Figure 0-1: Histogram Chart of the Survey Participants Gender

#### 4.2.1.2 <u>Age</u>

From the analysis of the research respondents age, it is inferred that majority of the research respondents are under the age group of "31 - 40" with 67.6%. Further, 27.5% of them are "above 40" years and remaining 4.9% of them are under the age group of "20 - 30" years. The results of both frequency and descriptive analysis are tabulated in Table -4.2. In addition, Figure -4.2 encloses a histogram graph.

Consequently, from the results of the analysis, it is comprehended that majority of the respondents are under the age group of 31-40.

Percent Cumulative Percent Mean Std. Deviation Frequency 4.9 Valid 5 4.9 20 - 30 69 67.6 31 - 40 72.5 2.23 .525 28 100.0 Above 40 27.5 102 100.0 Total

Table 0-2: Frequency and Descriptive Analysis of the Survey Participants Age

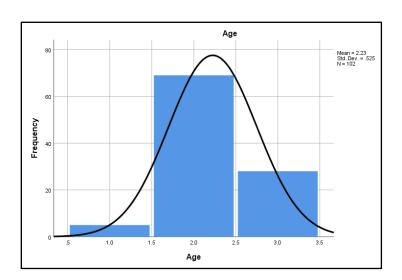


Figure 0-2: Histogram Chart of the Survey Participants Age

#### 4.2.1.3 Academic Qualification

Through the frequency analysis, it is inferred that majority of the survey respondents are bachelors i.e., 51%. Whereas, 29.4% of the respondents are highly qualified with master's degree and the remaining 19.6% are diploma holders. The results of both frequency and descriptive analysis are tabulated in Table -4.3. In addition, Figure -4.3 encloses a histogram graph. Therefore, from the results of this particular survey question, it is inferred that majority of the respondents are qualified and they have a better understanding about the survey questions. Eventually, their responses are authentic and adds immense value to the current research.

Table 0-3: Frequency and Descriptive Analysis of the Survey Participants Qualification

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Diploma	20	19.6	19.6		
	Bachelor	52	51.0	70.6		
	Master	30	29.4	100.0	2.1	.697
	Total	102	100.0			

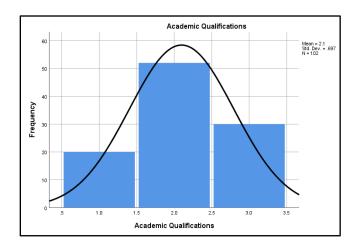


Figure 0-3: Histogram Chart of the Survey Participants Qualification

#### 4.2.1.4 Business Sector

After the frequency analysis of the research data, it is comprehended that 21.6% of the research participants are government officials. Further, 75.5% of the research respondents are employees of the private sector; as a result, their participation in the survey is high. In addition, the involvement of research participants from own business is also incorporated in the study; however, their participation is low with 2.9%.

Overall, the research incorporates different opinions of individuals who are serving government organizations, private organizations and the ones who own a business, which are with respect to KPI's and its impact on an organization's productivity. The results of both frequency and descriptive analysis are tabulated in Table -4.4. In addition, Figure -4.4 encloses a histogram graph.

Table 0-4: Frequency and Descriptive Analysis of the Business Sector in, which the Survey Participant is Working

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Government	22	21.6	21.6		
	Private	77	75.5	97.1		
	own business	3	2.9	100.0	1.81	.461
	Total	102	100.0			

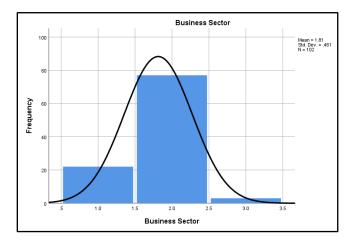


Figure 0-4: Histogram Chart of the Business Sector in, which the Survey Participant is Working

#### 4.2.1.5 Overall Years of Work Experience

Majority of the research respondents possess "11 - 20" years of experience with a participation level of 56.9%. In addition, 29.4% of the research respondents possess "5 - 10" years of experience. Whereas, 8.8% of them possess "less than 5" years of experience and 4.9% of them possess "above 20" years of experience.

Henceforth, from the survey data, it is inferred that individuals with great level of experience have participated in the survey. In fact, their views about KPI's are authentic and the results of the survey data can be relied with high level of accuracy. The results of both frequency and descriptive analysis are tabulated in Table -4.5. In addition, Figure -4.5 encloses a histogram graph.

Table 0-5: Frequency and Descriptive Analysis of the Overall Years of Experience that a Research Participant Possesses

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Less than 5 years	9	8.8	8.8		
	5 -10 years	30	29.4	38.2		
	11 - 20 years	58	56.9	95.1	1.81	.461
	Above 20	5	4.9	100.0		
	Total	102	100.0			

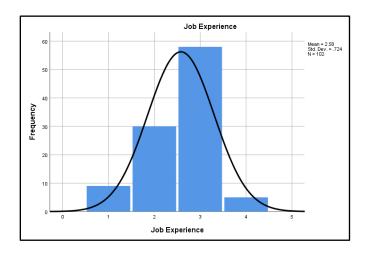


Figure 0-5: Histogram Chart of the Overall Years of Experience that a Research Participant Possesses

# 4.2.2 Analysis of Research Specific Likert Scale Questions, Section – B

Section – B is comprised of fifteen questions that are very specific to the current research and they are analyzed in this section of the research. However, all the fifteen question are Likert Scale questions, which has five options that further helps to collect the holistic views of the survey participants.

#### 4.2.2.1 Do you have sufficient knowledge about KPI?

From the results of the survey, it is inferred that 14.7% of the research participants "strongly agree" to the raised question, which implies that they have adequate knowledge about the KPI's. On the other hand, 64.7% of them "agree", 16.7% of them have remained "neutral" and 3.9% of them "disagree" with it.

However, when the opinions of "strongly agree" and "agree" are aggregated 79.4% is received. Eventually, from this it is conferred that 79.4% of the research respondents have complete knowledge about legitimacy of KPI's and its significance in an organization. The results of both frequency and descriptive analysis are tabulated in Table -4.6. In addition, Figure -4.6 encloses a histogram graph.

Table 0-6: Frequency and Descriptive Analysis of the Sixth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	15	14.7	14.7		
	Agree	66	64.7	79.4		
	Neutral	17	16.7	96.1	2.1	.682
	Disagree	4	3.9	100.0		
	Total	102	100.0			

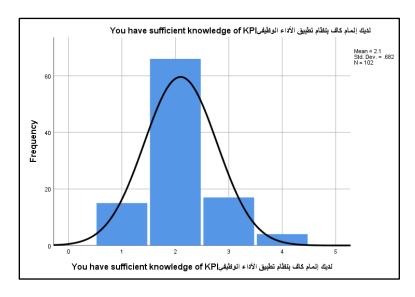


Figure 0-6: Histogram Chart of the Sixth Survey Question

#### 4.2.2.2 Do Manager / Supervisor Clarify the Details Related to KPI Clearly?

14.7% of the survey respondents "strongly agree" with the fact that their managers or supervisors clarify the doubts of employees that are related to KPI's that is set by the management. In addition, 51% of them "agree" to it. On the other hand, 22.5% of them have remained "neutral", 8.8% "disagree" and 2.9% "strongly disagree" to the raised question.

Consequently, through the results of the analysis, it is conferred that managers and supervisors play a significant role in clarifying the doubts of employees that are with respect to KPI's. Eventually, as the doubts are clarified, employees have a better understanding about each performance indicator and hence it helps to increase productivity. At the same time, it is also conferred that in an organization, where managers or supervisors are not responsive enough, employees do not have adequate information about the KPI, which is implemented in their organization. As a resultant, the performance indicator tends to collapse. The results of both frequency and descriptive analysis are tabulated in Table – 4.7. In addition, Figure – 4.7 encloses a histogram graph.

Table 0-7: Frequency and Descriptive Analysis of the Seventh Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	15	14.7	14.7		
	Agree	52	51.0	65.7		
	Neutral	23	22.5	88.2		
	Disagree	9	8.8	97.1	2.34	.939
	Strongly Disagree	3	2.9	100.0		
	Total	102	100.0			

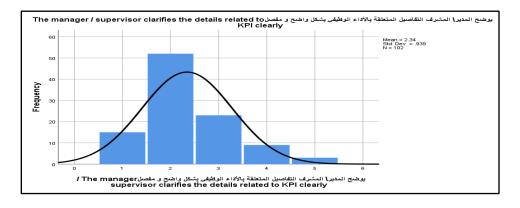


Figure 0-7: Histogram Chart of the Seventh Survey Question

# 4.2.2.3 The Details Related to KPI's are appropriate and related to the Job in which I Work for.

After the analysis of the survey data to the above raised question, 11.8% of the respondent "strongly agree" to it and 59.8% give their consent by clicking on, "agree". However, 15.7% have remained "neutral", 9.8% "disagree" and 2.9% "strongly disagree".

Thus, it is conferred that an aggregate of 71.6% (total of agree) of employees get all relevant details that are related to the KPI's that are implemented in an organization, which are related to their respective job. On the other hand, it is inferred that employees do not get relevant information about the KPI's, which is a matter of great concern. In fact, as an obligation, employees are ought to have information about the performance indicators, which ultimately helps them to perform in a more productive manner. The results of both frequency and descriptive analysis are tabulated in Table -4.8. In addition, Figure -4.8 encloses a histogram graph.

Table 0-8: Frequency and Descriptive Analysis of the Eight-Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	12	11.8	11.8		
	Agree	61	59.8	71.6		
	Neutral	16	15.7	87.3		
	Disagree	10	9.8	97.1	2.32	.914
	Strongly Disagree	3	2.9	100.0		
	Total	102	100.0			

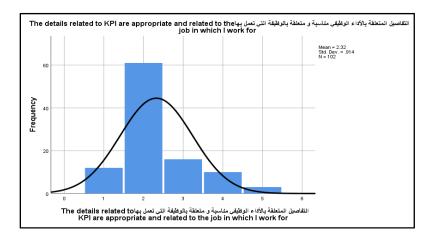


Figure 0-8: Histogram Chart of the Eight-Survey Question

#### 4.2.2.4 The KPI is Applied Fairly Based on my Job Profile.

7.8% of the research respondents "strongly agree" and 40.2% of them "agree", thereby opining that the KPI's are applied based on their job profiles. Nevertheless, 24.5% of them have remained "neutral", 22.5% of them "disagree" to the raised question and 4.9% "strongly disagree".

Thus, it is conferred that about 48% (aggregate of "strongly agree" and "agree") of employees opine that KPI's are applied based on their job profile. On the other hand, it is also inferred that KPI's are not applied fairly, which impels a great level of pressure on employees whilst performance measurements. Hence, it becomes more important on the part of management to apply KPI's in a fair manner, in order to avoid its negative implications. The results of both frequency and descriptive analysis are tabulated in Table – 4.9. In addition, Figure – 4.9 encloses a histogram graph.

Table 0-9: Frequency and Descriptive Analysis of the Ninth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	8	7.8	7.8		
	Agree	41	40.2	48.0		
	Neutral	25	24.5	72.5		
	Disagree	23	22.5	95.1	2.76	1.045
	Strongly Disagree	5	4.9	100.0		
	Total	102	100.0			

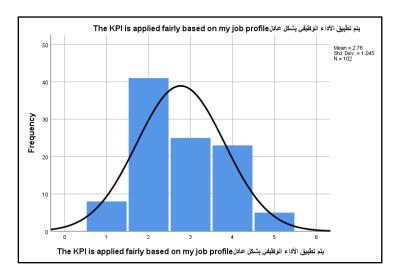


Figure 0-9: Histogram Chart of the Ninth Survey Question

#### 4.2.2.5 The KPI system develop my skill to do the work assigned.

From the results of the frequency analysis, it is inferred that 12.7% and 50% of survey participants "strongly agree" and "agree", respectively that the KPI system develops and stimulates domain oriented and interpersonal skills of employees, in order to accomplish the assigned work. On the other hand, 19.6% of them have remained "neutral", 15.7% "disagree" to it and 2% of them "strongly disagree" to the raised question.

Therefore, majority of the survey respondents opine that the system of KPI has the potentials to develop the job oriented, domain oriented and interpersonal skills of individuals, which further facilitates to accomplish the allocated job. Nevertheless, very few respondents do not agree with the raised question. The results of both frequency and descriptive analysis are tabulated in Table -4.10. In addition, Figure -4.10 encloses a histogram graph.

Table 0-10: Frequency and Descriptive Analysis of the Tenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	13	12.7	12.7		
	Agree	51	50.0	62.7		
	Neutral	20	19.6	82.4		
	Disagree	16	15.7	98.0	2.11	.971
	Strongly Disagree	2	2.0	100.0		
	Total	102	100.0			

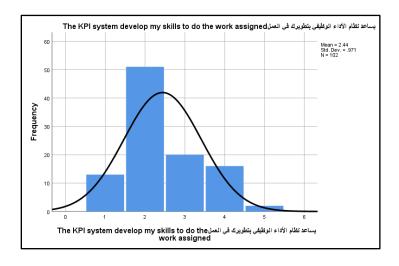


Figure 0-10: Histogram Chart of the Tenth Survey Question

#### 4.2.2.6 The process of evaluation of KPI is clear and transparent.

12.7% of the survey respondents "strongly agree" and 40.2% of them "agree" to the raised question that the process of evaluation of KPI is clear and transparent to employees who are working in public, private and self-owned businesses. On the other hand, 25.5% of them have remained "neutral", 19.6% of them "disagree" and 2% of them "strongly disagree" to the raised question.

Consequently, from the survey of this particular question, it is comprehended that the evaluation process of KPI's has to be clear and transparent enough, which further facilitates in accomplishing the key objectives of the organization. Eventually, if the KPI's are clear and certain, employees contribute their best efforts in accomplishing it, otherwise they just beat around the bush. The results of both frequency and descriptive analysis are tabulated in Table – 4.11. In addition, Figure – 4.11 encloses a histogram graph.

Table 0-11: Frequency and Descriptive Analysis of the Eleventh Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	13	12.7	12.7		
	Agree	41	40.2	52.9		
	Neutral	26	25.5	78.4		
	Disagree	20	19.6	98.0	2.58	1.009
	Strongly Disagree	2	2.0	100.0		
	Total	102	100.0			

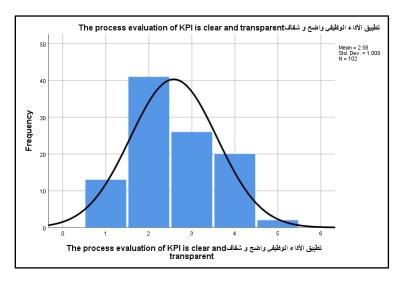


Figure 0-11: Histogram Chart of the Eleventh Survey Question

#### 4.2.2.7 The KPI is related to the tasks that I do routinely.

6.9% of the survey participants "strongly agree" and 54% of them "agree" that the KPI is incorporated in each department is related or relevant to the task they carry out on a day-to-day basis. Nevertheless, 27.5% of them have remained "neutral", 8.8% of them "disagree" and 3.9% "strongly disagree".

Therefore, from the results of the survey, it is conferred that organizations incorporate KPI is that are relevant to each department and its respective employees have a clear understanding about it, so that they can use it on a routine basis. On the other hand, it is also comprehended that some employees opine that the KPI's that are set by the organization are not relevant to their routine work. Henceforth, it arises a need for the development of KPI's that are specific to each department and its respective employees. The results of both frequency and descriptive analysis are tabulated in Table -4.12. In addition, Figure -4.12 encloses a histogram graph.

Table 0-12: Frequency and Descriptive Analysis of the Twelfth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	7	6.9	6.9		
	Agree	54	52.9	59.8		
	Neutral	28	27.5	87.3		
	Disagree	9	8.8	96.1	2.5	.898
	Strongly Disagree	4	3.9	100.0		
	Total	102	100.0			

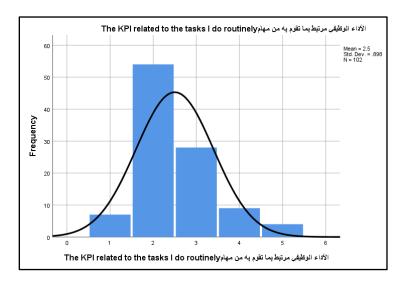


Figure 0-12: Histogram Chart of the Twelfth Survey Question

#### 4.2.2.8 KPI's standards apply to my job profile.

9.8% of the research respondents "strongly agree", further 52% of them "agree" that the KPI's, which are set by the organization are applicable to the individuals' job profile. On the other hand, 28.4% of them have remained "neutral", 7.8% have "disagreed" and 2% of them have "strongly disagreed". Therefore, from the results of this particular survey question, it is conferred that the KPI standards must be applicable to each individual's job profile. However, if the department heads set high standards of KPI's, then employees will not be competent enough to implement or practice such high standards of KPI's, which is beyond their understanding. Therefore, from this, it can be conferred that the KPI standards should be applicable to the job profiles of employees. The results of both frequency and descriptive analysis are tabulated in Table – 4.13. In addition, Figure – 4.13 encloses a histogram graph.

 $Table \ 0\text{-}13\text{:}\ Frequency\ and\ Descriptive\ Analysis\ of\ the\ Thirteenth\ Survey\ Question$ 

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	10	9.8	9.8		
	Agree	53	52.0	61.8		
	Neutral	29	28.4	90.2		
	Disagree	8	7.8	98.0	2.4	.847
	Strongly Disagree	2	2.0	100.0		
	Total	102	100.0			

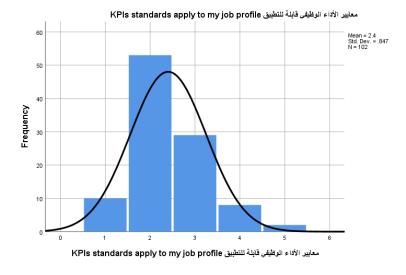


Figure 0-13: Histogram Chart of the Thirteenth Survey Question

#### 4.2.2.9 The KPI's are always developed to match the job profile.

6.9% of the survey respondents "strongly agree" and 38.2% of them "agree" to the raised question. Eventually, most of the employees perceive that the KPI's, which they follow on the routine basis, are often developed to match their job profile. On the other hand, 26.5% of them have remained "neutral", 25.5% have "disagreed" and 2.9% of them have "strongly disagreed". Consequently, from this it is conferred that KPI's must be developed in such a way that it matches the job profile of employees, which is always feasible. However, if they are not developed to match the job profile of employees, then it becomes quite difficult for employees to meet the objectives of the organization. Consequently, both employees and organization tend to suffer. The results of both frequency and descriptive analysis are tabulated in Table – 4.14. In addition, Figure – 4.14 encloses a histogram graph.

Table 0-14: Frequency and Descriptive Analysis of the Fourteenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	7	6.9	6.9	2.79	.998
	Agree	39	38.2	45.1		
	Neutral	27	26.5	71.6		
	Disagree	26	25.5	97.1		
	Strongly Disagree	3	2.9	100.0		
	Total	102	100.0			

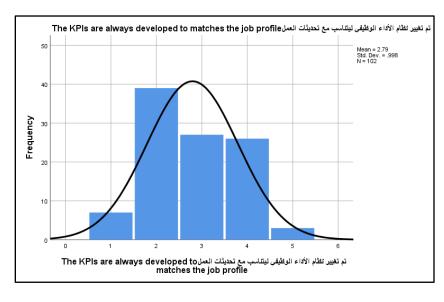


Figure 0-14: Histogram Chart of the Fourteenth Survey Question

### 4.2.2.10 Measuring KPI Contributes to Raise in the Productivity of the Factory.

24.5% of the survey respondents "strongly agree" and 57.8% of them "agree" to the raised question that measuring KPI's contributes to the raise in productivity of a factory. On the other hand, 9.8% of them have remained "neutral", 6.9% have "disagreed" and 1% of them have "strongly disagreed". Consequently, from the survey results of this particular question, it can be conferred that measuring KPI's at a regular instance of time facilitates to raise the productivity of the factory. Measuring often helps to understand the gaps that are present in the system. Eventually, once the gaps are identified it is easy to bridge those gaps. Hence, it is essential to measure KPI's regularly to know its current standing and fosters new ways for its improvement. The results of both frequency and descriptive analysis are tabulated in Table -4.15. In addition, Figure -4.15 encloses a histogram graph.

Table 0-15: Frequency and Descriptive Analysis of the Fifteenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	25	24.5	24.5		
	Agree	59	57.8	82.4		
	Neutral	10	9.8	92.2		
	Disagree	7	6.9	99.0	2.02	.844
	Strongly Disagree	1	1.0	100.0		
	Total	102	100.0			

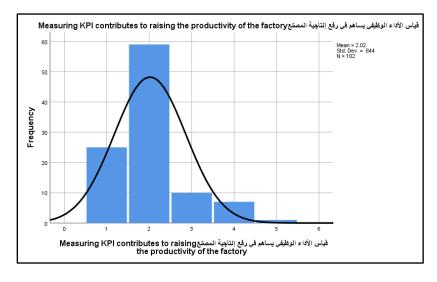


Figure 0-15: Histogram Chart of the Fifteenth Survey Question

#### **4.2.2.11** The KPI is Important in the Production Companies.

45.1% of the survey respondents "strongly agree" and 45.1% of them "agree" to the survey question that KPI's are important in a production company. Whereas, 7.8% of them have remained "neutral", 1% of them "disagree" and 1% of them "strongly disagree".

Therefore, from the survey results, it is conferred that KPI's are important for a company that is involved in production, because it allows keeping the objectives of the department in the frontier position. Eventually, since the objectives are very clear to the employees, it helps them to achieve it. The results of both frequency and descriptive analysis are tabulated in Table -4.16. In addition, Figure -4.16 encloses a histogram graph.

Table 0-16: Frequency and Descriptive Analysis of the Sixteenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	46	45.1	45.1		
	Agree	46	45.1	90.2		
	Neutral	8	7.8	98.0		
	Disagree	1	1.0	99.0	1.68	.747
	Strongly Disagree	1	1.0	100.0		
	Total	102	100.0			

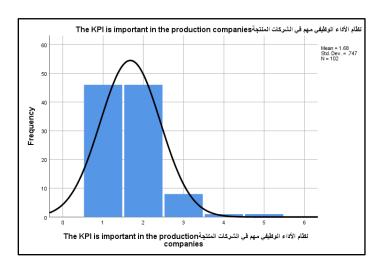


Figure 0-16: Histogram Chart of the Sixteenth Survey Question

# 4.2.2.12 There is a Relationship between KPIs and Productivity, which ultimately affects overall production figures.

32.4% of the survey participants "strongly agree" and 52% "agree" that there is a strong relationship between KPI's and Productivity, which ultimately has an impact on the overall production figures. However, 10.8% of them have remained "neutral", 3.9% of them "disagree" and 1% of them "strongly disagree".

Consequently, from the survey results of this particular question, it is conferred that there is a strong relationship between KPI's and productivity, which consequently has a positive impact on the overall production figures. Therefore, there is a strong correlation between KPI's and productivity. The results of both frequency and descriptive analysis are tabulated in Table -4.17. In addition, Figure -4.17 encloses a histogram graph.

 $Table \ 0\text{-}17: Frequency \ and \ Descriptive \ Analysis \ of the \ Seventeenth \ Survey \ Question$ 

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	33	32.4	32.4		
	Agree	53	52.0	84.3		
	Neutral	11	10.8	95.1		
	Disagree	4	3.9	99.0	1.89	.819
	Strongly Disagree	1	1.0	100.0		
	Total	102	100.0			

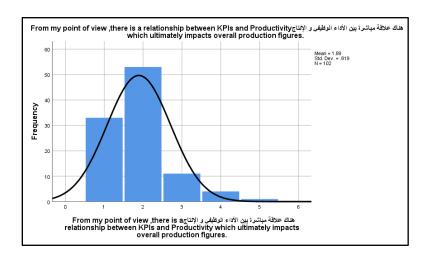


Figure 0-17: Histogram Chart of the Seventeenth Survey Question

# 4.2.2.13 The Production Development Department take Acceptance and discuss my Ideas and Suggestions.

9.8% of the survey respondents "strongly agree" to the raised question and 50% of them "agree" that the production development department takes the acceptance of employees and discuss their ideas and suggestions before setting KPI's. On the other hand, 29.4% of them have remained "neutral" and 10.8% of them have "disagreed". Therefore, from this particular survey question, it is conferred that few organizations allow employees to express their ideas and suggestions before a KPI is set. In addition, these proactive organizations not only allow employees to express their ideas, but also take the acceptance of their employees before a KPI is set. However, it is a very good initiative that marks the triumph of the KPI. On the other hand, it is also learnt that few organizations give no room from employees to express their views, which is indeed not a sign of a progressive organization. The results of both frequency and descriptive analysis are tabulated in Table -4.18. In addition, Figure -4.18 encloses a histogram graph.

Table 0-18: Frequency and Descriptive Analysis of the Eighteenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	10	9.8	9.8		
	Agree	51	50.0	59.8		
	Neutral	30	29.4	89.2	2.41	.813
	Disagree	11	10.8	100.0		
	Total	102	100.0			

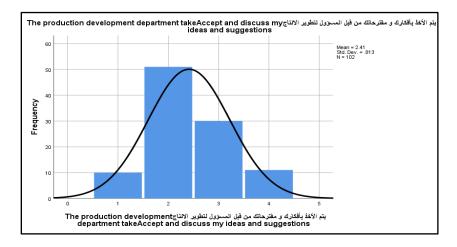


Figure 0-18: Histogram Chart of the Eighteenth Survey Question

#### **4.2.2.14** The Bonus Contributes in Productivity.

51% of the survey respondents "strongly agree" to the above survey question. In addition, 43.1% of them "agree" to the survey question that bonus contributes in productivity. Nevertheless, 5.9% of them have remained "neutral" to the raised question.

Therefore, from the survey results of this particular survey question, it is conferred that bonus and incentives plays a significant role in boosting productivity. Nevertheless, few survey participants perceive that bonus has nothing to do with productivity. Eventually, such employees need other type of stimulus, such as hike in position and career growth opportunities, in order to boost productivity. The results of both frequency and descriptive analysis are tabulated in Table -4.19. In addition, Figure -4.19 encloses a histogram graph.

Table 0-19: Frequency and Descriptive Analysis of the Nineteenth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	52	51.0	51.0		
	Agree	44	43.1	94.1		
	Neutral	6	5.9	100.0	1.55	.607
	Total	102	100.0			

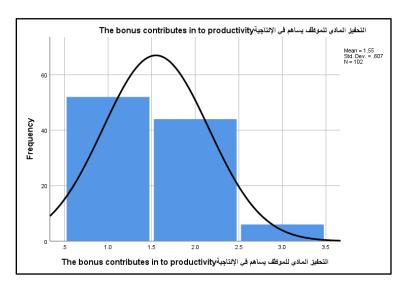


Figure 0-19: Histogram Chart of the Nineteenth Survey Question

#### 4.2.2.15 The Security and Work Environment is Essential to Increase Productivity.

52.9% of the survey respondent "strongly agree" to the raised survey question. In addition, 44.1% of them "agree" that job security and a conducive work environment is essential to increase productivity. Whereas, 2% of them have remained "neutral" and 1% of them "disagree" to the question.

Therefore, from the results of the survey it is conferred that job security and a conducive work environment has a vital role in increasing the productivity of the organization. Further, it acts as a positive stimulant in motivating employees to exert their best skills, which ultimately helps in increasing the productivity of the organization. The results of both frequency and descriptive analysis are tabulated in Table -4.20. In addition, Figure -4.20 encloses a histogram graph.

Table 0-20: Frequency and Descriptive Analysis of the Twentieth Survey Question

		Frequency	Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Strongly Agree	54	52.9	52.9		
	Agree	45	44.1	97.1		
	Neutral	2	2.0	99.0	1.51	.593
	Disagree	1	1.0	100.0		
	Total	102	100.0			

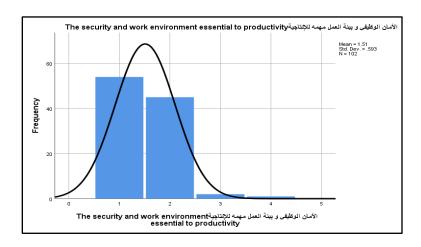


Figure 0-20: Histogram Chart of the Twentieth Survey Question

#### 4.3 TESTING THE RESEARCH HYPOTHESIS

The research hypothesis is tested through regression analysis. Consequently, this particular test enables the research to ensure that the current research has found a relevant solution to the research questions, which were raised earlier during the beginning of the study.

The initial dependent variable in the current research is "Measuring the KPI's, contributes to the raise in productivity", which answers the first hypothesis "How KPI handles productivity?". The results of the regression analysis are tabulated in Table -4.21.

Table 0-21: Regression Analysis Results

# Model Summary Model R R Square Adjusted R Square Std. Error of the Estimate 1 .668a .447 .357 .691

a. Predictors: (Constant), Q15, Q8, Q1, Q12, Q7, Q14, Q5, Q2, Q13, Q11, Q3, Q6, Q9, Q4

Further, the ANOVA results that are obtained through regression analysis are also tabulated, in order to have a better understanding, which is depicted in Table -4.22.

Table 0-22: ANOVA Results that are received after the Regression Analysis

			<b>ANOVA</b> <sup>a</sup>			
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.485	14	2.392	5.014	.000b
	Residual	41.505	87	.477		
	Total	74.990	101			

a. Dependent Variable: Q10

In addition, the coefficients results are incorporated and tabulated in Table -4.23, to illustrate the dependency of independent variables on dependent variables.

 $b.\ Predictors:\ (Constant),\ Q15,\ Q8,\ Q1,\ Q12,\ Q7,\ Q14,\ Q5,\ Q2,\ Q13,\ Q11,\ Q3,\ Q6,\ Q9,\ Q4$ 

Table 0-23: Coefficients Results of Regression Analysis

#### Coefficients<sup>a</sup>

				Standardized		
		Unstandardize	d Coefficients	Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.270	.362		.746	.458
	Q1	085	.124	067	688	.493
	Q2	054	.106	058	504	.615
	Q3	136	.125	144	-1.083	.282
	Q4	.048	.123	.058	.389	.698
	Q5	.180	.111	.203	1.629	.107
	Q6	100	.115	117	871	.386
	Q7	.136	.120	.142	1.132	.261
	Q8	.420	.115	.413	3.637	.000
	Q9	129	.116	150	-1.110	.270
	Q11	.409	.135	.354	3.032	.003
	Q12	.009	.124	.009	.074	.941
	Q13	.204	.122	.192	1.675	.098
	Q14	176	.149	124	-1.181	.241
	Q15	.090	.151	.062	.597	.552

a. Dependent Variable: Q10

Therefore, from the results of the regression analysis, it is conferred that the dependent variables "Have sufficient knowledge about KPI's", "Managers / supervisors clarify the details that are related to KPI's", "The details related to KPI are appropriate and they are related to the job in, which the employees work", "The KPI's are applied fairly based on the job profile of employees", "The system of KPI's, develop skills of employees and helps to accomplish the assigned work", "The process of evaluating the KPI's has to be clear and transparent for the employees, in order to increase its effectiveness", "The KPI must be related to the tasks that an employee carries out on a routine basis", "The KPI standards must be applicable to the job profile of employees", "The KPI's must be always developed to match the job profile of employees i.e., neither too high nor too low", "The KPI's are very important, when it comes to a production-oriented company", "There is a relationship between KPIs and productivity, which ultimately impacts overall production figures", "The production development department is ought to take the acceptance of employees before setting a KPI" and "Bonus contributes a positive impact on productivity" and "Work place security and work environment are the

## **CHAPTER 5:**

# **CONCLUSION**

#### 5.1 OVERVIEW OF THE RESEARCH

The current research is on the research topic "The Effectiveness of Performance Indicators on Employee Productivity: A Case of Oman India Fertilizer Company". Throughout the study a great level of emphasize was paid on assessing how the productivity of employees could be enhanced, so that an organization like OMIFCO can be benefited in terms of boosting their productivity. Further, the main objective of the current research is to improve the employees' level of performance and productivity through setting and implementing Key Performance Indicators (KPI's). Consequently, the productivity and performance among the employees are developed by means of creative human resource management strategies. In addition, the current study aims to propose KPI's that are applicable to OMIFCO and techniques to measure those KPI's, which are creative. Further, the research focuses on measuring those KPI's, in order to boost its productivity.

The current research is comprised of four main objectives, and they are: (a) to identify and determine as to what extent the KIP's that are proposed in the current research facilitate to handle the issues of productivity in OMIFCO, which are raised due to ineffective communication. (b) To establish a relationship between KPI's and boost the productivity of OMIFCO, in order to sustain and thrive in the competitive market of fertilizer industry with reference to the market of Oman. (c) To assess how KPI's affect productivity of OMIFCO. (d) To establish a relationship among performance measurement practices that can be adopted by OMIFCO and enhanced level of productivity in employees in the context of Oman.

#### 5.2 DISCUSSION ON RESEARCH FINDINGS

The last fifteen survey questions are very important to the study, hence the findings from those particular questions are disused in this particular section. However, the first five questions are raised to seek the basic information about the survey respondents. As such, it does not add much

value to the research, but it reveals that participants have adequate exposure towards KPI's and its significance.

The first finding of the study is that the survey participants "have sufficient knowledge about KPI's". Thus, it implies that the survey participants have complete knowledge about KPI's, its significance and how it contributes in increasing an organizations productivity. Eventually, the responses are legitimate and, hence the researcher can make relevant conclusions based on their responses.

The second finding of the current research is that "managers / supervisors clarify the details that are related to KPI's". Eventually, it is conferred that managers and supervisors play a significant role in clarifying the doubts of employees that are with respect to KPI's. Consequently, as the doubts are made clear, employees understand the set KPI is precisely and contributes in boosting productivity.

The third finding is that "the details related to KPI are appropriate and they are related to the job in, which the employees work". Consequently, if the KPI's are relevant to each department and are with respect to their jobs, then its outcomes are effective. However, if the KPI's are high, then they remain inappropriate.

The fourth finding of the research is that "the KPI's are applied fairly based on the job profile of employees". Consequently, on the fair application of performance indicators, employees employ their best potentials to accomplish them. Nevertheless, in KPI's are not applied fairly, then employees' scum to high intensity of pressure, which is not a good indicator of effective employee engagement. Hence, it becomes more important on the part of management to apply KPI's in a fair manner, in order to avoid its negative implications.

The fifth finding of the current study is that "the system of KPI's, develop skills of employees and helps to accomplish the assigned work". The system of KPI's has the potentials to develop job oriented, domain oriented and interpersonal skills of employees who are working in an organization, which further facilitates to accomplish the allocated job.

The sixth finding is that "The process of evaluating the KPI's has to be clear and transparent for the employees, in order to increase its effectiveness". On the other hand, if the eventuation of KPI's is clear and certain, employees contribute their best efforts in accomplishing it.

The seventh finding of the research is that "The KPI must be related to the tasks that an employee carries out on a routine basis". Henceforth, it arises a need that organizations are ought to incorporate KPI's that are relevant to each department and its respective employees. Further, employees must have a clear understanding about the KPI's that are adopted by the organization, because employees use it on a routine basis. Nevertheless, if the KPI's are beyond the understanding of employees, then it implies that the organization has adopted high level of KPI's, which are not applicable to be implemented on a routine basis.

The eight finding of the research is that "The KPI standards must be applicable to the job profile of employees". Nevertheless, if the departments incorporate high standards of KPI's, then employees will not be competent enough to implement or practice such standards that is beyond their level of comprehension. Thus, it can be conferred/concluded that applicable standards of KPI's have to be applied.

The ninth finding of the research is that "The KPI's must be always developed to match the job profile of employees i.e., neither too high nor too low". Hence, the respective departments must develop a feasible level of KPI's. Nevertheless, if KPI's are not developed to match the job profile of employees, then employees find it difficult to accomplish the objectives, which again impels a negative force on the overall productivity of the organization.

The tenth finding of the research is that "Measuring KPI contributes to the raise in the productivity of the organization". Measuring KPI's helps to identify the gaps and bridge them up, effectively. Therefore, there is always a need to measure the KPI's at regular instance of time with a motive to improve the productivity of the organization.

The eleventh finding of the research is that "The KPI's are very important, when it comes to a production-oriented company". However, it because, the introduction of KPI's allows, the organization to up-keep the objectives of the department in the frontier position.

The twelfth finding of the research is that "There is a relationship between KPIs and productivity, which ultimately impacts overall production figures". Therefore, with the effective relationship between KPI's and productivity, a positive impact is levied on the overall production.

The thirteenth finding of the research is that "The production development department is ought to take the acceptance of employees before setting a KPI". Moreover, it is equally important to "Discuss the ideas and Suggestions of employees", in order to keep the employees motivated and engaged.

The fourteenth finding of the current research is that "Bonus contributes a positive impact on productivity". Thus, bonus and incentives play a significant role in boosting the productivity of the organization. In addition, it is an effective employee engagement strategy. Further, some employees cannot be influenced just with bonuses and benefits, hence such employees must be stimulated with hike in position and career growth opportunities, in order to boost productivity.

The fifteenth finding of the research is that "Work place security and work environment are the essential constituents that helps in increasing productivity". In addition, work place security and conducive work environment are the two positive stimulants that motivates employees, in order to exert their best skills and expertise, which further helps to increase productivity of the organization.

## 5.3 LIMITATIONS OF THE RESEARCH

# \*Sample Size

Often studies wish is a general topic the perceptions of an employee regarding roles not that much because they concern about life issue towards a performance. Due to this, I contact only 102 out of more than 600 participants.

#### \*Data Collection Process

Because it is first, time to write like this Thesis, the collecting data from different source while I am working at organization in same time looking for my family, the method to writing this Thesis to much difficult. Same time the Data needed from the OMIFCO very difficult due the internal role.

### **Equipment**

\*The software used to analyze Data in this thesis called SPSS which no background and not used before, so it takes too much time and use long video to deal with it.

# \*General Issue

One of issue faced during study the virus (Coved19) which obstruct and stop researching. From another hand this virus stops students of school, college and university to attend their place, so they have to used internet which not able to carry this entire load.

### 5.4 CONCLUSION

Any organization irrespective of its services and operations are ought to incorporate KPI's or performance indicators within their organization, because it has a direct influence on their productivity. On the other hand, KPI's facilitates to raise the efficiency of the employee and it is an elementary aspect in the contemporary world, in order to sustain the pressure of competition and achieve sustainable competitive advantage. Therefore, through the implementation of department specific KPI's, the overall productivity of an organization can be boosted, which has a positive influence on the annual profitability, increase in sales, enhanced market share, increased brand identity and repute, increases productivity and further helps to quench the market demand. Henceforth, it can be concluded that KPI's are the most beneficial factors of an organization.

### REFERENCES

- 1. Adebayo, A., De Castro, V. R., and Gimenez, L. G. (2012). Measuring Competitive Factors: A perspective of Spanish manufacturing firms. 6th International Conference on Industrial Engineering and Industrial Management.
- 2. Aki, P., Harri, H. and Maila, H. (2011). Productivity and Performance Management Managerial Practices in the Construction Industry. *International Journal of Performance Measurement*, 1, 39-58.
- 3. Alchemer (2021) What is SPSS? Retrieved online from: https://www.alchemer.com/resources/blog/what-is-spss/#:~:text=SPSS%20is%20short%20for%20Statistical,for%20complex%20statistical %20data%20analysis.&text=Most%20top%20research%20agencies%20use,out%20of%20their%20research%20projects. Accessed on: 18th January 2021.
- 4. (AlKalbani, 2021)
- 5. Apuke, O. D., (2017). Quantitative Research Methods A Synopsis Approach, *Arabian Journal of Business and Management Review (Kuwait Chapter)*. 6(10), 40-47.
- 6. Barczak, G. and Kahn, K. B. (2012) Identifying new product development best practice, *Business Horizons*, 55(3), 293–305. doi: 10.1016/j.bushor.2012.01.006.
- 7. Bryman, A., and Bell, E., (2015). Business Research Methods. 4th edition. *Pearson Education Limited, England*.
- 8. Choong, K.K. (2013). Understanding the features of Performance Management Systems: a literature review, *Measuring Business Excellence*, 17(4), 102–121.
- 9. Choong, K.K. (2014). The fundamentals of Performance Management Systems. *International Journal of Productivity and Performance Management*, 63(7), 879–922.
- 10. Cortes, H., Daaboul, J., Le Duigou, J. and Eynard B. (2016), Strategic Lean Management: integration of operational performance indicators for strategic Lean management, *IFAC-PapersOnLine*, 65-70.
- 11. Effendi, M., Razali, M.M., Rohana, A., and Adi, S. (2014), A Study On The Development Of Key Performance Indicators (Kpis) At An Aerospace Manufacturing Company. *Journal of Advanced Manufacturing Technology*. 2(2), 1-19.
- 12. Gomes, C. F., Yasin, M. M., and Lisboa J. (2011). Performance Measurement Practices in Manufacturing Firms Revisited. *International Journal of Operations & Production Management*, 31(1), 5 30.
- 13. Goshu, Y. Y., and Kitaw, D. (2017). Performance measurement and its recent challenge: a literature review. *International Journal of Business Performance Management*, 18(4), 381-402.
- 14. Grossman, H., (2018). Review of Solomon Fabricant. The Output of Manufacturing Industries 1899–1937. DOI: https://doi.org/10.1163/9789004384750 030
- 15. Lancaster GA, Dodd S, Williamson PRJ Eval Clin Pract. 2004 May; 10(2):307-12.

- 16. Hackett Group, (2019). Process Metrics. Retrieved online from: https://www.thehackettgroup.com/process-metrics/. Accessed on: 6<sup>th</sup> January 2020.
- 17. Hanaysha, J., (2016). Improving employee productivity through work engagement: Evidence from higher education sector, *International Journal of Industrial Engineering Computations*, 6(1), 61-70.
- 18. Hill, C., Jones, G., and Schilling, M. (2014). Strategic management: theory: an integrated approach. Cengage Learning.
- 19. Horváthová, J., Mokrišováa, M., Suhányiová, A. and Suhányi, L. (2015). Selection of key performance indicators of chosen industry and their application in formation of Creditworthy model. *Procedia Economics and Finance*, 34(1), 360 367
- 20. Intra Focus, (2014). Key Performance Indicators: Developing Meaningful KPI. 1-38.
- 21. Ishaq, M. B., Awan, H. M. and Razaq, Z., (2013). The key performance indicators (KPIs) and their impact on overall organizational performance. DOI 10.1007/s11135-013-9945-y.
- 22. Ivanov, C. I., and Avasilcăi, S., (2013). Performance measurement models: an analysis for measuring innovation processes performance. *Procedia Social and Behavioral Sciences*, 124, 397 404.
- 23. Iveta, G., (2012). Human Resources Key Performance Indicators. *Journal of Competitiveness*, 4(1), 117-128.
- 24. Jamieson, S. (2004). Likert scales: how to (ab) use them. *Medical Education*, 38(12), 1217-1218.
- 25. Jorgenson, D. W., (2015), Information Technology and the G7 Economies, *Rivista di Politica Economica*, 95(1–2), 25–56.
- 26. Junio, 2018. Advantages and disadvantages of Google forms. Retrieved online from: https://www.mydatascope.com/blog/en/2018/06/15/advantages-and-disadvantages-of-google-forms/. Accessed on 10th January 2020.
- 27. Kaganskia, S., Majaka, J., Karjusta, K. and Toompalua, S., (2017), Implementation of key performance indicators selection model as part of the Enterprise Analysis Mode. The 50th CIRP Conference on Manufacturing Systems, Procedia CIRP. 63(1), 283 288. doi: 10.1016/j.procir.2017.03.143
- 28. Kang, N. Zhao, C. Li, J. and Horst J. A., (2016), A Hierarchical structure of key performance indicators for operation management and continuous improvement in production systems. International Journal of Production Research, 54(21), 6333-6350.
- 29. Keck, Ingo R., and Robert J. Ross., (2014), Exploring customer specific KPI selection strategies for an adaptive time critical user interface. *Proceedings of the 19th international conference on Intelligent User Interfaces*. ACM.
- 30. Kpolovie, P., (2017). Statistical Analysis with SPSS for Research. *Published by European Centre for Research Training and Development UK*. First Edition.
- 31. Lavy, S., Garcia, J.A. and Dixit, M.K. (2017) Developing a categorization matrix of Key Performance Indicators (KPIs): A Literature Review. *CIB W070 International Conference in Facilities Management*. 407-419.

- 32. Lee, H. and Markham, S.K. (2016) PDMA Comparative performance assessment study (CPAS): methods and future research directions. *Journal of Product Innovation Management*, 33(S1), pp. 3–19. doi: 10.1111/jpim.12358.
- 33. Likert, R. (1932). A Technique for the Measurement of Attitudes. *Archives of Psychology*, 140, 1–55.
- 34. Micheli, P., and Mari, L., (2013). The theory and practice of performance measurement, *Management Accounting Research*, 25(2), 147-156.
- 35. Muriel, D. P. L., (2016). Capital Goods and The Production of Consumption Goods. The Review of Economic Statistics, 165-170.
- 36. Nappi, V. and Kelly, K. (2018) Key Performance Indicators and Dimensions for the Innovative Process. *Paper presented at the 25th Innovation & Product Development Management Conference*, Pp. 1-21.
- 37. Neide, C. O., De Lima, E. P., and Da Costa, S. E. G., (2012). Performance measurement system a conceptual model. 1-10.
- 38. OECD Manual (2017), Measuring Productivity: Measurement Of Aggregate And Industry-Level Productivity Growth. Retrieved online from: http://www.oecd.org/sdd/productivity-stats/2352458.pdf. Accessed on: 6<sup>th</sup> January 2020.
- 39. OMIFCO. About OMIFCO. Retrieved online from: http://www.omifco.com/about.html. Accessed on: 5<sup>th</sup> January 2020.
- 40. Parmenter, D. (2015) Key Performance Indicators: Developing, Implementing, and Using Winning KPIs. 3<sup>rd</sup> Edition, Published by John Wiley & Sons, Inc.
- 41. Parmenter, D., (2010). Key performance indicators: developing, implementing, and using winning KPIs. John Wiley & Sons. First Edition.
- 42. Parmenter, D., (2015). Key performance indicators: developing, implementing, and using winning KPIs. John Wiley & Sons. Third Edition.
- 43. Pekkola, S., Ukko, J. and Melkas, H. (2014), Defining and measuring productivity in the public sector: managerial perceptions. *International Journal of Public Sector Management*, 23(3), 300-320.
- 44. Pekuri, A., Haapasalo, H., & Herrala, M., (2011). Productivity and performance management–managerial practices in the Construction Industry. International Journal of Performance Measurement, 1(1), 39-58.
- 45. Pooja, Y., and Col.Sachin, M., (2015). The Concept of Productivity. *International Journal of Engineering and Technical Research*. 3(5), 192-196.
- 46. Roshan, D., and Jenson, J. E., (2014). Study on performance measurement systems Measures and Metrics. *International Journal of Scientific and Research Publications*, 4(9), 1-10.
- 47. Sahno, J., Shevtshenko, E. and Karaulova, T., (2015). Framework for Continuous Improvement of Production Processes. *Inzinerine ekonomika engineering economics*. 26(1), 169-180.
- 48. Schmidt, C., Li, W., Thiede, S., Kornfeld, B., Kara, S. and Herrmann, C., (2016), Implementing Key Performance Indicators for energy efficiency in manufacturing, *Procedia CIRP*, 57(1), 758-763.

- 49. Sharma, M. S., & Sharma, M. V., (2014). Employee Engagement to Enhance Productivity in Current Scenario. *International Journal of Commerce, Business and Management*, 3(4), 595-604.
- 50. Shen, J., (2013). Investigation of how to implement successful KPIs for organizations based on an empirical study at an international organization. 5-72.
- 51. Siddiqi, H. and Qureshi, M. (2016) The Impact of Employees' Creativity on the Performance of the Firm. *Research Issues in Social Sciences*, 1(2016), 1-12.
- 52. Soumita, K., (2017). Efficiency Of Indian Fertilizer Firms: A Stochastic Frontier Approach. *The Institute for Social and Economic Change, Bangalore*. 2-24.
- 53. Sreekumar, M. D., Chhabra, M. and Yadav, R., (2018). Productivity in Manufacturing industries, *International Journal of Innovative Science and Research Technology*, 3(10), 634-638.
- 54. Stefanovic, N. (2014). Proactive supply chain performance management with predictive analytics. *The Scientific World Journal*, 25-38.
- 55. Velimirović, D., Velimirović, M. and Stanković, R. (2011) Role And Importance Of Key Performance Indicators Measurement. *Serbian Journal of Management*, 6(1), 63-72.
- 56. Villazón, C.C., Pinilla, L.S., Olaso, J.R.O., Gandarias, N.T. and De-Lacalle, N.L. (2020) Identification of Key Performance Indicators in Project-Based Organizations through the Lean Approach. *Sustainability*, 12(5977), 2-18.
- 57. Vuolle, M., Lonnqvist, A. and Schiuma, G., (2014). Development of key performance indicators and impact assessment for SHOKs. *Publication of the Ministry of Employment and the Economy Innovation*. 9-36.
- 58. Yin, Shen, Wang, G. and Yang, X., (2014). Robust PLS approach for KPI-related prediction and diagnosis against outliers and missing data. *International Journal of Systems Science*, 45(7), 1375-1382.

6 ANNEXURE-1

1.1 **COVER LETTER** 

Dear Research Participant

Date

My name is Khalfan Said Khalfan Al Harthy and I am a graduate student at Al-SHRQIAH University. For my final project, I am examining Effectiveness of Performance Indicator on Productivity in Oman India Fertilizer Company. Since, you are part of OMIFCO your

participation in the study is expected to add value to the research and it would become a source

to develop your organizations KPI's. Henceforth, I would like to invite you to participate in this

research study by completing the attached survey.

The following questionnaire will require approximately two months completing. There is no compensation for responding nor there risks in participating in the research. Moreover, through this correspondence, it is intimated that all information disclosed by the research participants would remain confidential, please do not include your name. Copies of the project will be provided to Al-Sharqiyah University instructor in Business Administration. Further, the universities superintendent and director are also expected to review the research papers and its findings. If you choose to participate in this survey, please answer all questions as honestly as

possible and return the completed questionnaires.

Thank you for sending your time and effort to assist me in endeavor my educational prerequisites. The data collected for the survey will provide useful information regarding the organizations KPI's standards. Completion and return of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions,

please contact me at the number listed below.

Sincerely,

Khalfan AL Harthy

Contact No. - 99820830

Email – khalfan.alharthy@omifco.com

Instructor's Name: saleh.alsinawi@asu.edu.om

# 7 ANNEXURE-2

# 1.2 QUESTIONNAIRE

# 1.2.1 <u>Section – A DEMOGRAPHIC</u>

- 1. What is your gender?
  - a. Male

- b. Female
- 2. What is your age?
  - a. 20 30
- b. 31 40

c. Above 40

- 3. What is your academic qualification?
  - a. Diploma
- b. Bachelor
- c. Master
- 4. What is the business sector that you are working in?
  - a. Government
- b. Private

c. Own Business

- 5. Overall years of experience?
  - a. Less than 5 years
- b. Less than 5 years c. 5-10 years d. Above 20

# 1.2.2 <u>Section – B VARIABLES</u>

		Totally agree	Partially Agree	Neutral	Disagree	Totally disagree
1	Do you have sufficient knowledge about KPI?	1	2	3	4	5
2	The manager / supervisor clarifies the details related to KPI clearly.	1	2	3	4	5
3	The details related to KPI are appropriate and related to the job in which I work for.	1	2	3	4	5
4	The KPI is applied fairly based on my job profile.	1	2	3	4	5
5	The KPI system develop my skill to do the work assigned.	1	2	3	4	5
6	The process evaluation of KPI is clear and transparent.	1	2	3	4	5
7	The KPI related to the tasks I do routinely.	1	2	3	4	5
8	KPIs standards apply to my job profile.	1	2	3	4	5
9	The KPIs are always developed to match the job profile.	1	2	3	4	5

10 Measuring KPI contributes to raising the productivity of the factory.  11 The KPI is important in the production companies.  11 2 3 4  12 From the point of view, there is a relationship between KPIs and productivity, which ultimately affects overall production figures?  13 The production development department take "Accept" 1 2 3 4 and discuss my ideas and suggestions?  14 The bonus contributes in to productivity.  15 The security and work environment essential to 1 2 3 4 productivity?							
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		productivity?					