



# **Assessing the effectiveness of performance measures on food security programs within the Emfuleni Local Municipality**

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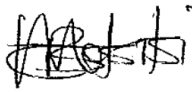
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## SOLEMN DECLARATION

I Constance Brenda Motsitsi, hereby declare the “Assessing the effectiveness of performance measures on food security programs within the Emfuleni Local Municipality” is my own work, and that the interpretations, views and shared expressions are my own. Any other sources/references whose work was used in this study has been quoted and referenced. Furthermore, I declare that this research study has not been submitted or used for any other qualification at any other institution.



CONSTANCE BRENDA MOTSITSI

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## **ABSTRACT**

This research study was aimed at assessing the effectiveness of the performance measures used to measure food security programs (FSPs) within the Emfuleni Local Municipality (ELM). Food insecurity is a challenge, not only for the South African Government, but also for the rest of the world. As a result, governments all over the world have come up with strategies, policies, initiatives and programs aimed at alleviating hunger and food insecurity. Food security is a broad concept and this research study focuses on household food security.

Performance measures are useful in helping managers set realistic, relevant and achievable goals with a monitoring system that is specific and clear with regard to what it is measuring, monitoring and evaluating. Clear, informative, useful and relevant performance measures assist in improving and sustaining the effectiveness of established programs, and these fundamental aspects should therefore be incorporated when establishing FSP performance measures.

Interviews were conducted within the ELM to enable the researcher to assess the effectiveness of the FSP performance measures established within the ELM. The researcher reviewed the usefulness, qualities, (SMART) features and elements important in every performance measurement and compared these to the performance measures established for measuring household food security and its programs within the ELM. Responses from the interviews indicated that measuring household food security remains a challenge within the ELM.

The assumption of the study is that the ELM needs to implement SMART and useful performance measures that pay close attention to all 4 elements important in measuring household food security and its programs. This will improve the implemented FSPs and as a result, the persisting high household food insecurity levels within this municipality will begin to depreciate and FSPs will become more effective and beneficial for the whole municipality.

## OPSOMMING

Hierdie navorsingstudie was daarop gemik om die effektiwiteit van die prestasiemaatreëls wat gebruik is om voedselbeveiligingsprogramme (FSP's) in die Emfuleni Plaaslike Munisipaliteit (ELM) te meet, te evalueer. Voedselonsekerheid is 'n uitdaging, nie net vir die Suid-Afrikaanse regering nie, maar die res van die wêreld. Gevolglik het die regering oor die hele wêreld strategieë, beleide, inisiatiewe en programme opgedoen wat daarop gemik is om honger en voedselonsekerheid te verlig. Voedsel sekuriteit is 'n breë konsep; hierdie navorsingstudie fokus dus op huishoudelike voedselsekuriteit.

Prestasiemaatreëls is nuttig om bestuurders te help om realistiese, relevante en haalbare doelwitte te stel met 'n moniteringstelsel wat spesifiek en duidelik is ten opsigte van wat dit meet, moniteer en evalueer. Duidelike, insiggewende, bruikbare en relevante prestasiemaatreëls help om die doeltreffendheid van gevestigde programme te verbeter en te handhaaf. Daarom moet sulke fundamentele aspekte opgeneem word wanneer FSP prestasiemaatreëls vasgestel word.

Onderhoude is in die ELM gedoen om die navorser in staat te stel om die doeltreffendheid van die prestasiemaatreëls van die FSPs wat in die ELM ingestel is, te evalueer. Die navorser het die nut, eienskappe (wat SMART is) kenmerke en elemente belangrik in elke prestasie-meting hersien, en vergelyk dit met die prestasiemaatreëls wat ingestel is om huishoudelike voedselsekuriteit en sy programme binne ELM te meet. Reaksies uit die onderhoude het aangedui dat die meet van huishoudelike voedselsekuriteit steeds 'n uitdaging binne die ELM is.

Die veronderstelling van die studie is dat die ELM en nuttige prestasiemaatreëls moet implementeer, wat noukeurig aandag skenk aan al 4 elemente wat belangrik is in die meting van huishoudelike voedselsekerheid en sy programme. Dit sal die geïmplementeerde FSPs verbeter, en gevolglik sal die volgehoue hoë huishoudelike voedselontsekeriteitsvlakke binne hierdie munisipaliteit begin depresieer, en FSPs sal meer effektief en voordelig vir die hele munisipaliteit word.

## **KEY WORDS**

**Assesses/assessment/assessing**

**Effectiveness**

**Efficiency**

**Elements**

**Evaluation**

**Food insecurity**

**Food security**

**Framework**

**Household**

**Implement/implementation**

**Improvement**

**Measurement/ measuring**

**Monitoring**

**Performance measurement/assessment**

**Programs**

**Usefulness**

## **LIST OF ABBREVIATIONS**

<b>DtiUK</b>	=	Department of Trade and Industry UK
<b>ELM</b>	=	Emfuleni Local Municipality
<b>FAO</b>	=	Food and Agriculture Organization
<b>FSM</b>	=	Food security measurement
<b>FSPs</b>	=	Food Security Programs
<b>PMF</b>	=	Performance measurement framework
<b>PMS</b>	=	Performance measurement system
<b>SMART</b>	=	Specific, Measureable, Achievable, Relevant, Timely
<b>Stats SA</b>	=	Statistics South Africa
<b>TRADE</b>	=	Training Resource and Data Exchange

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## **CHAPTER ONE**

### **BACKGROUND AND ORIENTATION**

#### **1.1 INTRODUCTION**

This chapter introduces the reader to the research study. It includes the background and orientation of the research problem, followed by the research questions and objectives and later on, the research methodology is discussed and the researcher establishes the ethical considerations of the research. This chapter ends with a summary of all the chapters. Through this chapter, the researcher aims to establish the foundation for this research study, as well as the importance of performance measures in assessing food security programs (FSPs).

#### **1.2 BACKGROUND AND ORIENTATION**

The Bureau of Education and Cultural Affairs (2016:1) defines performance measurement as a “regular measurement of outcomes and results, which generates reliable data on the effectiveness and efficiency of programs. Performance measurement as a concept has gained currency across organisations of all types, ranging from business, civil society and public entities”. Performance measurement is critical in determining whether the organisation is delivering on its objectives or not. Over the last 2 decades, performance measurement has become a concept for determining the effectiveness and efficiency of public development and management in South Africa (Striteska & Spickova, 2012).

It is critically important that the government measures the effectiveness of all its programs, projects, strategies and services that they provide to the public, hence the centrality of performance measurement is determining (measuring) service delivery. According to Roos (2009:10), “the public sector measures its performance in terms of value-for-money principles, namely economy, efficiency and effectiveness”. Performance measurement thus allows government institutions to measure the outcomes or results of all their inputs and evaluate the projects and gives them the ability to identify new opportunities. Proper management and measurement of performance is the key element in satisfactory service delivery, as it provides important information about the quality, benefits and overall management of services provided to the people (Striteska & Spickova, 2012)..

Performance measurement assesses the following three aspects: effectiveness of all inputs, efficiency in productivity and improvement of performance. These aspects contribute to the development and sustainability of programs and projects. It reflects on how well a project is managed, as it indicates whether the intended results have been achieved. Performance measurement thus assists to identify projects that are effective and those that are ineffective (Striteska & Spickova, 2012). It assists the government and communities to identify projects or programs that should be maintained and those that should no longer benefit from the support of public funds. Considering the many programs and projects supported by public funds (that includes those focusing on poverty, unemployment, HIV/AIDS, etcetera), performance measurement is vitally important in guiding the public sector budget to channelling resources towards effective projects. Performance measurement is a tool that should be used by all governments to effectively guide the allocation of funds among its institutions and departments based on their performance.

However, for performance measurement as a concept and approach to assessing the effectiveness and efficiency of projects and programs, the measures themselves should be effective. Effectiveness refers to “a measurement of the extent to which an aid activity attains its objectives”. In assessing effectiveness the following questions are asked: “To what extent were the objectives achieved or are likely to be achieved? What were the major factors influencing the achievement or non-achievement of the objectives?” (Anonymous, 2014:5). These questions imply that performance measures themselves should be assessed to determine their effectiveness in measuring outcomes.

The Department of Trade and Industry UK (DtiUK, 2013:1) identified the following important aspects in improving performance measurement: that performance measures should clearly “identify and track the progress against goals, identify opportunities for improvement and compare performance against both internal and external standards”. The DtiUK’s (2013:1) assertion implies that while performance measurement is important, its effectiveness should be determined. The performance measures should effectively measure what they should measure in order to ensure that they help organisations determine their outcomes and results.

The above fact regarding performance measurement means that programs should be assessed in order to ensure that performance measures are understood against a program being measured, i.e. whether they are successful in assessing and determining the intended

outcomes. This study therefore considers effectiveness of performance measurement within the context of FSPs.

Bickel, Nord, Price, Hamilton & Cook (2000:15-16) explained that there are several types of research that can be conducted in measuring food security. This includes monitoring the scale of: food assistance programs; evaluation studies of low income population and research on how the government assesses and monitors the priority needs of the community based on food insecurity. These approaches (in their diversity) attempt to measure the performance of FSPs. The question of their effectiveness as performance measures then surfaces. The accuracy of the measurement and monitoring systems of food security settings plays a vital role in helping public servants, service delivery providers, policy analysts and makers and the community at large to effectively measure and assess the effectiveness of standing programs (United Nations, 2013). To do this performance measures should be effective. Household food security status falls into four categories, namely (households will either be): “food insecure, food insecure without hunger, food insecure with hunger (moderate) and food insecure with hunger (severe)” (Bickel et al., 2000:11).

Food insecurity is one of the major challenges South African households face. The Government of South Africa has identified household food security as one of its primary goals (Zuma, 2010). This implies that it is important to have an effective FSP performance measurement system (PMS) that will determine the effectiveness of the programs over time. Monitoring and tracking of food insecurity can enable a thorough understanding of the basic aspects, which will allow better understanding of projects and allow greater innovation and diversity in improving FSPs as well as the ability to identify the severe conditions prevailing within communities (SA-Department of Agriculture, 2002).

Food security is a constitutional right in South Africa and yet despite this, 18.5% of Gauteng’s population is food insecure and approximately 20% are food deficient and malnourished (Stats SA, 2011). The Community Survey 2016 results indicated that, of the population of 13, 4 million residents residing in Gauteng, 10, 8% of these households remain food insecure (Stats SA, 2016). As the South African Constitution considers access to food as a constitutional right, the government is obliged to assist struggling households to gain access and be able to afford nutritional food and food stability as well as eliminate barriers to food security (Constitution of the Republic of South Africa, 1996: Sec 27(b)). The government has launched FSPs to ensure that every household has the basic means of survival and no child

goes to sleep hungry. “These community food projects are aimed at developing the communities of South Africa” (Mzini, 2006:7). With the increasing population, inflation, unemployment, urbanisation and poverty rates, the gap between food security and food insecurity is becoming a challenge in urban areas. The Department of Health (2000:154) made a recommendation to put more emphasis on poverty, as it is the major cause of food insecurity, as well as to expand its strategies and techniques that execute community-based projects targeting a wider range of vulnerable groups.

The government’s response to improving food security has increased over the past few years. The government has developed a framework of action to reduce food insecurity (SA-Department of Public Services and Administration, 2007). Over the past decade numerous government departments have made significant attempts to address this issue and a number of policies have been developed to guide and assist in combating food insecurity. These policies include the National School Nutrition Programme of 1994 and The Integrated Nutrition Programme of 1995; Integrated Food Security Strategy (IFSS) of 1996 and others. The IFSS 1995 is a “special strategy aimed at achieving 5 objectives: increased household production and trading; improved income generation and job creation opportunities; improved nutrition and food safety; increased safety nets and food emergency management systems; and improved analysis and information system management. Through these initiatives, the strategy aims to better the status of household food security”, (Department of Agriculture, Forestry and Fisheries. 2014:1).

It is essential to note that “food insecurity was historically associated with rural communities; but this is no longer the case (SA-Department of Agriculture, 2002). With sustained urbanisation, the locus of poverty is now shifting from rural to urban areas in the country. In addition, the recent sharp rise in food prices, coupled with an economic downturn, all suggest that underprivileged urban households are experiencing a broadening food gap” (Development Bank of Southern Africa, 2009:5). Although South Africa is a self-sufficient country in terms of the amount of food available, the South African Human Rights Commission (2011:143) has argued that distribution remains a problem and this is as a result of past inequalities. With the decline of economic growth that South Africa is facing, poverty directly contributes to citizens’ failure to access sufficient food, triggering chronic food insecurity (SA-Department of Public Services and Administration, 2002).

Food security initiatives have been proposed and implemented in various areas of government with the hope of improving household food security nationally (SA- Policy Implementation Plan, 2014). A number of these initiatives are the seven programs that were identified and agreed upon by the National, Provincial and Municipal Governments with community members (University of Pretoria, 2015:9). These programs aim to bring forth the desired result of reducing food insecurity. They also aim to build the capacity for food security. Within Gauteng, which is the area of focus and interest of this study, the following programs have been implemented at a national level to promote food security: “Capacity building for unemployed women and out of school youth; Encouraging the establishment of household and community food gardens; Establish a nutritional feeding scheme (including strengthening of school feeding programs); Input supplies to stimulate and boost production by smallholders and subsistence producers; Facilitating access to markets through direct contracting; Provision of public goods to support food production and marketing through the Comprehensive Agricultural Support Programme (CASP) to support smallholder production; and Coordination, monitoring, evaluation and reporting” (University of Pretoria, 2015:9).

In light of these important developments aimed at ensuring that South Africans are food secure, it is vital to have effective performance measures to ensure progress towards the realisation of people’s constitutional right to food security. It is important for the government to measure the FSPs so that they have a clear indication of whether or not projects are effective. Bickel et al. (2000:8) hold that “the full range of food insecurity and hunger cannot be captured by any single indicator”, but through the use of a variety of indicators based on experience, behaviour and overall responses received from statistical procedures of all the data collected through government entities. In view of this implied complexity in measuring FSPs, it is critical to assess the effectiveness of the food security performance measures, so that change and progress can be effectively determined and implemented in the FSPs.

As the DtiUK (2013:1) asserted, performance measurements should clearly “identify and track progress against goals, identify opportunities for improvement, and compare performance against both internal and external standards”. Thus, with the persisting food insecurity status, the concern for the effectiveness of FSP performance measures should be raised (SA- Policy Implementation Plan, 2014). The contention is that effective performance measures will reveal effectiveness and progress in FSPs while ineffective measures do not

provide useful information regarding gaps and weakness within FSPs, which perpetuates food insecurity.

The state is therefore obliged to take sound statutory measures, within accessible assets, in executing and protecting this constitutional right (Constitution of the Republic of South Africa, 1996: Sec 27(b)) and ensuring that all citizens are food secure. Food in/security is a broad concept. For the purpose of this research, focus will be on household food in/security. According to du Toit (2011:8), “access to food at household level depends on how food markets and the distribution systems function”. FAO (1996) defines food insecurity as “a situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life”. In support of this definition, the Department of Agriculture, Forestry and Fishery RSA (DAFF, 2014: 8) defines food and nutrition as “access to and control over the physical, social and economic means to ensure sufficient, safe and nutritious food at all times, for all South Africans in order to meet the dietary requirements” (SA-Department of Agriculture, 2002).

The South African Medical Research Council (2012) classifies any individual who receives less than 2261 kilocalories per day as food insecure. Aliber (2009) argues that household food security is measured through two data bases, namely the “General Household Survey (GHS) and the Income and Expenditure Surveys”. Food security is wide ranging and complex and cannot be measured through one instrument or element. Statistics South Africa (2012:3) posits that “although daily calorie intake and anthropometric indicators remain important, these are not flawless measures”. He adds that diverse mechanisms have been used in the past to measure food security and they have failed to contribute significantly to a thorough understanding of the complexity of food security. Household food security focuses on securing basic food and ensuring that each household can maintain basic provisions. Numerous households face the challenges and difficulties of obtaining and maintaining a basic means of survival in terms of access to food. This makes it imperative for the government to review the effectiveness of performance measures used to assess FSPs.

### **1.3 PROBLEM STATEMENT**

When South Africa became a democratic country, the government, pledged to make the country food secure (Du Toit, 2011:11). The population of Gauteng is 10.3 million residents with approximately 10.8% of these households going to sleep with empty stomachs (Stats

SA, 2016). The effort to make the country food secure seems not to be matched by proper monitoring systems, as there are no clear and accurate processes to measure the effectiveness of FSPs, resulting in many households and communities within the ELM and other regions remaining food insecure, despite projects being implemented. Failure to effectively and accurately measure the performance of FSPs leads to resource wastage and the persistence of food insecurity.

Jones, Ngunjiri, Pelto, & Young (2013:484) identified the following consequences that may result from using inappropriate metrics in measuring household food security rates: “measuring multiple domains without the ability to differentiate between them; measuring unintended areas of food security; collecting information that is not relevant; collecting data on an inappropriate scale; collecting data that cannot be measured multiple times at the needed time intervals; and selecting tools that require resources beyond those available for adequate data collection and analysis”.

The possibility of using inappropriate metrics in measuring food security is a persistent challenge. Bickel et al. (2000:8) maintained that “the full range of food insecurity and hunger cannot be captured by any single indicator”, but through the use of a variety of indicators based on experience, behaviour and overall responses received from statistical procedures of all the data collected through government entities (United Nations, 2013). In view of this implied complexity in measuring FSPs, it is critical to assess the effectiveness of the food security measurement system. Performance measures in FSPs may fail to effectively perform their measurement role, resulting in ineffective determination of results. When this happens, food insecurity persists and efforts to address it become ineffective. With persistent food insecurity, the concern for the effectiveness of FSPs’ performance measurements should be raised.

Compared to the 2011 GHS report, which concluded that 11, 3% of citizens in South Africa were finding it difficult to access food (Stats SA, 2011), the 2016 report indicates a decrease in food access by indicating that “approximately 13, 3% (2, 2 million) of households in South Africa indicated that they had skipped a meal in the past 12 months” (Stats SA, 2016). The persistent food insecurity points to at least one obvious cause: the performance of the FSPs implemented to address this condition is failing to track down and identify opportunities that will improve the household food security status of the country. It is therefore critical to examine the effectiveness of the performance measures used to evaluate these FSPs.

## **1.4 RESEARCH QUESTIONS**

From the problem statement above, the following research question and sub questions arose:

### **1.4.1 Primary question (main research question):**

How effective have the performance measures of FSPs been within the ELM, in light of the persistent food insecurity in the region?

### **1.4.2 Secondary questions:**

What is the importance of performance measurement, with regard to FSPs?

Which elements should be measured by the performance measures of the FSPs implemented within the ELM?

How do the performance measures implemented to assess FSPs within the ELM compare to the DtiUK's (2013) effective performance measurement criteria [i.e. (1) "clear identification and tracking of progress against goals, (2) identification of opportunities for improvement, and (3) comparison of performance against internal and external standards"]?

How can the effectiveness of these FSPs' performance measures be improved within the ELM?

## **1.5 RESEARCH OBJECTIVES**

From the research problems identified above, the research aims to achieve the following objectives:

### **1.5.1 Primary Objective**

To review the effectiveness of FSP performance measures implemented within the Emfuleni Local Municipality with regard to the persistent food insecurity in the region.

### **1.5.2 Secondary Objectives**

To establish the importance of performance measurement effectiveness, with regard to FSPs.

To review the elements that should be assessed by the performance measures of FSPs implemented within the ELM.



To compare the performance measures of FSPs implemented within the ELM with the effective performance measurement criteria of the DTIUK (2013) as noted above.

To provide an analysis of how the performance measures of FSPs used within the ELM can be improved to be more effective?

## **1.6 RESEARCH METHODS**

### **1.6.1 Research Approach**

This research collected data using qualitative research methods. DeFranzo (2011:1) defines qualitative research as “primarily exploratory research which is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research (Bulsara, 2006). Qualitative Research is also used to uncover trends in thought and opinions, and dive deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques (Clark & Creswell: 2004:12). Some common methods include focus groups (group discussions), individual interviews, and participation/observations. The sample size is typically small, and respondents are selected to fulfil a given quota”.

#### ***1.6.1.1 Qualitative Research***

This was a qualitative study as it evaluated the FSPs and their performance measures. Creswell (2009:3) defines qualitative research as “an enquiry process of understanding social situation, based on building a complex and holistic picture, fashioned with words reporting detailed views of informants and conducted in a natural setting”. Qualitative research is therefore a constructed technique that is used to discover the variables of an unknown theory (Clark & Creswell: 2004:12). Through qualitative research, the researcher aims to investigate, gather information and provide a theoretical perspective of the performance measurements, thus evaluating the effectiveness of these measures on public-funded FSPs within the ELM. The researcher also used a qualitative approach (interviews) in evaluating the phenomenon of this research.

#### ***1.6.1.2 Evaluative Research***

Knowledge Base (2016) defines evaluation as a “systematic acquisition and assessment of information to provide useful feedback about some object”. This research was evaluative and

sought to assess the effectiveness of the performance measures used within the ELM to evaluate public-funded FSPs. Evaluative research was conducted with a pragmatic paradigm

#### ***1.6.1.3 Research Paradigm***

Olsen, Lodwick, and Dunlop (1992:292) define a research paradigm as a pattern, framework or system constructed through academic and scientific assumptions, values and ideas. A research paradigm refers to a set of beliefs interrelated in practice and thinking to form a research pattern for discovering explanations and understanding concepts, assumptions and approaches used by scientific community researchers. Stuart (2011:3) identifies four major types of research paradigm: interpretative, positivist, transformative and pragmatic paradigms.

#### ***1.6.1.4 Pragmatic paradigm***

According to Mackenzie and Knipe (2006:6), the pragmatic paradigm is the use of mixed methods of data collection. Creswell (2003:11) supports this statement by adding that in pragmatic research, the research problem is placed at the centre of the study, ensuring that collected and analysed data is able to provide all available information for understanding the problem and insight into the research problem (Ellen, 1984:123). This evaluative study made use of pragmatic research to allow the researcher the freedom and capacity to use diversified methods and techniques in ensuring that collected data were credible and analysed appropriately.

### **1.6.2 Data Collection**

As stated above, the researcher collected data using qualitative methods, with the aim of enabling a broad study of the identified research problem.

#### ***1.6.2.1 Literature analysis***

The literature reviewed for this study was chosen based on two basic aspects: (1) the effectiveness of performance measurement where journals, e-publications, books and government publications were the main sources of information and (2) public-funded FSPs, where government policies, policy documents, ministerial speeches and the government data base were accessed as primary sources of information. Literature analysis provided theoretical and conceptual clarity on the effectiveness of performance measurement in the

context of FSPs. This guided the researcher in collecting and interlinking all the important aspects and information needed from the field work.

#### **1.6.2.2     *Policy analysis***

This was achieved through obtaining information and policies from the Department of Agriculture, the Department of Agriculture, Forestry and Fisheries, Stats SA and food security-focused organisations, as well as other secondary literature sources focused on performance measurements of food security programmes.

#### **1.6.2.3     *Program documents***

Documents and articles pertaining to FSPs were reviewed and analysed as part of the empirical study in ELM. These programs were thoroughly scrutinised and compared.

### **1.6.3     Empirical Study**

Empirical investigations were conducted to collect more information from the project managers who implemented projects promoting food security as well as with the beneficiaries of these programs. According to Burns (1997:329), an interview is “a verbal interchange, often face to face or though the telephone may be used, in which an interviewer tries to elicit information, beliefs or opinions from another person”. The research was limited to only three locations: Sebokeng, Evaton and Bophelong.

#### **1.6.3.1     *Key Informant Interviews (KII)***

UCLA Centre for Health Policy Research (2016) defines KII as “qualitative in-depth interviews with people who know what is going on in their community”. Informants for this research were managers who are in charge of formulation, implementation, monitoring, evaluation and the overall running of the FSPs within the ELM. The managers were cross-interviewed after their first interview was analysed to validate the accuracy and credibility of their first interviews.

In depth interviews were also conducted with the FSP staff officials (workers) within the ELM to find out more about the programs, the objectives, long term goals, implementation of those performance measures and how they plan to proceed in the future; and with the community workers delivering the program services to the community, in order to establish

how food insecure household are identified and their duties in delivering services. The interviews aimed to discover more about the FSPs. In KII questions are formulated in an ethical and respectful manner aimed at attaining only relevant information (USAID, 2016). The interviews involved a number of structured responses to the questions and a few open-ended questions to express the unique experiences, attitudes and views of the government officials. The FSPs' staff officials were cross-interviewed after their first interview was analysed to ensure the validity, accuracy and credibility of their first interviews.

#### **1.6.3.2      *Semi-structured interviews***

Semi-structured interviews were conducted to acquire the views and opinions of the beneficiaries to validate the effectiveness of the FSPs within their household. Interviews were conducted in a straightforward manner, aimed at only obtaining information that was relevant to the research. The interviews did not exceed fifteen minutes with each household.

#### **1.6.4      *Target population and sampling***

This research made use of non-probability sampling, which employs techniques that assist the researcher to select a sample of households from the population they are interested in studying. The sample was chosen subjectively. Two types of non-probability sampling were used in this research, namely: purposive and convenience sampling.

##### **1.6.4.1      *Target Population***

The targeted population was from three townships in the ELM that acted as a case study for this research study. These three townships were: Sebokeng, Evaton and Bophelong. The researcher chose these townships as they are three of the largest townships with high levels of food insecurity within the ELM. These townships were deemed to best represent the municipality in this research study.

##### **1.6.4.2      *Purposive sampling***

Maxwell (2003:15) defines purposeful sampling as where “particular settings, persons, or events are deliberately selected for the important information they can provide, that can be obtained as well from other choices”. This research made use of purposive sampling, where five (5) senior management employees who are accountable for the establishment and implementation of FSPs in the ELM were interviewed.

#### **1.6.4.3      *Convenience Sampling***

Etikan, Musa and Alkassim (2015:2) define convenience sampling as “a type of nonprobability or non-random sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study. It is also referred to the researching subjects of the population that are easily accessible to the researcher” The research used convenience sampling, where a group of people are targeted for the convenience of the study. In each township ten (10) households identified by the Emfuleni project managers were visited and interviewed regarding services received through the FSPs. 5 FSP staff officials, employed to identify and deliver the service to the insecure households were asked to answer the questions based on their experiences and observations regarding the effectiveness of the FSPs they deliver.

#### **1.6.5      *Data recording and analysis***

The views and opinions of the household community members and responsible public officials were transcribed during the interviews. Participants were required to answer questions in an unambiguous manner that was easy to transcribe and analyse. It was the sole responsibility of the researcher to gather and analyse the data that was generated. All the research discoveries were concluded in the research report. The research employed thematic coding for analysing the data.

##### **1.6.5.1      *Thematic coding***

According to Anon (2016), “Thematic coding is a form of qualitative analysis which involves recording or identifying passages of text or images that are linked by a common theme or idea allowing you to index the text into categories and therefore establish a basis of thematic concepts around it”. This research utilised thematic coding in analysing the data in order to establish a framework of all data received. The thematic analysis was based on deductive coding, inductive coding, categorisation of observation and credibility. Guba & Lincon (2009) hold that these four criteria reflect fundamental assumptions tangled in qualitative research.

#### **1.6.5.2     *Deductive coding***

Based on the type of study and the questions that were asked, it was more convenient to use deductive coding. Deductive coding is when data is scrutinized in terms of an existing framework or category (Teddlie and Tashakkori, 2009:25). Deductive coding was performed purposely with the conducted interviews and the questionnaires that were distributed. The answers were categorised in a manner that indicates whether the performance measures implemented to assess FSPs are effective or not, if community members are happy or not, if government interventions has sustainably assisted the families to become food secure, etcetera. All the data collected were analysed according to a set of objectives and a framework.

#### **1.6.5.3     *Inductive coding***

This study used inductive coding to analyse the data and allow an understanding of the research problem. Teddlie and Tashakkori (2009:25) define inductive analysis as “the involvement of discovering methods, patterns and categories in one’s data”. Through inductive analysis, the researcher was enabled to assimilate knowledge, frameworks and empirical realities with the conceptual and theoretical clarifications of food insecurity without following any category or assumption, but through freely exploring the data and possibly finding a new framework and direction in which to spiral the research. Inductive coding was achieved through observing the responses from the government officials and beneficiaries.

#### **1.6.5.4     *Categorisation of observations***

The researcher’s observations were recorded and analysed using both inductive and deductive coding. The observations were categorised in a manner that lead to the evaluation of the effectiveness of the performance measures of the FSPs.

#### **1.6.5.5     *Credibility***

The Oxford Dictionary (2013) defines credibility as “The quality of being trusted and believed in”. It is therefore the obligation of the researcher to certify that the research is credible and believable. The essence of trustworthy research lies in the validity, reliability and credibility of the information the research has presented. Three methods were used in this study to ensure the research’s credibility: triangulation, where the research uses both data and literature to validate the information received; constant comparison, where information

received from government officials is compared to the information from household beneficiaries and cross checking of information, where government officials are cross examined in a second interview, to validate the answers from their first interviews.

## **1.7 ETHICAL CONSIDERATIONS**

In obtaining, recording and analysing the data, the researcher complied with the ethical requirements of the university.

The researcher requested written permission to conduct the empirical study in the ELM and to interview the household beneficiaries of the food security programs. The nature of the research had to be explained to all the participants before requesting their participation so that they could make informed decisions. Participants were assured that their participation in the study was voluntary and that they could withdraw from the study at any time, should they feel the need. Participants were asked to sign a consent form in which they agree with the terms of the interviews. Confidentiality of all information was assured. Participants were recorded systematically using numbers and not names to assure confidentiality. After the analysis of the interview information, participants were given feedback and the outcome of their input.

## **1.8 PRELIMINARY CHAPTERS**

### **Chapter One: Background and Orientation**

This chapter aims to introduce the research topic, explain the research problem statement and provide the research questions and objectives. It describes the methodology and literature review used in acquiring information for this study. This chapter ends off by discussing the ethical considerations of this research study and preliminary chapters.

### **Chapter Two: Conceptual and Theoretical Analysis of Performance Measurement**

This chapter provides an in depth understanding of the overall importance, qualities and features of performance measurement. Through this analysis the researcher establishes a framework and elements that could be used to promote effective performance measurement of service delivery.

### **Chapter Three: Theoretical Framework for Measuring Food Security**

This chapter explains the theoretical framework for measuring food security and what the measurement of food security entails. The chapter also discusses the challenges and limitations associated with measuring food security on a global and South African scale.

#### **Chapter Four: Research Methodology**

This chapter explains the research methodology, research design and data collection methods and techniques that were used in the formulation of the research. It explains the sampling and ethical considerations the researcher used while collecting and assembling information for this study.

#### **Chapter Five: Presentation of results and discussion on effectiveness of performance measures on food security programs within the ELM**

This chapter presents the findings of the empirical research conducted within the ELM. The data is analysed and presented in a qualitative manner.

#### **Chapter Six: Conclusions and Recommendations.**

This chapter summarizes the researcher's recommendations for improving the performance measurement system within the ELM, with the aim of improving the effectiveness of the performance measures of the FSPs and eliminating food insecurity. This chapter ends with the conclusions of the study.



## **CHAPTER TWO**

### **CONCEPTUAL AND THEORETICAL ANALYSIS OF PERFORMANCE MEASUREMENT**

#### **2.1 INTRODUCTION**

Performance measurement is one of the most important elements of every organization and if performance measures are well integrated and implemented, the overall system performance and service delivery of the organization will improve significantly. Bourne (2015:1) states that “performance measurement has become a key mechanism for managing organizational performance” and if effectively implemented and used, the organization is likely to achieve its desired objectives and track down all the problems that are delaying its progress. Measurements of performance alert the organization when it is no longer on track to achieve set objectives and is a helpful instrument that provides relevant and critical information (Bruns, 1992:86).

It is crucial that managers, staff members and clients understand the role of performance measurement and how these measures can improve their quality of work and service delivery, so that they can use the system to promote a better and more effective working environment. Measures that are established must be of good quality and reflect on the organizational objectives. It is important that the measures be specific, measurable, achievable, relevant and timely (SMART). The organization’s failure to implement effective, sustainable and efficient measures may lead to dysfunction within the organization and make it difficult for managers to track the progress of organizational programs.

This chapter aims to emphasize the importance of understanding and using performance measures effectively and efficiently as tools for promoting better management of the organization. It also highlights the consequences of selecting inappropriate measures or not using performance measures effectively.

#### **2.2 UNDERSTANDING PERFORMANCE MEASUREMENT**

Lichiello (1999:9) defines performance measurement as the “selection and use of quantitative measures of capacities, processes and outcomes to develop information about critical aspects of activities, including their effect on the communities/customers”. This understanding of performance measurement is shared by the US Department of Health and Human Services

(2016:2), which defines performance measurement as a vital management tool, needed to clarify goals, formulate documents that will help to accomplish these goals and to document the benefits received from the venture of each pursued program.

The DtiUK (2013:1) defines performance measurement as an important piece of the puzzle in service delivery, which contributes to the total quality management (TQM) and the total quality performance of the organization. Performance is measured by the impacts, effects and improvements witnessed by both communities and organizations delivering the services and measuring the performance (Lebas, 1995:24). Training Resource and Data Exchange (TRADE, 2007:4) defines performance measures as statistics that inform us about the products and services of an organization. They also help managers to gain better understanding and to manage the organization better, for effective organizational management (Parmenter, 2007:19). These measures evaluate established objectives and goals against the achieved performance of the organization and to ascertain if the community they are serving is satisfied with their services, if the processes used are statistically controlled and if the gaps that existed are now being addressed. Most importantly, performance measures should provide relevant information that will enable the organization to make good decisions (Bruns, 1992:25).

According to the TRADE (2007:3), performance measurement should be considered as an “overall management system involving prevention and detection aimed at achieving performance of the work product or services to your customer’s requirements concerned with the process of optimization through increased efficiency and effectiveness of the process or product”. Performance measurement can further be defined as a process in which a set of goals is assessed through the utilization of developed and measurable indicators (Interoperability Clearinghouse, 2005). Tarr (2004:9) holds that in order to expand the effectiveness of an organization, we must establish and implement performance measurement as a unit and characterize it with a “purposeful, unified, integrated and fluid system”, which promotes and supports the functions, goals and objectives of the organization at all levels.

From these definitions we can conclude that performance is measured with regard to set goals and that performance measurement plays a vital role in promoting and improving effective service delivery within the management of organizations, including the public sector.

Delorme and Chatelain (2011:2) name the following four reasons that measurement has become a necessary tool in improving public management, these are: to improve decision

making processes and how work is administrated; to promote a more effective decision-making and administrative process for the inputs that are being measured; to use available resources efficiently when measuring inputs and to maintain democracy and transparency (Parmenter, 2007:19). This view is supported by the DtiUK (2013:1), which stated that organizational performance should indicate the following three areas: increased effectiveness in the capacity of what is being measured; efficiency of the process in which performance should be measured and increased productivity outcomes of what has been measured.

Lichiello (1999:25) provides reasons for why performance measurement should be conducted. Each of these reasons supports the views of Delorme and Chatelain (2011:25) in that good public management can be achieved through the awareness, administration and emphasized importance of effective and efficient performance measurement. DtiUK (2013:1) emphasizes that “you cannot manage what you cannot measure”. This means it is impossible to improve, sustain or understand the organizational PMS if you have no idea what you are dealing with.

This discussion on the meaning of performance measurement highlights the necessity of performance measures in an organization. It allows measurement and the tracking of progress (Lebas, 1995:25). However, it is important to consider in detail the importance and usefulness of performance measurement.

### **2.3 USEFULNESS OF EFFECTIVE PERFORMANCE MEASUREMENT**

The greatest principle in management is that what gets rewarded gets done, but Spitzer (2007:1) argues that “you get what you measure” and he further indicates that accurate application of performance measures will result in great rewards and effective management of the organization as a whole. Performance measurement is the key to ensuring that an organization’s strategy is implemented successfully and efficiently. The effectiveness of every organization depends on the successful achievement of predetermined requirements and objectives that ensure that all decisions taken within the organization are well-informed, strategic and operational (CIMA, 2008:4).

Spitzer (2010:48) supports these arguments by identifying the following aspects as essential and important variables for measuring performance in any organization: measurement gets straight to the point and makes performance visible; tells you what to do in order to acquire the desired results; makes accountability and performance visible; helps to communicate

what is important so that managers can know what is going on in the organization and helps management to gain better understanding of how the organization is performing so as to make better decisions on the way forward. According to Moseley and Dessigner (2010:44), in order to achieve effective management, the foundations of measurement must be operative, as every function of the organization will be based on it. Therefore, measurement is the most essential system of all, and if this system works well, the organization will manage and measure the right things and the anticipated outcomes will emerge (Parmenter, 2007:19).

Measurement plays a key role in the productivity and improvement of the quality of activities by ensuring that customer requirements are met; the organization complies with the objectives that were set; the organization has established standards of comparison; it provides visibility so that employees can monitor their performance on a scoreboard; it helps organizations recognize problems and areas they should prioritize and provide feedback for managing the improvements (DtiUK, 2007:1). This view supports Moseley and Dessigner's (2010:5) definition that performance measurement is data gathered and evaluated by an organization.

Performance measurement plays a vital role in recognizing and tracing the organizational development against organizational objectives; recognizing prospects for advancement; comparing the actual performance against set standards at an internal and external level and reviewing and formulating the direction of strategic activities (Bruns, 1992:31). Measurement also plays a significant role in the quality and efficiency development of activities. DtiUK (2007:1) sums the reasons why measurement is important for quality and productivity by noting that measurement ensures that the needs and requirements of the customers are met; comparable standards are well established; priorities are identified; provision for feedback is made available, enabling organizations to improve their standards; identify risks and ensure sensitive objectives are identified and solutions to approach them with delicacy are established and lastly, to make provision for a scorecard so that everyone can monitor their progress (Parmenter, 2007:11). Noting the importance of performance measurement, the question is: how must the performance management as a system of measurement be assessed?

“Effective performance assessment can constitute the most valuable instruments in a manager's toolbox. Performance assessment contains limitations that can make evaluating employee's contribution particularly challenging” (Harvard Business School Press, 2007:2). Frequent assessment and maintenance of a strategy and mission helps every organization to

elucidate a handful of responsibilities and monitor these tasks during the implementation and evaluation of the projects.

According to the Harvard Business School Press (2007:2), performance assessment is important in enabling project managers to accumulate valuable outcomes and help every company/organization to: determine how a project team is performing against organizational goals and help organizations become aware of what they should work towards; identify vital strengths on which reports can be established and variables measuring organizational progress; discover opportunities to improve and develop individual skills, team skills and overall effective management; construct developmental plans for all employees and establish a PMS that will help make informed decisions regarding compensations and promotions for good performance; keep record of all poor performances as evidence to protect the organization from any legal liability should poor-performing employees be demoted (Lebas, 1995, 43).

Performance measurement is useful for every organization that wishes to improve and monitor its work and the effectiveness of the results produced. If implemented successfully, performance measurement will have enormous benefits for every aspect of the organization.

### **2.3.1 Usefulness of performance measurement on the organization**

If the measurement system is functioning correctly, every aspect of the organization automatically falls into place and management tends to manage effectively and achieve desired results. If the organization is well managed, performance measurement will enable the following attributes:

**Enhanced decision making:** All the decisions made by the organization will be well informed and beneficial to the whole organization. Without good understanding of the objectives, the management will fail to make the correct decisions, thus allowing a multidimensional PMF that will enhance management decisions at all operational levels.

**Supported strategic planning and target setting:** An effective measurement system requires that employees are included in the development of strategic plans and goals. This ensures that the decision-making, the performance measures and the organizational management are in line with set strategies.

Improved communication: Cooperation and involvement in goal planning and target setting enhances communication and the support of strategic decisions. Through such engagement a common language of understanding is developed among employees and interdepartmental knowledge sharing is encouraged.

Accountability: Accountability at organizational level is reached when organizational performance is measured and reported through the implemented decision making tools. Decision makers must evaluate outcomes and outputs through commonly accepted standards and base all their decisions on these standards for accountability (CIMA, 2008:7).

If properly formulated, implemented, evaluated and assessed to review progress, performance measurement will have many benefits for the organization, the employers, the employees and the community at large. Ruzita, Zhar and Hasan (2012:51) name the following as benefits the organization will enjoy if its PMS is successfully implemented.

Improved quality of programs – programs implemented using performance measures are of good quality, as every step and action of the performance is measured according to the strategic plan and objective of the organization, therefore making it easier for employees to notice if the program is not acquiring the predicted results. Any problems can be attended to immediately and alternative plans can be implemented in a timely manner, resulting in improved and more successful programs.

Cross agency co-operation – when the measurement system is in place, all sectors of the organization are able to coordinate and cooperate in a beneficial and conducive manner.

Increased awareness of factors that affect performance results – a PMS helps managers and employees to evaluate their performance and be aware of their mistakes and shortcomings and they are then aware of every factor that affects the performance results and can deal with performance measures effectively.

Increased awareness and focus on results – performance measures highlight important aspects on which the organization should focus and provides a more steady awareness on the results.

Improving effectiveness of the organization – all in all, the PMS improves the overall effectiveness of the organization.

The benefits of performance measurement on the organization will always have direct impacts on the effectiveness of the organization's monitoring system. The monitoring system of the organization must always be aligned with the objectives that the organization is striving to achieve.

### **2.3.2 Usefulness of performance measurement as a monitoring system**

Performance measures are essentially implemented for tracking the progress of the organization, through providing organizational opportunities and capacities to monitor, assess, and improve on practices, strategies, approaches and activities. Performance measures indicate how well or how badly the organization is progressing towards achieving its goals and objectives, as well as indicating which policies and processes are effective. Monitoring performance assists the organization to make the best use of available data and attain crucial knowledge on improving the execution of its programs and policies, making it easier for the organization to achieve effective management. This includes planning, efficient budgeting, smooth implementation, monitoring and effective reporting on progress.

Monitoring progress helps the organization to work constructively towards optimistic and consistent improvement (Lichiello, 1999:33). Performance information allows organizational accountability, where every action and responsibility can be monitored and evaluated ensuring that organizations deliver services of the best value to the clients. National Treasury (2007:1) highlights that monitoring performance helps the organization monitor the usage of resources and the management of workers and alerts managers in time if something is wrong, or if the organization is failing to achieve its goals. When an organization knows what it is measuring, its performance is likely to improve, as the system will allow the staff to pursue performance contracts, risk management and benchmarking.

The basic principle of measuring performance is that if results of programs are not measured, it will be difficult to differentiate between success and failure, reward success, or even learn from the past mistakes and correct what went wrong. Therefore, keeping track of progress and keeping the system focused on the desired results is essential (National Treasury, 2007:5). Performance measures are effective and should contribute towards creating awareness of all the factors affecting performance results, improve service delivery and help organizational members better understand the functioning of the organization (Lichiello, 1999:25). As a result of monitoring performance, the organization may learn lessons and develop new strategies and approaches that might prove to be beneficial to the organization.

Therefore, implementing performance measures will allow the organization to assess and monitor the quality of effectiveness of programs and policies (Ruzita, Zhar & Hasan, 2012, 51).

Kaydos (1999:1) identified performance measurement as vital, not only to the organization as a broad range monitoring system of procedural and cultural benefits, but also to the frontline managers. Effective performance measurement enables managers to achieve organizational objectives.

### **2.3.3 Usefulness of performance measurement to managers**

If performance measurement is utilized effectively, the running of the organization will improve and the managers will have control and manage the organization more efficiently. The following benefits will accrue for managers if they use the performance measures effectively and efficiently

**Improved control:** Feedback is crucial for the control of any organization, as it provides managers with improved control over their areas of responsibility and with performance measures in place, deviations and threats to performance are identified early, allowing the managers to step-in and quickly minimize the threats before they cause damage. It also enables the maximization of opportunities. Such control helps prevent managers from being blind-sided with bad news and always being aware of the changes occurring around them.

**Clear responsibilities and objectives:** When responsibilities and objectives are clear and unambiguous, everyone knows what to do and it becomes easier for team members to accomplish their responsibilities and the objectives of the organization. It thus becomes easier for managers to know how well or how badly they are performing.

**Strategic alignment of objectives:** Performance measures communicate a clearer image of the company's objectives. Unless an organization is well-aware of its objectives, it will become difficult for it to align all its strategies to work together towards a common goal. Various objectives have to work in alignment with one another towards realizing and supporting the main objectives and growth and development strategies of the organization. Performance measures are therefore essential in assessing the effectiveness of a strategy.



Knowing what a process can do – its capabilities: Understanding a process makes it easier to identify its abilities. Being aware of these abilities is vital and helps the manager to deal with any problems that arise and helps maximize the utilization of opportunities.

Better planning and forecasting: When you know the performance expected from you, the planning and forecasting of projects become easier as performance measures can be used to test plans against desired results. Strategic actions work directly towards the set objectives and goals of the organization.

The freedom to delegate: When performance measures are in place, all employees know exactly what is expected of them and this gives the manager freedom to delegate, as tasks are planned precisely.

Changing an organization's culture: As the world changes, every organization must adapt to this change in order to keep up with success. Knowing and being aware of the performance expected by the organization and the measures used to measure this performance, makes it easier for any organization and its managers to keep up with the changes in the organization's culture (Kaydos, 1999:1; TRADE, 2007:7). When managers are well acquainted with the organizational measures, strategies and objectives, this will directly and positively affect the employees. Good management promotes employees to work hard and aspire to achieve the best results and such determination will result in beneficial and satisfying end results for the clients for whom the organization is catering.

#### **2.3.4 Usefulness of performance measurement to clients and employees**

Without doubt, performance measurement is beneficial to managers and the overall running of an organization but it also has benefits for employees, clients and the resource management. If the employees succeed in reaching organizational objectives and their performance is measured, this will benefit the organization's clients. Kaydos (1999:58) and the State of Washington (2016:2) name the following aspects as benefits that the employees and clients will enjoy if performance measures are effectively implemented and used within the organization.

Clear responsibilities and objectives on what is expected from them: when employees know what is expected from them, their performance increases and their overall work improves as they have clear duties and responsibilities explained to them, leaving no ambiguity in how

they must function. Through such clarity, the staff is able to meet the needs and deliver satisfactory services to the clients.

Seeing accomplishment and receiving recognition: when employees work towards the objectives they know, they often succeed in the execution of their duties and responsibilities. This accomplishment helps them gain recognition and essence within the organization, opening doors of promotions and rewards. When employees know they will be rewarded for their work, they produce the best results and the clients benefit equally as they receive the best services.

Objective evaluation: when audits and evaluations take place, the employees will be informed if they succeeded, or not in executing their organizational duties and responsibilities. Evaluation is accurate and most of the time cannot be disputed. Audits and evaluations ensure the organization delivers quality products at a low price for the clients.

More empowerment: performance measures have a number of factors contributing to the improvement of the organization and these factors empower not only the organization, but also the employees, to do their best to achieve set objectives and ensure they always do their best. Better production results in greater satisfaction of the clients, which in turn helps the organization to manage its resources efficiently and effectively.

### **2.3.5 Usefulness of performance measurement in resource management**

Performance measures are useful in helping organizations manage their resources better. Performance measures will indicate to managers if resources are being used effectively, efficiently and sustainably or if they are being wasted. Resource management is an important function in every organization, as the misuse of resources causes an imbalance, wastage and fruitless expenditure for the organization. Lichiello (1999:28) argues that performance measures help the organization to carefully assess its capacity and resource management to work effectively and efficiently. Therefore, performance measures should reflect the organization's capacity to carry out work.

Kaydos (1999:1) mentions the following as benefits of efficient resource management.

Improved quality and productivity: The following measurements are needed during production to improve the quality of goods and services: the difference in what customers/community members are receiving and what they initially desire; the quantities of

the processes providing the goods and services and the difference in the performance before and after the changes have been made. When measures are in place at the production phase, quality is improved, more people are satisfied, production increases and the objectives and goals of the organization are met.

More efficient allocation of resources: Good performance measures lead to good decisions and understanding of what the organization needs. It becomes easier to allocate resources accordingly and prioritize allocation in a manner that will achieve the desired results generally.

However, the usefulness of performance measures as organizational systems depend on the quality of performance measurement itself. If the performance measurement is of a good quality, the organization will succeed in achieving its objectives and goals.

## **2.4 QUALITIES OF A PERFORMANCE MEASUREMENT SYSTEM**

According to CIMA (2008:5), “performance measurement is an important tool of strategic analysis”. If performance measures are correctly determined, the overall management of the organization will be efficient, effective and productive. Effective measurement in every organization relies heavily upon the foundation of an effective measurement system and almost everything else is based on the performance measurement that the management employs. Effective management of the performance measures has elements that will help the organization to achieve the desired results.

The elements that constitute a good PMS include performance measures that have: clarity on what is being assessed by performance measures; objectives that identify and clarify what needs to be measured; inclusions and preparations for employees who use the system; clarity of the communication system within the measurement system; a clear accountability system to ensure that results determined by performance measures and improvements are implemented in line with the organizational objectives; provision for continuous feedback; comprehensive opportunities for learning; a well-established implementation plan and achievable goals.

The qualities of performance measures are encapsulated in what the DtiUK (2007:8) refers to as SMART. SMART is an acronym that stands for: S- Specific, M- Measurable, A- Achievable, R- Relevant and T- Timely. Performance measures should always be: specific and work towards a clear, unambiguous goal; measureable towards the organizational

objectives; realistic and possible to achieve; must only contain information that is relevant to the organizational objectives in order to achieve what is vital and there must always be a time frame for programs and strategies that are initiated and this must be monitored thoroughly throughout the implementation process. SMART performance measures define what is meant by quality performance measures, which are able to perform what they should be performing.

#### **2.4.1 Performance measures must be specific**

Creating and formulating a quality PMS includes laying the foundation for what the performance measure must entail; it must be in conjunction with and support of the organizational objectives; the framework that determines what the organization must measure, how to measure performance and most importantly what not to measure; principles that help the managers develop data collection systems, that collect relevant information for achieving set objectives; developing data processing systems; developing an implementable system and refining the validation of the final results (Kaydos, 1999:98).

A good PMS must be thought through, investigated and carefully formulated in a manner that allows development, improvement and sustainability within the organization. Developing an effective PMS requires guidelines and principles but above everything else, it needs the adherence to these guidelines and principles for effectiveness (Roos, 2009:36).

TRADE (2007:8) identifies the following as characteristics for establishing an effective PMS.

Measure only what is important - when you measure insignificant things the workload increases, results become disorganized and progress becomes unclear. It is vital that performance measures only measure that which is specific, important and necessary.

Focus on the customers' needs – it is of great importance that the organization's performance measures are focused on the customers' needs and prioritize these needs.

Involve employees – for any performance system to become successful, employees should be involved and know exactly what is expected of them. The more involved and transparent the processes, the more productive the employees are.

A good PMS needs a good Performance Measurement Framework (PMF). The PMF must focus on the customer and measure the correct things. Performance measures must be clear and unambiguous; well-managed; have high integrity; promote improvement and must link to the other goals and key drivers of the organization.

There are initially four key steps in a PMF. DtiUK (2007:4) describes these framework steps as “the strategic objectives of the organization which are converted into desired standards of performance, thus ensuring that effective metrics are developed to: compare the desired standards of performance with the actual achieved standards, identify gaps, and improve actions initiated. These metrics must be continuously implemented and reviewed”. TRADE (2007:5) names six categories in which performance measures can be grouped, yet states that every organization can develop its own categories based on the organization’s mission, but any developed category must be in conjunction with the organization’s PMF. The six categories are:

Effectiveness - measuring the degree to which process outputs meet the requirements;

Efficiency – measuring the degree to which achieved outputs were completed on time or delayed at a minimum resource cost;

Quality – measures if the outcome is of the required quality set by the organization;

Timeliness – measures whether or not production was achieved in a timely manner;

Productivity – measures the value achieved; and

Safety – measures the safety of the organization and the overall environment of its employees.

All these elements, characteristics and features will help an organization to establish specific and clear performance measures that are easy and accessible to measure.

#### **2.4.2 Performance measures must be measurable**

When formulating an effective PMS, there are requirements that the organizations and managers must pay attention to. These requirements are essential for ensuring that the PMS is effective, measureable and useful to the organization. “PMS should ensure employees are rewarded for good performance and that requires fact-based decision-making (Ruzita, Zhar and Hasan, 2012:45).

Principles guide and direct any given process. Following the principles of a system is important for guiding what the process should measure, emphasize and highlight and gives a clear direction for managers to follow. Parmenter (2007:19) identifies the following functions as key principles that will help any organization select the correct performance measures:

measures should have a clear relationship with system goals; measures should be meaningful and easy to understand; measures should inform, evaluate, plan and help make policy decisions; data should be adequate to support the measures; care should be taken to guard against unintended consequences of the measures; performance should have a clear and direct effect on the performance measures; performance should be the primary influence on the measures and measures should be valid, reliable and responsive.

In a shared perspective regarding the importance of performance measures, Luthuli (2007:193) names principles that provide a system of government to set up and monitor the organization's thoughtful goals and guide the organization and its strategy onto a path of success (Roos, 2009). These principles include clarifying the purpose of performance measures being linked to the organizational objectives; focus on measuring what is relevant, reliable and informative to the organization; balance adequate measures and guard against unplanned impacts; ownership of policies; on-going learning and continuous improvement of the PMS, Lebas, 1995:26).

Performance has no particular standardized form of measurement, but most organizations have adopted the most popular performance measurement criteria established by the DtiUK (2013). The DtiUK (2013) emphasizes that these performance measurement criteria are effective and will bring forth the desired results in an organization. This criterion has been accepted worldwide by most organizations and is therefore regarded as the most effective criterion for measuring performance. This performance measurement includes: (1) "clear identification and tracking of progress against goals, (2) identification of opportunities for improvement and (3) comparison of performance against internal and external standards". Should the organization's performance measurement meet these criteria, it is guaranteed to be successful.

Kontelnikov (2004:1) provides the following criteria for measuring performance: relevance – data, performance and information must always be measured in a relevant, clear and significant manner in line with the objectives of the organization. Whatever gets measured must contribute and reflect the objectives and goals of the organization; must be free from bias – the measurement system must not show bias, prejudice or favoritism, the measures must reflect accountability, fairness and the organizational objectives; must be reliable – performance measures must be reliable, they must measure what matters, what counts and what is relevant for the organization's success. The performance measures must be

trustworthy and achieve and promote the organizational goals and must always be available – performance measures must always be accessible.

According to Evans (2011:63), the criteria for performance excellence was established to encourage organizations to improve their competitiveness through an aligned approach to the organization's performance that will result in an ever-improving customer value and service delivery to market place success; an overall improvement in the organization's performance and abilities and improved learning at both personal and organizational level. This criterion consists of a hierarchical set of classifications, substances and capacities, which include:

#### Leadership

Leadership examines the organization's authority system, senior management and the organization's performance system, with how it fulfills its social responsibilities and ethical actions and assists with community engagement. Leadership also allows inspection in reviewing how top management's personal engagements guide and sustains the organization's vision and mission.

#### Strategic planning

Strategic planning examines how an organization develops its goals and action strategies, how it chooses and deploys plans, as well as the changes that will take place if circumstances change and how performance will be measured.

#### Customer focus

This examines the communication and engagement of the organization with its customers and how the organization listens to the needs and expectations of its customers.

#### Measurement, analysis and knowledge management

Here the criteria examines how the organization selects, gathers and analyzes data, manages its information, measures its performance, reviews data and how it evaluates all this information and applies it in a manner that improves the organization's performance.

#### Workforce focus

This category examines how the organization engages and manages its workforce. It also helps examine how the organization attempts to improve the full potential of its employees in alignment with the organization's vision, mission, goals and plan of action.

## Process management

Examines the processes of the organization, how the organization establishes its work system and manages its key processes.

## Results

This category examines how an organization manages its performance and improves its key business areas, processes and outcomes (Evans, 2011:63).

If an organization fails to implement performance measures that are specific and measurable, it will be very difficult for it to achieve the desired and anticipated results.

### **2.4.3 Performance measures must be achievable**

When implementing performance measures, it is important to decide where to begin. Implementation of measures should follow the principle processes that will produce the greatest returns. When performance measures are in place, strategies are better identified and need for change is better established (Spitzer, 2007:29). TRADE (2007:3) adds that the success of every PMS depends on the involvement of employees and their overall understanding of the PMS and performance. The implementation of a PMS requires a process. The PMS has been separated into eleven steps that serve as a guideline to indicate the measures that best fit their operations.

When implementing performance measures, the following features must be visible to ensure that the performance measures being implemented will be effective in serving their purpose. Kontelnikov (2004:1) identified the following as effective functions vital for the PMS of any organization:

- Implemented performance measures must be strategically aligned with the organizational objectives, goals and overall mission and vision of the organization. This will help the organization to achieve its objectives effectively and ensure that the process is learning-oriented for the employees;
- The PMS must generate knowledge through learning from its monitored operations and ensure appropriate actions are taken at all times. TRADE (2007:5) names the following attributes as a reflection of an ideal unit of measure, sharing the same value and perspective as Lichiello (1999:11): “Reflection of the customer’s needs; agreed decision making; measures must be comprehensible; measures must be broadly



applicable; must be uniformly interpreted; measurements must be compatible; measures must interpret precise results of performance; and measures must be economically applicable”;

- The success of the measurement relies on the data that is collected. The measured data must be consistent and cheap and easy to collect. Information that is collected must be thoroughly investigated and reliable to use, otherwise measuring performance will become difficult, as it is impossible to measure what you do not know;
- All measures used to measure performance must be based on key drivers of performance and the organization needs to identify and construct reliable and valid key drivers of performance that are linked to the organization’s strategy (Luthuli, 2007:204);
- Performance measures must indicate the destination the organization is trying to reach. The vital part of the performance measurement lies in its capacity to improve suitable measures and performance indicators;
- The most important feature of any PMS is to ensure that all vital information and actions are measured and whatever is measured must benefit and improve the growth of the organization. For performance to be measured successfully, outputs, performance measures, targets and feedback systems must be established to ensure that the important activities are being measured.

In order to achieve optimal results, the organization must have the following features:

Leadership and commitment – A good PMS begins with good leadership and commitment from the organizational leaders. The leaders must be well educated, skilled, knowledgeable and committed to making a success of the system. They must have a clear vision of the goals of the management system;

Good planning and a sound implementation strategy –Strong and solid leadership must formulate the PMS and plan a good implementation strategy;

Appropriate employee involvement – Once the management and leadership have formulated their vision and implementation strategy, they must involve the employees. They must ensure that the employees clearly understand the organizational strategy and that everyone knows their role and responsibilities in the execution of the strategized plan;

Simple measurement and evaluation – the PMS must be able to measure and evaluate results in a simplified, clear and unambiguous manner;

Control and improvement – the PMS must be controllable and must enable potential improvement and benefits for the organizational objectives, as well as benefit the managers and staff (DtiUK, 2007:6).

#### **2.4.4 Performance measures must be relevant**

Without specific attributes, performance measures will not be seen as reliable, relevant or worth implementing. Attributes are vital for every PMS and managers must ensure that key attributes are visible when implementing the organization's PMS. Lichiello (1999:11) names the following attributes as necessary for good and relevant measures: Validity - reflects customers' needs as well as those of the organization; Reliability - decisions must be made based on information that is reliable; Responsiveness - performance measures must respond well to the goals and objectives of the organization; Functionality - measures must function in a clear, unambiguous direction; Credibility - measures must be credible and have proof of reliability and compatible validity; Understandability - measures must be precise in the way in which they interpret results; Availability - measures must always be available and economically viable.

Every PMS is implemented to perform a specific function in promoting and improving the overall performance of the organization. There are common functions that every PMS must contain and Spitzer (2007:15-20) identifies the following as vital in proving the relevance of performance measures. Every PMS must guide the behavior of managers and staff; must increase fairness towards achieving set goals and must emphasize the expectations of the organization (Roos, 2009: 40). Measurement must reflect performance and motivate for the improvement of performance through simplifying all that is expected from employees and managers. Measurement must promote liability and allow an organization to institute an origin for goal-setting, but most importantly must improve the overall execution of processes and responsibilities by employees. Measurement must encourage reliability and promote improvement of performance through reliable and validated feedback, increased orientation and better understanding, allowing the organization's leaders to make informed decisions. The system must help solve problems in an informed manner that provides early warning signs, improved understanding, better planning and forecasting and generally motivates all employees to work hard and reach their performance targets (Kaydos, 1991:25).

#### **2.4.5 Performance measures must be timely**

Quality performance measures must always have a time frame. It would be irrelevant if an organization established performance measures but did not set a time frame for measuring the achieved results against the desired results. Timely performance measures create early awareness of any mistakes and side-tracking of policies and programs, allowing managers the opportunity and ability to rectify these mistakes and avoid any organizational dysfunctions. Performance measures must be evaluated and monitored on a regular basis to be useful and to facilitate the organizational decision-making process, helping the organization to make well informed decisions at the appropriate time. However, performance measures must have a flexible time frame for assessing organizational objectives, gathering relevant information and concluding reports, helping the organization respond quickly to any event that may arise (Abushaiba, Alfatiemy & Zainuddin, 2013: 24).

According to ACT Government (2013:13) “Data used to measure the performance must be produced frequently enough to track progress and must always be up to date. If the data is not released frequently, or the program is prolonged, it will take time to create an impact”. Time allows valuable insight for investors and stakeholders to analyze measures and provide a complete assessment of the organizational progress. Such information will assist the organization to avoid unpredicted disturbances and highlight drivers that are of key importance to the organization. The EY Center for Board Matters (2016:1) posits that performance measures can also be used to “provide a link between financial results and non-financial results performance”, allowing a better informed and well integrated reporting framework within a reasonable time frame.

Performance measures can be long term or short term, varying from monthly to yearly assessment. Therefore, performance measures should promote and support a timely collection of data, planning and assigning of responsibility in order to establish an integrated process with the aim of keeping track of the monitoring system (USAID, 1996:1).

SMART performance measures highlight all the important functions, features and elements every PMS must contain. The qualities of a good PMS lie in the organization’s capability of achieving and implementing good performance measures. However, failure to formulate and effectively implement SMART performance measures will have diverse consequences for the organization.

## **2.5 EFFECTS OF GOOD AND BAD USE OF PERFORMANCE MEASURES**

According to Spitzer (2007:36), measurement has good intentions and embraces substantial benefits for any organization. It is a powerful mechanism for improving the performance of any organization but it is important that measures be used properly, as any misuse of these measures will create problems within the organization. When poorly used, performance measurement will have negative impacts and consequences for the organization. These dysfunctions are caused by the measurement system itself when it contributes to behavior that is contrary to what is best for the organization (Moseley and Dessigner, 2010:45).

### **2.5.1 Causes of performance measurement dysfunctions**

Spitzer (2007:21) identified (i) information measurement and (ii) motivational measures as the major causes of measurement dysfunctions, simply because without accurate information it is impossible to achieve the required performance targets and without being motivated to achieve set measures, performance will be taken for granted and targets will be ignored. Spitzer (2007:23-47) goes on to explain the following as factors that contribute to the dysfunction of measurements:

Context of measurement – without the correct context of what to measure and how to measure it, incorrect variables are measured and the outcome does not reflect the organizational objectives. These misinterpreted results create a dysfunction in the system;

Measuring too much – when too much is measured results are inconclusive and unreliable and vague to what is more important and relevant;

Employee's attitude – if employees have a negative attitude towards the measurement system, they will be unlikely to understand the system as a whole and thus fail to measure the correct and important variables, leading to the failure and dysfunction of the system;

Measuring the wrong things – If you measure the incorrect variables, the results will not contribute towards improving the performance of the organization, but rather cause chaos and dysfunction of the results of the measurement system;

Confusing measurement and evaluation - if measurement variables are not clearly understood by employees, they will apply, monitor and evaluate results incorrectly. Incorrect application of measures will cause a strategic dysfunction in the management of the organization;

Fear – Fear is a destructive attitude. It destroys everything that is important, what must be measured, and shifts the focus from what matters most. Employees must not be led by fear when implementing measures, they must be ready for whatever results they will receive and always have an alternative solution for every problem.

Performance measures do not just fail; there is always a traceable reason behind the ineffectiveness of performance measures. According to the National Centre for Public Productivity (1997), the following are the major reasons that performance measures fail: excessive cost of data collection, lack of long term support from the managers of public officials; the absence of leadership to keep the process running; the lack of trained and informed staff; not using data generated by the processes in actual operations and not enough emphasis on performance indicators. Van de Walle (2007) adds that the following two factors contribute to performance measure failure: failure to define clear and strategic organizational objectives and goals result in failure to achieve anything meaningful. Without a clear vision of the direction the organization wishes to follow, it will be difficult to get there and failure to reveal objectives or define them correctly and unambiguously (Roos, 2009).

When an organization fails to utilize performance measures effectively, the reason falls into one of two categories (CIMA, 2008:8):

Firstly, because the organization continues to make use of the traditional accounting performance measures instead of making use of the new approaches that have been implemented, such as the balanced scorecard. Organizations should broaden their approach towards performance measurement by including multi-dimensional and non-financial performance measures. These approaches will effectively assist in the utilization of performance measures.

The second category is that organizations fail to include non-financial and multi-dimensional factors in their performance system. To overcome this problem, such organizations should be aware of the following issues when implementing a multi-dimensional PMS: timeline for achieving the developmental process, thus the organization should use a more systematic and logical approach, then a robust system and must ensure that the PMS does not conflict with the culture of the organization; must ensure that the employees' behavior is in line with organizational objectives and must be innovative in measuring key success drivers.

### **2.5.2 Using performance measures effectively**

In order for performance measures to bring benefits and be useful to the entire organizational structure, measures must be used effectively and efficiently. Using performance measures effectively can only benefit the organization, but this requires the use of the correct performance measures in an appropriate manner. The widely accepted criteria for measuring performance measurement are those of the DtiUK, which state that the DtiUK's (2013) effective performance measures must: (a) "have a clear identification and tracking of progress against goals, (b) enable the identification of opportunities for improvement, and (c) enable comparison of performance against internal and external standards"). These criteria simply define the important aspects of all the information discussed above, that performance measures should be useful, SMART and used effectively, or they will have adverse effects on the organization.

#### **a Clear identification and tracking of progress against goals**

Data, performance and the information to be measured must always be relevant, clear, available and significant with regard to the organization's objectives. . Performance measures are regarded as effective if they can clearly identify and track progress with reference to set goals. If performance measures cannot track progress towards achieving goals, then they will not be useful to the monitoring system, as they will not be able to evaluate how resources are managed, how employees perform and the effects of programs/activities on the clients. Without tracking the progress of the organization towards set objectives, the managers and employees will not be able to obtain SMART, relevant, crucial and dependable information that will assist them in improving the organization. As a result, the organization will not benefit and these performance measures will not be useful in identifying areas of improvement, but instead will bear adverse effects and create dysfunctions within the organization. Effective performance measures must therefore be specific, measurable, relevant, achievable and timely (SMART) for tracking progress towards achieving set goals.

#### **b Identification of opportunities for improvement**

When performance measures are able to track the progress of performance against set objectives, they are useful and provide the employees, employers and clients with SMART information (specific, measurable, relevant information, which allows the set goals to be achieved in a timely manner). Whatever gets measured must contribute and reflect the

objectives and goals of the organization. Managers will then be able to identify risks and deal with them before they escalate and also identify opportunities, which the organization can use to its advantage. This will lead to the improvement of programs and activities and improved organizational performance. Without the ability to identify opportunities for improvement, performance measurement will serve no purpose with regard to the monitoring system and resource management.

#### c Comparison of performance against internal and external standards

Performance measures must reflect accountability, fairness and the organizational objectives. Effective performance measures must be measurable against other performance measures, both internally and externally. This means that the performance measures used within the organization must be standardized and meet the standards of other performance measures, as measures must be set towards achieving organizational objectives. They must therefore be established in a manner that will reach the destination the organization and country is attempting to reach. These comparisons will serve as useful information to the managers, employees and clients, the monitoring system and the resource management of the organisation. Measuring performance measures must be made in a visible and clear manner, allowing measures to be compared to other performance measures. The organization must evaluate its performance measures regularly to ensure that they still meet the standardized criteria so that they benefit the entire organization.

The following factors are necessary for the effective use of performance measures and also help in avoiding organizational dysfunction. These factors will help the organization to achieve effective performance measurement within the context of the DtiUK's performance measurement criteria (Kaydos, 1999: 139-148):

Define performance measures through the verification of accountability: One of the most important and crucial steps after the implementation of performance measures is to review and ensure that accountability for each performance measure is defined. Accountability plays a vital role in the success of every process being implemented, without accountability the system will contain loop holes that will eventually have a negative impact on the PMS and bring it down.

The establishment of performance goals: It is essential to establish long and short term goals for all the performance measures and they will direct the project managers on what to work

towards. Without goals the performance measures are pointless and without direction, and will fail to have a positive impact on realizing the vision and mission of the organization or project at hand.

Regular review and analysis: Performance measures should be structured in a cycle that enables managers to review variables regularly. Reviewing and analyzing measures assists managers to develop an understanding of the importance of measures and how these measures are performing in terms of set goals and targets, making it easier to decide what actions to take after implementation.

Communicate performance information: Performance measures should communicate relevant information that is understood by those receiving it in the briefest manner possible and most importantly it must be well organized in a manner that does not create a system overload.

Making performance visible and promoting transparency helps to motivate employees to do their best at all times. Performance results can also be used for bench-marking and reviewing the difference between current outcomes versus the desired outcomes.

Establishing priorities: Performance measures provide the organization with important information that helps to identify priorities. These priorities evaluate how well the organization is doing by comparing the performance with set objectives.

Feedback: The feedback on performance must be frequent and consistent to enhance performance. Feedback helps the organization to identify weaknesses, grow strengths and allows an opportunity to effectively rectify mistakes.

Reward and recognition: Rewards and recognition motivate employees to work hard and improve their performance. Through positive recognition, employees can attain promotions and this is enough reason to ensure that everyone works towards achieving effective performance.

Using performance measures for more than just keeping score: Using performance measures effectively requires more than completing reports about the manner in which the organization is functioning, but also uses these measures to ask questions about problems and progress, so that areas needing attention can be identified and action can be taken.



## **2.6 SUMMARY**

Performance measurement is essential for improving the overall activities of every organization. If an organization can follow the guidelines and steps of developing, formulating, implementing and evaluating a quality PMS, the results from the performance measurement process will not only benefit the organization but the managers as well and encourage employees to know what they are working toward. It is therefore important for organizations to understand the relevance of formulating and implementing SMART measures that promote the usefulness and effective utilization of resources of good quality. Performance measures are useful for everyone and every aspect related to the organization, but most of all, performance measures must assess if the programs implemented by the organization recognize the goals and objectives the organization is attempting to achieve.

In the public sector government ought to ensure that all its efforts are cost efficient and satisfy the needs of the citizens it is serving. Therefore, performance measures used by government to assess policy programs and activities such as food security ought to be SMART and useful to all important aspects of the organization. The performance measures need to assess the effectiveness of the programs in eradicating public problems and promoting better service delivery.

## **CHAPTER THREE**

### **THEORETICAL FRAMEWORK FOR MEASURING HOUSEHOLD FOOD SECURITY**

#### **3.1 INTRODUCTION**

Food is an essential need for survival and food deprivation is an issue that numerous countries, including South Africa, have had to address by coming up with strategies, policies and projects aimed at identifying, understanding and alleviating food insecurity. Food security is an emerging topic of interest around the world due to the immense impacts and consequences of food insecurity that can affect almost every facet of society. Governments and policy makers around the world have implemented various indicators aimed at measuring household food security, but have failed to establish a single indicator or measure that will accurately and effectively assess food security and all its programs.

This chapter discusses the measurement of household food security and the effectiveness of food security programs globally and in South Africa, highlighting the consequences of not using the appropriate measures in the assessment of food security and its programs. It ends by identifying the challenges, making recommendations and identifying the accurate uses and limitations of measuring household food security.

#### **3.2 CONCEPTUALIZATION OF HOUSEHOLD FOOD SECURITY**

Food security is a basic human right that is enshrined in the Constitution of South Africa as well as article 25 of the Universal Declaration of Human Rights, which states that “everyone has the right to a standard of living adequate for their health and wellbeing” (Jones, Nguni, Pelto & Young, 2013:481). It became the priority and commitment of the South African Government to halve the number of hungry people in South Africa and reduce the level of poverty by 50% between 2004 and 2014. The government failed to achieve this goal, but has implemented various approaches, strategies and FSPs that were implemented to create a nation that is food secure remain a government priority in 2017.

Access to nutritious food is critical and needy households rely on the government’s ability to realize the goal of ensuring that objectives are reached with regard to assisting by means of FSPs. Although South Africa is nationally a food secure country, it is highly insecure at the household level (Jacobs, 2009:1). As already stated in the first chapter, one of the reasons for

such a large number of food insecure households is due to South Africa's failure to define and acquire accurate and relevant data on FS (Hart, 2009:25).

In an attempt to comply with the definitions of food security that are internationally accepted, FAO's definition of food security as "the right to have access to and control over physical, social and economic means to ensure sufficient, safe and nutritious food access that meets the dietary food intake requirements for a healthy life for all South Africans" (FAO 2010:1). Food insecurity can be caused by multiple factors, but the most common challenges that lead to food insecurity are: changes in climate patterns, food prices soaring, inadequate food safety nets and an increasing consumption of food crops (United Nations, 2013:2).

Du Toit (2011:2) describes food security as the capacity to acquire the necessary nutritional food on a day to day basis Food security is therefore defined as "a situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development as well as an active and healthy life" by Napoli (2011:9). Food insecurity can be linked to poverty and both are affected by unemployment and the economy. Food insecurity occurs when individuals/households are unemployed and therefore cannot afford the basic means of survival, which creates poverty and degrades their standard of living, thereby affecting the economy negatively and leading to other socials exclusion issues (Nord, 2006:18).

Food insecurity not only affects the economy but it also has adverse consequences for the health of individuals. Du Toit (2011:3) makes a clear distinction between national and household food security by stating that "food security at national level refers to the condition whereby the nation is able to manufacture, import, retain and sustain food needed to support its population with minimum per capita nutritional standards. At community level food security is defined as the condition whereby the residents in a community can obtain safe, culturally accepted and nutritionally adequate diets through a sustainable system that maximizes community self-reliance. At household level food security refers to the availability of food in one's home which one has access to. In this case, a household is regarded as food secure when the members of the family do not live in hunger or fear of starvation".

Food insecurity is a growing challenge globally and it threatens any country's capability of providing human rights and basic services to its population (The National Academies, 2006:45). Owina, Wesonga & Nabugooma (2014:1) refer to household food insecurity as a

situation where the household is unable to retain critical nutrition, with no access to money or resources.

A household is regarded as food insecure if its dietary intake is less than 80% of the daily minimum nutritional requirements. Tantu, Gamebo, Sheno & Kabalo (2017:2) posit that there are two types of household food insecurity: chronic and transitory. Chronic food insecurity is the extended periods of poverty and lack of access to food. Transitory household food insecurity can be identified as a serious and more frequent lack of access to sufficient and nutritious food security, which can be caused by “short term shocks and fluctuations in food availability and food access, of including year-to-year variations in domestic food productions, food prices and household income” (FAO, 2008:2).

Household food insecurity has direct consequences on overall health conditions, developmental risk in children, behavior, anxiety and depression problems, primary aggression and iron deficiency. Household food insecurity is therefore a form of deprivation affecting aspects of human well-being (Owina, Wesonga and Nabugooma, 2014:2). Leroy, Ruel, Frongillo, Harris & Ballard (2015:169) emphasize the National Research Council’s (2006) description of household food insecurity as “the uncertainty about future food availability and access, insufficient amount of the kind of food required for a healthy lifestyle, or the need to use socially unacceptable ways to acquire food”.

It is for this reason that every government must continuously measure the status and level of food insecurity in their country and be able to formulate, implement and sustain programs, projects and strategies that will ameliorate the food insecurity status of the country. Measuring the performance of these projects and programs is critical as the results present an indispensable instrument for evaluation and development (Bickel et al., 2000:7). Accurate and effective measurement and monitoring of these projects and programs will allow the government and the public to assess the effectiveness of these programs and projects.

Unfortunately no standardized measure of assessing household food insecurity or its programs has yet been established, making it impossible for policy makers to assess if the FSPs implemented by government are effective or not. Nonetheless, indicators in various forms and at various levels have been established to assess household food insecurity and its programs, but unfortunately none of these indicators are able to provide accurate and independent assessment of results and thus force evaluators to combine these indicators according to the nature and complexity of the program being assessed.

### **3.3 MEASURING FOOD SECURITY**

Food security is complex and dynamic in nature and its impacts are multi-dimensional and manifest with a large number of aspects in the management of government. The NDA (2013:7) summarizes Jacobs' (2009:126) and Hart's (2009:93) reasons as to why measuring food security are critical, those reasons are as follows:

Measuring food security broadens our knowledge and understanding of why food insecurity exists, what causes chronic food insecurity and the impacts it has on the government and the rest of society (Nord, 2006:40). This knowledge helps policy makers and researchers in acquiring good quality data on what causes food insecurity, establishing who is food insecure and who is vulnerable to food insecurity.

Measuring food security is important for providing us with a good information system that helps us to monitor, evaluate and assess the impacts of government interventions in addressing food security.

Measuring food security helps to identify early warnings related to food insecurity so that they can be dealt with in time. When selecting the indicator most appropriate for measuring food security, the researcher or assessor must be certain that the indicator measures the correct and relevant information with regard to that which is being measured. The selected indicator must prove validity and equivalence. Validity refers to the usefulness of the indicator to provide suitable, useful and analytical data for a given purpose, in a well-constructed, reliable and accurate manner (Nord, 2006:6). Equivalence refers to the indicator's ability to be consistent in constructing, measuring and teaming-up the data, therefore allowing more meaningful comparisons for most purposes (Leroy et al., 2015:171).

Reducing the hunger rates and obtaining food security for all entails proper identification of comprehensive measures of: the food insecure population; the severity of food insecurity; the causes of food insecurity and developments in addressing food insecurity. Food security is multidimensional and difficult to measure and it has been a global challenge to measure food security. According to numerous researchers of food security (Ike, 2015:2), the best way to measure food security is by combining key dimensions of the food security indicators to achieve a more comprehensive understanding and obtain reliable information regarding food security.

According to UNDESA (2014:24), there is an urgent need for finding indicators that will be able to identify the food insecure population as well as provide accurate, adequate and precise information for measuring, monitoring and evaluating the progress of food security. There are indicators referred to as the “4th generations of indicators” (the 4th generation indicators will be discussed later in the chapter) that dominate the FSM debate and are believed to provide a clearer and best measurement of household food security (Ike, 2015:1). It is important to remember that there is still no clear and globally recognized measurement system for measuring household food security. This statement is supported by the FAO (2013b:2), when it acknowledged that with all the strategies, approaches and indicators initiated to measure food insecurity, there is still no relevant, compatible and valid form of measuring food security across all regions and the measurement of food insecurity remains unsatisfactory.

According to Ike (2015:31), FSM is a policy that is practically essential. He explains that policies and interventions that diminish food insecurity ought to be based on excellent quality indication of “food insecurity, severity, vulnerability and nutritional status”. Existing food security measures have been developed according to a particular conceptual understanding of food security and most of these measures use a combination of the dimensions, making it critically important to measure and underlie the conceptualization and intention of each indicator. Ike (2015:31) adds that it is impossible to capture all dimensions of food security using one indicator. This theory is supported by the FAO (2013:2), as it recommends that it is always better to use more than one food security indicator in measuring food in/security. According to Maxwell (2012:56), a combination of indicators will help improve the performance measurement of food security. Maxwell (2012:57) goes on to say that these 4th generation indicators are the most validated, reliable and widely accepted indicators for measuring food security.

### **3.3.1 Food Security Measures**

According to the FAO (2013b), research involving the search for a single indicator that can be used to measure food insecurity, has led to the conclusion that more than one indicator is necessary for measuring household food security as each indicator captures a fuller image of a different dimension of food in/security. It is clear that there is no composite indicator for measuring food insecurity and that combining these dimensions of food security from different angles is the best way of understanding, measuring and obtaining the best results regarding the measurement of household food in/security (FAO, 2012).

Researchers have attempted to merge indicators into a single indicator that measures various dimensions of food insecurity, yet this in itself has been a challenge, as composite measures will forever be limited by the alternatives and the pressure involved in fine inter-intra household food insecurity details. De Cock (2012) conducted a research study in the Limpopo Province measuring household food security status by combining 6 indicators into one survey, but treating each as a standalone indicator. The combination of these indicators improved the awareness of classifying each household into a different food security level. In their research study Maxwell, Coates & Vaitla (2013:38) combined three household level indicators to investigate if these indicators are able to categorize households into food in/secure levels.

The set of questions established to measure food security can be collaborated into one continuous measure, which is referred to as the food security scale. This scale varies according to the level and range of severity of household food insecurity experienced. The unit of measure is used as a substance of principle. The set of questions asked serves as a core module, which works in an organized way to act as a measurement instrument for identifying the level of severity of food insecurity experienced by households.

From the affirmative responses received, a sequence of survey questions was obtained. Households that receive more than the scale value of 6 were found to be severely or more severely food insecure, while those who have not experienced any of the food insecurity conditions covered are awarded zero on the scale (Pityana, 2001:23). To avoid misinterpretation, the 1995 CPS Food Security Supplement placed emphasis on the following: “responses to individual items in this supplement are not, taken alone or in themselves, meaningful measures of food insufficiency, food insecurity, or hunger, and should not be used in such a manner”. The scale was only used to represent the condition of households as a group and not of individuals within the households. Santos & Brito (2012: 85) place emphasis on food security measurement by concluding that if performance is not measured accurately, it will affect any research conclusions.

The National Development Agency (NDA, 2013:4) emphasized Hart’s (2009) reasons for measuring food security:

- “FSMs broaden our understanding of the existing causes of chronic food insecurity;
- It is important to determine households which are food insecure and those vulnerable to food insecurity, because it is a challenge for the institutions implementing

interventions addressing food security to differentiate between food secure and food insecure households;

- A precondition for monitoring, evaluating and assessing the impact of interventions to address food insecurity by key institutions is the availability of food information systems and relevant data collection tools to track progress; and
- Measurement is also important for warnings and for predicting problems in relation to food insecurity”.

### **3.3.2 Elements that measure food security**

The globally accepted definition of food security is “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 1996). This definition pays attention to four elements that constitute the measurement of food insecurity: food availability, food access, food utilization and food stability (FAO, 2012). If a household cannot balance these elements, it is considered to be food insecure. The NDA (2013:8) acknowledges the importance of these dimensions and emphasizes that it is important for these dimensions to integrate and not function in isolation.

These elements can therefore be regarded as the pillars of food security. Each of these pillars is important as they cannot be derived from what constitutes food security. “These elements of livelihoods are key factors that affect a household’s ability to access, afford and utilize nutritional food. The lack of these elements (material and social) and activities required to generate a means of living is usually associated with poverty that translates into food and nutrition insecurity for most households” (NDA, 2013:4).

Food Availability – du Toit (2011:12) defines food availability as the country having enough quantities of food available at both national and household level. The NDA (2013:3) adds to this vision of food availability by referring to it as an adequate and consistent production and distribution of food. The FAO (2013a:1) refers to food availability as a dimension that “addresses the “supply side” of food security, and these are determined by the level of food production, stock levels and net trade”. Food availability includes the following factors: national production, import capability, food stocks and food assistance from other organs of state (United Nations, 2013:1).



Food Access - du Toit (2011:2) defines food access as the nation's and households' ability to sustainably obtain adequate food. Access to food has three features, namely the physical, economic and socio-cultural ability to access food (Napoli, 2011:20). Access to food includes the following factors: money to purchase food, income level, market related issues and infrastructure such as transport (United Nations, 2013:1). Access to food promotes and enables production and agricultural practices that cater for and protect vulnerable groups (NDA, 2013:3). The FAO (2013:1) explains access to food by stating that an "adequate supply of food at the national or international level does not

in itself guarantee household level food security, but it is concerned about insufficient food access and encourages a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives".

Food Utilization – the FAO's (2012:3) description of food utilization is that "utilization is commonly understood as the way the body makes the most of various nutrients of food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals". Du Toit (2011:3) refers to this as an appropriate usage of available resources in a stable and productive manner, as well as having safe and nourishing food. "Utilization also covers factors such as safe drinking water and adequate sanitary facilities, to avoid the spread of disease, increase awareness of food preparation and storage procedures (FAO, 2012). The utilization dimension does not only refer to the quality and safety of food but also to the preparation and the storage procedures" (Napoli, 2011:20).

The factors of food utilization include ensuring that food is safe for consumption at all times, clean production practices and the provision of food that meets the dietary quality and diversity of food security (United Nations, 2013:1). Utilization of food also requires intervention programs that will improve treatment and knowledge of all diseases, with the aim to improve and promote better food utilization (NDA, 2013:3).

Food Stability - refers to the ability to meet food security in a sustainable manner. "This dimension emphasizes the importance to reduce the risk of adverse effects on the other three dimensions: food availability, access and utilization. To be food secure, a population, household or individual must be guaranteed: availability of food, access to adequate food and proper food utilization at all times and in a stable way" (Napoli, 2011:20). This statement is

verified by the FAO's (2013a:1) explanation of why food stability is important, by stating that "even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food periodically, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on food security status".

The stability of supply and access to food is affected by the following factors: weather challenges, fluctuating prices, politics and economy related issues. Maintaining stability requires policies and intervention of risk assessment and risk and disaster management (NDA, 2013:3). Researchers all over South Africa assess food security using different methods, as there is no standardized or specific method of measurement. The lack of standardized measures makes it difficult to measure food security and find appropriate measures to address it (du Toit, 2011:9).

It can be established that food insecurity is "the uncertainty, insufficient, and unacceptable affordability, access, stability and utilization of food" (The National Academies, 2006:45). There are four features that must be determined when measuring food in/security. These features must categorize the level of food in/security under which the household falls FAO, 2012).

### **3.4 FEATURES OF HOUSEHOLD FOOD SECURITY MEASUREMENT**

Measuring household food security remains non-deterministic, as there is no standardized measure to accurately and reliably perform this measurement. When measuring food security in general, there are four features or categories of food security (Bickel et al., 2000:53).

Food secure - these are households that show no evidence of food insecurity. The USDA (2016:3) refers to this as high food security, where households have no challenge obtaining adequate and nutritional food.

Food insecure without hunger - this refers to when individuals have anxiety but minimal concerns about accessing food, with none or minimal disturbances to their eating patterns. USDA (2016:3) refers to this as marginal food security, where households experience negligible problems with the quality, quantity and variety of food they are able to access, with no substantial reduction in their food intake.

Food insecure (with moderate hunger) - A situation whereby the household faces moderate changes to their eating patterns. USDA (2016:3) refers to this as low food security, where the household's daily food intake has reduced in quality and variety, but the quantity of intake and normal eating patterns are not substantially disrupted.

Food insecure (with severe hunger) - where the household struggles to meet the minimum daily intake, to the extent of skipping meals and becoming ill as a result of the lack of access to adequate nutritious food. USDA (2016:3) refers to this as a situation where a household's access to food is largely disrupted due to a lack of money and healthy meals.

These features are used by South Africa and the rest of the world to categorize households when measuring food security.

### **3.4.1 Measuring Food Security: Global Attempts**

The FSM project was undertaken by a collaboration of US government agencies and experts from the private sector. In 1992 this project began to implement the key activities of the Ten-Year Comprehensive Plan for the Nutritional Monitoring and Related Research Program, which was established in 1990 by an act of US Congress. The primary task was to formulate a criterion measure for food insecurity and food shortage for the entire US. In 1995, the First Food Security Supplement, named the Current Population Survey (CPS), was implemented by the U.S Census Bureau and served as the cornerstone of the FSM Project. The data received from the CPS was thoroughly analyzed through a numerical food security scale. A categorized food security measure was also formulated to explain the state of food security in American households. The CPS was successful in establishing stability and robustness in measuring food security and has thus been used as a primary food security measure by the US Government (Bickel et al, 2000: 1-4; Nord, 2006:2-3).

Measuring household food security involves dynamics within and between households, as required information relies heavily upon the household surveys, and although food security refers to the economic and physical access to food, tools that measure food security reflect food consumption and food acquisition (Jones et al., 2013:490). When measuring food security, it is critically important to establish and differentiate between the levels at which data is acquired and measurements are made (Leroy et al., 2015:169).

It has been established and agreed upon by numerous authors that food metrics should focus on measuring four elements: availability, access, utilization and the stability surrounding the

FAO definition of food security. It is therefore critically important that the measures of food insecurity are inseparable from the purpose for which they were established (Jones et al., 2013:484). It has also been established by the majority of food security authors that the currently available measures of assessing the performance of food insecurity at both national and household levels are unclear, insufficient and need to be upgraded. It is argued that these measures can only work as a combination and not in isolation (United Nations, 2013).

During the 2008 global crisis it was revealed that international agencies and national government failed to monitor food security in a sufficiently accurate and timely manner and thus criticized “estimates of the hunger prevalence for lacking in accuracy in both cross-sectional comparison and trends” (Headey & Ecker, 2012:1). Although household food security indicators are relevant for measuring FSPs, they indicate a wide variety of results, little consensus and inadequate relationships among them, making it difficult to accurately measure the effectiveness of the food security programs at a household level. The shortcomings and failure to establish and implement appropriate measures has global consequences and thus the demand for improved measurements at both national and household levels has increased (Headey & Ecker, 2012:1).

Measuring food security has progressed over the past century. Measurement of food security and its programs is necessary for diagnosing the accuracy and effectiveness of the government’s responses to food insecurity (Headey & Ecker, 2012:3). Food security itself is a performance measure that assesses how well a region is accomplishing its task of providing people with adequate food at all times. It has been argued by various academics that the measurement of food security should follow directly from the FAO’s definition, regardless of the level at which it is being measured.

Measuring household food security should involve the following four aspects extracted from the FAO definition of food security: it should “relate to all people, at all times, with physical and economic access to an active and healthy life” (Upton, Cisser and Barrett, 2015:6). There are aspects such as costs and comparability measures that should be taken into account when measuring FSPs. Indicators that focus on households typically use survey data, which place importance on different parts of the understood definition of food security (Pityana, 2001:11).

Various indicators have been implemented and used by different governments globally, but there are three major indicators that have proved to be reliable in measuring household food security. These indicators are known as the 4<sup>th</sup> generation indicators and have been widely

accepted and used by many researchers and governments in measuring food security (United Nations, 2013).

#### **3.4.1.1     *The 4<sup>th</sup> generation indicators***

The following three indicators are accepted worldwide as the three major indicators for measuring household food security and are known as the 4<sup>th</sup> generation indicators (HFIAS, DDS and CSI). They have been widely accepted and are being used by numerous countries. These three indicators were found to be efficient and effective in time and cost and in identifying food insecure households and they best met the global food security criterion of equivalent, reliable and valid measures (Maxwell & Coates, 2012:144). Each of these indicators has been researched and validated by various authors.

##### **a     Coping Strategies Index (CSI)**

CSI was developed by CARE and WFP. CSI is a participatory approach that measures food security through a series of questions enquiring about how households cope with the experience of food shortfalls. From this analysis they construct a numerical score used for directing food aid, monitoring the impacts of this aid and estimating the long term changes in food security (Maxwell & Coates, 2012:144). CSI is then constructed from the coping strategies that the household implements when experiencing food deprivation or may use in the forecasted food insecurity. The final CSI of households in a community are compared with one another using the same adapted index and this report serves as a comparative indicator for measuring household food security (Jones et al., 2013:496).

Leroy et al. (2015:182) refer to CSI as “responses that people make when facing hardships such as household food insecurity and the measures they take to attenuate or mitigate their experiences”, and thus assessing “the frequency of occurrence of increasingly severe coping strategies”. CSI is divided into four basic categories: “Dietary change; short term measure to increase household food availability; short-term measures to decrease the number of people to be fed; and approaches to rationing or managing the shortfall” (Leroy et al., 2015:182).

This indicator was developed to identify vulnerable and insecure households and capture the elasticity and sustainable behavior of households. It is used as the basis for providing early signs of food insecurity and it also monitors and assesses the level of household food insecurity. The rationale behind this indicator and its theory is that households who are food

insecure adjust their behavior based on the fear of their future lack of food and best judgment of their situation (Maxwell & Coates 2012:59). The level of struggle determines the coping strategies that the households have employed to survive and those that are most severe and brutal are where most households are exposed to health problems, skipping meals and begging people for food. According to Maxwell et al. (2013:15), CSI is a precise and clear-cut indicator that is quick and easy to use and associated with other food security measures.

#### b Household Food Security Access Scale (HFIAS)

HFIAS is a survey made up of nine questions focusing on assessing household food in/security experiences and perceptions and was adapted from the U.S Department of Agriculture (USDA). This indicator captures the patterns of food reduction intake and its consequences, the feelings of shame from the households, as well as the anxiety and uncertainty over insufficient food intake (Bickel et al., 2000:102). The rationale behind this indicator is that when households face food insecurity, it results in reactions that are expected and can therefore be captured and quantified on a scale of severity (Maxwell et al., 2013:18).

The results from HFIAS can be presented in two forms: food insecurity scale and categories. This indicator and form of household food security measurement has the ability to group households according to their level and experience of food in/security. This form of measurement can also be used to measure, monitor and evaluate food security programs and their impact on food assistance. The following are the categories of household food security in the HFIAS (Ike, 2015:35):

Category One: High food security - this is a category of households that have sufficient food and no anxiety or problem accessing food.

Category Two: Marginal food insecurity – households that rarely experience the anxiety or difficulty of accessing sufficient food and as a result of such occasional events, their food intake does not reduce.

Category Three: Low food security – this category includes households whose food quality and variety of consumption has drastically changed, but their patterns of eating have not been highly disrupted.

Category Four: Very low food security – this category involves a household in which eating patterns and food intake was found to be disrupted while conducting this survey, due to a lack of means and difficulty in accessing food.

These categories were developed to help organizations in developing countries to evaluate their FSPs based on “reviewing and examining commonalities in the experience and expression of food insecurity”, based on four universal domains and subdomains, namely “uncertainty and worry about food; inadequate quality, insufficient quantity and accessibility to food” (Leroy et al., 2015:172). Thus, the objective of HFIAS is to assist in tracking the development progress of the organization and to evaluate the effectiveness of their FSPs.

#### c The Household Dietary Diversity Score (DDS)

The DDS was developed to focus on the nutritional aspect of food in/security and its outcomes can be used to measure the dietary status of households. It was developed by the Food and Nutrition Technical Assistance (FANTA) as a project for the FAO. The DDS has a high correlation with other measures and indicators of household food security at household and individual level (FAO, 2013b). Dietary diversity refers to a sum of different foods consumed by an individual or household within a specified period (Maxwell & Coates, 2012:149).

The DDS was designed as a proxy at household and individual level for accessing food and nutritional adequacy, as well as to capture nutritional facts about the food security of the households and individuals in a less subjective and timelier manner by conducting and analyzing surveys. The DDS is a good proxy indicator for the reasons mentioned below (Ike, 2015:38; D’Hlaese et al., 2011:20).

- It has a diversified dietary outcome of food security, stating exactly what a nutritional diet should include and how each individual or household is expected to access this diet;
- It is easy to understand for households as well as field workers conducting the surveys, as it is straightforward, clear and highly correlated;
- It leads to more desirable birth weights and anthropometric status, as it has a clear proxy for consumption, correlated and adequate caloric intake and household consumption;

- It protects calorie and micro nutrient adequacy and correlates highly with other household income factors;
- It recognizes the presence of concealed hunger through the use of household per capita caloric availability;
- It can be used to measure food in/security at household and intra-household level;
- It is easy to conduct and takes a maximum of 10-15 minutes with each household.

The DDS measures the nourishing quality of household diets. The DDS indicator frequently measures the calorie intake and has gained more importance than other indicators, due to its firm relationship with households as a direct qualitative assessment of their vulnerability, which is difficult to assess through quantitative methods (Hossian, Mullally & Asadullah, 2016:6). According to Leroy et al. (2015:172), the key element of the DDS is “diet quality”, as it promotes a healthy lifestyle, where adequate and essential nutrients are ingested.

The dietary indicators were established essentially to measure and assess food security. A simple scoring system was developed aimed at measuring household dietary diversity. The DDS uses a simple count of food consumed over a specified period by the household (usually 24 hours). “The HDDS was originally developed to monitor changes in access to adequate quantity of food at the household level and to evaluate the impact of programs” (Leroy et al., 2015:184).

Headey & Ecker (2012:9) revisited Maslow’s hierarchy of needs (Maslow, 1943) where the theory holds that the households with a higher value of micronutrient intake are food secure and have satisfied their basic calorie needs, meaning that the household with a low consumption value of micronutrients are food insecure (United Nations, 2013). Apart from the 4th generation indicators, South Africa has implemented its own indicators and measures aimed at assessing household food security.

### **3.4.2 Measuring Household Food Security: South African Attempts**

There is presently no exact, accepted or regulated means of measuring or monitoring food security in South Africa. This alone has created challenges in identifying strategies, targets and approaches for measuring and alleviating food insecurity as it is multi-dimensional in nature and changes over time. The Intergovernmental Panel on Climate Change (2012:18) posits that without a clear manner of measuring the multi-dimensional and forever changing status of food in/security, it becomes more difficult to design accurate policy targets and



measurements. These challenges can disrupt the policy-makers from addressing food insecurity and constrain the ability to find interventions appropriate for the different household conditions and needs. The International Plant Protection Convention (2012:18) (IPPC); and Altman, & Jacobs. (2009a:8) acknowledges the attempts of government to identify a composite measure of food security but highlights that it has failed, as there is still no accepted, standardized measure or monitor of food insecurity at a household level (SA-Policy Implementation Plan, 2014:3).

A lack of clear measures of food security is an undesirable state. It is critically important to measure and understand food in/security at a household level, as well as understand the effects of this condition and how the households react to these circumstances. It is important for government to find appropriate measures for food security and all FSPs, the causes and nature of food insecurity. Finding accurate measures will help public officials to assess the changing needs of food insecurity and find appropriate strategies for alleviating the problem (Ndobo, 2013).

Bickel et al. (2000:8) hold that “food insecurity cannot be measured by any single indicator”, but rather involves data about various specific conditions leading to the severity of the food insecurity condition. Household surveys are normally conducted to obtain the relevant data on the household food security status (SA- Policy Implementation Plan, 2014:24). A set of questions that serves as an indicator of food insecurity was established and included in the 1995 CPS Food Security Supplement, which became the basis for the food security scale measure. The following conditions are included in the CPS “core-module” to serve as indicators of household conditions:

- “Anxiety that the household food budget or food supply may be insufficient to meet basic needs;
- The experience of running out of food, without money to obtain more;
- Perceptions by the respondent that the food eaten by household members was inadequate in quality or quantity;
- Adjustments to normal food use, substituting fewer and cheaper foods than usual;
- Instances of reduced food intake by adults in the household, or consequences of reduced intake such as the physical sensation of hunger or loss of weight; and

- Instances of reduced food intake or consequences of reduced intake, for children in the household” (Bickel, 2000:8).

The questions are primarily fixed on ascertaining if the household acquires enough food or money for basic needs, as well as the normal and subjective responses to their condition.

South Africa, like many countries, still lacks a national survey that measures all dimensions of food insecurity, but it has a number of instruments that help it measure household food insecurity. National instruments used by the South African Government to measure dimensions of food and nutrition security include the GHS and the Income and Expenditure Survey (Altman et al., 2009a:11). These two surveys are believed to be more useful in identifying and assessing food insecurity, as well as in measuring the progress towards achieving stable, food secure households.

In their policy paper, the NDA (2013:5) confirmed that as with the rest of the world, South Africa lacks a single/instrument/indicator/measure for assessing all facets of food insecurity and goes on to say that the measurements used most often to assess household food security are a combination of essential and derived indicators. South Africa uses direct indicators to measure the experience of food insecurity. Direct measures are referred to as those qualitative measurement indicators that measure by observing households over a specified period, as well as by conducting in-depth interviews with members of households, with the aim of broadening the understanding and awareness of all the factors influencing food security (NDA, 2013:6).

South Africa has established its independent national instruments that aim to measure the different dimensions of food insecurity within the country at household level, but as with the rest of the world, these measures lack the ability to assess all the dimensions of food insecurity. The instruments used in South Africa to track and measure food security are:

- i. October Household Survey
- ii. National Food Consumption Survey
- iii. Food Security Vulnerability Information and Mapping System
- iv. General Household Survey
- v. Income And Expenditure Survey
- vi. The Integrated Food Security Strategy
- vii. The South African Research Council

The South African Government has established and implemented a Food and Nutritional Security Policy (FNS Policy) aimed at defining and measuring the food and nutritional security within the country and households, providing a food and nutritional security guiding programme that will optimize all the opportunities within every public strategy and programme and to act as the frontrunner in the SADC by contributing significantly to the region (DAFF, 2013:4). Altman, Hart & Jacobs (2009b:36) emphasize the need for South Africa to find accurate performance measures by highlighting the absence of a baseline determinant of food in/security. They hold that it is impossible to monitor the progress towards eradicating food insecurity.

The FNS Policy (DAFF, 2013:8) defines food security as “access to and control over the physical, social, economic means to ensure sufficient, safe and nutritious food at all times, for all South African, in order to meet the dietary requirements for a healthy life”. The FNS policy further considers a person or household as vulnerable to food insecurity if any of these conditions are not fulfilled. The following indicators have been identified as those that are most relevant for measuring household and individual food in/security in South Africa (DAFF, 2013:8).

#### Hunger Index

This survey was developed from the National Food Consumption Survey to indicate the level and rates of hunger. According to this survey, hunger remains a problem in South Africa and government intervention is needed to mitigate this challenge as soon as possible.

#### Anthropometric measurement

This measures the nutritional intake and existence and extent of malnutrition, as well as indicating an important proxy indicator for food availability and access. This survey reports whether the household's food security is very low or not.

Besides the above determinants of food security, there are a few food security and nutrition related information systems currently being used within the public sector without proper coordination. One of these strategies is the Food and Nutrition Security Implementation Plan. It is hoped that this plan will assist policy makers and various implementers of food security to achieve progressive outcomes in their set goals and objectives. This plan requires periodic

assessment of the levels of food insecurity and the poverty and malnutrition status over the set implementation period (Altman et al., 2009a:18).

The implementation activities require community-based monitoring and evaluation to assess if policies and programs that are initiated are achieving the desired outcomes within the prescribed time through the use of existing structures of government departments, research institutions, internal and external consultants and other implementation partners (SA- Policy Implementation Plan, 2014:28). According to Altman et al. (2009a:19), the key monitoring and evaluation reports must include the presentation of monitoring reports in monthly meetings; the presentation of quarterly progress reports in quarterly meetings; the presentation of annual reports in annual feedback meetings, and the presentation of mid-term and end-of-year program evaluations and reports on conclusion of the programs and projects (SA- Policy Implementation Plan, 2014:3).

### **3.5 CHALLENGES AND LIMITATIONS OF MEASURING FOOD SECURITY**

#### **3.5.1 Challenges in implementing measures and the consequences of using inappropriate measures for measuring food security.**

The most common approaches and metrics that measure food security reflect estimates and often face measurement error simply because estimation disaggregation is commonly based on assumptions and extrapolations that aggregate measures exposed to political influence. Failure to collect relevant, correct and accurate household data can result from non-random attrition caused by death, withdrawal of consent in surveys, migration and cost involved in field work and frequent follow-ups to the same respondents. The following are challenges that are commonly faced when measuring household food security or the effectiveness of food security programs.

- i. Data limitation - the limitations of data and pragmatics undermine a direct and complete link between definition and the measurement of FSPs. Ideal measures of food security require accurate, detailed and variable data on the well-being and health of individuals.
- ii. Collecting individual and household level data is costly and challenging and can result in measurement and sampling error.
- iii. Statistics collected at household level frequently neglect inequitable intra-household distribution (Upton, Cisser and Barrett, 2015:8).

In the researcher's analysis, one of the reasons that measuring food security and its programs is so difficult, is because it is influenced by the risks of climate change, global economic crises, job market and other socio-economic challenges.

The measures of accessing household food security and its programs should always be aimed at measuring the appropriate, important and relevant information, as well as the elements that are part of the FAO's (1996) definition of food security, as mentioned earlier. Failure to incorporate appropriate measures will always have consequences, not only for the household but also for the state. Jones et al. (2013:484) mentions the following consequences of selecting inappropriate measures: "measuring unintended domain or loci of food security ; measuring multiple domains without the ability to differentiate between them; collecting information that is not relevant to those for whom the data will be collected and used; collecting data on an appropriate scale; collecting data that cannot be measured multiple times at the needed time intervals; or selecting a tool that requires resources beyond those available for adequate data collection and analysis".

### **3.5.2 Challenges South Africa faces in measuring household food security**

South Africa is still challenged with eradicating, minimizing and measuring food security at a household level. Through the use and development of various indicators used to measure household food security, there is evidence that these measures have gaps and do not answer all the questions regarding food security and all its programs. The following are a few of the many challenges with which South Africa is faced in trying to eradicate food insecurity, as identified by the DAFF (2013:4).

There are not enough emergency management systems, safety nets and measuring tools within the household food security sector to provide for the food insecure households.

There are insufficient methods and techniques to mitigate the effects and impacts that food security has on individuals and households.

Citizens do not have adequate knowledge and information regarding food in/security and therefore fail to effectively use the resources provided to them in the choice of nutrients they consume.

Food production is not utilized in an optimal manner and the government needs to protect the land, skills and inputs needed for producing food.

Climate change has a detrimental effect on domestic production and creates a negative reaction to food availability, stability and affordability.

There is insufficient information on food in/security, making it extremely difficult to create relevant policies, regulations and programs that promote food security.

Governments all over the world are finding it difficult to measure household food security due to the struggle of finding a common and effective combination of indicators that will measure every aspect of food in/security. The NDA (2013:8) highlights the following reasons as to why measuring household food security is a challenge.

The inability and absence of a single indicator for measuring food security poses a challenge to acquiring accurate and reliable data on food security.

A number of the indicators measuring food availability are focused on the National Food Supply and ignore the nutritional status of individuals.

Information gathered from various surveys measuring household food security has conflicting results, raising doubts about the meaningfulness of the methodological approaches being used.

Hart (2009) adds the following reasons for South Africa being challenged in finding appropriate food security measures.

There are long intervals between surveys used to measure food security among households. This makes it difficult for researchers to accurately measure if strategies, policies and programs established to improve food security are accurate or not, as well as to measure the rate of food insecurity in between the surveys. This creates another obstacle, where there is an absence of current national data.

The use of different methodologies and criteria for measuring food security creates confusion as most indicators produce conflicting results. This creates uncertainty about the accuracy of the results.

Jacobs (2009) posits that another factor challenging the measurement of household food security is the limitations and strengths of the various food security indicators that have to be incorporated, as well as the fact that the South African household surveys measuring

household food security have construct figures in their results, raising questions about the measurements being used.

The failure to accurately, effectively and efficiently measure food security limits the alleviation and prevention of high food insecurity. In order to reduce limitations, government should find appropriate measures and ensure they are used in a sustainable manner.

### **3.5.3 Uses and limitations of the food security measure**

Because of the challenges faced in measuring food security, the following are the uses and limitations that all researchers and policy implementers must take into consideration.

- “The food security scale does not capture all potential dimensions of food insecurity;
- Because the measures reflect household status over a period of 12 months, the reviewers must be aware that a household that was food insecure the previous year, may be food secure at the time of the interview;
- Available food security measures does not measure food safety, nutritional status, or the availability of food through “socially acceptable” channels, nor does it measure community-level factors such as the nature and sources of the available food supply;
- Each of the specific boundaries used to identify categories of the food security status variable could be debated, with some people arguing that the boundary understates the number of households that are “truly” in a category, and others arguing that the boundary exaggerates the number. The status categories are therefore most useful in making comparisons;
- As long as the boundary is defined and measured consistently, one can be reasonably sure that an increase or decrease in the percent of households classified in a category represents a true increase or decrease in the number of households experiencing that general level of food insecurity or hunger;
- The food security scale has been found reliable for describing the status of a population, it has not yet been proven reliable for assessing the status of an individual household, as in a clinical screening context;

- Researchers should obtain the most current version of the questions and scale from the ERS web site to maximize comparability with national statistics;
- A set of companion scales based on severity-level indicators for individual adult and child household members is under development. Preliminary results from a test subsample in the CPS using items referenced to specific individuals (i.e., the respondent adult and a specific child selected at random) have demonstrated the feasibility of this approach; and
- The food security measure has been developed for households in the United States, reflecting the relevant range of conditions in this country” (Bickel et al., 2000:16).

### **3.6 SUMMARY**

Because the existing food security measures are inadequate for measuring the performance and progress towards food security, it is the role of the government to find accurate measures to assess household food security and the effect their programs have in improving the lives and food access of the insecure households. According to Jacobs (2009:9), the following aspects should be taken into account when developing future household surveys: the level of household consumption, taking into consideration the number of individuals in each household; the wealth status and livelihood of households, focusing on income and access of households to food; the location in which the survey is being conducted; the market and institution of these issues, the time during which households have experienced food insecurity and the risks and shocks related to the effects of food insecurity. SA and the rest of the world need to urgently find accurate, reliable and effective measures of assessing food security and associated programs in order to address the issue in a sustainable manner.



## **CHAPTER FOUR**

### **RESEARCH METHODOLOGY**

#### **4.1 INTRODUCTION**

Research is a process of searching for knowledge. Kothari (2004:1) defines research as a “scientific and systematic search for pertinent information on a specific topic”. A research study requires the understanding and application of research methods that are imperative in discovering important information on the chosen topic (Bulsara, 2006). It is important for every researcher to understand all the theoretical assumptions and research methods necessary in constructing a knowledgeable research study (Leedy, 2005).

This chapter focuses on the overview of the research methods employed in this research study for assessing the effectiveness of performance measures for FSPs within the ELM. The researcher discusses the structure of the research approach, data collection techniques, population sampling, data recording and the manner in which the data was analyzed. The research design of this study was applied in a manner best suited to search for and obtain the important and relevant information and knowledge regarding the topic at hand. This chapter also reviews the ethical considerations pertaining to this study.

#### **4.2 RESEARCH METHODOLOGY**

Schwardt (2007:195) defines research methodology as a model of explaining how an inquiry/problem statement should be investigated, by analyzing the procedures, principles and assumptions that should be followed. Methodology therefore defines, explains and establishes a researchable problem and ways in which the problem can be investigated in an effective manner, to help the researcher to select and establish effective and efficient means of collecting data (Clark & Creswell: 2004:12).

This research examined the performance measures used within the ELM to assess the effectiveness of performance measures on FSPs. A qualitative study was undertaken to enable the researcher to gather all relevant data for the completion of this study. Sample questions were prepared for the conduction of the interviews, but the researcher was not limited to this sample of questions.

#### **4.2.1 Qualitative research**

Schwardt (2007:195) defines research methodology as a model of explaining how an inquiry/problem statement should be investigated, by analyzing the procedures, principles and assumptions that should be followed. Methodology therefore defines, explains and establishes a researchable problem and ways in which the problem can be investigated in an effective manner, to help the researcher to select and establish effective and efficient means of collecting data (Bulsara, 2006:3). The success of a research study depends on the researcher's ability to use the appropriate research methodology (Leedy, 2005:14). This study is a qualitative research, through which the researcher aimed to evaluate the effectiveness of the performance measures employed at ELM.

#### **4.2.2 Qualitative research**

A qualitative study was undertaken to enable the researcher to gather all data relevant for the completion of this study. Mzini (2006:64) describes qualitative research as unlimited verbal responses, as they provide the researcher with first-hand information and the views of the interviewees, allowing the researcher to gather adequate and precise data. The researcher got to know the people (target group), observe and interpret their lifestyle, which could assist the researcher when analyzing the data. Qualitative research was chosen as it would better enable the research to form a 'systematic acquisition of assessment', forming a framework for the research study. The researcher was enabled to ask relevant and in-depth questions of the interviewees and also gain relevant information with regard to the problem statement of this research study. The researcher chose this research methodology as it was the best instrument to allow insight, perspective and theoretical knowledge that would enable the correct and successful evaluation of the effectiveness of the performance measures of FSPs within the ELM.

Through the conducted interviews and observations the following was achieved:

- required data regarding the performance measures of FSPs used within the ELM was obtained;
- the performance measurement of the FSPs established within the ELM was assessed for effectiveness;
- the elements used to evaluate the performance measures of the FSPs were discovered;

- the elements important in the performance measurement of FSPs were determined; and
- the shortcomings and ways in which the performance measures established within ELM can be improved were determined.

The researcher based all findings, verification of the information and evaluation of the entire research, on in-depth analysis of the responses from the interviews.

This study was a qualitative research, through which the researcher aimed to evaluate the effectiveness of the performance measures employed at the ELM. The researcher was able to form a ‘systematic acquisition of assessment’ as a framework for the research study.

### **4.3 DATA COLLECTION METHODS**

Data collection is a crucial element of every research study, as it establishes all relevant and basic data of a research project. Ludidi (2009:61) holds that collecting research data is a time consuming and overwhelming activity, which is essential and must be performed in an accurate manner, so that information interpreted by the researcher broadens people’s understanding and knowledge of the performance measures established within the ELM when assessing the effectiveness of its FSPs. Below is a description of instruments the researcher used in collecting data for this study

#### **4.3.1 Literature Review**

Ludidi (2009:74) emphasizes that literature review provides a benchmark of comparison of data and an outline for shaping and emphasizing the importance of a study. Literature review guided the researcher in structuring a framework for the study.

A literature review was conducted in Chapter two to formulate a conceptual and theoretical framework of performance measurement. Through this review of existing literature the researcher aimed to analyze the importance and usefulness of performance measurement and the qualities and features necessary for the establishment of an effective and useful performance measurement system. Through this analysis, a clear link and important aspects of the effectiveness of performance measures was established. A literature study was undertaken again in Chapter three of this research study. This was conducted to establish the framework, elements and indicators that have been formulated both globally and nationally in

an attempt to measure household food security. This analysis provided theoretical and conceptual clarity on the effectiveness of the performance measures in the context of food security and its programs.

Among other literature sources, the researcher used and analyzed e-journals, journals, e-publications, policy documents, books and ministerial speeches as the primary source for this study.

#### **4.3.2 Interviews**

Interviews assisted the researcher to obtain correct and precise information from interviewees. The ELM was contacted personally, where the researcher sought and received written permission to conduct the research in the ELM's Social Department. The researcher was further transferred to the relevant managers who deal with the FSP within the ELM. The social interaction between the researcher and respondents provided the researcher with a deeper understanding, insight and meaningful observations of the research problem, resulting in a broadened perspective, meaningful interpretation and useful data for the researcher to assess the effectiveness of the performance measures of FSPs within the ELM. The interviews were prepared and completed by the researcher based on the research objectives. The interviews were prepared as follow:

##### **4.3.2.1 Key Informant Interviews (KII)**

Key informant interviews were conducted with the managers within the department of these social services. These interviews were formulated and conducted in an open and adaptable manner, allowing the researcher the opportunity to ask follow-up questions about the FSPs' performance measures. These interviews were based on investigating and acquiring more information regarding the performance measures used within the ELM to assess FSPs. A total number of 5 (Interviewees 1 – 5) FSP management team members within the ELM were interviewed to provide information regarding these performance measures.

##### **4.3.2.2 In-depth interviews**

In-depth interviews were conducted with the FSP staff members within the ELM. These interviews assisted the researcher to establish and clarify the objectives of the research in terms of assessing the effectiveness of the implemented performance measures for FSPs. The

interviews enabled the research to obtain clear information on the FSPs. the responses of the interviewees allowed the researcher to ask in-depth questions and obtain relevant and thorough information relevant to this study. A total of five (5) FSP staff members were interviewed and they were referred to as: Interviewees 6 - 10.

#### **4.3.2.3     *Semi-structured***

Semi structured interviews were conducted with the household beneficiaries to validate the frequency, effectiveness and impact of the FSPs on the lives of the beneficiaries and how this is monitored and measured. Overall, the purpose of this was to assess if the impact of the FSPs on people's lives are assessed effectively by the municipality. A total of 30 beneficiaries were interviewed and referred to as interviewees 11 - 30.

Annexure 4 contains the sample questions that were prepared by the researcher for the interviews but the researcher was not limited to this sample, as the responses allowed the interviewer to ask relevant and important in-depth questions. A total of 40 interviews were conducted. The 2<sup>nd</sup> interviews (cross examination) were based solely on the responses from the first interview. There were no sample questions, as the questions were based on each interviewee's first responses.

### **4.4        TARGET POPULATION SAMPLING**

Malhotra (2010:372) defines a target population as the elements collected to gather "information and from which investigation is launched". This study focused on three townships within the ELM, namely Bophelong, Evaton and Sebokeng. These townships were specifically targeted for the purpose of this research as they are three of the largest townships within this municipality. All interviews were conducted within the ELM. Motsiri (2009:70) defines Sampling as "a technique employed to select a small group with a view to determine the characteristics of a larger group". The researcher's sample was chosen to determine if there will be identical responses to the questions asked, thus the small group interviewed would represent the larger group.

The sample was chosen based on the objectives of the study stated in Chapter One. 40 individuals were interviewed in total. The researcher found it important to interview employees working on the FSPs within the ELM, as they were the best people to give lucrative information regarding the FSPs' performance measures used within the ELM. The

choice of sampling was based on the people best able to provide relevant information regarding the effectiveness of the FSP performance measures within the ELM.

Five (5) managers involved in the FSPs were interviewed. These managers were important and relevant for providing the researcher with useful information regarding the FSP performance measures used within the ELM. They gave information regarding the performance measures used to assess FSPs and how these measures assess effectiveness, as well as the elements most crucial in these measures. Through their responses, the interviewer analyzed the performances established to assess performance measures of FSPs within the ELM townships.

Five (5) FSP staff workers were interviewed and provided useable, reliable and verifiable information regarding the FSPs and the evaluation of how FSPs work and what they aim to achieve and provide. Thirty (30) beneficiaries were interviewed, 10 from each township mentioned above. These beneficiaries were interviewed with the convenience of verifying the reliability of the information provided by the staff and managers.

Mzini (2006:65) defines sampling as a process in which data can be collected in an appropriate and rational manner, restricting it to a set of persons with relevant information for the research. Good research sampling is important as it decreases the probability of the researcher interviewing and selecting inappropriate people for the study and increases the validity and reliability of the research study. In this case, the researcher was able to interview the people who work, assess and provide these FSPs to the people within the ELM.

## **4.5 DATA RECORDING AND ANALYSIS**

### **4.5.1 Data Recording**

Data recording was undertaken with the aim of writing and observing all the responses in a meaningful manner that noted all relevant data collected during the course of the interviews. The researcher did not use any recording device. All the interviews were conducted face to face and transcribed by the interviewer. The interviewees were presented with the transcribed responses to sign to confirm that the transcribed information is in the correct context of their expressions. The researcher then analyzed the responses from the FSP managers and project workers and later went back to cross-examine these respondents, which enabled the

researcher to ask for more detailed information regarding the topic under investigation. These follow-up responses were also transcribed by the researcher and later integrated with the other interviews, to form a framework of all the relevant information regarding the FSP performance measures used within this municipality.

The interviews were transcribed through coding. No names were recorded; this was done to adhere to the ethical considerations that were established. The responses were coded in the form of numbers. The managers were coded from Interviewee 1 to 40 to represent their individual identities.

#### **4.5.2 Data analysis**

The researcher used thematic coding to analyze the data, where all the responses from the interviews were categorized into themes in order to assess the effectiveness of the performance measures within this municipality. Thematic coding refers to analyzing data using themes and categories of correspondences and differences in a qualitative study and referencing codes that fall under the themes that have been identified (Vaismoradi, Jones, Turunen & Snelgrove, 2016:2).

The researcher also used the logic model for analyzing the data. Milstein and Chapel (2017:20) define an effective logic model as one that can visually describe activities and the impact they expect to bring to the people and the community as a whole, by keeping all the parties involved working towards the same goal. Finley 2015 (1) describes a logic model as “a formatted, prescribed way to discern relationships among the activities you plan to do, the change you aim to bring, and the resources needed in operating programs”. To understand the program, the performance measures and the programme components of the FSPs, the one critical tool used in programme management analysis is a logic model. The logic model is a visual presentation of a program and its viewpoint on how the program will work in illustrating the relationships between all the program’s components (Corporation for National and Community Services, 2016:5).

The important components in every program are: program objectives, resource inputs, activities, outputs and outcomes. This study used a logic model for understanding how the FSPs in ELM work in order to determine the elements that performance measures of these programs should measure. The logic model outlines the numerous activities of the programs

that should be executed, monitored and tracked to ensure that the programs' targets are achieved. Accordingly, performance measures should be able to measure these various components.

Thematic coding assisted the researcher to classify and analyze information in a story-line. This research study classified important aspects in terms of the assessment of performance measures within the ELM. Responses from the interviews were scrutinized using deductive and inductive coding, where the researcher assessed the framework of the FSP performance measures used within the ELM. Observations from the researcher were also analyzed and recorded. The managers and staff within the ELM were cross examined (re-interviewed) and these interviews were analyzed for credibility to certify that the information given during the first interviews was credible.

#### **4.6 RESEARCH ETHICS**

Resnik (2015:2) defines an ethical research as the researcher collecting data in the correct manner, characterized by integrity and responsible conduct. The empirical research data of this study was collected ethically throughout.

The researcher requested, and was granted, written permission by the municipality to conduct the research within their Department of Social Development (Permission letter from the gate keeper may be reviewed as annexure 1 of this thesis). The researcher was made aware that the Department of Social Development has delegated this program to the Sebokeng SASSA offices, where the researcher was allowed to conduct the research under the jurisdiction of the ELM.

All the participants were presented with consent letters to sign (Consent letters may be reviewed as Annexure 2 – for FSP managers and staff and Annexure 3 - for beneficiaries), where the researcher explained the purpose of the study and gave them the opportunity to participate voluntarily. All the interviewees participated freely, volunteered to take part in the research and completed the consent forms agreeing to this. The researcher ensured that there was no violation of privacy or confidentiality in the collection of the empirical data.

All the identities of the participants were kept confidential and all participants were informed that they could withdraw from participation at any time if they felt the need. After the researcher had conducted the interviews, the participants were allowed to go through the



transcribed 'interview sample questionnaire' and sign it to verify their information. The interviewees' names were not kept for record; rather the interviewees were recorded and systematically named from Interviewee 1 to Interviewee 41.

#### **4.7 SUMMARY**

This chapter aimed to explain the research methodology that the researcher undertook in conducting the empirical study. The research study used a qualitative approach to address the research problem that was identified. The chapter discussed the sample population, data collection, data recording and analysis techniques that were used in assessing the effectiveness of the performance measures for FSPs within the ELM. A total of 40 interviews were conducted and these were analyzed to assess the effectiveness of the performance measures of FSPs within the ELM. The findings of this empirical study are analyzed and discussed in the next chapter.

## **CHAPTER FIVE**

### **PRESENTATION OF RESULTS AND DISCUSSION ON EFFECTIVENESS OF PERFORMANCE MEASURES ON FOOD SECURITY PROGRAMS IN EMFULENI LOCAL MUNICIPALITY**

#### **5.1 INTRODUCTION**

This chapter presents and discusses the findings of the empirical study conducted within the ELM. It sets out the findings against the set objectives in chapter one. The importance of this chapter is to analyse the data acquired from ELM and assesses if the performance measures on FSPs used within this municipality are effective or not. The analysis of the empirical study was done within the context of the literature reviewed in chapter two and three of this research.

#### **5.2 ESTABLISHING THE IMPORTANCE OF PERFORMANCE MEASUREMENT WITH REGARD TO FSPS IMPLEMENTED WITHIN THE ELM.**

The literature reviewed in Chapter 2 revealed that performance measurement is an important system that needs to be established in an accurate, useful and objective-orientated manner in every organization/institution. The importance of performance measurement arises from its ability to: clearly establish goals, track progress, identify opportunities for improvement, promote transparency and establish priorities, which enables feedback and means for improving that organization.

In order to determine the importance of performance measures established within the ELM, the components of the program, as well as its objectives, should first be determined. It is also important to understand the nature of the program before attempting to assess the effectiveness of performance measures on FSPs. Below are the empirical findings of the way in which FSPs established within the ELM function. The information gathered sought to establish the importance of performance measurement in light of FSPs. It aimed to answer the research question: what is performance measurement effectiveness in light of food security programs?

### **5.2.1 FSPs in Emfuleni Local Municipality**

From the interviews conducted, the following information regarding the FSP's implemented within the ELM was obtained.

According to the Corporation for National and Community Services (2016:5), the first step to determine whether the program is on track to achieving its objectives, one can start by asking:

- What are the objectives of the program?
- Which required inputs to run the program effectively?
- Which activities are implemented to successfully implement program?
- What outcomes should be achieved from these activities? And
- How are the achieved outcomes compared to the targeted outcomes?

The researcher used this framework when she interviewed the FSP staff workers within the ELM. This framework helped her to gather important information regarding FSPs, which will enable her to assess the important information regarding performance measures on FSPs within the ELM.

#### **5.2.1.1 Objectives of the Emfuleni Municipality FSPs**

From the interviews conducted with FSP staff workers, it was revealed that the main objectives of the FSPs are to assist households to: afford; gain access to nutritional food intake; and ensure households utilize this food in the most effective way as well as to ensure that all targeted beneficiaries are food secure in all aspects. Being food secure entails that the identified households should have accessibility and affordability to nutritional dietary requirements in the food intake they utilize (Interviewee 8).

From the above broad objective, the following particular objectives were recorded: The programme aims to ensure that targeted households (interviewee 1 -5):

- Have access to nutritional minimum required food intake;
- Have the minimum means to affording and utilizing their income and food in an appropriate manner;
- Have access to nutritional food intake, which will help them avoid being sick;
- Reduce the level of poverty, by minimizing poverty and hunger rates within the community;

- People living in all disastrous and vulnerable households are assisted to coping and bettering their lively conditions.

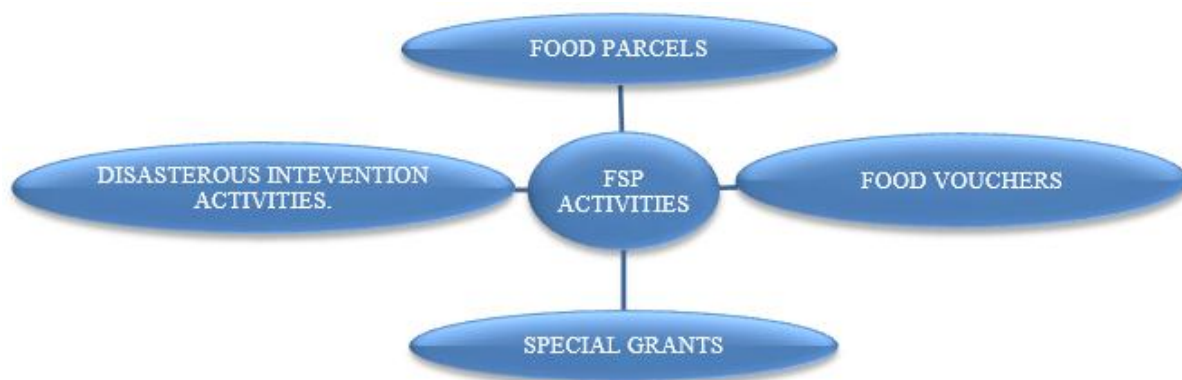
To meet the above mentioned objectives, the program processes described below is followed by the ELM staff when implementing FSPs.

#### a Inputs

The FSP inputs included programme staff and funds (Interviewee's 6 -10). These are staff members that will be planning and evaluating the program (Interviewee 7 and 10). These individuals should be capable and competent (Interviewee 9). That is, they should have relevant knowledge, experience and information regarding the FSP's and all the implementation and management processes (Interviewee 6, 8 and 10). It is important that the designated individuals who perform a particular task within the program are knowledgeable of all important processes in order for the program to be effective (Interviewee 7). The second input is financial resources. The municipality needs a budget to buy all the resources needed for their programs (Interviewee 6, 7, 9 and 10). Interviewee 8 stated that, money is the most fundamental inputs needed, because without it, our operations will come to a standstill. Money is also packaged in vouchers and given to households who receive food vouchers (Interviewee 6 and 8). Therefore money plays a vital role in the provision of these FSPs.

#### b Activities

With the financial resources and personnel identified above, a number of activities are conducted and are known as the FSPs. These activities include: food parcels, food-vouchers, special grants, and emergency and disaster interventions (Interviewee's 6-10). All these programs aim to minimize/alleviate hunger and promote food security within the ELM. The following star shape highlights these FSP activities.



**Figure 5.1: FSP Activities highlights**

*i. Food parcels*

Food parcels are given to all beneficiaries who have little access to nutritional food, due to non-affordability and low income levels (Interviewee 8). The food parcels are also there to address hunger levels and better the nutritional intake among household beneficiaries (Interviewee 9). These food parcels consists of only nutritional food which will contribute largely to the households dietary requirements. Food parcels therefore contribute to the beneficiary's food access and nutritional food security with the overall aim to eliminate hunger and food insecurity (Interviewee 6, 8). This project helps the beneficiaries to utilize nutritional food.

*ii. Food\_Vouchers*

Food vouchers are also given to beneficiaries experiencing high food insecurity levels. These vouchers sum up to a total of R765 per household beneficiary (Interviewee 6, 8, and 10). These vouchers are to help beneficiaries with low/no incomes to acquire food in order to help the household become food secure and have access and the ability to afford food (Interviewee 6, 7 and 10). Therefore this program plays a critical and vital role in assisting households obtain food affordability and food accessibility both amounting to improved food security.

*iii. Special grants*

These grants are issued to assist household's whose bread winner is suddenly sick or recently disabled, and therefore can no longer obtain an income and therefore living under vulnerable circumstances of very high poverty levels (Interviewee 7, 8 and 10). Special grants are restricted to households with special cases and there is a small number of such beneficiaries

(Interviewee 6). These household's must be evidently living in the "worst conditions" and unable to maintain a healthy living (Interviewee 9). The government therefore allocates a special grant to help such households and ensures that these households are able to afford and access food, helping them become food secure.

*iv. Emergency and disaster interventions*

These are situations whereby the government intervenes in disaster situations where the household is in a desperate need for assistance, sometimes with more than food and in need of the other essential things such as: blankets if the house burnt down, or funeral arrangement if bread winner's died in a tragic manner and the family has no funeral cover or money, etc. (Interviewee 6, 7 and 10). "Such cases need urgent and immediate intervention from us as a government structure, to step in and help the household to cope better with the 'disaster' that has occurred" (Interviewee 9). Therefore this project is implemented to ensure that the households are food secure through the disastrous situation.

**c Expected outcomes**

Through the above activities, the FSP staff indicated that they aim to: (1) improve nutritional food access; (2) reduced hunger levels, which in results in improved food security (Interviewee 6, 8 and 9). Food access focuses on providing minimum required nutritional food to the food insecure households, and to ensure these households experience minimum hunger levels and higher dietary intake (Interviewee 8 and 10). Through these measures, the beneficiaries therefore have better access to nutritional food and reduced hunger levels.

The broad objective of these FSPs is to therefore provide the community with the basic and good quality services which are useful and helpful, resulting in satisfactory service delivery which protects and enhances the lives of the ELM community by alleviating food insecurity. From the above information, the FSP's are summarized by the following basic conceptual logic model:

**Table 5.1: Emfuleni Municipality Logic model**

INPUTS	ACTIVITIES	OUTPUTS
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Program staff	Food parcels	Food accessibility
Funding/money	Food vouchers	Food affordability
	Special grants	Food utilization
	Disastrous intervention activities	Nutritional intake
		Reduction of hunger/poverty levels

These FSPs program components reveal the elements that should be assessed by the established performance measures. DtiUK (2013:4) maintains that, the importance of performance measures derives from the ability of these components to assess and determine the extent to which each component of the program has been met. If a program satisfactorily addresses the requirements of each component, it is most likely that the program objectives will be met. From the information provided by respondents and literature reviewed, the performance measures should assist in providing employees and managers with relevant information of the program.

### **5.2.2 Framework for understanding performance measures**

A framework for establishing the usefulness of performance measures was established in chapter two. The framework entails: performance measures should serves usefulness: on the organization; as a monitoring system; to managers; to clients and employees; and in resource management.

When this framework of performance measurement is implemented correctly and effectively, the usefulness of these measures benefits all important aspects of the organization and make it easier for the organization to optimize the opportunities at its disposal as well as to minimizing risks and threats. An organization cannot be successful or efficient in tracking down its progress towards set objectives, if its performance system is not established to the importance and usefulness of the organization. Furthermore without an effective performance measurement system results achieved from the programs will not be reliable.

### **5.2.3 Analysis of the importance of performance measurement in light of FSPs within the ELM through the reviewed literature**

From the literature reviewed in Chapter 2 and the data collected at Emfuleni Municipality, the researcher's analysis is that performance measures play a critical role in the organization's capacity to achieve its objectives.

Interviewee 6 posited that clear and properly formulated performance measures help the staff to clarify and better understand organizational objectives, so that the objectives are achieved in an effective manner. Interviewee 7 stated that the performance measures implemented within the ELM are important as "they help us determine if we have reached our output or not". These responses gave relevance to TRADE's (2007:4) analysis that performance measures play a vital role in assisting the organization to achieve effective organizational management, making it easier for management to evaluate its performance in relation to the objectives, as well as to evaluate community satisfaction with the goods and services that they provide. From these responses it can be said that performance measures must be established to serve as useful monitoring systems.

Interviewee 6 claimed that their performance measures assist them in decision making when evaluating which program is more beneficial, more cost effective and more rewarding. Interviewee 10's response gave relevance to Interviewee 6's answer by stating that "performance measures help us decide how much inputs are needed and how much resources are available? Which activities are working as planned? Are we achieving the outcomes we intended?" Both these responses clarified the importance of performance measures established for FSPs within the ELM and gave relevance to the literature reviewed in Chapter 2, where Delorme and Chatelain (2011:2) emphasized that performance measures must promote better decision-making in administrating that the correct inputs are obtained and available resources are used efficiently and effectively. Therefore, performance measurement is important as it provides managers with vital, relevant and important information regarding the FSPs.

Interviewee 8 responded to the question by saying "performance measurement is important because it allows employees to monitor, measure and assess FSPs, and then employees are able to report back to managers on whether program activities are performing well and which aren't. From this information, managers are able to decide which inputs are needed to improve FSPs, how programs can be improved and so on". This statement alone gave



relevance to the framework for establishing performance measures as discussed in Chapter 2, as it entailed that performance measures used on FSPs within the ELM are useful as a monitoring system for employees who implement and monitor FSPs, and provides the managers with lucrative information, which allows managers to better allocate and manage resources in a manner that is beneficial to the FSP, the clients and the organization as a whole. This response supports Moseley and Dessigner's (2010:44) statement that performance measurement is the most vital system of all and that its ability to manage and measure the correct things will result in the desired outcomes for the organization.

The importance of performance measures in the ELM is to help the managers determine if the programs are meeting organizational goals and if the municipality is achieving the intended results and monitoring the correct elements (Interviewee 9). The performance measures evaluate desired objectives against the achieved objectives through analyzing the inputs and activities implemented by the officials. Without the performance measures it would be difficult to measure and assess if the FSPs are effective (Interviewee 8).

From the interviews conducted within the ELM and from the reviewed literature, it is clear that performance measures must be established in a manner that promotes their usefulness and all the FSP activities implemented within the organization must follow this framework of importance. The importance of performance measures lies in their ability to reflect the effectiveness of what is being measured, as well as the efficiency of the activities used to establish what should be measured and the outcomes after measurement. Performance measures are important and useful in every organization as they are the key instrument for ensuring that the organization is able to successfully implement its strategy and achieve its program objectives.

### **5.3 A REVIEW OF THE ELEMENTS THAT ARE MEASURED BY THE PERFORMANCE MEASURES OF FSPS WITHIN THE ELM**

The literature reviewed in Chapter 3 revealed that measuring food security is a broad and complex concept but necessary, as it affects millions of people. Measuring food security widens our knowledge of the realities and causes of food insecurity and can provide us with useful information that can assist managers to monitor, evaluate and assess the impacts of FSPs in addressing food insecurity. Measuring food security helps to identify early warnings related to food insecurity, it helps indicate what is relevant and irrelevant in measuring food

security and validities useful and suitable approaches to addressing the problem. It became clear through the literature that was reviewed that there are still no unified or standardized performance measures for measuring food security and its programs. There are four important elements that every food in/security performance measurement must take into consideration: food accessibility, food affordability, food utilization and food stability.

In this section, the researcher analyzes interviews regarding the FSP elements that are measured by the performance measures established within the ELM. In order to analyze this effectively, the researcher scrutinizes each performance measure separately by reviewing the included elements and assessing these performance measures through the FSPs implemented within the ELM (FSPs were discussed in the previous section).

### **5.3.1 ELM programme components and respective performance measure questions**

The DtiUK (2013:8), Kontelnikov (2004:1) and Van de Walle (2007) advised that good performance measures should assess the extent to which all the components of a programme are adequately addressed. These components are: objectives, inputs, activities and outcomes (National treasury, 2007:6). The researcher uses the following table to illustrate the ELM's focus on each program component and the aspects that must be measured by the implemented performance measures in order to assess the effectiveness of FSPs.

**Table 5.2: ELM programme components and respective performance measure questions**

<b>Program component</b>	<b>ELM focus</b>	<b>Aspects to be measured (questions to be asked per component)</b>
<b>Objectives</b>	<p>These programmes aim to ensure that target households:</p> <ul style="list-style-type: none"> <li>• have access to the minimum required nutritional food intake;</li> <li>• have the minimum means to afford and utilize their income and food in an appropriate manner;</li> <li>• have access to nutritional food, which will help them avoid becoming ill;</li> <li>• experience a reduction of poverty and hunger; and</li> <li>• households are assisted in coping and improving their living</li> </ul>	<p>What information is our performance measure supposed to provide us?</p> <p>What information does our performance measures provide for us?</p> <p>Are our objectives of alleviating food insecurity and hunger realistic?</p> <p>How are our FSP objectives contributing towards our organizational goals?</p>

<b>Program component</b>	<b>ELM focus</b>	<b>Aspects to be measured (questions to be asked per component)</b>
	conditions.	
<b>Inputs</b>	Program staff  Funding/money	Is our budget large enough to provide goods and services to the targeted household beneficiaries?  Is our staff equipped and well informed about the FSPs they are providing for the beneficiaries?  Is our staff capable of providing the required goods and services for our beneficiaries?
<b>Activities</b>	Food parcels  Food vouchers  Special grants  Disastrous intervention activities	Are the food-parcels effective in ensuring that beneficiaries have an adequate nutritional food intake?  Are the food vouchers able to assist insecure households to gain better access to the required nutrition?  Are the special grants effective and efficient in assisting to alleviate hunger and food insecurity among food insecure households?  Do our Disaster Intervention strategies help household beneficiaries to cope better with the disasters that they are facing?
<b>Outcomes</b>	Food accessibility  Food affordability  Food utilization  Nutritional intake  Reduction of hunger/poverty levels	Are our FSPs assisting households to gain better access to food?  Are our FSPs helping household beneficiaries with low/no income to afford the minimum nutritional food requirements?  Are the FSPs providing household beneficiaries with adequate utilization of nutritional food?  Are our FSPs effective in helping the municipality to reduce hunger and food insecurity?

While the table above indicates the questions to be asked with regard to performance measure in order to determine the extent to which each aspect is met, it is critical to understand how FSPs in the ELM are assessed. The FSPs' performance measures are discussed next with reference to the elements each performance measure is meant to assess.

### **5.3.2 FSPs' performance measures established within the ELM**

In the interviews conducted with the project managers it was discovered that the FSPs' performance within the ELM is measured through four means: the Hunger Index measurement, the Household Income and Expenditure Survey, the Dietary Score and the anthropometric measurement.

#### **5.3.2.1 *Hunger Index measurement (HIM)***

The hunger level of the household is measured to assess if the household is food secure or insecure, as well as the category of food in/security the household falls into (Interviewee 5). The index also measures if the household is temporarily, occasionally or permanently food insecure (Interviewees 1, 3 and 4). This measure assesses the severe poverty-related behavior to which the household is exposed, by asking a series of scaled questions (Interviewee 2).

These questions are similar to those of the Household Food Insecurity Access Scale (HFIAS), but only capture information from households that are classified as experiencing severe or moderate food insecurity (Interviewee 4). The answers are then classified and used to measure the incidents and experiences of hunger and low food security (Interviewees 1 and 2). This performance measure assists the ELM to track the hunger and the scores are used to assess if there is an increase or decrease of hunger within the household (Interviewee 5). This assists the municipality to assess if the programs are effective in evaluating hunger and food insecurity (Interviewee 3).

The HIM is conducted before and after project implementation, with the aim of evaluating if the household still falls into the category of food insecurity and a hunger-stricken household (Interviewee 2). The total score for this performance measure will inform us if the household is eligible for the program (Interviewees 1 and 5). The most lucrative information this measure provides the staff is the status of the household (Interview 3). Once the project has been implemented, the household beneficiaries are interviewed again, this time to evaluate if there is a change in their food insecurity status (Interviewees 1 and 3). Interviewee 2 argued that the second evaluation is performed to evaluate "if the goods and services provided to the household are making the intended difference".

All these explanations came to one conclusion, which was expressed in Interviewee 4's explanations: "HIM in essence helps us evaluate if there is a change in the household's food

insecurity status before and after the implementation of the FSPs. How effective is the change? And most importantly, under which category of food insecurity does the household fall?” Interviewee 4.

These statistics are included in a report at the end of the year and they are reviewed to ascertain if the FSPs are effective in alleviating food insecurity and hunger. The results that are achieved are compared with the target results that were identified initially and anticipated during the project planning phase (Interviewee 4). When asked how HIM is used to monitor the performance of the FSPs during the implementation process, all the managers revealed that FSPs are not monitored during the implantation, but their PMS measures the end results. The researcher established that the FSPs are not monitored effectively.

From the documents that were reviewed, the HIM questions are asked in the manner illustrated in the table below.

**Table 5.3: ELM’s HMI questions.**

<b>Questions In the past 6 months</b>	<b>Frequency</b>	<b>Score</b>
Rate the frequency with which you and your household experienced low levels of food?	Never	4
	Rarely	3
	Often	2
	Frequently	1
How often were you and your household not able to eat adequate “preferred” food?	Never	4
	Rarely	3
	Often	2
	Frequently	1
How frequently did you and your household go to sleep without food to eat?	Never	4
	Rarely	3
	Often	2
	Frequently	1
How frequently were you and your household experience a period without any access to food?	Never	4
	Rarely	3
	Often	2

	Frequently	1
How often did you and your family go through a period where you had to go a day without food?	Never	4
	Rarely	3
	Often	2
	Frequently	1
Has there been a period where you and your family had to reduce your food intake due to insufficient/ lack of food?	Never	4
	Rarely	3
	Often	2
	Frequently	1
How frequently were you and your household forced to eat types of food you didn't want due to a lack of resources?	Never	4
	Rarely	3
	Often	2
	Frequently	1

Questions In the past 6 months	Frequency	Score
How frequently did you and your family have to eat a limited variety of food due to a lack of resources/ no access to adequate food?	Never	4
	Rarely	3
	Often	2
	Frequently	1
Total		

The frequency scores of the household are calculated and the household is categorized as follows:

**Table 5.4: HMI frequency scorecard.**

FREQUENCY SCORE	CATEGORY	
8 – 14	1	Severely food insecure
15 – 20	2	Food insecure
21 – 26	3	Mildly food insecure

27 – 32	4	Food secure
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The HIM questions are the same before and after programme implementation for a clear analysis of the results. From this analysis and monitoring, the officers are able to monitor if the FSP's have had an impact in the lives' of the household (Interviewee 5). The officials are able to evaluate the extent to which the FSP is helping the households to cope with food insecurity and to evaluate how well the government interventions are succeeding in reducing poverty and food insecurity (Interviewee 2). "We are able to measure if there is a difference in the household's food availability before and after the implementation of FSP; the level of food the household has access to and the category of food insecurity the household is facing before and after the programme" (Interview 1). This measurement therefore evaluates the amount of food to which the household is exposed, the way in which the household utilizes the available food and if the program is effective in reducing the levels of poverty and food insecurity. If the household is found to be food insecure, it will fall into the category that is provided with food parcels, where this government structure gives the household a specified amount of food as regularly as the budget allows them to.

#### **5.3.2.2     *Household income and expenditure survey***

With this performance measurement the households provide a summary of their income and expenditure, to ascertain the amount of money they are able to accumulate and the necessities they can afford. The essential part of this survey is for the officials to evaluate two important elements, the household's food affordability status and the household's access to food (Interviewee 2).

This performance measurement system is also undertaken before and after programme implementation (which usually lasts for 6 months). When households apply (re-apply) for the programme, they are requested to provide their proof of income and a list of their expenses (Interviewee 1). Interviewee 3 highlighted that this is done to check if the household's income is sufficient to buy adequate and nutritious food. The Income and Expenditure Survey helps the officials to determine if the household can "afford food" and what type of food it can afford (Interviewee 2). If there is a change in the household's income (e.g. if a member of the household has found a job), the household's new food insecurity status is re-evaluated (Interviewee 4).

After programme implementation the household beneficiaries are requested to have their status reviewed (Interviewee 1). This is done to check if the FSPs are effective in doing what they are meant to do (Interviewee 5). Officials are then able to evaluate if the programmes are helping families to be able to afford and access the food they need (Interviewee 2). The results of the information obtained from this survey were useful for informing the managers of the FSPs' effectiveness or lack thereof.

This performance measure focuses on two elements: Firstly, food affordability –officials are able to assess if the household's income is sufficient to buy the food needed for a month; secondly, food access –officials are able to evaluate if that income is sufficient or if the household needs additional money/food subsidy assistance from the government (Interviewee 4). The FSP staff needs to analyze the results of this survey to ascertain whether all the other data that was collected is correct and reliable and corresponds with the households' income (Interviewee 1). From the information provided by this survey and analysis of the households' income and expenditure, FSP officials need to ascertain if the households are using their income efficiently, or if they are over-spending on unnecessary items or unnecessary foods and mostly to evaluate the types of food they buy (Interviewee 3).

The information provided by the household beneficiaries must be carefully scrutinized to evaluate the households' levels of food insecurity and if the household is really food insecure or if their food insecurity is due to a lack of balance between their income and expenses and if the household is buying incorrect dietary items (Interviewee 5).

Requirements for Income and Expenditure Survey: (Interviewees 1 - 5)

- Household's proof of income;
- If the household does not have income, they must provide an affidavit stating how they are surviving (through which means they are surviving);
- Households must provide a list of their expenditure and include how much they spend on food and also specify if they receive food from other sources.

From this information, the officials need to analyze if the income and expenses are equivalent to the household's survival, or if the household needs government intervention in terms of FSPs to survive (Interviewee 4). This information assists our FSP staff to determine if the



households can afford to buy and access food with the income they have declared (Interviewee 3).

Households without enough income to access and afford food are usually awarded food vouchers. Families with no income or very little income with severe situations (difficult living circumstances) are often given special grants. Both these types of grants are in the form of giving the households money (special grants/food vouchers) and the households can then buy adequate and nutritional food (Interviewees 1, 2 and 5).

This method has the following advantages: The officials can identify all the households at risk of food insecurity, which assists in regulating food security (Interviewees 1 and 4); officials are able to assist households to manage their expenses better (Interviewee 1); officials are assisted in evaluating the households' food affordability and all their anti-poverty programs through the food they buy and use with their budget (Interviewee 3).

#### **5.3.2.3     *Dietary Score (DS)***

The household's nutritional intake is essential in order to achieve food security with good health. This measure assesses if the household's nutritional intake is adequate and utilized in an efficient manner to prevent poverty-related diseases and illnesses (Interviewee 3). This is achieved by scoring their eating patterns and the kind of food the household consumes and then grouping them into categories.

This measurement indicates three elements: the nutritional intake of the household, the type of food on which the household has access and the manner in which the household utilizes available food (Interviewee 1). The FAO (2013a:31) defines the Dietary Diversity Score as "a measure of household food access and food consumption that can be triangulated with other food related information to contribute towards providing a holistic picture of the food and nutritional security status in a community or across a broader area". This definition gives relevance to the ELM's evaluation of the DS as a FSP performance measurement.

The ELM conducts the DS twice a year, at the beginning of the year and at the end of the year. The first dietary score is undertaken to inform and verify the household's level (category) of insecurity. From this score, the officials are able to register the beneficiaries under the relevant category. The officials are able to evaluate and monitor all households under severe food insecurity with low access to food and in danger of falling ill due to

malnutrition and poverty (Interviewee 1). The DS “helps us categorize the beneficiaries eating patterns and therefore be able to help the officials advise them on what to eat, the types of food they should consume so that their nutritional intake can improve, which will prevent sicknesses and diseases” (Interviewee 2). The DS assists the officials to realize the type of food to which the household has access and if these types of food are the cause of their health conditions (Interviewee 3). The DS assists the officials to evaluate how the households utilize the food at their disposal (Interview 5).

At the end of the programme, (all interviewee’s related to this), the managers analyze the DS of the households again. The beneficiaries are asked the same questions, this time to see if there is a change in their dietary intake after the government intervention through the FSPs. The households are again categorized under the food insecurity categories to evaluate if there is a change in the households’ level of insecurity (Interviewee 4).

In disastrous situations where the household, (or a member of a household), has been diagnosed by a doctor, hospital or clinic with an illness related to malnutrition, or where the household’s DS is still severe, the household’s health conditions, body assessments and living conditions are then measured through the anthropometric measurement (Interviewee 1).

The DS focuses on three elements: nutritional food intake, food access and food utilization (Interviewees 1, 2, 4 and 5). Nutritional food intake is evaluated through the DS before and after the programme implementation, by asking households about the types of food they are eating and categorizing these types of food.

This element is an important indicator of food insecurity, as it assists officials to group beneficiary’s households into food security categories (Interviewee 1). The DS plays an important role in evaluating the types of food to which the household beneficiaries have access (Interviewee 2). Access to nutritional food is a vital aspect that informs the officials if the household can maintain the basic conditions of living or if they need the government’s intervention to survive (Interviewee 3). The third element is that the DS assists to determine the way in which the household beneficiaries utilize their food (Interview 1). DS assists to evaluate if the household consumes the correct food and if their illnesses are caused by the food they eat (Interviewee 2).

The DS is therefore undertaken to assess the quality of food to which the household had access and utilized before the program, as well as to assess any changes to their diet after

government intervention. This is to evaluate if the FSPs are effective in assisting the households to have better access to utilizing a nutritional food intake.

#### Dietary Score Questionnaire format

**Table 5.5: The ELM's Dietary Score Questionnaire format.**

Question	Score			
	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
What types of food do you mostly eat for: breakfast?	Cereals	Bread/stash	Dinner left overs	Other
Lunch?	Vegetables/fruits	Sandwich	Takeaways	Other
Dinner?	Vegetables and proteins	Bread and poultry	Takeaways	Other
How many times a day do you and your household eats?	3 times or more	twice	Once	

How often do you and your household eat	Vitamins and rich fruits?	5 – 4 days a week 10 - 15 days a month	3 - 2 days a week 6 – 10 days a month	1 day a week 5 – 7 days a month	Hardly ever Hardly ever
	Vegetables (green leafy)?				
	Cereals				
	Fish, Meat and poultry				
How often do you eat out? (With neighbors, friends, restaurants, etc.)		More than 4 days a week 10 – 15 days a month	2 – 3 days a week 8 – 10 days a month	1 day a week 5- 7 days a week	Hardly ever 0 – 4 days a month

Question	Score			
	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
Do you have access to clean water daily?	Yes – All the time	Most times	Often struggle to get clean water	No. (Where and how do you access water)
Do you have a garden of fresh fruits or vegetables	N/A	yes	NO	N/A
TOTAL				

### Category of food insecurity

**Table 5.6: The ELM's frequency scorecard in categorizing food insecurity.**

FREQUENCY SCORE	CATEGORY	
11 – 18	1	Severely food insecure with hunger
19 – 25	2	Food insecure with hunger
26 – 35	3	Mildly food insecure without hunger
36 – 44	4	Food secure without hunger

All the households who fall under the severely food insecure category are transferred to undergo anthropometric measurement, as they are believed to be living under severe malnutrition, with their health in danger of disease.

#### **5.3.2.4     *Anthropometric measurement***

This measurement measures the weight and health conditions of individuals within households (Interviewee 1). It helps the officials to map all the relevant and important nutritional security of the household and helps them understand the essential elements and significance of the correct nutritional intake and the consequences of malnutrition at the individual level (Interviewee 4). This measurement plays a critical role in indicating food insecurity through its measurement of the nutritional status of the household and the relationship between severe food insecurity and low nutritional intake of unhealthy food. This measure therefore focuses on two elements, food utilization and nutritional intake (identified by all the interviewees). These two elements play a very vital part in FSPs (Interviewees 1 and 3).

This performance measurement is conducted only with those household members found to be severely food insecure due to a lack of an adequate nutritional intake and their health is therefore exposed to illnesses and diseases related to or caused by poverty and malnutrition (Interviewee 2). This performance measurement plays a critical part in indicating households that need immediate intervention (Interviewee 3). Such household members are treated with care and are sent government-appointed doctors, where their health is supervised and their food intake is closely scrutinized (Interviewee 1).

This category mostly includes vulnerable households with sick children and pregnant woman struggling to eat or meet the minimum requirements of eating and as a result their health is compromised (Interviewee 5).

All 5 interviewees mentioned that this measurement focuses on 2 elements. Interviewee 2 elaborated by explaining that the household's nutritional intake is measured through the evaluation of the eating patterns gleaned from the DS and with this information, the officials further analyze if the provided FSP has helped to improve the health of the household member(s). The AM assess if the household member is utilizing the necessary nutritional intake (Interviewee 3).

This performance measure is used to assess and track the progress of the household member's health through regular monitoring and reviewing their body weight, body height, body fat and waist circumference and checking for diseases such as high blood pressure, cholesterol and diabetes by means of blood tests (Interviewee 4). This performance measure is conducted by the doctor.

This measurement specifically helps the ELM FSP officials to keep track of the household member's health, thereby enabling the officials to help these individuals get better treatment at their nearest hospitals and clinics (Interviewee 5). Such household members are advised to exercise, eat healthily, plant food gardens in their yards, take their medication correctly and consistently, and mostly, they are advised to learn about healthy eating and the condition of their health (Interviewee 2).

### **5.3.3 Analysis of the elements assessed by the performance measures established to assess FSPs within the ELM.**

The globally accepted definition of food security includes 4 key elements: food accessibility/availability, food affordability, food utilization and food stability. FAO (2013:1), as the facilitator of food security globally, holds that all four of these elements must be included in the performance measurement of food security and all its programs. This submission was accepted by many authors (Upton, Cisser and Barrett, 2015:6; NDA, 2013:4; The National Academies, 2006:45; Leroy et al., 2015:169 & Maxwell Coates, 2012:65 among many), who indicated that measuring food security should follow these elements directly. The NDA (2013:3) holds that performance measures are insufficient, inadequate and ineffective if they cannot measure all four of these elements simultaneously. If the established

performance measures fail to assess all four of these elements, then these performance measures are regarded as ineffective in measuring the complexity of food security. The NDA (2013:4) contends that the lack of any of these performance measure elements will result in more households that are food insecure.

Once the research study of the FSP performance measures and their elements had been completed (the interviews conducted), the researcher came to the conclusion that each performance measure of the FSPs within the ELM focuses on different aspects and elements of food security. The Hunger Index Survey focuses on measuring the household's food accessibility and how the household utilizes the available food. The Household Income and Expenditure survey focuses on the elements of food accessibility and the food affordability status of the households. The Dietary Score mainly assesses the elements of food access, nutritional intake and food utilization. Lastly, the Anthropometric Measurement measures the elements of nutritional intake and the utilization of available food. However, there is no sign of a performance measure established to assess the food stability of the households within the ELM. When interviewees were asked about this performance measure, none of them could provide a relevant answer as to why it was not measured or featured in the implementation and assessment of FSPs. The researcher's observation and analysis is that food stability as an element of food security is totally ignored within the ELM performance measures and the establishment of FSPs.

The element of food stability is very important, as the other three elements must work towards ensuring that households remain food secure after the intervention of FSPs. Napoli (2011:20) holds that food stability gives relevance to reducing the adverse effects on the other three aspects. FAOs (2013a:1) emphasize the importance of food stability by stating, "even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food periodically, risking a deterioration of your nutritional status". As a result, the lack of the missing, relevant and important element (food stability) results in the ineffectiveness of these performance measures in assessing FSPs.

The FAO (2013a:3) established that when measuring food security these 4 elements must always be addressed simultaneously, as they are all factors that affect the household's ability to maintain food security. Every household that lacks one (or more) of these elements is considered to be food insecure. Emphasis should therefore be placed on this element as its absence opens a gap in the performance of FSP programs, resulting in the ineffectiveness of

the performance measures and FPSs as a whole. Total food security can only be achieved when these four elements simultaneously take on equal importance. This assumption is supported by the assertion made by Jones et al. (2013:484) when they stated that the failure of performance measures to measure all these elements of food security will result in the assessment of incorrect domains, assessing multiple and unnecessary aspects and acquiring insufficient and unreliable information.

The danger posed by not addressing this food security element is that the ELM will always have to provide these goods and services to all the households that do not find employment or external means of acquiring food. The ELM needs to promote the establishment of FPSs that will ensure that households are left food stable even after the government has stopped intervening. These programs may include initiatives of households “growing their own gardens”, which will ensure that the households remain food secure even if the government can no longer provide them with food parcels. It is therefore important that the ELM incorporate the element of food stability into its FPSs and performance measurement system, to be able to effectively address food insecurity.

#### **5.4 COMPARING THE PERFORMANCE MEASURES USED WITHIN THE ELM REGARDING THE FPSs, WITH THE EFFECTIVE PERFORMANCE CRITERIA OF THE DTiUK (2013:7)**

There is no standardized performance measurement criterion, but the DtiUK (2013; 7) suggests a criterion that was widely accepted by many countries and organizations. This performance measurement criterion was founded through the DtiUK’s (2007:8) SMART qualities (S-Specific; M-Measurable; A-Achievable; R-Relevant; and T-Timely) that promote effective performance measures and assist the organization to set specific goals, which are measureable, achievable, relevant to the overall objectives of the organization and can be achieved in a timely manner. An organization therefore, needs to ensure that the performance measures it establishes will result in efficiency, productivity and effectiveness within the whole organization (CIMA, 2008:5).

Effective and SMART performance measures should be able to assist the organization to clearly identify and clarify organizational objectives, that which is important and relevant, track the progress of the organization against objectives, clarify the communication and accountability systems, determine results and improvements of aspects that need to be



improved and provide feedback to managers, learning opportunities and achievable goals (TRADE, 2007:9; Kaydos, 1999:98). SMART performance measures stimulate and promote useful performance measures that can improve the quality of services. Lichiello (1999:11) and Kaydos (1991:25) suggest that performance measures themselves should be assessed to determine their effectiveness in the organization.

This section aims to determine how the performance measures established to assess FSPs within the ELM compare to the DtiUK's (2013:7) effective performance measurement criteria. This entails three elements. First, effective performance measures should clearly assist in the identification and tracking of the program's progress against set goals. Second, effective performance measures should assist in the identification of opportunities for improvement. Thirdly, effective performance measures should assist in the comparison of performance against internal and external standards.

#### **5.4.1 A clear identification and tracking of progress against goals**

Through the interviews conducted within the ELM, the researcher was able to assess if the performance measurement system established within the ELM has a clear identification and tracking of progress system. Interviewees 1 – 10 provided information through which the researcher came to the conclusion that the FSPs are only measured before and after the programs have been implemented.

According to the interviewees, these performance measures are established to identify things that need to be measured, as well as to track the progress made by the FSPs. The interviewees explained that their performance measures form a system that records all assisted households and the types of services provided to them. At the end of the program the results are evaluated to ascertain if there is a change in the living conditions of the household after the implementation of the program, as well as to check if there is any progress and improvement made by the provided services (Interviewees 1 – 10).

The Hunger Index Measurement does not track the progress made by the ELM towards its goals, or the hunger rates during the implementation process. The Hunger Index Measurement used within the ELM measures the effectiveness of food vouchers and food parcels in eliminating hunger and food insecurity after the programs, but does not measure the hunger and food in/security of the beneficiaries during the implementation process. The researcher therefore finds the information provided by the performance measures inadequate

in reflecting the impact of the FSPs on the household's hunger and food security levels, Without identifying and tracking the effectiveness of these FSPs, or how these FSPs affect the households as they receive and utilize them, then the results of this performance measurement will not be able to assess the full impact of the effectiveness of the FSPs.

The Diversity Score measurement is conducted before and after the program implementation but not during the implementation process. The interviewees stated that this information is used to track the impact of the FSPs on the health and nutritional intake of the households and is also used to assess if the food parcels and special grants are helpful in minimizing food insecurity. The researcher observed that the length of time between beginning and ending the programs is too long to measure at once and the time that elapses in between the measurements opens the PMS to vulnerability, which may lead to results being unreliable and misleading.

The Income and Expenditure Survey does not monitor or measure the performance of FSPs during the implementation process and this leaves both the managers and employees clueless as to the living conditions of the household during the implementation process. The researcher observed that the FSP staff cannot evaluate whether or not the services they provide are sufficient for the household beneficiaries. During the interviews with the beneficiaries, a number of them indicated that the services they receive are not distributed in an equitable manner, as a family of 8 individuals will receive the same amount of subsidy as a family of 3 individuals. The managers and staff will not be able to determine the effects and adversities of this. It was consequently observed by the researcher that these performance measures are not established to monitor the progress and impact made by the FSPs on the beneficiaries' living conditions.

These performance measures do not seem to allow the staff to review the status of the households, as there is no evidence of a monitoring system through which employees visit the beneficiaries' homes to validate if the households are buying the required food, or if the households are using this money on things that do not help them towards bettering their lives and food security status.

The anthropometric measurement was found to be better for monitoring progress of the household's food security, as the households identified in this category are asked to consult a

doctor, clinic or hospital frequently for assessment of progress and the medical staff also make house calls to most of these households (Interviewees 1, 4 and 5).

#### ***5.4.1.1 Analysis of the ELM's performance measures in identifying and tracking progress through the literature that was reviewed***

There was no evidence provided on how performance measures track the progress of FSPs towards set goals within the ELM. Lichiello (1999:25) argues that failure of performance measures to track the effectiveness of programs will result in poor identification of tracking progress and the organization will fail to track the resources, which could lead to wasteful expenditure on programs and activities that are ineffective. Therefore, the results obtained within the ELM with regard to the FSPs cannot be guaranteed to be correct and reliable. There is no information regarding what happens to the households during the implementation of a FSP, making it very difficult to track progress.

From the interviews that were conducted, the analysis is clear that the FSPs are measured only before and after implementation and are not monitored during the implementation process. The DtiUK emphasizes that it is vitally important that the performance measures be able to monitor the implementation process in order to identify and properly track the progress of programs towards set goals. If the ELM does not track the progress of these FSPs during the implementation, in what way will it identify risks, progress, opportunities, threats, weaknesses and strengths in each program? How will it be able to track any improvement or stagnancy in the living conditions of the households without monitoring the programs effectively?

The researcher's analysis is that the performance measures on FSPs within the ELM are not SMART, as they do not clearly identify and track progress against set objectives. The National Treasury (2007:5) asserts that performance measures can only be relevant if they assist the organization to track its progress in achieving set objectives and identifying areas that need attention in order to keep the organization focused on its desired goals. A monitoring system is important and useful for every organization (Ruzita et al., 2012:51) and without proper monitoring, the ELM will not be able to evaluate the effectiveness of the FSPs, identify opportunities and capacity, effectively utilize available data and resources and ensure that everything goes according to plan in order for the municipality to attain food security and deliver the best services to its community.

Lichiello (1999:25) contends that the inability of performance measures to track the progress of FSPs during the implementation has consequences. While conducting the interviews, this fact was realized when Interviewees 1, 2, 3, 5, 9 and 10 mentioned that there is a high amount of wasteful expenditure within the ELM. The ELM has also failed to achieve set objectives, as it is difficult to achieve that which is not monitored, tracked and kept in line during implementation (Spitzer, 2007:9). Without a PMS that identifies and tracks progress towards set objectives, the performance measures will fail to implement SMART and effective performance measures that will ultimately be useful towards effective monitoring and managing of resources (DtiUK, 2013:9). This essentially means that the ELM will fail to provide specific (S) information and this failure will result in the ELM measuring things that are not important or relevant (R) for achieving the desired end result.

For the ELM to accurately identify and track the real differences and effectiveness these programs have on the beneficiaries, they need to measure the performance of FSPs during the implementation phase and monitor such performance throughout the implementation of the program. This will provide the managers and staff with the specific and relevant information required for measuring and improving the effectiveness of the FSPs. After analyzing all the responses from the interviews and information from the literature that was reviewed, it is evident that performance measures used to assess FSP's within the ELM do not have a clear monitoring system that tracks the progress of the municipality towards set objectives, and this raises the following question: if performance measures are not monitored, then how does the municipality identify opportunities?

#### **5.4.2 Identification of opportunities for improvement**

The second element in the DtiUK criteria for effective performance measurement is that the performance measures must be able to identify opportunities for improvement. This entails that the performance measures must be useful and beneficial to the organization, monitoring system, managers, clients and employees and resource management. The Harvard Business School Press (2007:2) contends that the usefulness of performance measures lies in their ability to identify opportunities for improvement.

From the interviews that were conducted, Interviewees 1 – 5 indicated that although opportunities may arise along the way, the ELM is unlikely to pursue these opportunities due to limited funds and resources. Interviewee 4 indicated that these limitations are due to

budget control and the large number of beneficiaries that needs help. Interviewee 2 posited that these constraints are caused because the organization is obliged to provide as many households as possible with food security benefits and as result, 80% of the available budget is spent on direct goods and services for these households. When opportunities arise there is little they can do to take advantage of them.

When asked for evidence of opportunities the FSP performance measure has helped the municipality to achieve: Interviewee 1 indicated that the end results provided by the performance measures (Hunger Index Measurement, Income and Expenditure Survey and Dietary Survey) assist the municipality to determine which of the FSPs are more effective for achieving the intended objectives.

Interviewee 3 indicated that the various FSPs enable them to use different techniques to improve people's lives. Interviewee 5 mentioned that the performance measures assist the ELM to analyze whether or not the FSPs are effective in assisting households towards better utilization of nutritional food to which they have access and what can be done to minimize hunger and food insecurity. Interviewees 1 and 4 stated that these performance measures provide useful, relevant and lucrative information, other than these opportunities, no others were identified by the managers and staff members during the interviews.

#### ***5.4.2.1 Analysis of the ELM's performance measures against the identification of opportunities through the reviewed literature***

From the interviews that were conducted, the responses from the ELM managers indicated that these performance measures are able to identify aspects for improvement but these opportunities cannot be utilized due to insufficient funds. The researcher's observation is controversial to the fact that, the FSPs are not monitored effectively enough to provide reliable information and means of improvement for the ELM.

Lichiello (1999:33) suggests that if an organization does not have a proper monitoring system that tracks the progress of performance measures, it will be difficult for it to identify opportunities and capacities to assess and improve the activities of the organization. As the ELM's FSPs lack a clear monitoring system, performance measures are unable to provide useful information that will assist the municipality to identify opportunities that could improve people's lives by alleviating poverty and food insecurity. This analysis gives credence to the DtiUK's (2013:7) belief that the usefulness of the performance measurement

lies in its ability to benefit all aspects of the organization in order to improve the effectiveness and productivity of the organization.

Ruzita, Zhar and Hasan (2012:51) posit that without a performance measures that can identify opportunities for improvement, an organization will be unable to improve the overall effectiveness of its programs. Therefore, if the ELM can implement a clear and consistent monitoring system, this will enable the municipality to identify ways in which resources can be better managed to be more productive, used more effectively and allocated more efficiently, in a manner that could create more opportunities for improvement. If not addressed, the performance measures will not to provide opportunities to recognize the usefulness of the performance measures in creating, identifying and optimizing opportunities for improving FSPs and the organization as a whole.

#### **5.4.3 Comparison of the FSP performance measures used within the ELM against internal and external standards.**

Performance measures must be standardized to meet particular objectives and activities and must work towards achieving the same objectives and standards.

##### ***5.4.3.1 Comparing FSP performance measures used within the ELM against the performance measures of other programs within the municipality.***

Unfortunately the researcher was denied any information concerning other internal programs outside the scope of the FSPs. It is therefore difficult to compare the performance measures of the FSPs to other internal programs. However, an analysis was made based on information that was shared during the interviews that were conducted.

Interviewees 1 and 3 indicated that all internal programs, as with the FSPs, have capable staff and funds allocated to them.

Interviewee 4 indicated that the performance measures of programs are based on the nature of the programs themselves and are therefore all different, as they provide different information for different purposes.

Interviewee 5 indicated that every program has different objectives, therefore the performance measures used to assess these programs are all different and cannot be compared to one another as they serve different purposes and are themselves different.

Interviewee 2 responded that “the performance measures of our programs are different from other program performance measures, because every program is set at achieving, specific and different goals, and these goals determines the performance measures established for the program. The only common component all the programs have is to promote, support and uphold the municipality’s goal and vision”.

#### ***5.4.3.2 Analysis of the ELM’s performance measures on FSPs compared to other internal programs’ performance measures through the literature that was reviewed.***

With no other information obtained regarding other programs and their performance within this municipality, the researcher’s findings on this section are based on the above responses. It is therefore the researcher’s analysis that the performance measures implemented within this municipality differ from program to program, depending and based on the nature of the program, but all these programs are working to promote the municipality’s overall social goal of bettering the lives of the entire community through accountable, transparent and responsible service delivery. Internally, it is a good thing when all organizational programs are implemented based on program objectives and not in contradiction to the overall organizational objectives and goals. Kaydos (1999:139-148) explains that performance measurement must provide the organization with important information that allows it to identify priorities and indicators to evaluate success in line with set goals.

If the performance measures of each program are implemented and based on the nature and objective of that program, it means that the performance measures of other internal programs are SMART. This means that performance measures will be specific to what the ELM is attempting to achieve, thus enabling the ELM to set measurable targets for FSPs. The managers and employees are clear on what they are working towards, making it easier for the results to be achievable. The results obtained from each program will be relevant to the organizational goals and programs will be completed in a timely manner as everyone knows what to do. As a result, the whole municipality will benefit greatly from this program. This assumption is supported by Tarr’s (2004:9) assertion that established performance measures must work as a unit characterized in a “purposeful, unified, integrated and fluid system” that stimulates and expands the effectiveness of the organizational objectives at all levels

Performance measurements are regarded as effective when they can provide visibility that allows employees and managers to monitor performance of the programs to help the organization recognize problems and areas that should be prioritized within the entire organization, as well as to provide feedback for driving improvements within the organization (Dti UK, 2007:1). Therefore, the ELM's vision of establishing performance measures that promote the organization goals at large is a fundamental cornerstone for organizational development.

#### ***5.4.3.3 Comparing FSP performance measures used within the ELM with the performance measures of external FSPs.***

In order for the FSPs to improve and be effective in any organization, it is vital that the performance measurement standards of these FSPs meet the external standards of measuring FSPs. External standards of measuring FSPs surround the 4 elements of food security, namely: food accessibility; food affordability; food utilization and food stability (FAO, 2013b:7). In order for any measurement to be considered reliable for measuring food security and its programs, that measure must include an instrument/s that measures all these elements. After conducting the interviews within the ELM, the researcher was able to compare the ELM's FSP performance measures against external standards.

The ELM and the rest of the world are still struggling to find effective performance measures for assessing food security. The reason there are still no standardized performance measures nationally and globally for assessing food in/security and its programs is because measuring food security includes a number of challenges and limitations. The FAO (2013b:6) holds that there is an urgent need for relevant, compatible and valid performance measures for measuring household food security across all regions. Ike (2015: 33) supports this argument, by positing that it is impossible to address household food insecurity without understanding the full dimensions of food security. The lack of standardised measures greatly limits and challenges the effective measurement of household food security. UNDESA (2014:24) contends that measuring household food security is limited, as data available to researchers is limited and it undermines a direct and complete link between definition and measurements of FSPs.

External performance measures of FSPs



The FAO (2013b:6) indicates that there is no standardized performance measurement system (or single indicator), approved as an effective, reliable, and efficient means of assessing household food security. De Cock (2012:98:) posits that measuring food insecurity is a challenge, as she combined 6 performance measures in order to accurately assess household food security (the effectiveness of programs addressing these), and came to the conclusion that even the combination of these performance measures are inadequate in successfully and effectively assessing the effect the FSP has on household food security, as there are many limitations posed by each of these indicators. UNDESA (2014:24) points out that the costs and time involved in accumulating household data and statistics disregards unequal intra-household supply. Maxwell (2003:68) holds that the most effective performance measures for household food security are the 4<sup>th</sup> generation indicators.

These 4<sup>th</sup> generation indicators consist of the: Coping Strategies Index (CSI); Household FI Access Scale (HFIAS) and the Household Dietary Diversity Score (DDS). These 4<sup>th</sup> generation indicators were found to be efficient and effective in saving time and costs and for identifying insecure households and measuring all the relevant elements of household food security. The 4<sup>th</sup> generation indicators have therefore been accepted as effective performance measures by numerous scholars (Maxwell & Coates, 2012:144). Although these performance measures are generally accepted, it is important to remember that there are other preferred performance measures used to measure food security independently. Headey & Ecker (2012:1) emphasize that although various performance measures have been implemented to measure household food security and the effectiveness of its programs, these measures still show evidence of inadequacy and inaccuracy in their results. Although there is no standardized performance measure, numerous authors agree that the performance measures measuring food security should surround and measure the 4 key elements founded and established within the FAO's (2013a:1) definition of food security: food accessibility/availability; food affordability, food utilization and food stability.

The ELM's FSP performance measures

From the discussions and presentation of performance measures for FSPs within the ELM, it can be evaluated that the performance measures implemented to measure FSPs within the ELM are inadequate, ineffective and insufficient in correctly assessing FSPs. The findings of this empirical study are that performance measures used within the ELM should be revised, re-worked and re-implemented to be more effective. The most evident hindrances with these

performance measures are that they lack the critical element of food stability that is necessary for measuring household food security, the time between before and after measurements is too long with no measurement during implementation and these performance measures do not effectively monitor the FSPs, making it difficult for managers and employees to obtain certain information that could assist in resource management and allocation. As a result, these performance measures are ineffective in improving the organization.

Measuring household food security is a challenge within the ELM and externally. Literature that was reviewed indicated that these common challenges are caused by household food security measures not capturing all 4 elements and potential dimensions of food security, being assessed with a time delay with no information during the interval, not measuring food safety, nutritional status, or the availability of food through “socially acceptable” means and each of the specific boundaries used to identify the categories of food security status variables could be debated (Bickel et al., 2000:16) and (Jacobs, 2009:56 ).These limitations create challenges to measuring household food security (Hart, 2009:9) and challenge the ability of governments and organizations to measure household food security. Food insecurity affects millions people and hinders the country’s ability to develop its social and economic aspects that are affected by insecurity, poverty and high levels of hunger. South Africa has implemented its own performance measures for assessing household food security and its programs (NDA, 2013:8).

In closing this sub section, it is safe to suggest that both external and the ELM’s performance measures implemented to assess FSPs are insufficient, inadequate and as the result, there is a need for better performance measures. This analysis is backed by the NDA’S (2013:9) assertion that the government should invest in in-depth, qualitative studies that will help study and analyze food security measures more effectively and assist to find and create uniformity of the indicators measuring food security. The ELM falls short when compared to the standards of external performance measures, mainly because it does not measure food stability, which is a critical element in measuring household food security.

## **5.5 AN ANALYSIS OF THE WAY IN WHICH THE PERFORMANCE MEASURES OF FSPS USED WITHIN THE ELM CAN BE IMPROVED TO BE MORE EFFECTIVE**

This section discusses ways in which the ELM's performance measures can be improved to strengthen the effectiveness of the FSPs. The researcher identifies the shortcoming of the performance measures as well as the areas that need to be improved in order to ensure that performance measures are not just effective but also useful and beneficial to the entire community. It was established earlier in this study that the realization of the usefulness of performance measures is beneficial to the overall improvement of an organization, therefore the structure of the usefulness of performance measurement is used to identify the gaps/shortcomings within the ELM and then the researcher suggests ways in which these gaps can be overcome to benefit the entire organization.

The usefulness of performance measures includes 5 aspects, as discussed in Chapter 2. These are: usefulness for the organization; usefulness for the managers, clients and employees; usefulness for the organization's resources management and lastly the usefulness of performance measures as a monitoring system. Gaps in the ELM's performance measurement system are analyzed through these aspects.

### **5.5.1 *Gaps hindering the usefulness of performance measures as a monitoring system***

From the interviews conducted within the ELM, the researcher came to the realization that the performance measures implemented to assess FSPs within this municipality do not have a clear monitoring system. As discussed earlier in this chapter, the FSP performance measures are conducted only at the beginning and at the end of the program but not during the implementation process. This opens a gap that allows the failure to provide managers and employees with important and specific information regarding the direct impact of the program on the household beneficiaries during implementation.

These performance measures fail to be SMART (Specific (S), Measureable (M), Achievable (A), Relevant (R) and Timely (T)). This failure results in the loss of specific(S) information and the results cannot be accepted as relevant(R) in providing accurate information regarding the direct impact the FSPs have on beneficiaries.

Another shortcoming caused by the lack of a clear monitoring system is that too much time elapses between the measurements taken at the beginning and ending of the program and the results do not provide reliable information with regard to the progress in the beneficiary's livelihood. In order to minimize these gaps and improve these performance measures, the ELM needs to implement performance measures that will monitor the FSPs during the implementation phase and be able to provide specific and relevant information on how the households are affected by the implementation of these programs. Such a monitoring system will serve as a useful instrument that will improve the overall development and success of the organization, including the FSPs.

### **5.5.2 Gaps in the usefulness of performance measures in resource management**

Without a clear and informative monitoring system that monitors the implementation process, the resources will not be managed appropriately during the implementation process, resulting in the misuse and mismanagement of resources and the ELM itself will not be able to determine which resources work better and more efficiently than others. Without a monitoring system, it will be difficult to manage resources and without proper resource management, it will be difficult for the municipality to improve its productivity and quality of services in allocating resources in an efficient and equal manner. This could lead to wasteful and fruitless expenditure. Through the interviews that were conducted, the beneficiary interviewees revealed that the allocation of FSPs is not fair and equal. These beneficiaries held the view that the FSP's contents are allocated at a specified amount/goods for all households and pointed out that the households do not comprise the same number of people, e.g. some households have 8 members while others have 3 members and both these households will receive food parcels worth the same amount (R765), regardless of the number of people. 60% of these individuals regard this as inequity.

Without effective resource management, the ELM will not be able to identify and address these problems. Without a properly implemented monitoring system, the information obtained from results cannot be trusted as reliable and correct, as the organization will fall short in effectively monitoring the usage of what is relevant and finding ways of managing resources better, thus optimizing opportunities and saving money.

### **5.5.3 Gaps hindering the usefulness of performance measures for managers**

If the performance measures fail to monitor progress properly, not only will they fail in resource management, but they will also fail to inform the managers of what is important, or what the effects of the FSPs are on the beneficiaries. Without this information, managers will make uninformed decisions, risk a lot of things and also not be able to utilize opportunities well. Therefore, this gap will not be beneficial and useful in allowing managers to make the correct decisions regarding the programs. If the performance measures cannot be informative and provide the manager with relevant information, it will be difficult for the ELM to improve its FSPs. The municipality needs to ensure that the monitoring system they choose to implement is able to provide lucrative information that will allow managers to gain better knowledge and information that will assist them in making informed and opportunistic decisions that will ultimately also assist them to better manage the available resources.

### **5.5.4 Gaps hindering the usefulness of performance measures for clients and employees**

When managers fail to acquire specific, relevant and useful information regarding what happens during the implementation of FSPs, the employees will also fail to measure the performance measures in a SMART manner. This means that employees, as with the managers, will be unclear on what is useful in the FSPs' performance measures.

These performance measures will not provide specific (S) information to employees and the clients about the FSPs during the implementation. Therefore, there will be variables and aspects that will not be measureable (M) with regard to the FSP, resulting in targets not being achieved (A) in a timely (T) manner. This will have unsatisfactory consequences, which will ultimately have a negative effect on the clients (in this case the community). Whatever the managers and employees fail to achieve will have adverse consequences for the clients and in this case, the FSPs will fail to alleviate food insecurity within the ELM households.

Interviewee 4 indicated that there is no direct target the FSPs aim to reach, but rather indirect results (objectives) are desired, to alleviate food insecurity and poverty. The researcher finds these objectives "vague" as the lack of a direct target open a sizeable gap, because after measuring the results one cannot say whether or not the target was achieved (A), because alleviating food insecurity entirely cannot be achieved through the implementation of the FSPs alone. Many more programs, time and resources from the government, NGOs,

community members and other stakeholders are needed. Thus, the objective of the FSPs to alleviate food insecurity and poverty is not achievable through simple FSPs. Employees must have a direct target to aim for and performance measures and efforts must strive to achieve that target. Achieving a set outcome will result in employees being beneficial for providing useful FSPs to needy households.

#### **5.5.5 Gaps hindering the usefulness of the organization**

When the performance measures cannot provide useful information to the managers, employees and clients, then the whole organization will not be useful in eradicating food insecurity or achieving its intended goals. All the shortcomings identified within the performance measures of the ELM automatically open gaps for the management and staff to ultimately reach organizational objectives, as organizational objectives all depend on the usefulness of the other 4 aspects being realized.

Another shortcoming that will affect the usefulness of performance measures towards improving the organization and FSPs is that the performance measures implemented within the ELM do not measure food stability, which is an important element in measuring food security. Therefore, the measures that are implemented cannot and will not be able to entirely eliminate food insecurity until all the vital elements of food insecurity are addressed simultaneously.

In conclusion of this section, in order to improve all the above gaps, all five aspects of the usefulness of the performance measures must be implemented to function as a unit simultaneously, as indirectly and directly these aspects influence one another. If they can be implemented as a unit they can promote effective and improved performance measurement of FSPs. Through effective and useful performance measures, the ELM will be enabled to realize SMART qualities. In order for the ELM to improve its performance measurement system to become effective, it must incorporate food stability as an important and equal aspect of measuring food security.

The following table is the researcher's analysis of the performance measures used within the ELM on FSPs. Thematic coding assisted the researcher to classify and analyze information in a story-line, according to the information obtained from the interviews conducted within the ELM.

**Table 5.7: Thematic coding – assessment of FSP performance measures within the ELM**

THEME CATEGORY	SUB-CATEGORIES	
<b>1.Information</b>	1. Usefulness  2. Lead to more information  3. Accurate  4. Relevant	a. Detailed b. Lucrative  a. Clear b. Assess elements
<b>2. Measureable effects of the program</b>	1. Change  2. Impact  3. Results	a. To beneficiary's livelihood b. To organizational achievement  a. On insecurity status of households b. Of the program on the organization c. Of the program on the entire organization  a. Program targets, goals and objectives
<b>3.Budget control</b>	1. Budget target  2. Limited funds  3. Wasteful expenditure  4. Unforeseen costs	a. Estimated funds  a. Available funds b. Available resources  a. Unaccounted costs b. Fruitless expenditure c. Unnecessary cost
<b>4.Performance measurement Elements</b>	1. Food insecurity	a. Vulnerability b. Hunger experiences

THEME CATEGORY	SUB-CATEGORIES	
	2. Food affordability	a. Income and expenses b. Budget control c. Basic needs
	3. Food utilization	a. Dietary requirements b. Healthy food c. Sustainable food d. Clean water and food
	4. Food access	a. Food availability
<b>5. Monitoring and recording</b>	1. Interviews	a. Time to time interviews to monitor: <ul style="list-style-type: none"> <li>• Hunger index (levels)</li> <li>• Income and expenses of household</li> <li>• Dietary levels</li> </ul>
	2. Analysis of data	a. Analysis of program impact on: <ul style="list-style-type: none"> <li>• Program's goals</li> <li>• Livelihood of beneficiaries</li> <li>• Quality of services</li> <li>• Customer satisfaction</li> <li>• Organizational objectives</li> <li>• Target goals</li> </ul>
	3. Data recording	a. Data captured into the system for reporting
<b>6. Reporting</b>	1. Staff meetings	a. Weekly b. Monthly c. Quarterly



THEME CATEGORY	SUB-CATEGORIES	
	2. Progress report	a. Report progress on: <ul style="list-style-type: none"> <li>• Budget control</li> <li>• Time-frame</li> <li>• Achieved targets against anticipated objectives</li> </ul>
<b>7.Evaluation</b>	1. Comparison	a. Achieved program statistics/results b. Budget assessment and evaluation c. Anticipated results
	2. Provide detailed SWOT analysis	a. On beneficiaries b. On organization c. On staff d. On resource management
<b>8. Benefits of performance measures</b>	3. Improved time-management	a. Differences within the households = before and after program implementation b. Coping strategies c. Vulnerability
	4. Improved quality services	a. Indicators for: <ul style="list-style-type: none"> <li>• Food insecurity</li> <li>• Food access</li> <li>• Food utilization</li> <li>• Food affordability</li> <li>• effectiveness of performance measures</li> <li>• All these elements are important in achieving total food security.</li> </ul>
	1. Lead to more information	a. Managing risks, hazards and threats in time b. Help optimize opportunities and strengths c. Help manage weaknesses

THEME CATEGORY	SUB-CATEGORIES	
	2. Accurate	a. Keep to the right time frame
	5. Relevant	a. Customer satisfaction b. Meeting targets

## 5.6 SUMMARY

The responses from the interviews indicated that the performance measures established within the ELM provide the employees and managers with lucrative information that allows them to assess the impact the FSPs have on the people and if these performance measures are able to provide relevant and required performance measures. The ELM performance measures are not able to effectively track the progress of FSPs towards set objectives, as these programs are not monitored during the implementation phase and evaluators are therefore unable to acquire crucial information. Managers and staff are not able identify opportunities for improvement and this opens up gaps and loopholes within the performance measurement system of the ELM, all resulting in the ineffectiveness of the performance measures.

Measuring household food security requires performance measures to measure 4 important elements: food affordability, food accessibility, food utilization and food stability. The literature that was reviewed indicated that the failure of performance measures to measure all 4 elements simultaneously ultimately means that the performance measures are ineffective. The performance measures within the ELM do not measure all 4 of the elements that are vital for measuring food security and its FSPs, as the element of food stability was not evident throughout the interviews. Food stability is an important element and the failure of the ELM to measure and incorporate it in its performance measures has led to the ineffectiveness of its performance measures by presenting inadequate and unreliable information.

It is the researcher's opinion that the ELM needs to revise their performance measurement policies and systems in a manner that meets external standards. Through this initiative, the organization will be able to improve service delivery, performance measures and the assessment of their programs. The analysis of the interview responses indicates that the performance measures used within the ELM for assessing FSPs is ineffective and inconsistent

with what constitutes food security measures as discussed in Chapter 3 of this research study. These performance measures also fall short of the vital aspects and qualities important in what constitutes effective and useful performance measures, as discussed in Chapter 2 of this research study. Nonetheless, it is important to remember that measuring food security remains a sizeable challenge, not only for the South African Government but also for the entire global village. More research is called for in an attempt to come up with performance measures that can assess food security and its programs effectively.

## **CHAPTER SIX**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **6.1 INTRODUCTION**

This chapter summarizes the research study. The researcher begins with an overview of the chapters, followed by the realization of the research objectives as stated in Chapter 1. The researcher then provides recommendations on how the performance measures implemented to assess FSPs within the ELM can be improved, and then concludes the study.

#### **6.2 OVERVIEW OF CHAPTERS**

This research study comprised six chapters, divided as follows:

##### **6.2.1 Chapter One: Background and orientation**

This chapter introduced the reader to the research study by discussing the orientation and background of the problem statement, the research questions and objectives, the research methodology the study followed and the ethical considerations taken into account in collecting the data.

##### **6.2.2 Chapter Two: Conceptual and theoretical analysis of performance measurement**

This chapter provided the conceptualization and understanding of an effective performance measurement system. It presented a theoretical framework on the usefulness and qualities that an effective performance measurement in its entirety constitutes. The chapter ended by discussing the effects of good and bad performance measures. In a nutshell, Chapter 2 emphasized the importance of performance measures and why it is critical that every institution/organization or company establishes a good performance measurement as a foundation for the success of all its projects, programs, initiatives and activities.

##### **6.2.3 Chapter Three: Theoretical framework for measuring food security**

This chapter focused on the performance measures of food security and measuring its programs. It began by explaining what food security measurement should entail, constitute and focus upon. It discussed the elements and features that food security performance

measures should include and constitute in order to be effective, useful and informative. Global and South African attempts at measuring food security and its programs were reviewed, indicating that although there are globally accepted indicators called known as 4<sup>th</sup> generation indicators, there is no standardized performance measurement system for measuring food security effectively on both platforms, raising questions on the current information regarding food security measurement systems as a whole. This chapter ended with a discussion of the challenges and limitations associated with measuring food security and its programs. It mentioned previous recommendations for improving and establishing food security measures.

#### **6.2.4 Chapter Four: Research Methodology**

This chapter provided an overview of the research methodology and research instruments used in collecting and analyzing the data presented in the empirical study. The research methodology followed a qualitative approach. The chapter discusses the target population and data sampling, data recording and data analysis and ended with the ethical aspects followed in obtaining the data.

#### **6.2.5 Chapter 5: Presentation of results and discussion on the effectiveness of performance measures on food security programs within the ELM**

The findings of the research are based on the analysis of the data that were collected through literature reviewed and interviews conducted within the ELM to assess the effectiveness of performance measures. Data were analyzed and presented in this chapter. The research summarized the important aspects of the theoretical findings in Chapters 2 and 3. The empirical findings were presented and discussed. This chapter aimed at discussing all the relevant information obtained and established during the investigation. The researcher assessed whether or not performance measures are effective in measuring the performance of FSPs within the region.

#### **6.2.6 Chapter 6: Conclusions and Recommendations**

The researcher concluded the study, paying close attention to the realization of objectives and providing recommendations for improving the FSP performance measures within the ELM.

## **6.3 REALIZATION OF OBJECTIVES**

### **6.3.1 Primary Objective**

*Objective 1: To review the effectiveness of the performance measures of FSPS within the ELM in light of the persisting food insecurity in the region.*

Performance measures established within the ELM are useful and efficient to a certain extent, but the absence of critical performance measurement qualities, elements and criteria creates gaps in the overall effectiveness of FSPs and as a result, the ELM cannot be effective in measuring and improving the household food security levels in the region. The researcher therefore concludes that the measures used within the ELM are ineffective in assessing the performance of its FSPs and therefore needs to be revised, improved and properly coordinated in a manner that will be useful for the organization, provide informative information and most importantly, be able to create and identify opportunities that will improve not just the FSPs, but the municipality (region) as a whole.

### **6.3.2 Secondary Objectives**

*Objective 2: To establish the importance of performance measurement in light of food security programs*

Performance measurement in its entirety is critically important in every organization, as it increases the overall performance, success and capacity of the organization towards reaching its maximum potential and ability, as well as optimizing all the opportunities that the organization encounters. It was established that a good performance measurement system is useful for realizing the organizational objectives, implementing an effective monitoring and evaluation system, in the way the managers control, manage and make decisions within organizations, in simplifying and clarifying programs and objectives and individual responsibilities for the employees so that organizational objectives can be accomplished and evaluated in a clear manner and lastly, a good performance measurement is useful in assisting the organization to manage, improve and allocate its resources in an effective, efficient, resourceful, productive and quality manner. After the empirical study had been completed, it was clear that the performance measures used within the ELM do not have an effective monitoring and evaluation system, resulting in a weak resource management system. This creates gaps and ineffectiveness in the implementation and assessment of FSPs.

It was also established that performance measures should be SMART (Specific, Measureable, Achievable, Relevant and Timely). Performance measures used within the ELM have proved to be measureable, relevant and timely (to a certain extent), but not specific to what the organization aims to achieve through FSPs, therefore leading to targets being unachievable.

Measuring food security is important, as it broadens our awareness of food insecurity, the causes and effects that food insecurity has on the people and the government. South Africa still has no specific, effective and standardized measures for measuring food security and its programs. It is important to note that the global village has not yet found effective food security measures. There is therefore a global need for effective performance measures of food security and its programs. This means that more research has to be conducted into finding appropriate and equally effective performance measures of food security and FSPs. This information could assist the researchers, policy-makers and government to obtain good quality information that could assist to find standardized and effective measures to assess improve and evaluate food security and its programs.

*Objective 3: To review the elements that should be measured by performance measures in food security programs in the Emfuleni Local Municipality*

The globally accepted definition of food security is a pillar of what food security constitutes and therefore pays attention to 4 key elements that affect food security at all levels. These elements are food availability, food access, food stability and food utilization. The performance measures used within the ELM to measure FSPs have three out of four elements in their performance measurement system of food security programs, food availability/access, food affordability and food utilization. Therefore, food stability as a key element of measuring food security should be given attention, as its absence opens up a gap in the performance of FSPs, resulting in the ineffectiveness of the entire measurement system.

*Objective 4: To compare the performance measurements of the ELM regarding FSPs with the effective performance measurement criteria of the Department of Trade and Industry UK (2013) [i.e. (1) “clear identification and tracking of progress against goals, (2) identification of opportunities for improvement, and (3) comparison of performance against internal and external standards”]:*

- (1) An analysis was performed to review the ELM’s performance measurement system’s ability to identify and track the progress of the FSPs towards achieving the desired

objectives. The ELM's performance measures were found to fall short and are ineffective in identifying and tracking the progress made towards achieving goals.

- (2) An analysis was performed to determine if the performance measures used within the ELM are able to identify opportunities that will improve the FSPs and the organization as a whole. The ELM's performance measurement system was found to be lacking in terms of providing the managers with information and opportunities to be utilized. As the ELM's monitoring system is ineffective in providing specific information, this limits its ability to create opportunities and as a result, the pursuit of opportunities is constrained by the "limited budget received".
- (3) A comparison was made between the performance measurement standards of all internal programs within the ELM and the performance measurement standards of the external FSPs. Although the researcher could not acquire visible proof, the interviewees within the ELM revealed that every program has its own performance measures, which are based on the objective and targets of the particular problem and the standards of each internal program differ accordingly. The researcher found that the standards of the performance measures used within the ELM fall short of the standards of the external FSPs, mainly because the ELM's FSP performance measures do not embrace a vital element of food security measurement, namely food stability.

*Objective 5: To present an analysis on how effective performance measurements of FSPs can be improved within the ELM*

An analysis of the shortcomings/gaps in the performance measurement system used within this municipality was performed (by the researcher), highlighting ways in which these shortcomings can be improved in a productive way that will result in the effectiveness and improvement of FSPs. The researcher used the structure of the "usefulness of the performance measures" (as discussed in Chapter 2 of this research), to display the hindrance these gaps cause to the usefulness of performance measures. The ELM may incorporate these suggestions into its PMS to improve the usefulness of its performance measures in a manner that will stimulate effective FSPs and increase the chances of the municipality achieving its desired results.



## **6.4 RECOMMENDATIONS**

- (1) First and foremost, the ELM needs to collaborate with the stakeholders and other government structures within its region, to formulate, implement and evaluate the FSPs within its jurisdiction, so that more is done to provide these basic services to the community. This will minimise food insecurity within this region and more households will be assisted.
- (2) The ELM must play a more visible and active role in ensuring that the services and FSPs provided to the households are effective.
- (3) Measuring food security is not just an ELM challenge but a national and a global challenge; therefore the South African Government needs to find effective, efficient, adequate measures for measuring food security and its programs as soon as possible and not wait for the 'developed countries and facilitator's such as the FAO to develop such measures. Through their own efforts, municipalities will have efficient and reliable measures to adapt. The lack of relevant and reliable performance measures challenges the efforts to ensure the implementation of effective FSPs to address the relevant elements of food security.
- (4) The ELM policymakers need to implement a monitoring system that will allow informative feedback that presents a clear SWOT analysis, to improve the organization's service delivery. This monitoring system must assess the FSPs and performance measures before, during and after the implementation of the FSP's. The performance measurement system must constitute the relevant and important qualities, elements and features associated with both effective performance measurement and the measurement of food security.
- (5) A better monitoring system is needed to ensure thorough research of the community is conducted in an efficient manner. More researchers and fieldworkers need to be employed within the ELM (with regards to FSPs), with the aim of monitoring the impact these programs have on the lives of the beneficiaries. This should be conducted in a manner that promotes effective performance measurement and enables managers to identify areas of potential development that will benefit not only the municipality but the community and other stakeholders as a unit.

- (6) The ELM needs to monitor programs more frequently, especially through the implementation phase. Failure to monitor the direct impact the FSPs have on the beneficiaries eventually results in the municipality's failure to obtain important information that can help it to identify opportunities and risks and better resource utilization methods. This also creates a gap in the overall performance measurement of the municipality, which serves as a threat to achieving desired results.
- (7) The ELM needs to establish clear criteria in their PMS, rather than relying on the statistics their budget allows. FSPs should be established to challenge and provide the four key elements (food availability, food affordability, food utilization and food stability) constituted in the globally accept definition of performance measurement. It is crucially important that the elements essential for measuring food security must be united and given equal importance to work simultaneously in measuring the performance of the food security programs. Through these elements, performance measures can be improved to work in a more effective and efficient manner and food security can be sustained.
- (8) Policy makers within the ELM should re-evaluate the municipality's policies by establishing them in a manner that promotes equality, fairness and efficiency, bearing in mind the composition of the families, as well as the differences in their health conditions, geographical area and so forth.
- (9) The ELM must ensure that its performance measurement system is SMART. This will increase accountability, transparency and the effectiveness of their performance measurement system, lessening corruption, wasteful and fruitless expenditure and other maladministration and promoting a performance measurement system that will help the ELM (and other stakeholder's within the municipality) better identify and maximize its opportunities and improve service provision.
- (10) The ELM should implement useful performance measurement with a clear monitoring system and detailed resource management systems.
- (11) The ELM needs to implement a wide range of indicators, which will work simultaneously as a unit of measuring various combinations of food performances, experiences and illnesses the households identifies due to food insecurity. These

indicators must not only measure those that are food insecure, but also serve as a warning for those in dangers of becoming food insecure.

- (12) Although managers hold that their standards are independent and cohesive within their budgetary constraints, the researcher believes that the performance measurement system should frequently be compared to their internal and external standards. Government at the national level needs to conduct more research into establishing a standardized performance measurement system that all their local offices will use as a monitoring and evaluation instrument.
- (13) The ELM needs a disaster management plan that will assist them to provide better services instead of delegating, and should they need to delegate, that this plan must ensure that they play an assisting role in ensuring that FSPs use the correct performance measurement that produces relevant and reliable.
- (14) Workshops are needed to educate all FSP workers and beneficiaries about the programs and service delivery in its entirety, including the PMS, as a number of the employees were unable to answer questions.
- (15) The ELM should focus beyond the allocated budget and initiate things like agricultural opportunities where they can grow and provide food to the struggling households from their own backyard. This will also create employment for the households who does not have jobs, resulting in increased food access and a lessening of the number of dependents upon the government.
- (16) Effective performance measurement needs the collaboration of the government and community. The government needs to host community workshops where they educate the community on the way in which to efficiently utilize food, self-access to additional nutritional food, use money in an efficient manner to afford basic food and most importantly educate these beneficiaries on the importance of striving for a nutritional and healthy lifestyle. This will benefit the entire ELM community and households will play an active role in improving their own lifestyles.

## **6.5 CONCLUSIONS**

For any program, project or initiative to be successful, an effective performance measurement system must be established by the organization/company or institution. The performance measurement system implemented by the government to monitor FSPs must be efficient and encompass all the relevant, important and accurate elements that are SMART, usable and most importantly, effective.

Food security is the government's responsibility, which constitutes that the government must assist all food insecure households with food assistance. Municipalities, as the sphere of government that deals with public participation, are obliged to provide these services on behalf of the government. Research has revealed that performance measures on FSPs established within the ELM have numerous loopholes and inconsistencies compared with the internationally accepted standards, qualities and elements of importance.

The performance measures implemented within the ELM lack proper monitoring to track the progress of FSPs effectively against set objectives. This leads to the ELM being unable to identify opportunities for improvement. This has resulted in limited growth and ineffectiveness of the FSPs. The ELM has to improve its performance measurement system and function in a collaborate manner.

Measuring household food security is a global concern and scholars and researchers are still searching for performance measures that will appropriately and accurately measure household food security and associated programs. It has been agreed upon by many scholars that measuring performance measures must constitute and directly measure the 4 key elements found in the FAO's definition of food security. These elements are: food accessibility/availability, food affordability, food utilization and food stability.

The performance measures and FSPs implemented within the ELM must implement and address food stability as a vital element of food security. Failure to incorporate this element in its PMS will result in the overall failure of the municipality to alleviate food insecurity and measure its FSPs appropriately in a manner that will provide managers with lucrative and relevant information.

This research allows the conclusion that the ELM should work with all the stakeholders within its jurisdiction to re-work their performance measures of the FSPs and amalgamate

these into their programs with all the necessary elements that meet the international criteria of performance measures for measuring FSPs. Through all the data reviewed and analyzed, the researcher came to the conclusion that the performance measures used within the ELM are ineffective and therefore need to be revised, reworked and implemented in a better and more effective manner.

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## ANNEXURE 1: GATEKEEPERS LETTER - APPROVAL LETTER FROM THE ELM TO THE RESEARCHER



Office of the Deputy Municipal Manager:  
Corporate Services  
Training And Development

Tel: +27 16 440-7742/3  
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E-mail:

P.O. Box 3

Vanderbijlpark, 1900

Web: [www.emfuleni.gov.za](http://www.emfuleni.gov.za)

Date: 01 September 2017

Ref: J.S. Roets

File: 10/11/1

To whom it may concern

**RE: Confirmation of Research Approval viz. Ms. CB Motsitsi**

This serves to confirm that Ms. CB Motsitsi sought and was granted permission by Emfuleni Local Municipality (ELM) to conduct an in-depth research titled "Assessing the effectiveness of performance measures of food security programs at Emfuleni Local Municipality."

ELM is granting research access to its premises and relevant Department(s) to Ms. CB Motsitsi and her associates for that purpose only. This research access will terminate immediately upon the completion of the research period as stipulated.

Ms. CB Motsitsi will also abide by the rules and regulations that govern all ELM employees whilst on the premises. This includes any confidentiality obligations that may be required to be observed in publication of the (MA) dissertation.

Breach of any such prescripts will result in immediate termination of the research access and any concomitant mitigating steps may be taken where necessary.

ELM would also welcome a copy of the completed dissertation as a *quid pro quo* if possible.

ELM wishes Ms. CB Motsitsi well in her research endeavor.

~~pproved/Not Approved~~

Acting HR Manager  
Mr. S Roets

**01/09/2017**

DATE

## **ANNEXURE 2: CONSENT LETTER FOR MANAGERS AND STAFF (RESEARCH PARTICIPANTS) WITHIN THE ELM**

- 1. TITLE OF THE RESEARCH:** Assessing the effectiveness of performances measures for food security programs within the Emfuleni Local Municipality
- 2. RESEARCHER:** Constance Motsisti
- 3. AIM-** You are being invited to take part in a research under the title: : Assessing the effectiveness of performances measures for food security programs in the Emfuleni Local Municipality

### **4. WHAT IS THIS RESEARCH STUDY ALL ABOUT?**

The research is part of a master's degree study at the North West University. The aim of the study is to investigate the performance measures used to asses food security programs at the Emfuleni Local Municipality. The objectives of this study are:

1. Investigate performance measures implemented at the Emfuleni Local Municipality;
2. Determine the effectiveness of these measures;
3. Establish if these measures are effective in measuring food insecurity;
4. Investigate how many food insecurity programs have been implemented by Emfuleni Local Municipality;
5. Investigate how these measures are assessed.

### **5. WHY HAVE YOU BEEN INVITED TO PARTICIPATE?**

This study seeks to find out more about the performance measures implemented by Emfuleni Local Municipality. in order to do so, the researcher needs to interview the beneficiaries, implementers and project managers of the programs in order to determine if these measures are effective or not.

### **6. WHAT WILL BE YOUR RESPONSIBILITY?**

Your role is to share your experiences, thoughts, and views about the performance measures used in evaluating the food security programs based on your experience in response to the questions asked.

**7. ARE THERE RISKS INVOLVED IN YOUR TAKING PART IN THIS RESEARCH AND HOW WILL THESE BE MANAGED?**

There are no risks in this study. All discussions will be confidential and will not be discussed outside the research discussion environment. No people's names will be used or linked to the responses.

**8. WHAT WILL HAPPEN TO THE DATA?**

The names of the participants will be kept confidential. The information analyzed will form part of a master's research dissertation that will be submitted to North West University. The information acquired will also be shared with ELM management.

**9. WILL YOU BE PAID TO TAKE PART IN THIS STUDY AND ARE THERE ANY COSTS INVOLVED?**

You will not be paid to take part in the study. There will be no costs involved.

**10. HOW WILL YOU KNOW ABOUT THE FINDINGS?**

The general findings of the research will be shared with you through the North West University after the study.

**11. IS THERE ANYTHING ELSE THAT YOU SHOULD KNOW OR DO?**

You can contact: Constance B. Motsitsi (E-mail: brendamotsitsi@yahoo.co.za)

**12. DECLARATION BY PARTICIPANT**

By participating after the research has been explained to you or signing below, you are agreeing on your own behalf to take part in the research study: Assessing the effectiveness of performances measures for food security programs in the Emfuleni Local Municipality

I declare that:

- I have understood this information and consent form and it is written in a language with which I am comfortable.
- I have had a chance to ask questions to both the person obtaining consent, and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurized to take part.

- I understand that what I contribute could be reproduced publically and/or quoted, but without reference to my personal identity.
- I may choose to leave the study at any time and will not be penalized or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) ..... On (*date*) ..... 20.....

.....

.....

**Signature of participant**

**Signature of witness**

The best way to reach me is:

Name & Surname: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Cell Phone Number: \_\_\_\_\_

### **Declaration by person obtaining consent**

I (*name*) ..... declare that:

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter.

Signed at (*place*) ..... On (*date*) ..... 20.....

.....

**Signature of person obtaining consent**

.....

**Signature of witness**

---

### **Declaration by researcher**

I (*name*) ..... declare that:

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use a interpreter.

Signed at (*place*) ..... On (*date*) ..... 20....

.....

**Signature of researcher**

.....

**Signature of witness**

### **ANNEXURE 3: CONSENT LETTER FOR BENEFICIARY PARTICIPANTS**

**1. TITLE OF THE RESEARCH:** Assessing the effectiveness of performances measures for food security programs in the Emfuleni Local Municipality

**2. RESEARCHER:** Constance B Motsisti

**3.** You are being invited to take part in a research under the title: Assessing the effectiveness of performances measures for food security programs in the Emfuleni Local Municipality. This study aims to evaluate if the ELM has measures in place monitoring and evaluating if the services they are delivery to the people are effective or not. The researcher aims to assess these measures and provide suggestions and recommendations on better performance measures, thus resulting in better service delivery for the community and beneficiaries of these programs.

**4. WHAT IS THIS RESEARCH STUDY ALL ABOUT?**

The research is part of a master's degree study at the North West University. The aim of the study is to investigate the performance measures used to asses food security programs (FSP) at the Emfuleni Local Municipality (ELM). The objectives of this study are:

- Assess performance measures the ELM uses in evaluating FSP;
- Assess the evaluation and monitoring of these performance measures
- Determine the effectiveness of these measures;
- To find ways in which the provision of FPS can be improved through the assessment of performance measures.

**5. WHY HAVE YOU BEEN INVITED TO PARTICIPATE?**

The researcher aims to find out from the beneficiaries if the FSP are beneficial to them, how they assessed, and how often does ELM review and evaluate their status. Through this information, the researcher aims to assess the performance measures of the FSPs.

**6. WHY HAVE YOU BEEN INVITED TO PARTICIPATE?**

The researcher aims to find out from the beneficiaries if the FSP are beneficial to them, how they assessed, and how often does ELM review and evaluate their status. Through this information, the researcher aims to assess the performance measures of the FSPs.

**7. WHAT WILL BE YOUR RESPONSIBILITY?**

Your role is to share your experiences, thoughts, and views about the performance measures used in evaluating the food security programs. This includes how frequent are your household food security status evaluated, how has the programs helped your household become more food secure and what are the suggestions you may have, that you believe that might help not on improve the FSP, and the overall management of how the ELM can better monitor and evaluate the progress and performance of service delivery in terms of FSP.

**8. ARE THERE RISKS INVOLVED IN YOUR TAKING PART IN THIS RESEARCH AND HOW WILL THESE BE MANAGED?**

There are no risks in this study. All discussions will be confidential and will not be discussed with anyone after the interview has been conducted. No names will be used or linked to the responses.

**9. WHAT WILL HAPPEN TO THE DATA?**

The names of the participants will be kept confidential. The information analyzed will form part of a master's research dissertation that will be submitted to North West University.

**10. WILL YOU BE PAID TO TAKE PART IN THIS STUDY AND ARE THERE ANY COSTS INVOLVED?**

You will not be paid to take part in the study. There will be no costs involved.

**11. HOW WILL YOU KNOW ABOUT THE FINDINGS?**

The general findings of the research will be shared with ELM management. Anyone who wishes to find out more about the results may get this information from the ELM management offices, through the permission of the gatekeeper.

**12. IS THERE ANYTHING ELSE THAT YOU SHOULD KNOW OR DO?**

You can contact: Constance B. Motsitsi (E-mail: brendamotsitsi@yahoo.co.za)

**Declaration by participant**

By participating after the research has been explained to you or signing below, you are agreeing on your own behalf to take part in the research study: Assessing the effectiveness of performances measures for food security programs in the Emfuleni Local Municipality



I declare that:

- I have understood this information and consent form and it is written in a language with which I am comfortable.
- I have had a chance to ask questions regarding my consent, and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurized to take part.
- I understand that what I contribute could be reproduced publically and/or quoted, but without reference to my personal identity.
- I may choose to leave the study at any time and will not be penalized or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests.

Signed at (*place*) ..... On (*date*) ..... 2017

**Signature of participant      Signature of witness.....**

The best way to reach me is:

Name & Surname: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Cell Phone Number: \_\_\_\_\_

**Declaration by person obtaining consent**

I (*name*) ..... declare that:

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter.

Signed at (*place*) ..... On (*date*) ..... 2017

**Signature of person obtaining consent**      **Signature of witness.....**

**Declaration by researcher**

I (*name*) ..... declare that:

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter.

Signed at (*place*) ..... On (*date*) ..... 2017

**Signature of researcher**

**Signature of witness**

## **ANNEXURE 4: QUESTIONNAIRE SAMPLE FOR ALL PARTICIPANTS**

Please note that these questions were the founding questions to the interviews, but the researcher was not limited to this sample. The questions were justified and asked deftly according the responses of the respondents. This was done to obtain facts, insight and thoughts of the respondents.

### **1. Questionnaire sample for FSP Managers**

1. What FSP performance measures does the ELM use to determine the effectiveness of performance measures on FSP's (how do you know if you have reached your target? how do you know you have done everything you need to do in an FSP?)?
2. What are the indicators of measuring the effectiveness the performance measures of FSPs? What is your monitoring framework for service delivery? What is your reporting framework?
3. What are your performance measures implemented to measure in FSPs
4. Which elements do your performance measures indicate? (Meant to measure?
5. How do you use your performance measures (your monitoring and evaluation systems) to identify and track progress against the goals of the FSPs?
6. How do you use your performance measurement systems to identify opportunities for FSPs improvements within the ELM?
7. How do the FSP performance measures in ELM compare against the standards of other internal programs?

### **2. Questionnaire sample for FSP staff officials**

1. Which programs has the ELM implemented in addressing the persisting problem of food insecurity within this region?
2. How these FSP assessed for effectiveness?
3. How do you know if you have reached your target? How do you know you have done everything you need to do in an FSP?
4. Which constraints do you face in the implementation of these FSPs?

5. Which performance measures do you use to assess FSPs?
6. How do you use the performance measures to monitor FSPs?
7. Do you ever compare the standards you are using to measures FSPs, against external standards

### **3. Questionnaire sample for FSP household beneficiaries**

1. How often is the performance and progress of FSP's measured (How often is your living conditions monitored?)
2. Are you informed when evaluations on FSP takes place?
3. What do you benefit most from these services?
4. Are these FSPs able to provide food security and stability within your household?
5. How satisfied are you with the FSP services you are receiving from the ELM based on what they promised they would do for you?
6. Are there issues that have not been addressed by the ELM that you feel should have been addressed as promised in concern with FSP's?
7. In your own view, would you say that the ELM is effective and efficient in the overall evaluation and assessment of measuring the performance of FSP's? And why?

### **4. Follow up Interviews with the FSP managers and official staff members**

These questions were asked to verify the information obtained during the first interviews, and to get more information regarding the FSP performance measures.

1. What is the importance of every FSP performance de measure established to assess FSPs?
2. Which elements are important in measuring these performance measures?
3. From the first interviews, it looks as though programs are monitored only before and after the program is implemented, why are these programs not measured during the implementation?

4. Do you believe that these FSP performance measures are effective in:
  - Identifying and tracking objective?
  - Identifying opportunities for improvement?
  - Comparison to internal and external standards?
5. Are these performance measures useful in improving the overall effectiveness of FSPs? How?
6. Are there any suggestions you may have, that can help the municipality improve FSPs through the implemented performance measures? (Is there an aspect/element you believe should be included in the implemented PMS, which could improve the usefulness of FSPs?)

**FSP staff officials** - The staff officials were asked to deliberate more on the FSPs and their elements. Questions were asked from the information provided

**Managers** - Managers were asked to discuss in detail, the performance measures used assess these FSPs. Questions were asked from the information provided

## **ANNEXURE 5: LETTER FROM THE LANGUAGE EDITOR**



One Stop Solution  
24 Firenze Gardens  
Warbler Road  
Cotswold Ext  
Port Elizabeth  
6045  
[www.onestopsolution.co.za](http://www.onestopsolution.co.za)

### **TO WHOM IT MAY CONCERN**

I, Michele van Niekerk, declare that I have done the language editing for the thesis of:

**C.B. MOTSITSI (23108460)**

entitled:

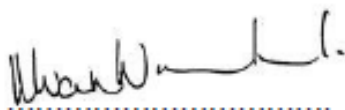
### **ASSESSING THE EFFECTIVENESS OF PERFORMANCE MEASURES ON FOOD SECURITY PROGRAMS WITHIN THE EMFULENI LOCAL MUNICIPALITY**

A research proposal submitted in fulfilment of the requirements for the degree of Masters in Public Management and Governance at the North West University.

I cannot guarantee that the changes that I have suggested have been implemented nor do I take responsibility for any other changes or additions that may have been made subsequently.

Any other queries related to the language and technical editing of this treatise may be directed to me at 076 481 8341.

Signed at Port Elizabeth on 26 March 2018



Mrs M van Niekerk