



**WOLKITE UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**COLLEGE OF BUSINESS AND ECONIMICS**

**DEPARTMENT OF MANAGEMENT**

**ASSESSMENT OF THE EFFECTIVENESS OF BALANCED  
SCORECARD IMPLEMENTATION: THE CASE OF GURAGE  
ZONE SELECTED GOVERNMENT ORGANIZATIONS, ETHIOPIA**

**A Thesis Submitted to the Department of Management, College of Business and  
Economics, School of Graduate Studies, Wolkite University in Partial Fulfillment  
of the Requirements for Degree of Masters of Business Administration**

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## DECLARATION

I, Mohammed Shihur Jijo, declare that this thesis entitled: “Assessment of the Effectiveness of Balanced Scorecard Implementation: The case of Gurage Zone Selected Government Organizations, Ethiopia” is an outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged. To the best of my knowledge, this study has not been submitted for any degree in this University or any other University. It is presented for the partial fulfillment of the Degree of Masters of Business Administration.

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## **DEDICATION**

I dedicate this thesis manuscript to my father Shihure Jijo Mohammed, and my mother Ormege Hamid Ayano, for nursing me with affection and love and for their dedicated partnership in the success of my life.

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## **ACRONYMS/ ABBREVIATIONS**

**ANOVA** Analysis of Variance

**BPR** Business Process Reengineering

**BSC** Balanced Scorecard

**EFQM** European Foundation for Quality Management

**EMI** Ethiopian Management Institute

**EMPA** Ethiopian Management Professionals Association

**GZGOs** Gurage Zone Government Organizations

**GZPS** Gurage Zone Public Service

**PBMS** Performance Based Management Systems

**PSCBI** Public Sector capacity Building Initiatives

**ROPM** Result Oriented Performance Management

**SNNPRS** South Nations, Nationalities and People Regional State

**SPSS** Statistical Package for Social Sciences

**SWOT** Strengths, Weakness, Opportunities and Threats

**VIF** Variance Inflation Factor

## **ABSTRACT**

*Although Balanced Score Card has been adopted by the Government of Ethiopia at all levels of the government structure for some time now, effectiveness of its implementation is not adequately studied empirically. The current study was, thus, conducted to assess the effectiveness of BSC implementation in Gurage Zone selected government organizations. The study employed mixed type of research to achieve intended objectives of the study. Simple random sampling and stratified sampling techniques were used to select 144 respondents from 1052 civil servants in the government offices. The data was gathered through pretested questionnaire and interview. The study used SPSS Version 20 for processing the data. The collected data was analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation presented by using table. Besides, regression and correlation analysis were used to show cause effect relationships. Though the departments made efforts to realize of the effectiveness of BSC Implementation, the findings of the study revealed that they were not at good deal in attaining their intended objectives. To mention few: lack of leadership commitment, absence of continuous training and participation of employees during BSC Planning, lack of awareness in reform concept, no close supervision, no relevant rewarding system, no adequate evaluation and monitoring activities. Here, 57.2 % of the variations in the effectiveness of BSC Implementation were jointly accounted by the nine variables at 5% level of precision. The major finding of this study depicts that BSC Implementation practice is not at good deal in the selected public sectors. Therefore, it is recommended that the departments should focus on strengthening reform team and change agents to achieve the effectiveness of BSC implementation and enhancing communication at every stage of reform implementation. It is also recommended that the top managers to be highly committed towards avoiding taking more time in finalizing reform implementation and putting incentives in place to motivate the best performers. Genuinely speaking, to realize effectiveness of BSC implementation, the departments suggested to employ the implementation practices by incorporating the necessary components of BSC.*

**Key Words:** *Balanced Scorecard, Effectiveness, Implementation, performance measurement, public sector, reform*

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the Study

Nowadays, change has become a widespread phenomenon, even reaching government organizations. Without it nothing can survive in this competitive world. Global change has become among the most pressing issues of the 21st century. It has brought by technological advancement, greater decentralization and social activism. The outcome of these changes is felt by government for better governance through effective service delivery, transparency and accountability. To achieve these, the government either in developing or developed countries undertakes different reforms to improve its core function, specific sector policy, management and organization (World Bank, 2002).

Public Service Reform is among the tools introduced by governments to improve service delivery to their citizens. The purpose public service reform is to improve the effectiveness and performance of the public service and to ensure affordability and sustainable economic and social development. In order to improve its service delivery and performance management system, the government in developing countries has been undertaken different change management tools. Depending on different literatures, there are different change management tools. Some of them are well known and implemented in Ethiopia since 2000. Balanced Scorecard (BSC), Business Process Re-engineering (BPR), Total Quality Management (TQM), Result-Oriented System (ROS), Decentralization and Kaizen are the main ones. BSC, which is among the change management tools, is a strategic planning and management system that used extensively in business and industry, government and non-government organizations to align business activities to the vision and strategy of the organization (Kaplan and Norton, 1992). BSC measures an organization performance via: financial, internal business process, innovation and learning and customer perspective to maximize the efficiency and effectiveness of service delivery (River Bank & Peterson, 2008). However, Kasurinen (2002) identified different types of barriers to change in the BSC implementation process such as lack of time and resources was a potential problem, as not everyone in the organization was willing to invest sufficient time and resources on the BSC project.

The government of Ethiopia has embarked on institutional efforts across layers of government, and the scope of public sector capacity building initiatives (PSCBI). The civil service reform is one of the sub programs of PSCBI aiming to promote the development of an efficient, effective, transparent, accountable, and ethical civil service (The former Ministry of Capacity Building, 2005 as cited in Tewabech, 2016). Among the subprograms activities of the civil service reform, improving the governance of human resource management that is the execution of strategic performance management system is the target area of this study. Thus, as of May 2010 the Balance Scorecard (BSC) performance management system that is a tool for change and strategic management system has been implemented in many public sector organizations in Ethiopia (The former Ministry of Capacity Building, 2013 as cited in Tawwabech, 2016).

Bahiru (2009) described Civil Service reforms in developing countries including Ethiopia seems to have improved the performance of some public institutions by reducing unnecessary work chains, amount of time it takes for users to receive services, and inhibiting the scope of corruption. As a result, the BSC has been introduced in the country over the last eight years. However, Yosef (2011) explains Civil Service reforms impeded by lack of structural set up that is amenable to reforms execution, lack of proper control, absence of clearly defined management system and procedure of effective and efficient utilization of human resource and lack of managerial know how and commitment as well as lack of proper communication on implementation process. Thus, the purpose of the study was to assess the effectiveness of BSC Implementation in Southern, Nations, Nationalities and Peoples Regional State/ SNNPRS/ with reference to Gurage Zone Selected Government Organizations.

## **1.2. Statement of the Problem**

The BSC has evolved over time (Sigalas 2015), and is the most widely used, universally accepted PMM framework (Lueg, 2015). Typically, it contains performance measures from four distinct perspectives, namely, financial, customer, internal business process, and learning and growth to evaluate an entity's performance (Sigalas, 2015; Baird, 2017). The BSC can help organizations to link and align financial and non-financial performance measures with their strategy (Behery et al., 2014), and thereby monitor their performance in line with their strategy and vision (Mehralian et al., 2017).

Business organizations can use the BSC to translate their strategic objectives into a coherent set of performance measures and targets (Moullin, 2017). It enables organizations to link together their performance measures across the different perspectives through strategy maps, which reflect the cause and effect relationships with the view of meeting their strategic goals (Francioli and Cinquini, 2014; Perkins et al., 2014). It can also be deployed for organizational decision making (Hoque, 2014), and for management and organizational change (Pimentel and Major, 2014).

Lueg (2015, p.35) suggests that the BSC provides organizations a comprehensive view of their business model, and helps managers focus on what really matters to the organizations' business model by using a set of suitable measures. However, research showed that implementation of balanced score is not without problems. For instance, Thomson (2008) explain four potentially problematic issues in the application of the Balanced Scorecard. First, they argue that there is often lack of understanding of organizational processes. Second, there is lack of understanding of the alignment between different BSC elements. Third, it is often difficult to measure what the organization intends to measure. Finally, understanding how the organization's strategy is related to the BSC can be difficult. Similarly, Kasurinen (2002) identified different types of barriers to change in the BSC implementation process such as lack of time and resources was a potential problem, as not everyone in the organization was willing to invest sufficient time and resources on the BSC project.

*Supporting this claims, however, evidence from three Austrian academics reported that 8% of 174 companies from German speaking countries decided not to implement a performance measurement system (and a balanced scorecard in particular) because they could not see advantages or 'positive impact' of its implementation (Speckbacher et al., 2003). On the other hand, empirical research undertakings witnessed that proper implementation of balanced score card pays in terms of improved performance and service delivery. In this regard, and Diefenbach Crabtree(2008) and Great banks and Tapp(2007) proved that firms adopted BSC significantly outperform than that did not adopt BSC using different matching criteria. Moreover, different empirical studies indicates that organizations those perform BSC and those do not perform BSC come up with the same result (Neely et al, 2000).*

Therefore, it is difficult to draw conclusive results, of these reforms and their implementations as success in one country may be failure in other countries.

Temam (2011) in his study identifies misunderstanding of reforms concept, lack of adequate training, hiring inexperience consultants, lack of competent and skilled workers and poor communication are major challenges of the implementation process BSC. Tolla and Daniel (2015) examined in their studies the approach remained top down, and level of preparation and support from the consultants is found incompatible with the comprehensiveness and number of organizations looking for support, despite the country's commitment to reform the public sector. They add the training given do not go deep enough to create a shared understanding and technical mastery on the use of BSC tools among the team members.

Like lack of strong management support and adequate resourcing of BSC initiatives, mismatch of BSC organization structure, continuous in-use learning and training, close supervision, evaluation, and monitoring activities, rewarding mechanisms are not treated well in the former studies. Above all, no any study is conducted on effectiveness of Balanced Scorecard implementation in Gurage Zone Government organizations. Thus, the study attempted to assess the effectiveness of BSC implementation Case of Gurage Zone Selected Government Organizations.

### **1.3. Research Questions**

The research tried to address the following basic questions.

1. What does the implementation of BSC in the study area look like?
2. Was the implementation of BSC in the study area effective?
3. What factors affected the effectiveness of implementation of BSC in the study area?
4. What were the benefits of implementing BSC in the selected government organizations?

### **1.4. Objectives of the Study**

#### **1.4.1. General Objective**

The general objective was to assess the effectiveness of BSC implementation in Gurage Zone Government Organizations.

### **1.4.2. Specific Objectives**

The specific objectives of the study were:

1. To assess the status of BSC implementation practices in the study Zone government organization.
2. To examine whether BSC implementation in the study area was effective or not.
3. To investigate factors that affected the effectiveness of BSC implementation in the study area.

### **Null Hypothesis**

The following null hypotheses were tested at 5 percent level of significance. Customary level used when working on significance (Krawthol and Anderson, 2001 cited in Plotts, 2011).

**Ho1:** There was statistically significant correlation between each BSC implementation practices and effectiveness of BSC implementation in the selected public sectors in Gurage Zone

**Ho2:** There was statistically significant effects of each BSC implementation practices on the effectiveness of BSC implementation in the selected public sectors in Gurage Zone

### **1.5. Significance of the Study**

The finding of this study is expected to be important for Gurage Zone Government Organizations to identify their strengths and weaknesses regarding implementation of BSC. Besides, it is expected to be helpful to both public and private organizations dealing with the implementation of BSC to share the practical experiences of the target organizations and identify the possible outcomes of BSC on performance. Moreover, it may be used as a spring board by other researchers to conduct a further study on the area. Above all, it enables the student researcher to acquire basic experience and knowledge about the research.

### **1.6. Scope of the Study**

Thematically, the current study focused on assessment of the effectiveness of BSC implementation and associated factors.

Geographically, the study covered Gurage Zone Government Organizations which comprised of departments and offices at zonal level. The study adopted a cross sectional research design comprising of both descriptive and cause –effect designs to describe the issues at hand and the relationships between the issues. Data was collected from December15- 25 / 2011 E.C.

### **1.7. Limitations of the Study**

In order to make the study more valuable and admirable the researcher applied his full knowledge but the study is not without limitations. Some of these include searching recent references for the study, distributing questionnaire and made focus interviewees at their work place as well as the late training on SPSS were the most difficult work but the researcher did his best to persuade the respondents for the successfulness of the study. Shortage of time, resources and budget were also the constraints of the study.

### **1.8. Definition of Terms**

**Social Sectors-** are sectors established by aiming to achieve social development that provides basic needs to people.

**Political Sectors-** are governance of a sector and the way in which politics and institutions interact with in that sector will in practice have a critical impact on sector policies and services.

**Economic Sectors-** are sectors categorized under their functioning in the economic servicing areas.

**Balanced scorecard** - an integrated system for describing and translating strategy the use of linked performance objectives measures, targets and strategic initiatives in four balanced scorecard perspectives –customer ,internal process financial and learning and growth. It is acts as a measurement system, strategic management system and communication tool.

**Initiatives** –strategic initiatives (often simply referred to as in the scorecard vernacular) are the specific projects, activates or programs you will embark up on in order to meet or exceed your performance targets.

**Lagging Indicators:** it is a performance measures that represent the consequences of actions previously taken. They frequently focus on results at the end of a time period and characterize historical performances. Employee satisfaction is considered as lag indicator.

**Leading Indicators**-these measures are considered the drives of lagging indicators. There is an assumed relationship between the two, which suggests that improved performance in leading indicators will drives better performance in lagging indicators. Lowering absenteeism (leading indicator) is hypothesized to drive improvement in employee satisfaction (lagging indicator)

**Measures** – a standard used to evaluate and communicate performance against expected results. It is normally quantitative in nature which is capturing numbers, dollars percentages and so on. Reporting and monitoring measures helps an organization gauge progress towards effective implementation of strategy.

**Perspectives**- It refers to category of performance objectives or measures in is in balanced scorecard and in most organization choose the four standard perspectives such as; financial, customer, internal process, learning and growth.

**Strategy**- It is situated at the center of balanced scorecard system and it represents the broad priorities adopted by the organization in recognition of its operating environment and pursuit of its mission (Paul R., 2014 cited in Hailemariam, 2016).

## **1.9. Organization of the Thesis**

The rest of the thesis is organized as follows. The second chapter deals with the theoretical and empirical literature coupled with conceptual framework for the study. The third chapter discusses about the methodology of the study comprising of description of the study zone, the research design and approach, data type and sources, study population and sampling procedures as well as data collection methods and procedures, method of data analysis and ethical considerations. The fourth chapter incorporates with the results and discussions of the study. The last chapter, chapter five, deals with the conclusions and recommendations based on the findings of the study.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

Here, in this chapter, the theoretical review, the empirical review and the conceptual framework which were referenced from different articles, journals and other research works as well as different manuals from beginning to end of the study. Thus, the historical foundations of Balanced Scorecard and its framework, benefits of adopting BSC, effectiveness of implementing BSC and the factors affecting effectiveness of BSC implementation treated among others.

#### **2.1 Theoretical Review**

##### **2.1.1 Historical Nature of BSC in Public Sector**

The Balanced Scorecard was developed by Robert Kaplan, an accounting professor at Harvard University, and David Norton, a consultant from the Boston area.

In 1990 Kaplan and Norton led a research study of a dozen companies exploring new methods of performance measurement. The impetus for the study was a growing belief that financial measures of performance were ineffective for the modern business enterprise. The study companies, along with Kaplan and Norton, were convinced that a reliance on financial measures of performance was affecting their ability to create value. The group discussed a number of possible alternatives but settled on the idea of a Scorecard featuring performance measures capturing activities from throughout the organization customer issues, internal business processes, employee activities, and of course, shareholder concerns. Kaplan and Norton labeled the new tool the Balanced Scorecard and later summarized the concept in the first of several Harvard Business Review articles, “The Balanced Scorecard Measures that Drive Performance” (Niven, 2002). Since then a number of organizations adopts the Balanced Scorecard and achieved immediate results. Kaplan and Norton discovered these organizations were not only using the Scorecard to complement financial measures with the drivers of future performance but were also communicating their strategies through the measures they selected for their Balanced Scorecard.

As the Scorecard gained prominence with organizations around the globe as a key tool in strategy implementation, Kaplan and Norton summarized the concept and the learning to that point in their 1996 book, *The Balanced Scorecard* (Niven 2002). Since that time, the Balanced Scorecard has been adopted by over half of all Fortune 1000 organizations. The momentum continues unabated, with companies large, medium, and small taking full advantage of the tool's profound simplicity and unmistakable effectiveness. Once considered the exclusive domain of the for-profit world, the Balanced Scorecard has been translated and effectively implemented in both the nonprofit and public sectors (Niven, 2006). As Kaplan and Norton (1992) describes the name "Balanced Scorecard" reflects the Balance between

- short- term and long-term objectives
- financial and non-financial measures
- lagging and leading indicators
- external and internal performance perspectives.

### **2.1.2. Balanced Scorecard Implementation**

The reason to adopt BSC has been boldly pronounced by various authors. Kaplan and Norton (1996) discuss if we can't measure our processes, we can't manage our processes. If we can't manage our processes, we can't improve our processes. If we can't improve our processes, we can't meet or exceed our customers' expectations. What gets measured gets done. Measurement is core of the BSC. To ensure their survival and growth in this neck-to-neck racing business environment, organizations need to measure their performance from time to time and make the necessary adjustments depending on circumstantial factors. Measuring organizational performance strongly affects the behavior of people from within and outside of an organization. The measurement system employed by the organization needs to be holistic one that is derived from its strategy and capabilities (Kaplan& Norton, 1992 cited in Tilaye, 2010).As Kaplan and Norton (1996) explain the BSC emphasizes those financial and nonfinancial measures must be part of the information system for employees at all levels of the organization. Front-line employees must understand the financial consequences of their decisions and actions; senior executives must understand the drives of long-term financial success.

The objectives and the measures for the BSC are more than just a somewhat ad hoc collection of financial and nonfinancial performance measures; they are derived from a top-down process driven by the mission and strategy of the business unit. The BSC should translate a business unit's mission and strategy into tangible objectives and measures. The BSC is more than a tactical or an operational measurement system. Innovative companies are using the scorecard as a strategic management system, to manage their strategy over their long run. They are using the measurement focus of the scorecard to accomplish critical management processes:

- Clarify and translate vision and strategy
- Communicate and link strategic objectives and measures
- Plan, set targets, and align strategic initiatives
- Enhance strategic feedback and learning

Besides, BSC has its own framework. The following figure depicts the BSC framework proposed by Kaplan and Norton /1996/.

**Figure 1: BSC Framework**



Source: Kaplan and Norton, 1996

The basic premise of the BSC is that financial results alone cannot capture value creating activities. In other words, financial measures are lagging indicators and, as such, are not effective in identifying the drivers or activities that affect financial results. Therefore, Kaplan and Norton (1992) suggest that organizations, while using financial measures, should develop a comprehensive set of additional measures to use as leading indicators or predictors of financial performance. They suggested that measures should be developed that address four perspectives (Charles J. 2013 as cited in Admitu, 2016). Recognizing some of the weaknesses and vagueness of previous management approaches, Kaplan and Norton (1992) as cited in Admitu, 2016) have introduced the BSC approach in 1992. Apart from this, BSC has its own step wise arrangement for proper implementation. The steps are briefly indicated below.

There are nine steps to be considered for proper implementation of BSC. Among the nine steps of BSC proper implementation the first step is Assessment. Assessment involves conducting the organization assessment of the strategic elements: the mission and vision, Strengths, weakness, opportunities and threats (SWOT) and organization values. It also about preparing a change management plan for the organization, which will entail conducting a change readiness review to determine how ready the organization is in embarking on such a journey and what needs to be put in place to make it ready.

In order to implement BSC successfully organizations should have to undertake SWOT analysis, then identify enablers (opportunities and strength) and pains (weakness and threats) and also identify target customers and stakeholders this is done by taking in to account the organization's mission, vision and core values. This will help to provide direction to the organization successes (Makakane, 2007). The second step to proper BSC implementation is strategy. As Rohm, et al. (2013), cited in Masresha, 2015) define strategy as positioning choices made and actions taken to move the organization from its current state to some desirable future state. strategy translate the mission and vision in to programs , products , projects, services and activities that can be acted up on , monitored , measured and evaluated for effectiveness. The strategy steps include: (a) Choosing balanced scorecard perspectives and (b) Choosing high-level strategic themes and results. Taken together, they represent the organization's collective organization –wide —pillars of excellence" (Masresha, 2015). The third step is Objective, which refers to the actual results the organization hopes to achieve.

A strategic objective is used to break strategic themes in to more actionable activities that lead to the strategic results (Rohm, 2008). Besides, strategic objectives are used to translate strategy into measurable and actionable components that can be monitored (Stellar Leadership Ltd. 2013 as cited in Tsion, 2014). As the fourth step, the strategy map has turned out to be as important innovation as the original BSC itself. Executives find the visual representation of strategy both natural and powerful. Strategy maps provide increased granularity for executives to describe and manage strategy at an operational level of detail. A strategy map provides a visual framework for an organization's strategy how it intends to create value. In effect, a strategy map captures the organization's strategy in visual form so that managers can better execute their desired strategy. Strategy maps are built around the structure of these four perspectives. They ensure that the organization's objectives in each of these perspectives are consistent and internally aligned (ISORAITE, 2008). Performance measure, which is the fifth step for proper implementation, is developed for each strategic objectives along with baseline or benchmarking data and clear targets. It is quite important to identify a basket of measures so as to make sure that both qualitative and quantitative results are properly considered. As rule of thumb, the number of measures should be between 2 and 3 (Stellar Leadership Ltd, 2013 as cited in Hailemariam, 2016).

The sixth step in the process is Strategic Initiatives. This is the step where programs and projects that lead to the materialization of the strategic objectives are identified and agreed. The initiatives are vehicles that carry and move the organization towards the strategic objectives and targets (Ibid). Automation involves automating the BSC system, and consists of analyzing software options and user requirements to make the most cost-effective software choice for today and to meet enterprise performance information requirements in the future. It is purposely put as Step 7 on the 9-step framework, to make sure that the proper emphasis is placed on strategic thinking and strategy development before "software seduction" sets in (Makakane, 2007).

Cascading, which is the eighth step, involves cascading the corporate scorecard throughout the organization to business and support units. Then, team and individual scorecards are developed to link day-to-day work with departmental goals and corporate vision. It is the key to organization alignment around strategy. As the scorecard management system is cascaded down through the organization, objectives become more operational and tactical, as do the performance measures.

Accountability follows the objectives and measures, as ownership is defined at each level. An emphasis on results and the strategies needed to produce results is communicated throughout the organization (Ibid). The last step in the proper implementation of BSC is evaluation. It ensures that the strategic planning and management system is dynamic and incorporates continuous improvement into day –to- day operations and management (Rohm, et al., 2013 cited in Hailemariam, 2016). The organization process is similar for all types of organizations, but how often its performed depends on the operating environment and the need for performance information to better inform decision making (Rohm, et al., 2013as cited in Masresha, 2015).

**Figure 2: BSC Nine Step Framework**



Source: The Balanced Scorecard Institute (2016)

### **2.1.3. Benefits of Adopting Balanced Scorecard**

Proper implementation of BSC has several benefits. Different authors identified different benefits. A synthesis of the benefits is presented in the following paragraph. According to Frost (2007) there are at least seven benefits for an enterprise to consider. To begin with, Scorecards drive better performance. The evidence is clear that solid feedback enhances performance at all levels and across all organizational units. When people and groups throughout an enterprise know how they are doing and what needs improving, they do better.

Besides, Scorecards implement strategy. This means they translate strategy into concrete terms and help to track its implementation. Though scorecards also reflect operational issues, they are developed in a way that specifically directs attention to strategy and future direction. What is more, Scorecards ensure to have the right measures. A group of measures implemented without a well-thought-out performance model in mind or, worse yet, imposed from the outside, seldom bring new focus or drive desired actions. Thus, effective performance scorecards are, by nature, consciously and purposefully constructed.

In building one, develop a logical structure that helps everyone know what should be measured, what belongs on the scorecard and what does not belong. Furthermore, they encourage balanced performance. Executing today's work is absolutely crucial, but so is implementing the strategic initiatives that prepare the enterprise for tomorrow. The proper scorecard design keeps the right balance of operational and strategic factors radar screen. Scorecards point out what's missing. Because the scorecard is designed to offer a comprehensive view of how the enterprise is doing and where it's going, the scorecard will help to see if any key factors are missing the gaps stand out. Those who use unstructured measures without an underlying performance model have no way of knowing what may be missing. Scorecards encourage good management. As it is discussed above, they make it possible to readily monitor all the measures in a complex organization. As a result, reviews are more regular and more thorough.

When performance issues stand out on a top-level scorecard, it's possible to "drill down" to layers of data that give further details. The bottom line is that scorecards encourage thorough monitoring and timely corrective actions. Strong scorecards help to tell the full story of performance how the complex variables are being balanced and optimized as a group. This allows presenting a compelling picture of performance that is undistorted by focus on an individual issue (Frost, 2007). Regarding this, Kaplan and Norton (1996) argue that the BSC is a management system (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results. When fully deployed, the BSC transforms strategic planning from an academic exercise into the nerve center of an enterprise.

More specifically, the BSC has brought a revolution into performance measurement as it provides the following benefits: (Kaplan and Norton, 2001; 1996 as cited by Tilaye, 2010).

The BSC is an easy way to understand, design and more formalized process of performance management and linking strategy to performance measures and outcomes (Pandey, 2005). As Brunette (2010), stated many companies are motivated to implement the BSC as it assists the organization in the following ways: a) To promote growth and communicate strategy: As the BSC focuses on long-term strategic outcomes and not only on short-term operational results, it promotes growth. b) Companies use the BSC to provide focus: When measures are aligned to a few Critical strategies, the BSC is used to provide focus on what is important to the company. These are to understand target customers and their requirements and to acknowledge the need to focus on and invest in intellectual capital and intangible assets as these will carry a competitive advantage in the future. c) The BSC performance: Individual and collective results are tracked against targets to correct and improve matters. Furthermore BSC demonstrates where accountability lies. d) A company uses the BSC to align its goals: When one measures what is truly important to success, the measures are linked to and used to support one another in the process alignment occurs across the organization. The BSC enables employees to understand strategy, and to link strategic objectives to their day-to-day operations.

Balanced scorecard system serves three primary purposes (Niven ,2014):

- **Communication:** strategy maps are designed to translate the organization's strategy into action via objectives stitched together through the perspectives.
- **Measurement:** The scorecard was created to alleviate three measurement challenges plaguing modern companies: how to competently gauge the role of intangible assets, balance financial and nonfinancial indicators, and ultimately execute strategy. While strategy maps communicate the strategic destination, scorecard measures (and associated targets) monitor the course, ensuring stay on track.
- **Strategic Management:** Balanced scorecard can be used as the centerpiece of a broader management system, which links it to such crucial management processes as budgeting, compensation, board governance, and risk management. Similarly Mohamed and Busoni (2014), suggested some benefits of implementing the BSC follows. According to them a key advantage of the balanced scorecard is that it puts strategy, structure, and vision at the center of management's focus.

Furthermore, BSC was constructed to tell the story of an organization strategy and to guide its implementation. Balanced scorecard emphasizes an integrated combination of financial and non-financial performance measures. It keeps management focused on the entire business process and helps ensure that actual current operating performance is in line with long-term strategy and customer values. The cause-and-effect linkages of the BSC confine the difficulty and interrelationships of a strategy, facilitating explicit tradeoffs among quality, cost, and access.

According to Balanced Scorecard Institute (2009) the benefits of employing the BSC for strategic planning and management are: a) BSC allows for organizational alignment to build collective and individual accountability from the vision of the company to the desk top of individuals, b) BSC offers improved communication and transparency.

Management can build employee buy-in and offer incentives for desired behavior. Performance information provides a basis for executives and other staff to be evaluated fairly against company standards, and for incentives to be linked to performance.

#### **2.1.4. Effectiveness of BSC Implementation**

The effective implementation of BSC is realized in terms of acceptance by staff and improved finance, improved, internal business processes, improved learning and growth and improved customer service and satisfaction. When created early in the balanced scorecard development process, your BSC vision provides a valuable touchstone going forward providing focus and facilitating quick consensus when critical balanced scorecard decisions are required( Hendricks, et al., 2004).Kaplan and Norton (1996) note that the BSC has the capacity to serve a number of purposes. These include clarifying and gaining consensus about strategy, aligning departmental and personal goals to strategy, linking strategic objectives to long-term targets and annual budgets, identifying and aligning strategic initiatives, and obtaining feedback to learn about and improving strategy (Kaplan and Norton, 1996:19). Additionally, they also note that the BSC enables organizations to focus on all strategic areas within the organization, monitor short-term results from the four perspectives, namely financial, customer, internal business process and learning and growth perspectives, and communicate and implement strategies throughout the organization. It also helps to generate superior financial outcomes due to the inclusion of measures for both tangible and intangibles assets.

Successful BSC organizations make their BSC widely available so that everyone can "make strategy their job." Fully deploying a BSC across an organization helps develop strategic awareness amongst employees. This is important because successful strategy implementation requires the active contribution of every employee as they make decisions in their day to day work - decisions that can either contribute to or take away from the business strategy. Many business leaders voice concern about sharing their business strategy so broadly across the organization. Worries include the disclosure of critical strategic information to competitors. While these are valid concerns, successful BSC organizations know that the benefits of a broad deployment philosophy and in building employee satisfaction and loyalty levels far outweigh the risk of serious information leaks (Pandey, 2005). To support BSC implementation and its ongoing use, successful BSC organizations view communication and education on their business strategy and the balanced scorecard as an important internal marketing campaign. As a result, few of these organizations use only a single mode of communication to do the job. In fact, they use almost every type of communication method available, from general communication modes (e.g. large group meetings and mass distribution e-mails) to those that are very personalized with customized messages (e.g. face to face discussions) to ensure communication success (Pineno,2013).Successful BSC organizations deepen alignment by mirroring their balanced scorecard framework and categories in as many business activities as possible: reward and recognition programs, individual goal plan formats, incentive compensation plan formats, strategic plan categories and format, and almost anything else they can think of! They maximize alignment with the BSC until it becomes so integral to the business that it is automatic and embedded in everyday work (Hendricks etal.,2004).

### **2.1.5. Factors Affecting Effectiveness of BSC Implementation**

To overcome the challenges of implementing BSC and to maximize the benefits of the same, authorities in the area have identified some critical success factors. There are a number of critical factors that should be presented in an organization to ensure the success of the BSC method. The following list should be used as a check and balance before implementing the program and as an ongoing exercise to assist in continuing success (Niven, 2003 cited in Smith, 2006).

The factors are commitment, clarity, communication, accountability, performance measures, link to strategy and reporting. Let us have a discussion on each of them in the following way. To begin with, to meet the organization's intended goals, commitment must be demonstrated at all levels of the organization, especially at the executive level. Otherwise, the organization goals may not be achieved accordingly. With respect to clarity, the objectives of the program, and the underlying reasons for the change should be understood by all employees and stakeholders. Besides, communication should be an ongoing process and often checked to ensure that proper and timely communications are being practiced throughout the entire organization. Equally important, there should be clearly assigned and understood accountability for the process and results of the BSC program. What is more, a system for measuring performance, that is positive, not punitive, must be developed and provide sufficient and accurate information to decision makers. Furthermore, employee rewards and recognition should be tied to the performance measures through the employee evaluation process. Moreover, the BSC at the department level should be clearly linked to the organization's strategy. All objectives and tasks performed and measured should contribute to the overall progress toward success. Last but not least, when we discuss about reporting it is a critical factor that can be easily overlooked. As a result, comprehensive reports documenting the success of the program, especially in a pilot program, can serve as tools for acceptance and expansion of the BSC program.

## **2.2. Empirical Review**

Balanced Scorecard implementation and its effectiveness, benefits drawn and challenges of implementation have been studied empirically across the globe. Some prominent works are reviewed and the synthesis of the review is presented below. The student researcher's arguments are also presented towards the end!

Civil service reform is an effort to make government more organized, affordable, honest, and responsive to bring government closer to the grassroots and deliver better. The term civil service is usually understood as a subset of the wider public service. This civil service consists of government ministries, departments and agencies, including people who advise on, develop, and implement government policies and programs. Reforming the civil service is important in improving governance, service delivery, economic policy and public financial management (Rao, S., 2013).

For public sectors in particular, the balanced scorecard can be hard to implement because it is primarily a top-down management tool that tend to hamper bottom-up initiatives, there is a challenge in accounting for the strong experienced and creative forces from the lower levels of the organization (Hoff and Holving, 2009 cited in Temam, 2016). As Sekar and Hirve (2007), reforms are not achieved objective as intended due to various challenges like organizational resistance, insufficient resources, lack of top management commitment, misconception of reforms and lack of adequate training. Moreover, different empirical studies show that organizations that perform BSC and those did not perform BSC come up with the same result (Neely et al, 2000). So, it is difficult to conclude, as one country success and the other country experience failure and to achieve required result of these reforms the implementations needs to be checked in line with success and failure factors.

Thomson (2008) explains four potentially problematic issues in the application of the BSC. First, they argue that there is often a lack of understanding of organizational processes. Second, there is a lack of understanding of alignment between different BSC elements. Third, it is often difficult to measure what the organization intends to measure. Finally, understanding how the organization's strategy is related to the BSC can be difficult.

According to Mengesha and Common (2007), BSC aims to enable a company to translate its vision and strategy into a tangible set of performance measures. Masresha, (2015), reported that, the agency has been implementing the BSC system in a way that the literature proposes. However, the improvement areas identified in the study has been made the Information Network Security Agency not to grab the full benefits of the BSC system. According to Tsion (2014), BSC helps the employee and the organization in order to enhance their knowledge in regard to their organization vision, mission and objectives; it also enhances the knowledge of effective time management, commitment to work, having responsibility for their work. Balanced scorecard does not provide a bottom line score or a unified view with clear recommendations: it is simply a list of metrics. These critics usually include in their criticism suggestions about how the 'unanswered' question postulated could be answered. Typically, however, the unanswered question relates to things outside the scope of Balanced Scorecard itself such as developing strategies. Molleman (2007) in his survey finds the inflexibility of the BSC a significant limitation towards its implementation. This indicates that the BSC is not sufficiently flexible for application in firms in a highly dynamic business environment.

This finding goes in opposition with Kaplan and Norton about the flexibility of the BSC. While Kaplan and Norton argue that the BSC assists managers to modify strategies, in a highly dynamic business environment, managers will have to modify their strategies frequently or changing them altogether. Thus, the above studies show that even though the BSC implementation has benefits for the organization performance it has its own challenges and limitations for the proper implementation. Due to this reason, implementation of this tool needs a prior focus to meet expected outcomes.

There are a few empirical studies linking the use of BSC to better decision making or improved financial performance of companies, but some work has been done in these areas. Past studies by Malmi (2009), Neely (2009), Meena (2009), Teemu (2010), Kobia (2007) and Macharia (2007) attempted to address the Balanced score implementation process and hence failed to effectively highlight the key balanced score card implementation challenges. It also clear that a broadcast surveys of usage have difficulties in this respect, due to the wide variations in definition of 'what a Balanced Scorecard is. Single organization case studies suffer from the 'lack of a control' issue common to any study of organizational change.

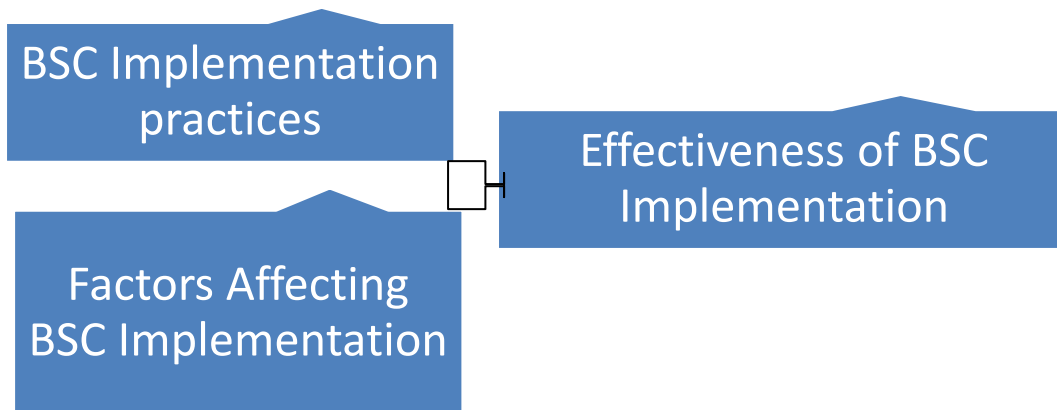
The past studies and the theoretical review hence explained different researchers' opinions on the use of balanced score card but none of the researchers clearly explained how public sector organizations should effectively implement balanced scorecard, this has, therefore, left some major gaps that calls for a thorough research study on effectiveness of BSC implementation. Thus, the student researcher still argues that if all the components of BSC implementation are employed through participating stakeholders accordingly in an organization effectiveness of BSC implementation could be realized.

### **2.3. Conceptual Framework**

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reichel and Ramey, 1987). Following this, the conceptual framework below, comprises of the independent variables and dependent variable. Meanwhile, the dependent variable, effectiveness of BSC implementation process plays as the "effect" pathway from the independent variables.

Therefore, steps for proper implementation, challenges of effectiveness of BSC implementation, the factors affecting effectiveness of BSC implementation, benefits of effectiveness of BSC implementation including effectiveness of BSC implementation are included under the conceptual framework.

**Figure 3: Conceptual Framework**



Source: Adapted from Literature Reviewed /2019

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This chapter presents about description of the study area, the research design, data type and sources, study population and sampling procedures, data collection methods and procedures, method of data analysis and ethical considerations.

#### **3.2 Description of the Study Area**

The study area is Gurage Zone, which is one of the administrative zones of SNNPRS. Gurage Zone is found at a distant of 158 kilometers from Addis Ababa and 275 kilometers from the capital city of SNNPRS, Hawassa. As the central Statistics Authority reported in 2007, it is bordered on the south west by Hadya Zone and Yem Special Woreda. On the west, north and east by the Oromia Region, and on the south east by Silte Zone. It comprises of 13 woredas and two city administrations.

#### **3.3. The Research Design and Approach**

To attain the objectives of the study, the researcher followed a combination of descriptive and explanatory designs. This is so because the objectives of the study sought describing the status of BSC implementation practice, its effectiveness coupled with the benefits drawn from BSC implementation on the one hand and investigating the factors that affect the effectiveness of implementation of BSC in the zone on the other hand. Besides, mixed approach is employed for this study (i.e mixed data and methods are employed to address the research objectives).

#### **3.4. Data Type and Sources**

In order to attain the objectives of the study, the researcher utilized primary source of data. The data was collected from selected GZGOs employees and managers.

### 3.5. Study Population and Sampling Procedures

The population of this study was Gurage Zone Government Organizations which were found at zonal level comprising of 28 sectors with a total of 1052 employees.

**Table 1: The three strata (Economic Social and Political Sectors)**

No.	Economic Sector	Social Sector	Political Sector
1.	Trade and Industry	Education	Militia
2	Agri .and Natural Resource	Health	SPDM
3	Livestock and Fishery Resource	Youth and Sport	Security Admin.
4	Revenue Authority	Women and Children	Zonal Council
5	Water, Mining and Energy	Public service and Human Resource	Justice
6	Urban Development. And Housing	Labour and Social Security	Zonal Administration
7	Construction	Environmental Protection	
8	Road and Transport	Cooperative and Union	
9	Rural Entrepreneurship	Culture, Tourism and Government Communication	
10	Finance and Eco. Dev't	Emergency Protection and Readiness	
11		Higher Court	
12		Police	

Source: Gurage Zone Public Service and Human Resource Department, August 2018

The study used probability sampling since it gives the population equal chances to be selected as samples. From the probability sampling, simple random sampling was employed using lottery techniques to identify individual respondents that were included in the survey. It was employed so as to select representative samples. Of the total population that were selected among the 28 public sectors of the zone, eight of them were participated in the study. In addition, stratified sampling was used for the study so that the sampling was employed based on the organizations functions as economic, political and social sectors. Due to this reason, seven Political Sectors, 11 Social Sectors and 10 Economical Sectors were included in the study. Among the three categories 1052 population, 144 of them were taken as sample for the study to ensure that the sample size had a characteristic representation of the target population. The sample comprised of two political, three social, and three economical sectors with samples 21,71 and 52 respectively.

The two selected political departments were the offices of the zonal Council and the Zonal Administration, whereas the three selected social sectors were the departments of Public Service and Human Resource, Education and Health. While the remaining three Economic sectors were the departments of Finance and Economic Development, Agriculture and Natural Resource and Trade and Industry. Since the researcher wanted the sample to be more precise, the sampling error will keep within 1 per cent at the 99 per cent confidence level. Thus, a hyper geometric formula was used for determining the size of the sample to determine non-uniform quantification than any other formula. According to Kothari (2004:179) it is given by:

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + z^2 \cdot p \cdot q}$$

Where,

N= total Population size (1052)

n= total number of samples

e = 0.1(since the estimate should be within 1 percent of true value)

z = 2.58 (as per table of area under normal curve for the given confidence level of 99%)

p = .05

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + z^2 \cdot p \cdot q}$$

$$n = \frac{(2.58)^2(0.1)(1-.5)(1052)}{(.1)^2(1052-1)+(2.58)^2(.5)(1-.5)} = \frac{1750.6332}{12.1741} = 143.799805 \cong 144$$

This formula was used here; this is because it helps to determine non-uniform quantification than any other formula. In stratified sampling, after identifying the sample size using the above equation the researcher need to allocate the estimated sample size to each stratum under the study. One method is proportional allocation. It is used when the size of the sample from a given stratum is proportional to the size of the stratum. That is in the proportional allocation, a small sample taken from a small stratum and large sample taken from a large stratum and the sample size in each stratum is fixed.

**Table 2: List of Selected Government Offices**

Group of selected sectors	Total no. of sectors	Total Population	Sample of selected sector	Total sample population	Sample proportion
Economic sectors	10	479	3	204	71
Social sectors	12	414	3	132	46
Political sectors	6	159	2	77	27
Total	28	1052	8	413	144

There are 16 managers in the eight public sectors, two in each of the target departments, which were selected using judgmental sampling by assuming they would respond almost the same as to the rest members of the categories on assessment of the effectiveness of BSC Implementation in the target zone departments. Thus, 16 managers were participated in the interviews that were selected purposely so as to triangulate the questionnaire as well.

### **3.6. Data Collection Methods and Procedures**

As a primary data gathering tool, interviews was used, in order to provide different perspectives, views and opinions on the topics to be investigated in the research. Here, the participants were managers (i.e coordinators of work processes). The primary data was also be collected from employees of selected departments through questionnaire. Thus, the questionnaire was developed and distributed to collect the required data for the study.

#### **A/ Interview**

Semi Structured face-to-face interviews were chosen by the researcher. In order to get more views, management bodies were interviewed. Interviews allowed for additional or follow-up questions to get more clarity. The interviews were conducted at the selected GZGOs. The main reason for conducting interviews on site was that it was assumed that participants would felt more confident and relaxed in their own surroundings. As a result, it was assumed that privacy would be ensured if the interviews were conducted in private offices. The dates and times of the interviews were arranged with the participants directly. At the beginning of the interview, the purpose and procedures of the interview was explained. An assurance of confidentiality of responses and a guarantee of anonymity increased the likelihood that more reliable results would be obtained.

The interviewees further informed that they were not bound to answer all the questions, and could reserve their comments to any question they might have felt uncomfortable in answering. The interview was conducted in English. By considering the language proficiency level of interviewees, Amharic language was used so as to gather the required information.

## **B. Survey Questionnaire**

The questionnaire comprised of a combination of open and close-ended questions. The closed-ended questions presented on a five point Likert Scale item design. This was conducted in order to make the questionnaire easy to interpret and simple for the respondents to answer.

Questions on the Likert Scale were asked to respondents to indicate the strength of their agreement or disagreement with each statement on effectiveness of - Balanced Score- card implementation on a five-point Likert Scale, Where, 1=Strongly Disagree;

2=Disagree;

3=Neutral;

4=Agree;

5= Strongly Agree

The researcher preferred to use the Likert Scale because as Saunders, Lewis and Thorn hill (2009) described it provides data that can be easily subjected to statistical analysis. Besides, for reasons of efficiency and cost, questionnaire enables researchers to include a much broader range of respondents in their research, and thereby find evidence of patterns amongst bigger population.

## **3.7. Validity and Reliability**

### **3.7.1. Validity**

Validity is “the extent to which the measuring instrument measures the characteristics or dimensions that the researcher intends to measure” (Thatcher, 2010 cited in Shimelis, 2017).

Data collection instruments, questionnaire and interview were designed by taking in to consideration of the basic research questions and all items included in the questionnaire and interview were directly derived from them and consistent with the objectives of the study. A pilot test of the questionnaire was employed. Here, the purpose of the pilot test is to ensure that the faults, if any, are corrected, and to ensure that the questionnaire will gather the information that it intends to gather (Churchill, 1991: 64-73). For the pilot test, only 30 respondents were participated. The data obtained was evaluated to ensure that questions were properly answered.

Based on the data collected there were some disorganized questions. Hence, the reliability and validity of the tools were analyzed and necessary modifications were made so as to gather the actual data. However, the findings of the pilot test were not included in the final results.

### **3.7.2. Reliability**

The respondents were requested what time best suited them – before scheduling appointments to reduce the stress factor. As the interviewees were given an option to be anonymous, without disclosing their positions in the organization, it may be assumed that the answers given became reliable. It must be noted that when conducting an interview, employees might understand the questions differently, and this obviously has an effect on the answers. As a result, the questions were formulated in such a way as to avoid any misunderstanding. Regarding this, Eskola and Suoranta (2005) suggested that the reliability of a research can be ensured by planning the interview and outlining additional or follow-up questions in advance. During the interviews, the respondents were asked additional questions to make sure that the researcher understands the interviewees correctly. Cronbach's alpha is used. It is a coefficient of reliability and commonly used as a measure of the internal consistency or reliability of a psychometric test score for a sample of examinees. Hence, according to Lombard (2010), Coefficients of .90 or greater are nearly always acceptable, .80 or greater is acceptable in most situations, and .70 may be appropriate in some exploratory studies for some indices. The reliability test was held using the rule stated in (Baharin et al., 2015). That is, Cronbach's Alpha value that ranges from 0.9 – 1.0 taken as excellent, 0.8 - 0.89 as very good, 0.7 - 0.79 as acceptable, 0.6 - 0.69 questionable while 0.5 - 0.59 as a poor and the value less than 0.5 as unacceptable. According to (Sekana and Bougi, 2010; cited in Baharin et al., 2015), the closer Cronbach's alpha is to 1.00, the higher the internal consistency reliability will be.

As it has been set in the earlier sections, the general objective of this study was to assess the effectiveness of BSC Implementation in the case of selected public sectors in Gurage Zone. Therefore, in order to achieve this objective, three specific objectives were designed using questionnaire on which descriptive and inferential statistical analyses were employed. But, the validity of the inferences drawn from these statistical analyses using the items in the questionnaire depends on the consistency or dependability of the measuring instrument – each item. In this regard, the analysis to be valid and the statistical analysis explore the effects of BSC Implementation practices on effectiveness of BSC Implementation; it should satisfy the reliability test. Therefore, the reliability of the items was checked using pilot study before running the actual study.

As indicated in Table 3 below, the Cronbach's Alpha result shows that the reliability of the nine variables (independent variables) and the dependent variable (EBSCI), filled by the sampled employees are ranges from 0.700 to 0.895. This implies that the reliability of the instrument is more than the acceptable standard. Therefore, as shown in table 3 the reliability of the variables with their items are shown below.

**Table 3: Reliability Analysis of Main Variables**

Construct	Cronbach's Alpha	No. of Items
ASS	.700	6
SP	.895	10
SO	.785	4
SM	.879	4
PM	.843	5
SI	.822	4
AUT	.701	5
CAS	.859	5
EVAL	.805	4
EBSCI	.898	11

Source: Own Survey, 2019

### 3.8. Method of Data Analysis

The collected data from primary and secondary sources was analyzed by using descriptive statistics such as percentage and presented using table. Once the data has been organized and presented, it was analyzed using descriptive statistical tools such as data tabulation, percentage. On top of these, the data presented and analyzed by using SPSS and its different statistical tools like tables. SPSS version 20 is used to enter raw data and got it ready to interpretation. It was analyzed to provide answers for the research questions and draw appropriate recommendations. The interview results analyzed for triangulation of the questionnaire. The various characteristics of the sample population such as sex, age of employees, educational level, field of study, type of sector, current status and work experience were presented and analyzed both quantitatively and qualitatively. Above all, regression and correlation analysis was made to show cause effect relationships.

Under the inferential analysis, a regression model was applied to determine the relative importance of each of the variables with respect to assessment of effectiveness of BSC implementation in government organizations of Gurage Zone, Ethiopia.

The regression model used was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \epsilon$$

Where:

**Y** = Effectiveness of BSC implementation

**$\beta_0$**  = Constant Term

**$\beta_1$ - $\beta_9$**  = Beta coefficients

**X1** = assessment

**X2** = strategic planning

**X3** = strategic objectives

**X4** = strategic map

**X5**= performance measure

**X6**=strategic initiatives

**X7**=automation

**X8**= cascading

**X9**= Evaluation

$\epsilon$  = error term (residual term that includes the net effect of other factors not in the model and measurement errors in the dependent and independent variables).

***Assumptions for Multiple Linear Regression Model:***

1. For any specific value of the independent variable, the values of the dependent variable are normally distributed. (This is called the *normality* assumption.)
2. The variances (or standard deviations) for the dependent variables are the same for each value of the independent variable. (This is called the *equal variance* assumption.)
3. There is a linear relationship between the dependent variable and the independent variables. (This is called the *linearity* assumption.)
4. The independent variables are not correlated. (This is called the *non-multicollinearity* assumption.)
5. The values for the dependent variables are independent. (This is called the *independence* assumption.)

As stated in (Pallant, 2005, p. 143, Abdel – Salam, 2008; Bluman, 1998, p. 503). Assumption tested in chapter four.

**3.9. Ethical Considerations**

In ensuring compliance with the ethical considerations, and to ensure the participation by all employees that were involved in the study, the following ethical issues were employed throughout the study: Guarantees that the names and details of the respondents did not disclose; the respondents were also assured of confidentiality and anonymity; and lastly, the researcher did not attempt to view the change fraternity as a static framework of change, but rather as a dynamic framework for developing the field of change management during BSC implementation process.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND DISCUSSIONS**

#### **4.1. Introduction**

In this chapter, the data collected is presented, analyzed and interpreted to seek appropriate answer for the questions raised to respondents to assess the effectiveness of Balanced Scorecard implementation in Gurage Zone Government Organizations. To this end, data collected from primary sources through interview of 16(sixteen) managers and questionnaires distributed to 144, out of which all of them were returned are analyzed and interpreted. The responses to the question were framed in a way that basic research questions are answered. The first section presented the demographic information of the respondents. Percentage (%) was used to value the data of the general background and the Likert Scale distributions was used for the second part of the responses to measure the data which are rated as strongly disagree ( 1.00- 1.49) disagree (1.50–2.49), neutral (2.50–3.49), agree (3.5–4.49) and strongly agree (4.50-5) were taken to measure responses and mean and standard deviation were used to interpret the data value along with corresponding t-values to compare with p–Critical value of ( 0.01). P-value was used to detect the differences and to make sure that the difference is real where 0.01 was taken as standard and critical. The results obtained and the analysis of the responses to questions is presented below.

#### **4.2. Demographic Characteristics of Respondents**

Under this section, the gender, age level of respondents, education level of respondents, field of study they were joined and type of sector they are serving in as well as their current position and their work experience they served in the departments were discussed and interpreted below the following table. Besides, chi-square test was conducted for gender, age, education level and type of sector of the respondents.

**Table 4: Demographic Characteristics of Respondents**

Items		Frequency	Percent
Gender	Male	99	68.8
	Female	45	31.36
Age	20-30	34	23.6
	31-40	85	59.0
	41-50	23	16.0
	51-60	2	1.4
Education Level	Diploma	1	0.7
	Degree	114	79.2
	MA/MSc	29	20.1
	PhD or Above	-	-
Field of Study	Managerial	107	74.31
	Non Managerial	37	25.69
Type of Sector	Economic	52	36.1
	Social	71	49.3
	Political	21	14.6
Current Position	Junior Employee	62	43.056
	Senior Employee	82	56.944
Experience	1-5 year	62	43.1
	6-10 years	45	31.3
	11-15 years	23	16.0
	16-20 years	10	6.9
	21-25 years	2	1.4
	25-30	2	1.4

Source: Own Survey, 2019

As can be seen from table 4 above, majority of the respondents were males showing that there were few women in the target sectors. As the chi-square test reveals there is no relationship between gender and effectiveness of BSC implementation process. This tells that gender has no any effect on effectiveness of BSC implementation.

In the above table, 74 % of the respondent ranges between 20 to 40 years of age showing that most of the key posts are held by the young and active age group in the target departments of the zone. The tests of chi-square results show that there is relationship.

As depicted in table 4 above, the Education levels of the respondents were 20.1% MA/ MSC, 79.2% undergraduate, 0.7% Diploma and no any PhD holders and above. This indicates that majority of the respondents (79.2%) were first degree holders. Thus, the findings indicate that majority of the respondents were significantly educated. From this, one can understand that the respondents are well-educated who are believed to be responsible to know about the practical issues related to BSC. Consequently, when a chi-square test is run the finding seems education level positively affect effectiveness of BSC implementation. The more educated the person, the more roles he/ she has in the realization of effectiveness of BSC implementation.

Out of the total respondents, 36.1% of the respondents were from economic sectors and 49.3% of the respondents were from social sectors staff as well as the rest 14.61% are from the political sectors. As the chi-square test result depicts, there is no any relationship between type of sector and effectiveness of BSC implementation. Regarding this, Niven (2006), no two BSC implementations are completely alike. Besides, the author continues that organizations which decided to implement the tool should do so in a way that fits the individual culture, current management processes and readiness for such a major change initiative.

As it is depicted in table 3 above, relatively larger proportions of the respondents have served in the departments between 1-10 years followed by those who served more than 10 years. Most of respondents (74.4%) have served the departments during the last 10 years and they are expected to have taken part in the building and implementation of the departments' BSC because balanced scorecard was embarked at the departments eight years back as consulted BSC documents and interview conducted with managers/ directors. 22.9% of the respondents served from 11-20 years, while the rest 2.8% of them served for more than 20 years.

This implies that indeed the majority of the respondents have considerable knowledge of the activities carried out in the target departments on BSC.

### **4.3. Balanced Scorecard Implementation Practices**

Balanced Scorecard Implementation Practices has a paramount importance in assessing the effectiveness of BSC Implementation in an organization.

Therefore, it has its own procedures or components that are helpful to crosscheck the status of BSC Implementation. Assessing the status of BSC implementation is one of the objectives of the study. Thus, to meet this objective, data was gathered. To assess the effectiveness of BSC Implementation in the selected departments the gathered data using the independent variables (i.e. assessment, strategic planning, strategic objective, strategic mapping, performance measure and automation as well as cascading and evaluation), a brief analysis and interpretation has been made in table 5 below.

**Table 5: Descriptive Statistics for the Major Variables**

<b>Variables</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Assessment	144	1.17	5.00	3.6817	.59194
Strategic Planning	142	1.10	4.80	3.4725	.70340
Strategic Objective	143	1.00	5.00	3.6941	.69986
Strategic Mapping	144	1.00	5.00	3.2778	.88948
Performance Measure	143	1.00	4.80	3.4000	.74871
Strategic Initiatives	143	1.25	5.00	3.4388	.76062
Automation	143	1.00	4.20	2.4895	.66615
Cascading	144	1.00	5.00	3.4569	.79321
Evaluation	144	1.00	5.00	3.4410	.74326

**Source: Own Survey, 2019**

As shown in the table 5 above, it portrays the mean score agreement level of respondents is 3.6817 with standard deviation of .59194. From this, one can deduce that the general employee rating towards assessment is high which indicate that majority of the sampled respondents agreed on assessment of BSC implementation in the departments. Here, the interview results also coincide with this finding.

Regarding this, Makkane (2007) describes that in order to implement BSC successfully organizations should have to undertake SWOT analysis, then identify enablers (opportunities and strength) and pains (weakness and threats) as well as identify target customers and stakeholders. This should be done by taking in to account the organization's mission, vision and core values, which will help to provide direction to the organization successes. Therefore, the optimal agreement scores for assessment in the departments strongly suggests that effective BSC implementation can be realized if they work more on its basic elements accordingly.

As depicted in table 5 above, most of the responses of employees registered a mean score of 3.4725 with a standard deviation of .70340. This indicates that most of the respondents replied neutral to the question forwarded on formulation of strategic planning in the departments. Besides, the interview results shows majority of the interviewees were not satisfied with the accomplishment of strategic planning. This implies the strategic planning focus areas are not well defined and understood as well as most of the respondents have convinced that their work process use customer, financial, internal process, learning and growth perspectives to assure the balance in the organization strategies and measures. Regarding this, (Nevin, 2014 as cited in Tewabech, 2016) describes strategy planning is specific and detailed actions we will take to achieve our desired future and pattern of consistency of action over time. Therefore, all performance objectives and measures should align with organizational strategy so as to meet intended goals.

As can be seen from table 5, most of the respondents replied agree for the question raised on strategic objectives with the mean score and standard deviations values 3.6941 and .69986 respectively. Therefore, it was very evident from the table that strategic objectives of the balanced score card of the departments are placed in the themes, performance indicators are related to the objectives of organization, has well-written objective statements which provides precise clarification of the meaning and objectives describe the links in the chain of cause and effect evident in the strategy map. This implies that the departments have well set their strategic objectives which are linked with their own organizations objective. Even most of the interviewees support the ideas of the respondents. As Nevin, (2014) explains objectives are concise statement of what the organization must do well in each of four perspectives of financial, customer, internal process and learning and growth in order to execute its unique strategy.

In the same table above, for strategic mapping a mean score of 3.2778 and a standard deviation of .88948 were registered. This shows majority of respondents have convinced that the strategic mapping is employed accordingly in the departments. Regarding this, most of the interviewees became reluctant in agreeing to the same questions forwarded to them. In relation with this, ISORAITE (2008) describes that a strategy map captures the organization's strategy in visual form so that managers can better execute their desired strategy. Strategy maps are built around the structure of these four perspectives.

They ensure that the organization's objectives in each of these perspectives are consistent and internally aligned.

As can be seen from Table 5 above, for performance measure a mean score of 3.40 and standard deviation of .74871 is registered. This shows majority of respondents have convinced that the measures used by the departments link the objectives to the visions, are aligned among directorates and scientifically selected through benchmarking. Furthermore, the measures used are not just enough to evaluate achievements in each objective. The outcomes of the interview have also confirmed that they were convinced that performance measures are linking to organization objectives. With regards to this, Lang Field Smith et al., (2006) explains that a well-designed BSC should contain a mix of outcome measures (i.e., lag indicators) and performance drivers (i.e. lead indicators). The measures within the BSC can, therefore, be sub-divided as lead (driver measures) and lag indicators (outcome measures). Otherwise, intended objectives could not meet accordingly. Similarly, Charles (2013) suggested that performance measures should be developed that address the four perspectives.

As can be seen in table 5 above with respect to strategic initiatives, most of the responses of employees registered a mean score of 3.4388 with a standard deviation of .76062. The strategic initiatives chosen at the survey were not done through proper sort of selection criteria, were not tied to the vision and mission as well as they are not wide reaching. This was supported by the fairly majority of the respondents. This result clearly demonstrates that the departments have not developed strategic initiatives as an intervention mechanism to achieve the goals through meeting their organizations objectives. Regarding this, (Niven, 2005 as cited in Hailemariam, 2016) explains that no initiative in an organization, regardless of its potential, has any chance of success without a sponsor in top management. The same applies with BSC. He stresses the importance of top level management for the success of the BSC initiative. He still argues that if top management does not support the BSC initiative, and more importantly, does not appreciate its role in solving real life problems, the BSC will show average results and will probably fail.

Table 5 above shows that when respondents were asked a question related to automation. They responded neutral with a mean of 2.4895 and standard deviation of .66615.

This shows that most of the respondents replied disagree to the question forwarded whether automation is employed properly in the departments or not. From this result, one can deduce that automation was not properly implemented during BSC implementation Process. The opinion of the managers interviewed also support this finding. Regarding this, LinaNjeri.2014 as cited in Admitu, 2016) has described that the absence of automation to record and roll-up results early in the implementation severely derails the team into the mechanics of recording actual versus targets. Organizations cascading to this level will gain the maximum value from the Balanced Scorecard by ensuring that all employees, regardless of function or level, have developed objectives and measures that align with overall organizational objectives. Besides, as Charles (2002) capitalizes that automation is essential in order to manage the vast amount of information related to a company's mission and vision, strategic goals, objectives, perspectives, measures, causal relationships, and initiatives.

It is clear from the aforementioned table that the cascading process signals a mean score value of 3.4569 with a standard deviation of .79321. This relatively shows larger proportion of the respondents have convinced that their work process cascade high-level strategy in to aligned lower level objectives and measures. The result reflected that the departments did not work enough on cascading activities. The finding further signals that the respondents were not satisfied with the work done so far by the departments' leaders. This is in line with the findings of Zemenu and Habtamu (2013). In their research on challenge and prospects of BSC, showed shortcomings in the BSC implementation like: cascading and alignment of the BSC to reward and personal development plan, difficulties in setting performance measures, subjectivity and favoritism in performance monitoring and evaluation system, and laborious paper based performance data handling and management system (lack of automation) has impeded the effectiveness of BSC in achieving intended objectives.

The results presented in table 5 above clearly indicate that most of the respondents convinced with the way of evaluation with a mean of 3.4410 and standard deviation of .74326. The finding also reflected that though the departments have tried to exercise evaluation to fine tune and optimize its balanced scorecard it was not as such satisfactory. The interview results gathered from the managers also go in line with the above finding as well.

However, Rohmetal. (2013) ensures that evaluation which is the strategic planning and management system is dynamic and incorporates continuous improvement into day –to- day operations and management. From this, one can deduce that evaluation plays a pivotal role in attaining organizations’ intended objectives.

#### 4.4. Effectiveness of BSC Implementation

Balanced Scorecard implementation plays a pivotal role in achieving organizational goals. To meet this, the implementation process should be effective. Assessing the effectiveness of BSC implementation is another objective like crosschecking the status of BSC implementation practices in the target departments. Therefore, here interpretation is made on the data obtained followed by analysis of the study below the descriptive statistics of the issue under discussion.

**Table 6: Descriptive Statistics for Effectiveness of BSC Implementation**

Item	N	Minimum	Maximum	Mean	Std. deviation
Effectiveness of BSC Implementation	144	1.00	4.64	3.2917	.70104

Source: Own Survey, (2019)

As it is indicated in the above table 6, effectiveness of BSC Implementation registered a mean score of 3.2917 and standard deviation of .70104. This shows that most of the respondents convinced on the effectiveness of BSC Implementation. To begin with, most of the respondents convinced that commitment has been demonstrated at all levels of the organization especially at the executive level.

Besides, most of the respondents replied neutral to the questions raised on the presence of clarity on objectives of the reform, proper and timely communication, accountability, a system of measuring performance, linking to strategy and reporting. Moreover, most of the employees convinced that properly implemented BSC resulted in cost reduction, time saving and resulted in increasing quantity or service or quality.

Here, most of the interviewees also replied they were not satisfied with the effectiveness of BSC implementation even if there were many benefits gained in the departments' like better quality and quantity in performing activities as well as with reduction of cost and doing activities in a relatively shorter time and other benefits as well after the implementation is being carried out. From this, one can understand that majority of the respondents were not satisfied with the points raised which are keys to effectiveness of BSC implementation as well. Regarding this, Artley et al, (2001) as cited in Tewabech, (2016) stated that without strong leadership a program won't succeed.

Thus, leadership must be dedicated to the program all the time. This indicated that commitment is very important managing institutional achievement. So those who involved in leadership position need to be committed to the successful achievement of the reform as a whole.

During interview conducted with managers, most of them describe challenges such as lack of BSC knowledge and experience among employees and leadership, staff resistance to reform, unfamiliarity with BSC software, some of them assume that it is time consuming to feed activities with software, while others consider BSC as a political issue and lack of follow-up and required supervision during implementation. Therefore, the results of the study concurred with that of Sudirman (2012) as cited in Adamitu (2016) who stated that in the implementation of the strategy, government organizations often encounter obstacles that generally come from the employee. Such barriers include resistance to change, lack of commitment as well as the fear of accountability pressures. Without adequate follow up of supervisor it is difficult to achieve intended objectives. This finding also in line with previous studies reported by Gerrits (1994) and Taylor (2010) as cited in Temam (2016) pointed out BSC failed due to lack of detailed guidance and support from supervisor and change agent for actual implementation of reforms. However, majority of the interviewees confirmed that the departments tried to make efforts to solve the above listed challenges. To mention few: awareness creation and training rendering services were conducted to both employees and managers on reform concepts, practical application of BSC and other activities to maximize effectiveness of the implementation process, were being made as well .

On the other hand, majorities of the interviewees confirmed that some benefits were gained in the departments since BSC implementation: increasing customer satisfaction, minimizing cost and time, effective utilization of resources comprising of human and material resources, improved financial performance, customer satisfaction evaluated in the departments, traditional and time taking measurement tools are changed to the currently used measurement tools and the like. From this description, one can understand that if BSC implementation process is properly managed its effectiveness comes in to realization.

#### **4.5. Pearson Correlation Analysis**

Pearson Correlation was carried out to determine how the research variables were related to each other. Pearson's Correlation reflects the degree of linear relationship between research variables. It ranges from -1 to 1.

Correlation values of 1 mean that there is a perfect positive linear relationship between variables. As a general guideline, a value ranging from 0.1 to 0.4 would be classified as a weak correlation, and anything above 0.5 would be regarded as a strong correlation. In addition, a value approaching zero indicates the absence of any relationship between two variables, in other words no correlation (Cohen, 1988 cited in Pete 2008: 80). A correlation helps us to detect the strength of their relationship. Thus, all correlations between items are positive and significant at 1% level.

**Table 7: Pearson Correlation Analysis**

		ASS	SP	SO	SM	PM	SI	AUT	CAS	EVAL	EBSCI
ASS	Pearson Correlation	1									
	Sig. (2-tailed)										
	N	144									
SP	Pearson Correlation	.631**	1								
	Sig. (2-tailed)	.000									
	N	142	142								
SO	Pearson Correlation	.502**	.674**	1							
	Sig. (2-tailed)	.000	.000								
	N	143	142	143							
SM	Pearson Correlation	.507**	.692**	.613**	1						
	Sig. (2-tailed)	.000	.000	.000							
	N	144	142	143	144						
PM	Pearson Correlation	.501**	.647**	.621**	.636**	1					
	Sig. (2-tailed)	.000	.000	.000	.000						
	N	143	141	142	143	143					
SM	Pearson Correlation	.269**	.434**	.401**	.408**	.458**	1				
	Sig. (2-tailed)	.001	.000	.000	.000	.000					
	N	143	141	142	143	142	143				
AUT	Pearson Correlation	.326**	.433**	.334**	.343**	.380**	.274**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001				
	N	143	141	142	143	142	142	143			
CAS	Pearson Correlation	.454**	.529**	.558**	.543**	.596**	.470**	.368**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000			
	N	144	142	143	144	143	143	143	144		
EVAL	Pearson Correlation	.403**	.509**	.416**	.471**	.632**	.392**	.399**	.573**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		
	N	144	142	143	144	143	143	143	144	144	
EBSCI	Pearson Correlation	.401**	.548**	.501**	.563**	.692**	.433**	.369**	.666**	.621**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	144	142	143	144	143	143	143	144	144	144

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Own Survey, (2019)

ASS= Assessment, SP= Strategic Planning, SO= Strategic Objective, SM= Strategic Mapping, PM= Performance Measure, SI=Strategic Initiatives, AUT= Automation, CA= Cascading, EVAL= Evaluation, EBSCI= Effectiveness of Balanced Scorecard Implementation

As presented above in table 7, assessment had a positive correlation with strategic planning (r = 0.631, p< 0.01), Strategic Objective (r = 0.502, p< 0.01), Strategic Mapping (r = 0.507, p< 0.01), Performance Measure (r = 0.501, p< 0.01), Cascading (r = 0.454, p< 0.01), but it has a weak correlation with Strategic Initiative (r = 0.269, p< 0.01), Automation (r = 0.326, p< 0.01), Evaluation (r = 0.403, p< 0.01) and Effectiveness of BSC Implementation (r = 0.401, p< 0.01). However, these correlation were found to be statistically significant at 0.01 significance level (p-value = 0.000).

When we observe strategic planning, it was found to have a strong positive correlation with Strategic objective ( $r=0.674$ ,  $p$ -value = 0.000), Strategic mapping ( $r = 0.692$ ,  $p < 0.01$ ), Performance measure ( $r = 0.647$ ,  $p < 0.01$ ), Strategic Initiative ( $r = 0.434$ ,  $p < 0.01$ ), Automation ( $r = 0.433$ ,  $p < 0.01$ ), Cascading ( $r = 0.529$ ,  $p < 0.01$ ), Evaluation ( $r = 0.509$ ,  $p < 0.01$ ) and Effectiveness of BSC Implementation ( $r = 0.548$ ,  $p < 0.01$ ). This shows that all the aforementioned main variables have a strong correlation with strategic planning. Above all, these correlation were found to be statistically significant at 0.01 significance level ( $p$ -value = 0.000). Consequently, strategic objectives had a strong positive correlation with strategic mapping ( $r = 0.613$ ,  $p < 0.01$ ), performance measure ( $r = 0.621$ ,  $p < 0.01$ ), cascading ( $r = 0.558$ ,  $p < 0.01$ ), evaluation ( $r = 0.416$ ,  $p < 0.01$ ) and effectiveness of BSC implementation ( $r = 0.501$ ,  $p < 0.01$ ) but it has a weak positive correlation with Strategic Initiative ( $r = 0.401$ ,  $p < 0.01$ ), automation ( $r = 0.334$ ,  $p < 0.01$ ). This correlation was found to be statistically significant at 0.01 significance level ( $p$ -value = 0.000). Similarly, strategic mapping had a strong positive relationship with performance measure ( $r = 0.636$ ,  $p < 0.01$ ), strategic initiative ( $r = 0.408$ ,  $p < 0.01$ ), cascading ( $r = 0.543$ ,  $p = 0.000$ ), evaluation ( $r = 0.471$ ,  $p < 0.01$ ) and effectiveness of BSC implementation ( $r = 0.563$ ,  $p < 0.01$ ) but it has weak positive correlation with automation ( $r = 0.343$ ,  $p < 0.01$ ). The relationship was found to be statistically significant at 0.01 significance level ( $p$ -value = 0.000). Furthermore, performance measure had a strong positive correlation with the main variables strategic initiative ( $r=0.458$ ,  $p < 0.01$ ), cascading ( $r=0.596$ ,  $p < 0.01$ ), evaluation ( $r=0.632$ ,  $p < 0.01$ ) and effectiveness of BSC implementation ( $r=0.692$ ,  $p < 0.01$ ) but it has a weak positive correlation with automation ( $r=0.380$ ,  $p < 0.01$ ). This implies that the relationship was found to be statistically significant at 0.01 significance level ( $p$ -value = 0.000). What is more, strategic initiative had a strong positive correlation with cascading ( $r=0.470$ ,  $p < 0.01$ ) and effectiveness of BSC implementation ( $r=0.433$ ,  $p < 0.01$ ) but it has a weak positive correlation with automation ( $r=0.274$ ,  $p < 0.01$ ) and evaluation ( $r=0.392$ ,  $p < 0.01$ ). This implies that the relationship was found to be statistically significant at 0.01 significance level ( $p$ -value = 0.000). Moreover, automation had a weak positive correlation with cascading ( $r=0.368$ ,  $p < 0.01$ ), evaluation ( $r=0.399$ ,  $p < 0.01$ ) and effectiveness of BSC implementation process ( $r=0.369$ ,  $p < 0.01$ ). This implies that the relationship was found to be significant at 0.01 significance level ( $p$ -value = 0.000).

However, cascading had a strong positive relationship with Evaluation ( $r=0.573$ ,  $p= 0.000$ ) and Effectiveness of BSC Implementation ( $r=0.666$ ,  $p< 0.01$ ). This implies that the relationship was found to be statistically significant at 0.01 significance level ( $p\text{-value} = 0.000$ ). Likewise, evaluation had a strong positive correlation with effectiveness of BSC implementation ( $r=0.621$ ,  $p< 0.01$ ). This implies that the relationship was found to be statistically significant at 0.01 significance level ( $p\text{-value} = 0.000$ ). Last but not least, when we see the Pearson Correlation with respect to effectiveness of BSC implementation with each of the main variables is positively correlated with all of the main variables. However, effectiveness of BSC implementation had a strong positive correlation with the main variables strategic planning, strategic objectives, strategic mapping, performance measure, strategic initiative, cascading and evaluation. While assessment and automation have a weak positive correlation with effectiveness of BSC implementation, here, the student researcher expected that both assessment and automation to have a strong positive correlation with effectiveness of BSC implementation. This might be occurred, however, due to carelessly filled questionnaire of employees. To put it in a nutshell, all the variables have a positive correlation with effectiveness of BSC implementation. This indicates that if all the variables are employed accordingly they could have a great role in maximizing the effectiveness of the implementation process.

## **4.6. Results and Discussions of Regression Model Evaluation and Analysis**

### **4.6.1 Multiple Linear Regression Model**

A regression analysis was applied to find out the relationship between the BSC variables in the effectiveness of BSC implementation in Gurage Zone selected departments. As mentioned earlier, one of the objectives of this study was to examine whether there was statistically significant effect of BSC Implementation practices on effectiveness of BSC Implementation in the selected public sectors in Gurage Zone or not.

Thus, the study adopted the following regression equation to establish the relationship between variables:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7 + \beta_8x_8 + \beta_9x_9 + \varepsilon;$$

Where,

**Y**= Effectiveness of BSC Implementation,

**$\beta_0$** =the constant of regression,

**$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$  and  $\beta_9$** = are the regression coefficients/weights of the following respective independent variables;

**X1**= Assessment,

**X2**= Strategic Planning,

**X3**= Strategic Objective,

**X4**= Strategic Mapping,

**X5**=Performance Measure,

**X6**=Strategic Initiative,

**X7**=Automation,

**X8**=Cascading,

**X9**=Evaluation and

$\varepsilon$  = error term.

#### **4.6.2. Evaluation of Multiple Linear Regression Model Assumptions**

In order a multiple linear regression model shows the relationship between the dependent variable and multiple (two or more) independent variables and the validity of the inferences drawn from this model analysis depends on its assumptions being satisfied.

In this regard, the analysis to be valid and the regression model explore the relations and examine effects of the independent variables on the dependent variable; it should satisfy all the multiple linear regression model assumptions. Therefore, the assumptions were checked before running the regression analysis using SPSS version 20 software. The diagnostic test for the whole regression model is attached in the Appendix part. In this section, the evaluation of the assumptions of multiple linear regression model and model fitness test analyses are presented using the outputs of the SPSS.

**Normality Assumption:** For any specific value of the independent variable, the values of the dependent variable are normally distributed.

This assumption was checked graphically, most popular (Pallant, 2005). Data is normal if the data follows a straight line or if it goes with slight deviation from straight line ups and down.

The normality plot graph of sampled data of EBSCI, effectiveness of BSC implementation is shown below.

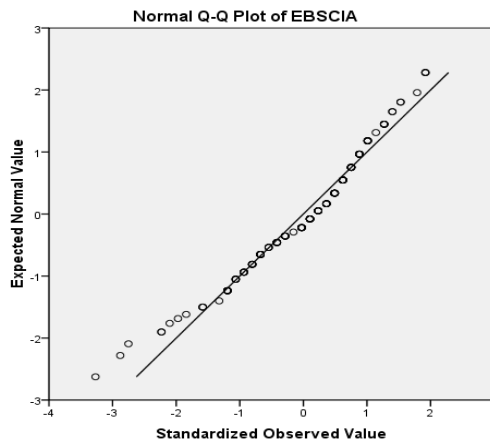


Figure 4: Normality Q – Q plot graph for EBSCI, effectiveness of BSC Implementation

As it can be seen from the above normal Q – Q plot and as normality checking mechanism indicated in (Abdel – Salam, 2008, p.15/42), except at the right top and bottom left of the Q – Q plots are slightly going on and off from the straight line but to some extent resembled to it. Therefore, this shows that the normality assumption is nearly satisfied.

**Linearity Assumption:** There is a linear relationship between the dependent variable and the independent variables. In other words, the value of Y is proportional to the independent variable X. Since the goodness of the model depends on how well it predicts Y, the linearity of the response(Y) and Predictors(X), p – p plot graph could be implemented.

As indicated in (Torres – Reyna, 2007, p. 16), if the whole plots show 45 degrees pattern, it indicates that the model seems to be doing a good job in predicting Y. as it can be seen in the graph given below, the plots form 45 degrees pattern. Therefore, the linearity assumption was met.

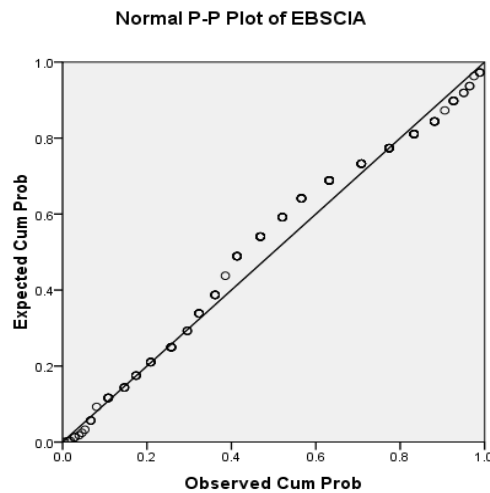
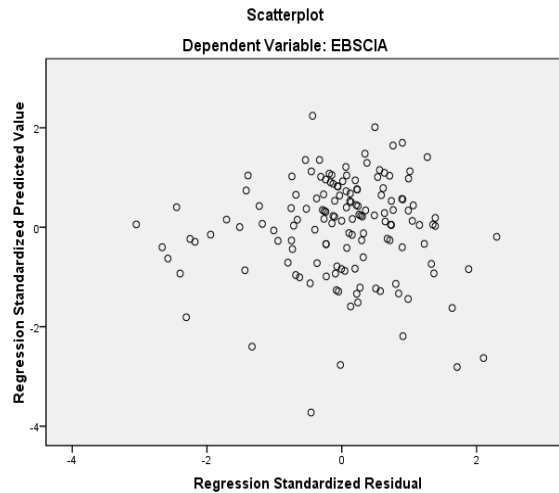


Figure 5: Linearity p – p plot graph for EBSCIA

**Homoscedasticity (equal variance assumption):** For every value of the independent variable (X), the distribution of the dependent variables (Scores) must have approximately equal variability. To test this assumption regression standardized residuals and regression standardized predicted value plots were used, because, they detect model lack of fitness and unequal variances. As indicated in (Abdel – Salam, 2008, p. 16/42; Torres – Reyna, 2007), any trends or patterns in the plots indicated lack of fitness and unequal variances which lead to a potential problem in the model.

The scatter plot for Effectiveness of BSC implementation is given below in Figures 6.



**Figure 6: Scatter plot for homogeneity of variance for EBSCI**

As can be seen from the above scatter plot, even though most plots are concentrated towards the upper central part, they do not form a certain pattern and there are some plots dispersed out from the center.

This dispersion can show to some extent the homogeneity of the variances. Meaning, it nearly satisfied the equal variance assumption.

**Non multi co-linearity assumption:** The independent variables are not very strongly inter - correlated. That is, the predictor variables should not have a strong relationship with each other. Multi co-linearity occurs when several independent variables correlate at high levels with one another, or when one independent variable is nearly linear combinations of the other independent variables (Keith, 2006 cited in plots, 2011).

**Table 8: Non multi co-linearity test of the independent variables, ASS, SP, SO, SM, PM, SI, AUT, CAS, EVAL**

<b>Independent Variable</b>	<b>Tolerance</b>	<b>VIF</b>
<b>ASS</b>	.557	1.797
<b>SP</b>	.308	3.244
<b>SO</b>	.442	2.262
<b>SM</b>	.421	2.377
<b>PM</b>	.381	2.627
<b>SI</b>	.713	1.402
<b>AUT</b>	.767	1.304
<b>CAS</b>	.467	2.142
<b>EVAL</b>	.522	1.916

Source: Own Survey, 2019

The nine independent BSC Implementation practices components in the model should not be highly correlated. To test this assumption the researcher used the more precise approach, assessing the tolerance and its reciprocal values (VIF, Variance Inflation Factor) in the output results of the regression analysis for model fitness. The tolerance value is the indication of the percent of variance in the predictor that can't be accounted for by the other predictors, very small value indicated that a predictor is redundant. If the tolerance value of each predictor is greater than 0.10, then it indicates the non – multi co-linearity for each predictor if not it shows the existence of multi co-linearity. As (Dien Ngo, 2012, p.9; Pallant, 2005: 150; Torres – Reyna, 2007: 21) showed that, if the VIF value of each predictor is less than 10, then it indicates the non – multi co-linearity of the predictors if not it suggested a problem. When such situation, tolerance less than .10 and VIF is greater than 10, is happened the regression model estimates of coefficients became unstable and the standard errors for the coefficients could get inflated. In other words the model loses its statistical validity.

As it can be seen in the above Table 8, there was no multi co-linearity amongst the independent variables ASS, SP, SO, SM, PM, SI, AUT, CAS and EVAL in the models for the effectiveness of BSC Implementation. Therefore, the non – multi co-linearity assumption was met.

In general, as the four model assumptions test indicated in the above output results of the SPSS, all assumptions were met and hence the multiple regression model for the assessment of effectiveness of BSC Implementation in the selected sectors with the nine independent variables was ready to be tested for the model fitness test.

#### 4.6.3. Model Fitness and Significance of the Independent Variables as a Whole

Model fitness test is a statistical test to check whether the regression model is fit for the data or not. To test the model fitness, the overall steps for testing multiple linear regression model, F – test analysis of variance [ANOVA] for the overall models fitness test and t – test for the significance of an individual coefficients in the regression models with 5 % level of significance were used(Engida&Zeytu, 2017). Therefore, the significance of the independent variables as a whole is summarized in table 8 below.

**Table 9: Model Summary**

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.774	.600	.572	.44944

a. Predictors: (Constant), ASS, SP, SO, SM, PM, SI, AUT, CAS, EVAL

b. Dependent Variable: EBSCI

Source: Own Survey, 2019

In the above Table 9, the R value tells us that, the strength of the relationship between the independent variables, BSC Implementation Practices Likert Scales average ASS, SP, SO, SM, PM, SI, AUT, CAS and EVAL and the dependent variable effectiveness of BSC Implementation.

So, the numerical value .774 indicates the existence of strong positive relationship between the dependent variable – effectiveness of BSC Implementation and the predictor variables **ASS, SP, SO, SM, PM, SI, AUT, CAS** and **EVAL**.

The R square value, .600, indicated that the percentage of variation of the dependent variable was directly attributable to the independent variables. This means the model explained 60 % of the variance/changes in the effectiveness of BSC Implementation. Therefore, as (Pallant, 2005) indicated that, the explaining capacity of the model with the nine variables was 60 %.

The Adjusted R square value tells us that the most useful measurement of the success of the model, which is better than the R square value. Because R square value tends to somewhat over – estimate the success of the model when applied to the real world, and also the Adjusted R square value takes in to account the number of variables (the nine independent variables) in the model and the number of observations (participants – sampled public sector employees) upon which the model was based on (Diem Ngo & Puente, 2012). Therefore, the adjusted R square value for the effectiveness of BSC Implementation was .572. So, one can say that effectiveness of BSC Implementation model had accounted for 57.2 % of the variance in explaining the effectiveness of BSC Implementation.

**Table 10: ANOVA (Analysis of Variance) Output Part I**

ANOVAa

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	39.058	9	4.340	21.484	.000
	Residual	26.058	129	.202		
	Total	65.116	138			

a. Dependent Variable: EBSCI

b. Predictors: (Constant), **ASS, SP, SO, SM, PM, SI, AUT, CAS, EVAL**

Source: own survey, 2019

As can be seen from the above Table 10, the F calculated value with its degrees of freedom (9, 129) for effectiveness of BSC Implementation as a whole is  $.000 < 0.05$  implies that with the confidence  $(1 - \alpha)$  very close to 100%. Therefore, it could be said that at least one of the coefficients  **$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$**  and  **$\beta_9$**  was significant for the model – for the Effectiveness of BSC Implementation.

In other words, the variable Y was better if it was a function of at least one of the variables **X1, X2, X3, X4, X5 X6, X7, X8** and **X9** rather than only with  $\beta_0$ . Therefore, **X<sub>i</sub>** and **Y** were linearly related and that the model was fit the data. This is to say, the BSC Implementation – the nine independent variables and Effectiveness of BSC Implementation – the dependent variable were related. Hence, the regression model could predict the effect of Effectiveness of BSC Implementation practices on BSC implementation.

#### 4.6.4. Significance of each Regression Coefficients: Significance of each independent variable

To identify which regression coefficient (or independent variable) was significant for the model (for the dependent variable), the output of the coefficients table of the SPSS was used. The test of significance was conducted by the t – p – value.

The study used ANOVA to establish the significance of the regression model from F-significance value of p less than 0.05 was established ( $p=0.00 < 0.05$ ). This shows that the regression model has a less than 0.05 likelihood (probability) of giving wrong predictions. The F- calculated was larger than the critical value. The model is statistically significant in predicting how the variables affect the effectiveness of BSC implementation.

**Table 11: ANOVA output part II: Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations	Co-linearity Statistics	
	B	Std. Error	Beta			Zero-order	Tolerance	VIF
(Constant)	.567	.287		1.979	.050	-	-	-
ASS	-.039	.086	-.033	-.448	.655	.407	.557	1.797
SP	.009	.097	.009	.092	.927	.549	.308	3.244
SO	-.032	.083	-.033	-.389	.698	.497	.442	2.262
SM	.118	.066	.153	1.785	.077	.585	.421	2.377
PM	.320	.083	.346	3.837	.000	.699	.381	2.627
SI	.008	.060	.009	.138	.890	.406	.713	1.402
AUT	.033	.066	.032	.498	.620	.358	.767	1.304
CAS	.213	.072	.240	2.943	.004	.643	.467	2.142
EVAL	.185	.072	.200	2.589	.011	.618	.522	1.916

Dependent Variable: Effectiveness of BSC Implementation

Source: Own Survey, 2019

According to the result obtained from the SPSS, in Table 11 above, under the Sig. column, the p – values of the independent variables PM, CAS and EVAL are less than 0.05, indicated that they are statistically significant for the model, because their level of confidence are greater than 95% [ (1 – p)100%]. For instance, for PM, p – value = .000 which leads to have a confidence level of (1 – .000)100% = 100% which is greater than 95%. Meaning, the above three independent variables – PM, CAS and EVAL had significant effect on the effectiveness of BSC implementation.

In general, the information contained and discussed in sections 4.6.3 and 4.6.4 characterized the goodness and the usefulness of the model to predict the effects of effectiveness of BSC implementation based on BSC implementation practices such as ASS, SP, SO, SM, PM, SI, AUT, CAS and EVAL. Therefore, the regression model (4.6.1) becomes the predictor model with equation:

The established regression equation was:

$$\text{Predictor model: } Y = 0.567 + 0.039X_1 + 0.009X_2 - 0.032X_3 + 0.118X_4 + 0.320X_5 + 0.008X_6 + 0.033X_7 + 0.213X_8 + 0.185X_9$$

(4.6.2)

**Predictor model using unstandardized Beta values (using BSC implementation Practices):**

$$(Y) \text{ (EBSCI)} = -1.870 + 0.039(\text{ASS}) + 0.009(\text{SP}) - 0.032(\text{SO}) + 0.118(\text{SM}) + 0.320(\text{PM}) + 0.008(\text{SI}) + 0.033(\text{AUT}) + 0.213(\text{CAS}) + 0.185(\text{EVAL})$$

(4.6.3)

**Predictor model using standardized Beta values:**

$$(Y) \text{ (EBSCI)} = -0.33(\text{ASS}) + 0.009(\text{SP}) - 0.033(\text{SO}) + 0.153(\text{SM}) + 0.346(\text{PM}) + 0.009(\text{SI}) + 0.032(\text{AUT}) + 0.240(\text{CAS}) + 0.200(\text{EVAL})$$

(4.6.4)

## Predictor Model Interpretation

According to Alwadal (2010) Value of coefficient relation between variables 0.70-1.00 Very strong association, 0.50-0.69 Substantial association, 0.30-0.49 Moderate association, 0.10- 0.29 Low association, and 0.01-0.09 negligible association.

The regression equation has established that holding all the independent variables (assessment, strategic planning, strategic objective, strategic mapping, performance measure, strategic initiative, automation, cascading and evaluation) constant, other factors influencing effectiveness of BSC implementation in the target GZGOs will be 0.567 ( $p = 0.05 = 0.05$ ). The findings indicate that taking all other independent variables at zero, a unit increase in assessment will lead to a -0.039 ( $p = 0.655 > 0.05$ ) decrease in the effectiveness of BSC implementation in the target GZGOs. This shows that there is a negative relationship.

A unit increase in strategic planning will lead to a 0.009 ( $p = 0.927 > 0.05$ ) increase in the effectiveness of BSC implementation in the target GZGOs. This shows that there is a positive relationship. On the other hand, a unit increase in strategic objective will lead to a -0.032 ( $p = 0.698 > 0.05$ ) decrease in the effectiveness of BSC implementation in the target GZGOs. This implies that the relationship is negative.

A unit increase in strategic mapping will lead to a 0.118 ( $p = 0.077 > 0.05$ ) increase in the effectiveness of BSC implementation in the target GZGOs. This shows that there is a positive relationship. A unit increase in performance measure will lead to a 0.320 ( $p = 0.00 < 0.05$ ) increase in the effectiveness of BSC implementation in the target GZGOs. This indicates that there is a positive relationship. A unit increase in strategic initiative will lead to a 0.008 ( $p = 0.890 > 0.05$ ) increase in the effectiveness of BSC implementation in the target GZGOs. This shows that there is a positive relationship.

A unit increase in automation will lead to a 0.033 ( $p = 0.620 > 0.05$ ) increase in the effectiveness of BSC implementation in the target GZGOs. This shows that the presence of positive relationship. From the given description, one can deduce that Performance Measure influences the effectiveness of BSC implementation most; followed by Cascading, Evaluation, Strategic Mapping, Automation, Strategic Planning, Strategic Initiative and Strategic Objectives as well as assessment respectively.

The study also established a significant relationship between effectiveness of BSC implementation in the target departments and the independent variables; Assessment( $p=0.655>0.05$ ), Strategic Planning ( $p=0.927>0.05$ ), Strategic Objectives ( $p= 0.698 >0.05$ ), Strategic Mapping ( $p=0.077>0.05$ ), Performance Measure( $p=0.00 < 0.05$ ), Strategic Initiative ( $p=0.890> 0.05$ ),Automation( $p=0.620> 0.05$ ), Cascading ( $p=0.004 <0.05$ )and Evaluation( $p=0.011<0.05$ ).

The regression coefficients were tested for significance at  $\alpha =0.05$ . Significance occurs at p-values less than 0.05. From the above results, we can understand that most of the variables were good predictors to effectiveness of BSC implementation in the selected departments. However, the variables performance measure, cascading and evaluation do not have a strong role in predicting the variation in the effectiveness of BSC implementation. Besides, the regression analysis results of the variables assessment and strategic objectives are ( $\beta= -.039$ ,  $t= -.0448$ ,  $p> 0.05$ ) and ( $\beta= -.032$ ,  $t= -.389$ ,  $p> 0.05$ ) respectively. This shows that they have little or no role in predicting the variation in the effectiveness of BSC implementation.

#### 4.7. Results and Discussions of Regression Analysis

One of the objectives of this study was to examine whether there is statistically significant effect of each of BSC implementation practice on the effectiveness of BSC implementation in the selected public sectors in Gurage Zone. Therefore, to answer the second basic research question, i.e., to test the hypothesis  $H_{o2}$ : There is statistically significant effect of each of BSC implementation practice on the effectiveness of BSC implementation in the selected public sectors. The researcher used the ANOVA Tables 9 and 10, in table 11 above, the F – p – value (.000) indicated that the multiple correlation coefficient  $R = 0.706$  was significant. Meaning, the contribution of at least one of the nine BSC implementation practices, assessment, strategic planning, strategic objectives, strategic mapping, performance measure, strategic initiative, automation, cascading and evaluation had significant effect on the effectiveness of BSC implementation.

As indicated in Table 11, **PM**, **CAS** and  **EVAL** statistically have significant effect on the effectiveness of BSC implementation, because their sig. values are .000, .004 and .011 respectively which are less than .05(level of precision). This result led us to accept the stated null hypothesis on these variables.

Therefore, it could be inferred that these three independent variables had positive and significant effect on the effectiveness of BSC implementation. Regarding the remaining six independent variables, **ASS**, **SP**, **SO**, **SM**, **SI** and **AUT** had positive but insignificant effect on the effectiveness of BSC implementation, since their sig. values are .655, .927, .698, .077, .890 and .620 respectively, which are greater than to the level of precision. This result led us to reject the null hypothesis on these variables. Hence, it could be concluded that these variables had positive and insignificant effect on the effectiveness of BSC implementation. However, it should be noticed that insignificant to the dependent variable does not mean that it has no effect totally, because it has certain contribution to the dependent variable. Regarding the results and findings of this study on reward system, it is in line with the finding of the study conducted by Evans et al. (2016) on effectiveness of BSC implementation on employee productivity and investigated that cascading and evaluation systems affected effectiveness of BSC implementation. Moreover, it is also concurred with Meklit (2017) who conducted a study on the effect of BSC implementation practices on effectiveness of BSC implementation and confirmed the existence of significant relationship between effectiveness of BSC implementation with performance measure, cascading and evaluation. With regard to this, Lang Field Smith et al. (2006) explains that a well-designed BSC should contain a mix of outcome measures (i.e., lag indicators) and performance drivers (i.e. lead indicators). The measures within the BSC can, therefore, be sub-divided as lead (driver measures) and lag indicators (outcome measures). Otherwise, intended objectives could not meet accordingly. Similarly, Charles (2013) suggested that performance measures should be developed that address the four perspectives. Zemenu and Habtamu (2013) in their research on challenge and prospects of BSC, showed shortcomings in the BSC implementation like: cascading and alignment of the BSC to reward and personal development plan, difficulties in setting performance measures, subjectivity and favoritism in performance monitoring and evaluation system, and laborious paper based performance data handling and management system (lack of automation) has impeded the effectiveness of BSC in achieving intended objectives. Rohm et al. (2013) ensures that evaluation which is the strategic planning and management system is dynamic and incorporates continuous improvement into day –to- day operations and management.

In order to compare the extent of the contribution of each of the nine variables to the Effectiveness of BSC Implementation, standardized coefficients, Beta values were used (Table 4.7), because, it gives a measure of the contribution of each independent variable. A large value indicates that a unit change in this predictor variable has a large effect on the dependent variable.

The percent of the effect of each the BSC Implementation practice variables (**ASS, SP, SO, SM, PM, SI, AUT, CAS** and  **EVAL**) was obtained by the equation that links R square = 0.572 as indicated in (Beaumont, 2010) analysis:

$$[R]^2 = \beta_{ASS}r_{0ASS} + \beta_{SP}r_{0SP} + \beta_{SO}r_{0SO} + \beta_{SM}r_{0SM} + \beta_{PM}r_{0PM} + \beta_{SI}r_{0SI} + \beta_{AUT}r_{0AUT} + \beta_{CAS}r_{0CAS} + \beta_{EVAL}r_{0EVAL}$$

Where,  $\beta$ s are the coefficients of independent variables – BSC Implementation practice variables,  $r$ s are the zero order correlations which had been taken from the output of the coefficients' Table 11, Zero order is the Pearson correlation between each predictor and dependent variable (Brooks, 2008, p.6).

The value of R square could be expressed as the sum of the product of each of the employee performance management system practice variables standardized Beta values by zero order correlation coefficient values respectively as:

$$0.572 \times 100\% = (-.033 \times .407 + .009 \times .549 + -.033 \times .497 + .153 \times .585 + .346 \times .699 + .009 \times .406 + .032 \times .358 + .240 \times .643 + .200 \times .618) 100\%$$

$$57.2\% = 57.2\%$$

From these percentages, one can infer that different types of the BSC Implementation practices and encouragement mechanisms were inevitable for the betterment of the Effectiveness of BSC Implementation effectively in the public sectors. The remaining 42.8% of Effectiveness of BSC Implementation might be affected by other variable(s) on the BSC Implementation practices, factors, the overall working environment conditions, challenges like absence of training and development caused by lack of resources, inappropriate employee perception towards the issue and inadequate commitment from top management, as pointed out by (Thitina, 2016) etc. which were not included in this study

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1. Introduction**

This chapter discusses the findings of the study with reference to specific objectives. Besides, it presents conclusions of the study based on the findings. It also outlines the recommendations for the study and ends by forwarding possible areas for future research implications.

#### **5.2. Summary and Major Findings**

The study was conducted to assess the effectiveness of BSC implementation in the selected Garage zone government organizations. Data was collected from both interview and questionnaire. The collected data was analyzed using descriptive statistics. Here, correlation and regression analysis was made to show cause-effect relationships. Therefore, the investigator listed the findings of the study as follows.

- It is revealed that the target departments have not done satisfactorily with regard to translating high-level strategy in to aligned lower level objectives and measures and aligned to the departments' vision, mission and strategy.
- Larger proportion of the respondents were convinced that the departments have evaluated the progress towards their strategic goals, reviewed the BSC strategic planning and management system to determine where efficiency and effectiveness could be improved, reviewed organization planning, assumption, strategy, objectives, performance measures, strategic initiatives and budget and as well as tried to put proposal for organizational change as needed.

- Involvement of too few people and taking too long time in reform implementation, lack of BSC knowledge and experience among employees and leadership, staff resistance and reluctance to reform, unfamiliarity with BSC software, some staff assume that it is time consuming to feed activities with software, others consider BSC as a political issue and lack of follow-up and supervision were mentioned as factors by most of the respondents both during questionnaire and interview held with employees and managers respectively.
- As per the findings reached during correlation analysis, all of the main variables are positively correlated with effectiveness of BSC implementation with 0.01 statistically significant levels. However, the regression analysis results depicted that most of the value of the variables were greater than 0.05 except the three variables Performance measure, cascading and evaluation.

### 5.3. Conclusions

The objective of this study is to assess the effectiveness of BSC implementation from selected Gurage Zone government organizations. Data was collected from primary sources using questionnaire and interview as well as through documents. To this end, data was analyzed and interpreted using descriptive approach and correlation and regression analysis. Based on the interpretation made, the researcher reached at the following findings.

Having followed the finding of the study, the researcher comes up with the following conclusions.

- From the results of the study, it can be concluded that the leadership of the departments have not made satisfactory efforts in the realization of effectiveness of BSC implementation so as to improve their organizations performance. Besides, the status of proper BSC implementation practices is not satisfactorily achieved its intended objectives though it is being used as strategic planning and performance measurement tool.
- The study has revealed that majority of the respondents were not being satisfied on the assessment of departments strength and their work processes effort on in depth analysis of the internal and external environments while developing the strategic plan. Following this, strategic plan focus areas are not well defined and understood, used customer, financial, internal process, learning and growth perspectives to ensure the balance between the organization strategies and measures and put customer satisfaction as a central position.
- It was very evident that strategic objectives were not placed in themes, performance indicators were not related to the objectives of the departments, well-written objective statements which provide precise clarification of the meaning and objectives describe the links in the chain of cause and effect failed to be in the strategy map.
- Majority of the respondents have convinced that the strategic initiatives chosen at the survey were done through proper sort of selection criteria. Besides, the initiatives were not tied with the vision and missions as well as they were not wide reaching. Similarly, the measures used were not just enough to evaluate achievements in each objective.

- Majority of the respondents were not well satisfied with the mix of measures used as well as how well they are fit to accurately measure objectives.
- The outcomes of the interview also convinced that performance measures were linked to organization objectives.
- The respondents felt that the implementation of BSC was faced with a challenge of lack of BSC knowledge and experience of employees and leadership, staff resistance and reluctance to reform, taking longer time to reform the whole process of performance measurement and in involving few individuals in the process.
- Majority of the respondents convinced that they employ automation so as to process data about BSC implementation process using software
- Linkage of leading and lagging indicators are not treated accordingly in the departments

## 5.4. Recommendations

Having followed the conclusions of the study, the student researcher recommends the following points to the departments. Therefore, the departments recommended to:

- Strengthen reform team and change agents among the organizations members who can speed up the whole reform activities and really motivate the involvement of the larger mass of the departments for proper BSC implementation. To achieve this, there should be given due attention through proper selection of the team members and the provision of strong support to the team in the form of exposure visit and arranging different trainings.
- Conduct intensive awareness creation activities to the employees about the meaning, benefit and the techniques of BSC system from the balanced perspectives of its nature as a strategic management system, performance measurement and strategic communication.
- Enhance communication at every stage of reform implementation by organizing short and long term training on the whole process of BSC implementation. So that they can follow the development of performance measurement of their organization.
- give due consideration to align performance measurement with reward systems to motivate the best performers as well as to stimulate others to follow the footsteps of better achievers. Therefore, the objectives of the departments could be achieved in relatively better quality and quantity as well as with lower cost and shorter time.
- Any newly developed or introduced reform in an organization to be effectively implemented should involve organization level participation in all the processes of implementation. Balanced scorecard implementation also requires the same approach.
- be highly committed towards avoiding taking more time to finalize reform implementation as it is actually de-motivates better performers and increase the number of those who resist change. In other words, the longer the implementation period takes too much time it will put the commitment and efficiency of the managers under question. Therefore, the departments' managers should be very clear about implementation of reform including its importance in transforming their organization and committed to do everything in a relatively shorter time by making necessary amendments.

- Have to put more effort in regularly evaluating the implementation process of their BSC in order to identify the strengths and weakness that can contribute to better performance. Therefore, to achieve intended objectives of effective implementation plan and monitoring mechanisms should be designed its progress to strictly be followed up by the top management team of the departments as well.
- Give particular attention to automation to properly measure individual and institutional achievements and this should to be linked to a rewards system that motivates the best achievers as well as reports for immediate and future use.
- There should be a linkage of leading and lagging indicators accordingly to meet the goals of effectiveness of BSC implementation.

## **5.5. Future Research Implications**

According to Niven (2006), no two BSC implementations are completely alike. Further, the same author states that organizations which decided to implement the tool should do so in a way that fits the individual culture, current management processes and readiness for such a major change initiative. Therefore, the study was limited to selected departments of Gurage Zone Government Organizations. The researcher would, thus, recommends for further study on Assessment of Effectiveness of Balanced Scorecard implementation in Government Organizations. Equally important, the finding of this research identified 60 percent of the factors that affect effectiveness of BSC implementation in the study area. Therefore, there is a chance to other researchers to conduct a further study on the area so as to identify the other factors that affect effectiveness of BSC implementation in government organizations. Though the reliability of the questionnaire was tested, the existence of subjectivity could not be avoided. Future research may also consider using a larger sample to replicate this study. Further, a more refined questionnaire instrument with additional items could provide a more comprehensive data set to enable an improved analysis. It was concluded from this study that data collection needed utmost care at the time of collection to control the quality of the data. Moreover, this study falls in the constraints of time, cost and required resources. In conclusion, Balanced Scorecard effectiveness implementation should cover both internal and external assessments. This is worth noting to knowing and evaluating the effectiveness of the Balanced Scorecard implementation and link it with strategic initiatives.

## REFERENCES

- Admitukumsa(2016). Assessment of Balanced Scorecard Implementation, Success Stories and Challenges in the Ethiopian Public Higher Learning Institutions: The Case of Jimma University, 2016*
- Abdel – Salam, G.A.(2008). Interpreting Multiple Regressions: A short overview. Virginia Polytechnic Institute and State University. [http://www. Stat.vt.edu/consult/](http://www.Stat.vt.edu/consult/)*
- Alwadaei, S.A (2010). Employee’s perception of, and satisfaction with, performance Appraisal*
- Atkilt. (1996). Civil Service Reform and Administration Modernization in Merit (A quarterly Bulletin of Ethiopian Civil Service Commission).*
- Balanced Scorecard Institution (2012). Improving Performance, Scoring Success: Using Balanced Scorecards for Organizational Excellence August, 2012.*
- Bob Frost (2007). Measuring Performance: Seven Good Reasons to Use a Scorecard: A paper in the Performance Perspectives Series by Dr. Bob Frost.*
- Civil Service Ministry (2013). In Brief Civil Service Reform Program in Ethiopia. Ethiopian Central Statistics Agency Census Report (2007.)*
- Daniel Beyera and Tolla Berisso(2015). Examining the Outcomes of the Balanced Scorecard as an Integral Tool of Public Sector: Reform in Selected Sectors of the Oromia Regional Government, Ethiopia. International Journal of African Development v.2 No.2 Spring 2015:71*
- Diefenbach Crabtree, A. D. (2008). The effects of Adopting the Balanced Scorecard on Shareholders Returns. Advanced in Accounting,24 (1), 8-15*
- Getachew Hailemariam and Richard Common (2006).Civil Service Reform inEthiopia: Success in two ministries, Research Memorandum 59 • August 2006.*
- Great banks, R. T. (2007). The impact of Balanced Scorecard in a Public sector Environment: Empirical evidence from Dunedin City Council, New Zealand. International Journal of Operations and Production Management, 27 (8), 846-873.*
- Gurage Zone Government Organizations Balanced Scorecard five year strategic plan (2011)*
- Gurage Zone Public Service Organizational Profile (2018)*

- HailemariamAbayneh(2016). Assessment of Balanced Scorecard Implementation: In the Case of Gulele Sub-City Education OfficesMay 2016, AAU.(Unpublished)*
- Hammer, M. and Champy, J. (1990, July/August). Reengineering work: Don't automate and obliterate. Harvard Business Review, 102-110.*
- Hendricks K. et al.,(2012). Adoption of the Balanced Scorecard: A Contingency Variables Analysis, Can. J. Adm. Sci. 29(2):124-138.*
- Hirve, K. and Sekar(2007). Risk Factors and Barriers to Process Reengineering*
- Jean M. Smith (2006). Using a Balanced Scorecard as a Strategic Tool in Public Purchasing:International Public Procurement Conference Proceedings 21-23 September 2006.Kaplan and Norton (1992), edited by IDMC Balanced Scorecard (BSC)*
- Kaplan, R. S., Norton, D. P. (1992). The balanced scorecard- measures that drive performance. Harvard Business review, 74 (1), 75-76*
- Kasurinen. (2002). Exploring Management Accounting Change: The case of Balanced Scorecard implementation. Management Accounting Research, 323-343.*
- Kothari, C. R. (2004). Research Methodology: Methods and Techniques New Age International.*
- Lombard M., (2010). Practical resource for assessing and reporting inter-coder reliability in content analysis research project.p']\*
- Malmi T.(2009).“Balanced Scorecards in Finnish companies”, Management Accounting Research, 12 (2), pp.207-220*
- Margarita IŠORAITĖ (2008).The Balanced Scorecard Method: From Theory to Practice MykolasRomeris University*
- Masresha Mulat (2015). Challenges of Balanced Scorecard Measurement, Cascading and Evaluation in the Case Of INSA, AAU.*
- Mengesha, G.H and Common, R. (2007). Public sector capacity reform in Ethiopia:A tale of success in two ministries. Public Administration in Ethiopia, 27, 367-380.*
- Mihai Ionescu (2012). The Balanced Scorecard (BSC) Framework, Implementation Methodology and Recommended Application, Executive brief April, 2012 Romania.*

- Molina M.A.C et al. (2014). "Does the balanced scorecard adoption enhance the levels of organizational climate, employees' commitment, job satisfaction and job dedication?", Management Decision, 52(5):983-1010*
- Molleman B.(2007). The challenge of implementing the Balanced Scorecard. The Proceedings of the 6th Twente Student Conference on IT, Enschede, 2nd February 2007.*
- Morongwa Makakane (2007). Successful Step by Step Implementation of the Balanced Scorecard: Back to... Workinfo.com Human Recourses Magazine Volume 1 Issue 10, 2007.*
- Moris, J. (1977). The transferability of western management concepts and programs: an East Africa perspectives. (L. e. Stifel, Ed.)*
- Neely, Kennerley and Martinez. (2000). Performance measurement system design: A literature Review and Research Agenda. International Journal of Operations and production Management, 15 (4), 80-116.*
- Niven P.R. (2002). Balanced Scorecard Step-by-step, Maximizing performance and Maintaining Result John Wikey and Sons Inc. New York.*
- Niven P. R. (2006). Balanced scorecard step-by step: Maximizing performance and Maintaining Result, Hobken, new Jerssey; John Wiley& sons, Inc. p. 16*
- Niven P.R. (2008). Balanced Scorecard step-by-step for Government and Nonprofit Agencies: 2<sup>nd</sup> Edition. By John Wiley and Sons Inc. New Jersey, Canada.*
- Pandey, I. M. (2005). Balanced scorecard: myth and reality. The Journal for Decision Makers, 30(1), 85–102.*
- Parker, R. (2000). Organizational Culture in the Public Sector. (2nd, Editor) Queensland*
- Paul R. Niven (2014). Balanced scorecard evolution, dynamic approach to strategy execution. John Wiley and sons, Inc. Canada.*
- Pete Greaseley (2008). Quantitative Data Analysis: An Introduction for Health and Social Sciences, Open University Press.2008.*
- Pineno, Charles J. (2013). Sustainability Reporting by Organizations: an Integrated Approach or a Separate Category within the Balanced Scorecard based on key drivers through a Mapping Strategy: Byrd School of Business, Shenandoah University 2013.*
- Rao, S. (2013). New thinking on technical assistance to resolve knowledge and capacity gaps. GSDCR Helpdesk Research Report 935, Birmingham, UK: University of Birmingham.*
- River bark and Peterson (2008). A Balanced Approach to implementing the Balanced Score Card.*

- Robert S. Kaplan and David P. Norton, (1992). *Putting the Balanced Scorecard to Work: January- February 1992 issue of HBR*
- Robert S. Kaplan, David P. Norton. (1996). *The Balanced Scorecard: Translating Strategy into Action: Harvard Business School Press, United State of America 1996.*
- Robert S. Kaplan (2010). *Conceptual Foundations of the Balanced Scorecard: Working Paper, Harvard Business School, Harvard University.*
- Rohm, H. (2008) *Using the Balanced Scorecard to Align Your Organization Balanced Scorecard Institute, Strategic Management Institute*
- Solomon Markos (2013). *Civil Service Reform in Ethiopia: Issues, Lessons, and Future Directions: International Journal of Public Administration.*
- Speck Bacheretal. (2003). *A descriptive Analysis on the Implementation of Balanced Scorecards in German-speaking countries, Management Accounting Research, 361-384*
- TemamGebu(2016).*Assessment of Challenges of Implementing Civil Service Reforms: BPR and BSC in Focus, in Arsi Zone, At Asella, Ethiopia.WolaitaSodo University, Ethiopia.European Journal of Business and Management*
- Tewabech Melesse(2016). *Impact of BSC Implementation on the Performance of an Organization: The Case of Ethiopian Air Lines: AAU, 2016.*
- Thompson, K. a. (2008). *An improved tool of for building high performance organizations. Organizational Dynamics, 37 (4), 378-393.*
- Tilaye Kassahun (2010). *Rethinking Institutional Excellence in Ethiopia: Adapting and Adopting the Balanced Scorecard Model Vol.2 No.1 May, 2010.*
- Tsion Getachew(2014). *Challenges and prospects of Balanced Scorecard Implementation in the Development Bank of Ethiopia: AAU, 2014.*
- World Bank (2002). *Civil service reform; Strengthening World Bank and IMF collaboration. Washington: Library Congress calculating-in-publication Data.*
- Yosef, T. (2011). *Study of the Civil Service Reform in Adama City Administration: Regional state of Oromia Ethiopia. A.A: A.A.U.*
- Zemenu, G. and Habtamu, T.( 2013). *Challenges and Prospects of Balanced Scorecard: An Assessment of Some Selected Federal Civil Service Organizations in Ethiopia.*

**APPENDIX- A**

**EMPLOYEES' QUESTIONNAIRE**

**WOLKITE UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**DEPARTMENT OF MANAGEMENT**

**QUESTIONNAIRE**

**Dear Respondents!**

The main objective of this questionnaire is to assess the Effectiveness of Balanced Scorecard Implementation in Gurage Zone Government Organizations. The finding of this study is used for the partial fulfillment of the requirements of Master in Business Administration /MBA/ at Wolkite University. To this end, your honest and truthful responses mean a lot to this research. Thus, you are kindly requested to fill out this questionnaire with utmost honesty. Since this questionnaire is purely academic, it will result no any negative consequence in your present job.

Thank you in advance for your cooperation!!

N.B No need of writing your name.

**Section I: Background Information**

**Direction:** Put an X mark in the appropriate box given below.

1. Gender: 0. Female  Male
2. Your age in years on the date of interview-----
3. Education Level: 0. Diploma  1. Degree  2.MA/MSC  3.PHD or above
4. Field of Study:\_\_\_\_\_
5. Type of your sector:  
0. Economic  1. Social  2. Political
6. Current position:\_\_\_\_\_
7. How long have you served in the department? -----

## Section II: Status of BSC Implementation Practices

**Direction:** Please put an X mark in the box that matches your agreement with each of the position in the table below.

Where, 1- Strongly Disagree

2- Disagree

3- Neutral

4- Agree

5- Strongly Agree

No.	Items	1	2	3	4	5
<b>8. BSC Implementation Practices Related Questions</b>						
	<b>8.1 Assessment</b>					
1	Your department analyses the internal weakness and strength and of the external threats and opportunities, SWOT in formulating the strategic plan					
2	your department develop clear vision, mission and core values to provide direction for the organization					
3	your department identify organization pains and enablers from SWOT analysis					
4	your department identify its customers and stakeholders after understanding their need and demands					
5	your department strategic plan is developed by all of you					
6	your department provide education and training about the scorecard					

<b>8.2 Strategic Planning</b>						
<b>1</b>	Your department/office formulated strategic plan based on in depth analysis of the internal and external environments					
<b>2</b>	Your department/office strategic plan focus areas are well defined and understood					
<b>3</b>	Your department/office uses customer, financial, internal process, learning and growth perspectives to assure their balance in the organization strategies and measures as well					
<b>4</b>	Your department/office put customer satisfaction as a central position rather than other activities					
<b>5</b>	The financial perspective is the primary objective of your department/office/ scorecard					
<b>6</b>	Your department/office identify values proposition for key customer and stakeholder's service attributes(quality, timelines, cost effectiveness, etc) image and relationship components					
<b>7</b>	Your department/office identify strategic theme which represent the major focus area					
<b>8</b>	Your department/office identify strategic results that ratify the successful execution of the strategic theme					
<b>9</b>	Your department/office s identify competitive critical success factors					
<b>10</b>	Your department/office strategic theme and goals are linked with performance-based budgeting					
<b>8.3 Strategy Objective</b>						

1	Your agree that your department/office strategic objectives are placed in themes					
2	Your department/office indicator are related to the objectives of organization					
3	Your department/office has well-written objective statements which provides precise clarification of the meaning					
4	Your department/office objectives describe the links in the chain of cause and effect evident in the strategy map					

#### 8.4 Strategic Mapping

1	Your department/office use strategic map as a tool of education and communication about organization strategy					
2	Your department/office use strategic map to link the strategic objective with its cause-and-effect relationships and demonstrate how value is created through four perspectives					
3	Your department/office use strategic map to balance set of objective, representing each of perspectives					
4	Your department/office use strategic map to eliminate ambiguity and clarify responsibility					

<b>8.5 Performance Measure</b>					
<b>1</b>	Your department/office performance measurement links to the Organizations vision through the objective on the strategic map				
<b>2</b>	Your department/office undertakes internal or external benchmarking to set measurements and indicators				

<b>3</b>	Your department/office performance measures include leading lagging, quantitative and qualitative measures in balanced ways				
<b>4</b>	Your department/office performance measures in each perspective are capable enough to measure the objectives				
<b>5</b>	Your department/office performance measures is accurate and consistent with work process and units performance measurement system does not impose in to data collection burdens				
<b>8.6 Strategic Initiative</b>					
<b>1</b>	The initiatives are tied to strategic vision, mission, objectives and perspectives explicitly defined in terms of				

	owners, schedules action steps, progress, and expected results and fits with one of the strategic themes				
2	Your department/ office strategic initiatives are wide reaching ( i.e entire organization) and solve a significant organization pain				
3	Your department identifies potential strategic initiatives, developed criteria of selection and analyzed selected strategic initiatives				
4	Your department prioritize strategic initiatives				
<b>9. Implementing BSC/ system rolled out Related Questions</b>					
<b>9.1 Automation</b>					
1	your department has software to automate the collection and reporting of the quantitative data				
2	your department transfers data in to relevant information and uses for performance measurement				
3	your department enters the measures, targets and initiatives of the organization in the software				
4	the scorecard software accommodate the addition of performance measures from a variety of physical and non physical locations				
5	the scorecard software allow you to perform statistical analysis				
<b>9.2 Cascading</b>					

1	your department drives high level strategy in ti aligned lower level objectives and measures					
2	your department scorecard is aligned to its vision, mission and strategy of the organization					
3	your department gets you develop individual scorecards aligned to the organization strategy					
4	individual and team scorecards aligned with rewards					
5	your department invites you to participate in giving feedback on the scorecard					
<b>9.3 Evaluation</b>						
1	Your department/office Periodically reviews the progress towards its strategic goals					
2	Your department/office review of the BSC strategic planning and management system to determine where efficiency and effectiveness can be improved					
3	Your department /office uses evaluation to review organization planning, assumption, strategy, objectives, performance measures, strategic initiatives and budget					
4	Your department/office use evaluation to put proposal for organizational change as required					

**Section III: Effectiveness of BSC Implementation**

**Direction: Please put an X mark in the box that matches your agreement on Effectiveness of BSC Implementation with each of the position in the table below.**

**Where , 1- Strongly Disagree**

**2- Disagree**

**3- Neutral**

**4- Agree**

**5- Strongly Agree**

	Items					
S.No		1	2	3	4	5
1	You agree that commitment has been demonstrated at all levels of the organization especially at the executive level					
2	Clarity on the objectives of the program, and the underlying reason for the change has been understood by all employees and stakeholders					
3	Proper and timely communications are being practiced throughout the entire organization					
4	There is a clearly assigned and understood accountability for the process and results of the balanced scorecard program					
5	A system for measuring performance that is positive not punitive, have been developed and provide sufficient and accurate information to decision makers					
6	The balanced scorecard at the work process level Has been clearly linked to the organization' strategy					
7	Comprehensive reports documenting the success Of BSC program has been exercised by your department /office					

8	Properly implement BSC resulted in cost reduction					
9	Properly implemented BSC resulted in time saving					
10	Properly implemented BSC has contributed to punctuality service or product					
11	Properly implemented BSC resulted in increasing the quantity or service or product					

**Section IV: Factors Affecting Effectiveness of BSC Implementation**

**Direction: Please put an X mark in the box that matches your agreement on factors affecting effectiveness of BSC implementation with each of the position in the table below.**

Where , 1- Strongly Disagree

2- Disagree

3- Neutral

4- Agree

5- Strongly Agree

---

S.No	Items	1	2	3	4	5
1	Your department /office/ has set too few measures per perspective					
2	your department office has adopted too many indicators					
3	Measures selected for the scorecard does not reflect the organization, strategy					
4	Your department /office try to make quantitative link between nonfinancial leading indicators and expected financial results					
5	Your department/office lacks senior leadership commitment					

6	Your department /office has involved too few individuals in the implementation of BSC process					
7	Your department /office kept the score card at the top					
8	your organization BSC development Processes have taken too long					
9	Your department has introduced the balanced scorecard only for the purpose of compensation					
10	Your department /office employ the BSC without considering the organizations culture					

Thank you for your Cooperation!!

***APPENDIX- B***

**WOLKITE UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**INTERVIEW QUESTIONS**

The purpose of this interview is to collect primary data from purposively selected respondents in Gurage Zone Government Organizations for the study entitled assessment of the effectiveness of balanced scorecard implementation. Your appropriate responses has a paramount importance to the finding of the study.

Thank you in advance!!

1. Why did your organization decide to implement BSC as strategy development and performance measurement tool?
2. When did your department/ office start implementing the BSC?
3. What measurement tool was in use to measure organizational performance before implementation of BSC?
4. What is the status of BSC Implementation Practices?
5. Has the BSC system been improved since implementation?
6. How far BSC has solved the challenges of the previous measurement tools?
7. What major factors are affected the implementation process?
8. What measures has taken to overcome the challenges you might faced?
9. Does organizational culture has any role in the implementation process?
10. What are the benefits of implementing BSC?

The end!!

**APPENDIX- C**

**DESCRIPTIVE STATISTICS OF THE VARIABLES**

<b>Item Statistics</b>			
<b>Assessment</b>	Mean	Std. Deviation	N
Your department analyses the internal weakness and strength and of the external threats and opportunities, SWOT in formulating the strategic plan	3.62	1.038	144
your department develop clear vision, mission and core values to provide direction for the organization	3.92	.878	144
your department identify organization pains and enablers from SWOT analysis	3.75	.857	144
your department identify its customers and stakeholders after understanding their need and demands	3.88	.774	144
your department strategic plan is developed by all of you	3.63	.960	144
your department provide education and training about the scorecard	3.30	1.135	144

<b>Item Statistics</b>			
<b>Strategic Planning</b>	Mean	Std. Deviation	N
your department formulated strategic plan based on in depth analysis of the internal and external environments	3.50	.921	142
your department strategic plan focus areas are well defined and understood	3.65	.915	142
your department uses customer, financial, internal process, learning and growth perspectives to assure their balance in the organization strategies and measures as well	3.47	.920	142
your department puts customer satisfaction as a central position rather than other activities	3.47	1.050	142
the financial perspective is the primary objective of your department scorecard	3.29	1.035	142

your department identify values proposition for key customer and stakeholders service attributes, image and relationship components	3.51	.973	142
your department identify strategic theme which represent the major focus area	3.60	.938	142
your department identifies strategic results that ratify the successful execution of the strategic theme	3.41	1.086	142
your department identify competitive critical success factors	3.49	.943	142
your department strategic themes and goals are linked with performance based budgeting	3.32	1.007	142

<b>Item Statistics</b>			
<b>Strategic Objectives</b>	Mean	Std. Deviation	N
your department strategic objectives are placed in themes	3.56	.976	143
your department indicators are related to the objectives of the organization	3.83	.805	143
your department has well written objective statements which provide precise clarification of the meaning	3.78	.800	143
your department objectives describe the links in the chain of cause and effect evident in the strategy map	3.61	1.014	143

<b>Item Statistics</b>			
<b>Strategic Mapping</b>	Mean	Std. Deviation	N
your department uses strategic map as a tool of education and communication about organization strategy	3.10	1.179	144
your department uses strategic map to link the strategic objective with its cause and effect relationships and demonstrate how value is created through the four perspectives	3.19	1.010	144

your department uses strategic map to balance set of objectives representing each of the perspectives	3.40	.956	144
your department uses strategic map to eliminate ambiguity and clarity responsibility	3.42	1.008	144

<b>Item Statistics</b>			
<b>Performance Measure</b>	Mean	Std. Deviation	N
your department performance measurement links to the organization vision through the objectives on the strategic map	3.50	.956	143
your department undertakes internal or external benchmarking to set measurements and indicators	3.48	.933	143
your department performance measures include leading, lagging, quantitative and qualitative measures in balanced ways	3.31	.960	143
your department performance measures in each perspective are capable enough to measure the objectives	3.41	.988	143
your department performance measures are accurate and consistent with work process and units performance measurement systems do not impose in to data collection burdens	3.29	.939	143

<b>Item Statistics</b>			
<b>Strategic Initiative</b>	Mean	Std. Deviation	N
the initiatives are tied to strategic vision, mission, objectives and perspectives explicitly defined in terms of owners, schedules action steps, progress and expected results and fits with one of the strategic themes	3.42	.915	143

your department strategic initiatives are wide reaching and solve a significant organization pains	3.41	.952	143
your department identifies potential strategic initiatives developed criteria of selection and analyzed selected strategic initiatives	3.41	.929	143
your department prioritize strategic initiatives	3.52	.970	143

<b>Item Statistics</b>			
<b>Automation</b>	Mean	Std. Deviation	N
your department has software to automate the collection and reporting of the quantitative data	2.26	.991	143
your department transfers data in to relevant information and uses for performance measurement	2.69	1.009	143
your department enters the measures, targets and initiatives of the organization in the software	2.46	.948	143
the scorecard software accomodate the addition of performance measures from a variety of physical and non physical locations	2.50	.971	143
the scorecard software allow you to perform statistical analysis	2.54	1.019	143

<b>Item Statistics</b>			
<b>Cascading</b>	Mean	Std. Deviation	N
your department drives high level strategy in ti aligned lower level objectives and measures	3.72	.865	144
your department scorecard is aligned to its vision, mission and strategy of the organization	3.67	.915	144
your department gets you develop individual scorecards aligned to the organization strategy	3.50	1.017	144
individual and team scorecards aligned with rewards	3.13	1.102	144
your department invites you to participate in giving feedback on the scorecard	3.26	1.051	144

<b>Item Statistics</b>			
<b>Evaluation</b>	Mean	Std. Deviation	N
your department periodically reviews the progress towards its strategic goals	3.51	.861	144
your department reviews of the BSC strategic planning and management system to determine where efficiency and effectiveness can be improved	3.24	1.066	144
your department uses evaluation to review organization planning, assumption, strategy, objectives, performance measures, strategic initiatives and budget	3.56	.883	144
your department uses evaluation to put proposal for organizational change as required	3.45	.922	144

<b>Item Statistics</b>			
<b>Effectiveness of BSC Implementation</b>	Mean	Std. Deviation	N
commitment has been demonstrated at all levels of the organization especially at the executive level	3.26	1.051	144
clarity on the objectives of the program and the underlying reason for the change has been understood by all employees and stakeholders	3.15	.948	144
proper and timely communications are being practiced throughout the organization	3.23	1.056	144
there is a clearly assigned and understood accountability for the process and results of the balanced scorecard program	3.15	1.064	144
a system for measuring performance that is positive but not punitive has been developed and provided sufficient and accurate information to decision makers	3.16	.958	144
the balanced scorecard at the work process level has been clearly linked to the organization strategy	3.35	1.099	144

comprehensive reports documenting the success of BSC program has been exercised by your department	3.16	1.015	144
properly implemented BSC resulted in cost reduction	3.44	.966	144
properly implemented BSC resulted in time saving	3.38	.953	144
properly implemented BSC has contributed to punctuality, service or product	3.47	.953	144
properly implemented BSC resulted in increasing the quantity , service or product	3.46	.892	144

<b>Item Statistics</b>			
<b>Factors Affecting Effectiveness of BSC Implementation</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
your department has set too few measures per perspective	3.06	1.168	139
your department has adopted too many indicators	3.27	1.033	139
measures selected for the scorecard do not reflect the organization strategy	3.06	1.108	139
your department tries to make quantitative link between nonfinancial leading indicators and expected financial results	3.38	1.125	139
your department lacks senior leadership commitment	2.99	1.014	139
your department has involved too few individuals in the implementation of BSC	2.94	1.153	139
your department keeps the scorecard at the top	2.88	1.097	139
your organization BSC development processes have taken too long	3.27	.991	139
your department has introduced the BSC only for the purpose of compensation	2.99	1.046	139
your department employs the BSC without considering the organization culture	3.24	.969	139

## APPENDIX- D

### PILOT RELIABILITY TEST RESULTS

**Assessment (not acceptable)-** You need to restate the items in such a way that the items are internally consistent and related!

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.493	.399	6

#### Strategic Planning (acceptable)

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.904	10

#### Strategic Objective (acceptable)

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.812	.812	4

**Strategic Mapping (acceptable)**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.858	.860	4

**Performance Measure (acceptable)**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.857	.869	5

**Strategic Initiative acceptable but** the number of items is too small! Add some 2 or 3 items related to them!

**Reliability Statistics**

<i>Cronbach's Alpha</i>	<i>Cronbach's Alpha Based on Standardized Items</i>	<i>N of Items</i>
.707	.709	2

**Automation (slightly acceptable)-but** the number of items is too small! Add some 2 or 3 items related to them!

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.519	.519	2

**Cascading (very poor and not acceptable at all)-** you need to restate the items and even add some more related items.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.086	.482	4

**Evaluation (acceptable)**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.718	.719	4

**Effectiveness of Balanced Scorecard Implementation (acceptable)**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.846	.845	11

**Factors Affecting Effectiveness of Balanced Scorecard Implementation (acceptable)**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.884	.885	10

**APPENDIX- E**

**RELIABILITY STATISTICS OF THE ACTUAL VARIABLES**

<b>Construct</b>	<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>No. of Items</b>
<b>Assessment</b>	.687	.699	6
<b>Strategic Planning</b>	.895	.895	10
<b>Strategic Objective</b>	.777	.785	4
<b>Strategic Mapping</b>	.876	.879	4
<b>Performance Measure</b>	.843	.843	5
<b>Strategic Initiative</b>	.822	.822	4
<b>Automation</b>	.700	.701	5
<b>Cascading</b>	.858	.859	5
<b>Evaluation</b>	.804	.805	4
<b>Effectiveness of BSC Implementation</b>	.897	.898	11
<b>Factors Affecting Effectiveness of BSC Implementation</b>	.800	.802	10