



**STRUCTURAL EQUATION MODEL ON QUALITATIVE PRODUCTIVITY
OF SMALL, MEDIUM ENTERPRISES IN REGION XI**

ALLADIN G. LORO, DBA

KeyWords

sustainability practices, organizational performance, and quality management practices, structural equation model, Philippines

Abstract

This study aimed to determine the best fit model on qualitative productivity. In particular, sustainability practices, organizational performance, and quality management practices were investigated with the use of adapted questionnaires as tools in gathering the primary data from the 400 respondents in Region XI. The research design used in the study was descriptive-correlative technique using Structural Equation Model. Findings reveal that sustainability practices, organizational performance, and quality management practices have significant relationships with qualitative productivity. All latent exogenous variables significantly influence the endogenous variable qualitative productivity. Model 4 was depicted as the best fit for this study, and it revealed qualitative productivity was influenced by sales revenue and optimization of labour capitalization, anchored on the strong evidence sustainability practices influenced by stakeholder orientation and sustainability features of products and services; organizational performance defined by financial and market performance; quality management practices defined by leadership and process management.

Chapter 1 INTRODUCTION

Rationale

Small and medium enterprises (SMEs) have faced many sustainability issues despite of having competitive products (Sallem, Nasir, Nori & Kassim, 2017). The absence of good practices of management, good organizational performance, and qualified labour could lead to low productivity performance (Yoshino & Hesary, 2016). A small and medium enterprise company operates to provide the specifics on the defined size. Furthermore, the problem of low level performance and management skills has been attributed to the nature and the character of the system of the organization (Turyahikayo, 2015). Additionally, the problem on low on productivity is attributed to the following factors such as education, government policy, business competition, and technology (Kurniawati & Yuliando, 2015). The most critical factor of the SME's low qualitative productivity is human resource. Employee motivation have led towards a better performance, higher productivity, creativity and innovation, retaining, staff, better service, equality and enrich human capital (Omar, Rahman, & Ismail, 2014)

It is evident that qualitative productivity leads to the growth of small and medium scale enterprises; this is apparent in the market shares, profitability levels and sustainability of most SMEs that have adopted this concept (Agwu & Afiero, 2018). He also added that SMEs enjoy sustainability and financial health.

Furthermore, a firm is innovative when it creates new combinations of production factors. These may be the introduction of new goods or existing goods with better quality (Herr & Nettekoven, 2017). Small and medium enterprises are non-subsidiary, autonomous businesses with fewer staff and this proportion differs across nations. Challenges are inevitable in operating such a company, and one of this is productivity (Berisha & Pula, 2015). Most analysts agree that management and performance of the organization in small and medium enterprises are the most probable cause of increasing in productivity. Small, medium-sized enterprises, usually well backed by technology, may have been fully convinced of the advantages of technology (Martin & Milway, 2009).

Sustainability has a great impact in every small and medium enterprise since it can affect the productivity of the organization (Asgary, Ozdemir, & Ozyurek, 2020). Sustainable practices are the processes services employ to maintain the qualities that are valued in every business organization. Sustainability practices of an organization mainly depend on its ability to perform well in terms of quality (Hussain, Ahmad, Haq, Nazir, Imran, & Islam 2015). Small and medium enterprises develop a suitable conceptual model for improving productivity and quality (Gunasekaran, Okko & Yli-Olli, 2016). In addition, the commitment to sustainability of small and medium enterprises, they see both market and entrepreneurial advantages of sustainability. (Jansson, Nilsson, Modig, & Vall, 2017). Sustainability practices can substantially yield concrete financial results and improving the productivity for small and medium business enterprises (Quadder, Kamar, & Hassan, 2016). The economic dimension of sustainability practices implies that a small and medium enterprise having good process on productivity associated with the right quality will have a strong drive to success. (Yadav, Gupta, Rani & Rawat, 2018). Sustainable business practices have

been steadily on the rise and many companies now embrace sustainability (Shields & Shelleman, 2015). Hence, some studies show that there is a strong positive relationship between sustainability practices and qualitative productivity.

Moreover, small and medium enterprises need to have a strong organizational performance since it is a significant factor in improving their output or their productivity. Organizational performance system is an important tool as it provides the organization with the necessary information achieve their goal and their desired output in terms of productivity (Mahmudova & Kovacs, 2018). The organizational performance of small and medium enterprise is based on the performance of the firm (Lo, Wang, & Ramayah, 2016). Hence, the organizational performance is base on their capability to lead to the creation of employment and qualitative productivity. (Moorthy, Tan, Choo, Wei, Ping, & Leong, 2012). Furthermore, organizational performance is the result of the effort made to execute a task or activity, process and procedure; at its core, performance is about creating and adding value in terms of quality (Suarez, 2016).

Furthermore, quality management practices improve the quality performance of an organization (Sahran, Zeinalnezhad, & Mukhtar, 2010). Furthermore, quality management practices were the most effective management tools of measuring quality performance of organization and sustaining a competitive advantage. The quality management practices of small and medium enterprise presents a distinctive challenge to the organization, since management challenges emerge with the phenomenon of complexity (Kureshi et al., 2009). In addition, quality management practices improve organizational performance in both large and small businesses and in any part of the world (Fening, Amaria, & Pesakovic, 2018). Sahran,

Zeinahnezhad and Mukhtar (2010) cited that the more extensive use of formal management practices helps SMEs to grow and increases their productivity.

There have been several studies in the past about productivity of small and medium enterprises. However, there are limited studies on how qualitative productivity has contributed to the success of the small and medium enterprises (Franco & Haase, 2010). Furthermore, there is no published study about qualitative productivity with the above-mentioned variables in the Philippines. This study aims to examine the impact of the above-mentioned variables on the qualitative productivity and to understand the toughest indicators of qualitative productivity and generate the best fit model. Additionally, this study may provide insights on what programs and activities are needed to prioritize and to be implemented to stimulate the best quality about productivity in Region XI.

Research Objectives

This study aimed to determine the best fit model of qualitative productivity of small and medium enterprises in Region XI. The specific objectives are as follows to wit:

1. To assess the level of sustainability practices of SMEs in terms of:
 - 1.1 Stakeholder Orientation;
 - 1.2 Process Management;
 - 1.3 Sustainability features of products and services; and
 - 1.4 Learning orientation.
2. To evaluate the level of organizational performance in terms of:
 - 2.1 Financial and Market Performance;
 - 2.2 Quality Performance;

- 2.3 Innovation Performance;
 - 2.4 Environmental Performance; and
 - 2.5 Social Performance.
3. To estimate the level of quality management practices in terms of:
 - 3.1 Leadership;
 - 3.2 Quality Policy and Planning;
 - 3.3 Alliances and Resources; and
 - 3.4 Employees Management.
 4. To measure the level the qualitative productivity of SME's in terms of:
 - 4.1 Sales Revenue;
 - 4.2 Increase Output Unit Cost of Production;
 - 4.3 Optimize Labour Utilization; and
 - 4.4 Optimize Capital Utilization.
 5. To determine the significant relationship between:
 - 5.3 Sustainability Practices and Qualitative Productivity;
 - 5.4 Organizational Performance and Qualitative Productivity; and
 - 5.5 Quality Management Practices and Qualitative Productivity.
 6. To determine the best fit model for qualitative productivity of SMEs.

Hypotheses of the Study

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between:
 - 1.1 Sustainability Practices and Qualitative Productivity;
 - 1.2 Organizational Performance and Qualitative Productivity; and

1.2 Quality Management Practices and Qualitative Productivity.

2. There is no best fit model for qualitative productivity of SMEs.

Review of Related Literature

This chapter includes the review of related literature and researches on sustainability practices, organisational performance, quality management methods, and qualitative productivity.

The review includes theories, principles, concepts, studies and views related to Sustainability Practices with the indicators: *stakeholder orientation, process management, sustainability and features of products and services and learning orientation* (Maletic, 2013). Organizational performance was also adapted from Maletic (2013), with the following indicators: *financial and market performance, quality performance, innovation performance, environmental performance and social performance*. Quality management practices with the following indicators: *leadership, quality policy and planning, alliances and resources and employees management* (Garcia, del Rio Rama, & Alonso, 2014). Qualitative productivity with the following indicators: *sales revenue, increase output unit cost of production, optimize labor utilization, and optimize capital utilization* (Asian Productivity Organization Journal 2014).

Sustainability Practices

Small, medium-sized companies have created measures to address environmental problems and adopt innovation as well as stakeholder orientation, process management, sustainability features of products and services, and learning orientation (Blundel, Monaghan, & Thomas, 2013). Sustainability actions have been shown to bring benefits not only to society, but also to companies themselves

(Jayeola, 2018). In particular, sustainability is conducted to benefit the financial performance of companies, apart from benefiting society. Various studies have shown that there are many methods to make SMEs more sustainable. In addition, in the business environment, there are several successful models of sustainable SMEs evolving. United Kingdom's trade associations were recognized as a useful channel for improving SMEs' viable practices (Elke & Bos-Brouwers, 2009). The study focused on small and medium-sized enterprises in the UK tourism industry and how trade associations can assist in implementing sustainable policies.

Stakeholder orientation is one of the indices of sustainability practices. Aminu (2018) indicated that the orientation of stakeholders creates value for all stakeholders, both social and financial. Business organizations set stakeholder orientation to safeguard the company's picture. This is due to ethical issues and the social responsibility of corporations. In relation to operating their activities in the most economical, efficient and efficient way possible to boost efficiency, there is growing pressure on company organizations to act ethically. Also, customers have become more aware of the reputation of the undertakings that they patronize (Minovic, Moravcevic, & Beraha, 2016).

Small and medium-sized companies (SMEs) have become the worst impacted by the absence of resources, strategic data, and appropriate partnerships for implementing ethical procedures (Lee, Herold, & Yu, 2015). Focusing on ethical aspects of stakeholder involvement in the growth of government e-services raises several key issues: who should be engaged and who should not be? For what reasons are stakeholders involved? What is going to be the consequence of stakeholder involvement and participation (Boyal, Kumar, & Ram, 2015). Dale (2016) indicated that stakeholders should have facilitated sustainable non-injectable growth,

taking into account the four fundamental values of medical morality: charity, maleficence, fairness, and independence. It is evident that businesses can no longer afford to ignore the ethics of company. Owing to unethical procedures, particularly those connected with staff and top managers, there are on-going company failures. (Turyakira, 2017).

Stakeholder orientation is found to have a positive connection with performance, and there are more complex relationships between stakeholder orientation dimensions, including synergy and obstructing effects (Xinming, Xiaoxiang, Xiaoqing, & Piesse, 2014). Their research shows that easy summation of orientations is not enough for better results for some stakeholders. Customer orientation, competitor orientation, and provider orientation have strong interactive performance impacts.

Process management is another measure of sustainability practices. This relates to the alignment procedures with the goals of an organization. This is the adoption of the Business Process Management (BPM), which is a management paradigm shift in a target organisation that contributes to a process-driven management model being established (Kolar, 2014). The business processing management includes the entire lifecycle of the business process and consolidates methodologies and methods from several past methods (Chong, Hoekstra, Lemmers, & Beveren, 2019).

Over the past century, business process management has acquired prevalence. It developed from a number of company performance improvement methods including Total Quality Management, Business Process Reengineering, and Six Sigma (Dallas & Wynn, 2014). It seems that the terms business process and business process management are still not clearly understood. Business process

management is an idea, concept or methodology, depending on a private point of perspective, and even more important, there are various stakeholders like business management and administration, software developers and computer scientists (Rolinek, Vrchota, Kubecova, & Marikova, 2015). In addition, its essence is a small number of ideas. Business process management recognizes the ability to separate procedures from their execution in the definition, design, evaluation, and refinement (Dhliwayo, 2016). In this respect, improvement of operational procedures is differentiated from minor, unconscious or undirected enhancement. Business process management also requires an end-to-end perspective of organizational procedures, especially across functional borders (Mendoza, 2015).

Undoubtedly, business process management is closely linked to technology issues such as business process management systems, (Feldbacher, Suppan, Schweiger, & Singer, 2016). There are a number of business process management research and process orientation studies. Since BPM itself does not have a strong terminological basis, most empirical surveys lack a validation of the prevalent knowledge of BPM by participants. This risks comparing apples and oranges with empirical results (Singer, 2015).

The third indicator is the *product and service sustainability characteristics*. There is a purpose for every product or service. A product is that which provides environmental, social, and financial advantages while protecting public health and the environment from raw material extraction to final disposal, throughout their entire life cycle (Nulkar, 2013). Complex worldwide and local difficulties increase the position of higher education and research as an important component of sustainable development in society, which also requires the interconnection of environmental, economic and socio-cultural elements in education, (Vezzoli, Kohtala, & Srinivasan,

2014). Benefits are the reasons for buying the product or service from clients. For instance, the advantages of some ovens to buyers include safety, ease of use, affordability, or prestige in many ovens with stainless steel casings (Veskaisri, Chan, & Pollard, 2017). Products have unique characteristics, advantages and services; vary from each other, although these distinctions may not always be so evident to prospective clients (Susman, Warren, & Ding, 2006). Features are factual statements that assist to identify a product or service's certain qualities and features (Ndesaulwa & Kikula, 2016). Benefits show the reasons for buying a product or service from a customer. They demonstrate an end outcome and identify with clients from the view of "what's in it for me," which is more attractive to them than characteristics, (Hodges, 2017).

Learning orientation, the fourth indicator has an effect on knowledge acquisition and its successful implementation for task performance. Only when staff are motivated, empowered and treated as precious resources will the learning orientation be improved. Establishing private relationships and open communication between owner-managers and staff fosters a strong orientation towards teaching.

As Pett and Wolff (2015) cited, firm values can lead to increased performance when coupled with appropriate behaviors. The company should promote the process of organizing learning as the primary company priority (Suliyanto & Rahab, 2012). Entrepreneurial orientation would explain why smaller organisation executives need to know firm values because it plays a major role in shaping the future of the company. (Abiodun & Kida, 2016). On the other side, for tiny companies running separately, Ismail, Soehod, Senin, and Akhtar (2014) point out that the absence of funds restricts competitiveness and creates a significant obstacle to internationalization. Small and medium-sized enterprises are regarded as the

backbone of economic growth because they make up a majority worldwide in the economy.

Due to market globalization, technological developments and changing consumer needs and requirements compelled the nature of competitive paradigms to constantly alter (Singh & Garg, 2010). They added that these changes drive companies to compete with different dimensions such as designing and developing new products, adopting smart manufacturing approaches, implementing fast-to-market distribution, buying cutting-edge communication, and developing appropriate marketing strategies.

Organizational Performance

This is assessed with the following indicators: *financial and market performance, quality performance, innovation performance, environmental performance, and social performance.*

Financial and market performance is the first measure. To survive and attain required efficiency and competitive advantage, organisations need to develop and execute strategies that suit their key company and make them adapt quickly to changes (Ombongi & Long, 2018). Knowing the factors that produce achievement and how it can be measured is critical in the present economic and financial crisis (Gavrea, Illies, & Stegerean, 2011).

Not every company can ensure economic stability and the capacity during a financial crisis to regulate organisational efficiency. The significance of small and medium-sized enterprises in the evolution of the economy, the decrease of poverty, the boost of jobs, production, technological innovation and the rise in social and norm positions is demonstrated worldwide and recognized in both developing and

developed economies (Eniola & Enterbang, 2015). In a globalized economy, the need for company organizations to remain competitive promotes the essence of defining the drivers of sustainable competitive benefits. For several reasons, the interest in strong reputation research has grown considerably in recent years (Elshobery, El-Iskandrani, & Hegazy, 2010). The main thing is that organizations have realized that a powerful reputation can help them align with marketplace requirements, attract investment, motivate staff, and serve as a means of distinguishing their products and services (Omolo, 2015). Small and medium-sized enterprises have distinctive characteristics and their social contribution's characteristics and impacts may also differ from the big corporations (Punnakitikashem, Laosirihongtong, Adebajo, & McLean, 2010). Their markets are lower than those of bigger firms. Also, SMEs owner-managers face less shareholder pressure.

The second indicator is the *performance of quality*. Quality relates to a standard of excellence and is consistent with a product's demands. Today's challenge for tiny businesses is to enhance their general efficiency and stay ahead of competition (Ndubisi & Agarwal, 2014). Indeed, a source of competitive advantage is improved quality efficiency. One of the biggest advantages of total quality management is its focus on continuous improvement of business processes (Prabawani, 2013). Performance assessment has become a significant element of organizations growth policies in the context of a worldwide and extremely competitive market. (Fening, 2012).

The performance measurement scheme is one of the determinants that generates the value of a company and is expected to lead an enterprise from a long-term view to maintain or improve its performance (Zhang & Thiam, 2014). Small

businesses do not know the need to assess their efficiency or the potential advantages of this measurement (Wasniewski, 2017). Performance measuring systems influence communication processes by requiring and supplying appropriate data that affects people's way of thinking and acting. A performance measurement scheme is one of the determinants that generates the value of an enterprise and is often referred to as a significant support instrument for SMEs (Ankrah & Mensah, 2015).

While many studies document the importance of resources and capabilities for firm performance, these studies focus largely on large companies (Ndubisi & Agarwal, 2014). For the most part, small companies are ignored because they are deemed to be lacking in fields, bundling and deploying resources; as a result, there is very restricted knowledge of how important resources and capacities impact smaller firms efficiency (Attar, Gupta, & Desai, 2014). Moreover, little is known on how the on-going innovation approach can lead to changes in efficiency in tiny companies.

The third indicator is the *performance of innovation*. Nowadays, organizations are adapting innovation. Ruri and Omagwa, (2018), cited that adoption can be understood as a decision through which an organization selects, adapts, and implements new technologies, products; or organizational and managerial practices and assimilates these into its operations and activities. It is an effort to capture innovation in more than just products; unlike most prior studies, it requires a measuring tool capable of capturing the PIP of a company (Lyver & Tu, 2018).

The impact of the development performance of organisations on their innovation and competitiveness varies depending on the sector they work within. The connection between companies' environment and financial performance is a significant problem for the development of environmental policy (Prasanna,

Jayasundara, Gamage, Ekanayake, & Rajapakshe, 2019). In addition, it is often asserted that there is a conflict between companies' competitiveness and their performance in the environment.

Small and medium enterprises often lack funds, funding, time, and expertise to introduce policies to improve the environment and society (Rosli & Sidek, 2013). The ability of SMEs and other organizations to introduce environmental issues and concerns into their management systems appears to differ (Franco & Matos, 2013). SMEs tend to have more limited information on how to assess the benefits of environmental management and how to reduce their impact on the environment (Labonne, 2016). Innovation has been called the most important element in the globalized and competitive setting of today. Innovation-oriented companies not only attain competitiveness, they are also prepared to maintain them for a longer period of time. (Ismail et al., 2014). In today's modern world, they are the remaining competitive organisations needed to pursue innovation.

Environmental performance is the fourth indicator. Because of several innovations, corporate social responsibility has become the focus of attention (Nanjundeswaraswamy & Swamy, 2015). Enterprises have the room to survive and flourish and have thus become critical players in the country's financial, social and cultural growth (Rahman & Ramos, 2013). They have seen an increasing interest in CSR in companies as well as in academia over the past centuries. It was noted that a significant amount of research concentrated almost completely on developed countries and big companies on the link between CSR and company performance (Choongo, 2017).

In addition, less attention has been paid to tiny and medium-sized businesses (SMEs) in this region. The effective application of methods of social responsibility

through entrepreneurial operations is crucial to a more sustainable economy. To date, no comprehensive study has shown the extent to which distinct variables affect SME's social performance (Kraus, Burtscher, Niemand, Tierno, & Syrja, 2017). It can be regarded that CSR fulfills a number of voluntary responsibilities for managers and employees as well as customers, vendors and the company where businesses are situated, such as multiple social, financial, and environmental operations (Guzman, Castro, & Torres, 2016).

While making up a majority of companies, SMEs lack knowledge of their environmental effects, as well as an understanding that greater environmental performance can be a competitive advantage to a big extent. Most importantly, they have restricted ability to interpret appropriate policy incentives and react to them (Georgia, 2016). In particular, the internet has also helped to increase consciousness in society. Many big company houses and sectors have come to realize that sustainability is no longer an alternative.

Social performance is the fifth measure. Recognizing that corporate social responsibility (CSR) is essential for sustainability, the majority of studies have concentrated on specific normative arguments for big corporations to adopt it. (Moyeen, & Courvisanos, 2012). This ignores the role of SMEs and the investigation of how such companies effectively execute CSR operations. The research starts with the assumption that small and medium-sized enterprises can design suitable CSR strategies to solve local community problems (Özyürek & Yilmaz, 2015). SMEs operate within these communities and are subsequently more aware than their larger counterparts of community and environmental issues (Sidik, 2012).

Corporate Social Responsibility (CSR) has shifted from ideology to company truth as the spill over the effects of corporate choices on the social and physical

setting has become increasingly evident in the wider society (Hudson, Smart, & Bourne, 2011). Corporate Social Responsibility (CSR) is a subject that creates much controversy, especially when it is analyzed and discussed with regard to small and medium-sized enterprises. (Guzman et al., 2016).

Worldwide, governments, development organizations, media, and academia have called for higher integration of CSR into the business strategy (Moertini, 2012).

The aim is to participate in operations that address broader social, community, and environmental problems with a perspective to improving societal circumstances. Although the CSR agenda has traditionally been connected to big companies, SMEs have been increasingly expected to participate in CSR projects and report on such operations (Jorge, Madueño, Sancho, & Martinez, 2016).

Quality Management Practices

Management methods are another factor in determining productivity performance. Carvalho and Costa (2014) stated that quality is an attribute of a product or service that is perceptual, conditional, and somewhat subjective.

Leadership is one of the indices for quality management procedures. Leaders are essential for all kinds of organisations and play distinct roles and execute distinct significant tasks in the organisation. (Madanchian, Taherdoost, Noordin, & Taherdoost, 2017). In his article "Exploring Leadership Skills for the Sustainability of Small and Medium-Sized Enterprises," Peters (2019), cited that companies need powerful management support, but it is particularly crucial for SMEs. The company's decision-making and policies depend on the organization's development. SME leadership is linked to the ability of one or more people at the top of the organisation (Gachina, 2016).

The small structure of SMEs strongly determines its efficiency; the nature of the leadership employed by the management is important (Yadav & Sahoo, 2018). Furthermore, management plays a crucial role in formulating the approach of the company in maximizing earnings and ensuring smooth operations flow (Hernandez, Yesenia, & Lerma, 2017). On the other hand, the issue faced is deficiencies in management, including ethical issues.

The absence of management understanding is not the only issue that SME rulers need to address. (Garzon, 2015). The manner they do stuff within the organisation, how they perceive the organization's truth and the significance of management to them, they have to understand that there are more problems to be analyzed about SME governance (Yuno & Ali, 2015).

The next indicator is quality policy and planning, resulting from the strategic quality measures related to the organization's strategic plans. Many of the company deficiencies observed prior to execution were resolved (Pfeifer, Salija, & Susac, 2013). In addition, quality management practice has demonstrated its beneficial effect on organisational performance and in latest years has gained important attention (Pham, 2017). They must first look at the essential quality aspect of their strategic process in order for the business organization to succeed.

Strategic planning is a method of coordinating operations to attain the long-term objectives of the organization (Majama, Israel, & Magang, 2017). They also quoted that moulding a policy is a commitment to implement a specific set of actions aimed at expanding the company and this involves mixed attempts to attract and please clients, compete effectively and conduct activities in a manner that improves the economic efficiency of the company. Omsa, Ridwa, and Jayadi (2018) have mentioned the role of strategic planning, execution of strategies, and assessment of

strategies, particularly in medium-sized firms, as vital for attaining sales volume, accelerating BEP success, and achieving targeted profit.

Despite the reality that SMEs and big businesses differ substantially in terms of size and type of assets, it has been shown that SME decision-makers are conscious of and apply strategic planning methods, but encounter obstacles and challenges in the application and execution phase. (Opoku, 2016).

The alliances and resources are another indicator. Strategic alliances enable the development, success and internationalization of companies to be simplified (Salisu & Bakar, 2018). Strategic alliances are gaining prominence in the strategy of big and small companies (Rothkegel, Erakovic, & Sheperd, 2015).

They have also become a means of expanding companies into new markets, accessing distributed capacities, and leveraging technologies and other resources. Das (2010) indicated that the company's resource-based view on strategic alliances was not implemented systematically. He described resources as those (tangible and intangible) assets that are semi-permanently linked to the company. If you want to create the world a healthier place, the resource alliance is a proponent of community change and a link builder. In terms of human resources, development of human resources is closely linked to social socio-economic developments (Abduli, 2013). The significance of human resource management methods lies in its ability to impact the organisational performance not directly but through the beneficial impact on the performance of staff known as the results of staff (Lazim, Azizan, & Sorooshian, 2015). The human resource management variables include hiring and firing, motivation, training, performance assessment, compensation and benefit plans, and policies and procedures for personnel (Liang, Dunn, & Short, 2016).

The last indicator is the *employee management*. The employment relationships of small and medium-sized enterprises depend not only on the company's particular nature but also on internal variables and the turbulent conditions in which they often find themselves (Mallet, & Wapshott, 2017). Small, medium-sized companies (SMEs) productivity can be enhanced if they embrace the management of the relationship between healthy staff. In order to comprehend the growth of a richer image of employment relations in SMEs, SMEs must be placed in a wider context (Mallet & Wapshott, 2017). They further cited that, this is an important aim because, as this research has sought to highlight, employment relations are changing as the prominence of SMEs grows, with implications for political, economic and social questions and for areas such as industrial disputes.

The main aims of employees involvement reflect a management agenda concerned with increasing understanding and commitment from employees and securing an enhanced contribution to the organisation (Wilkinson, Dundon, & Grugulis, 2016). Employment relations executives in SMEs spent less time on such problems than their equivalents in big companies, whereas the comparison between tiny and medium-sized companies was more pronounced than the comparison between medium-sized and big companies. (Forth, Bewley, & Bryson, 2014).

Qualitative Productivity

The dependent variable is the qualitative productivity of small and medium enterprises (SME's). These are measured in four indicators namely: *sales revenue*, *increase output unit cost of production*, *optimize labour utilization*, and *optimize capital utilization*.

The first indicator is *income* from sales. A sale refers to the number of units that you sell your product, and revenue refers to the complete quantity of cash that your sales produce. As the organisation relies highly on sales, this is an essential component of the company. Sales forecasting will therefore form the foundation for inner planning and resourcing (Haataja, 2016). Because of the absence of control over the marketplace and the internal environment, SMEs mostly set and implement short-term policies and strategies, including marketing strategies, so that they can modify strategies whenever needed by looking at the market scenario (Tem, 2015).

In their research B2B Sales Guidelines and Process Description for SME working in the service sector, Jamsen and Tommila (2018) quoted that sales are a component of marketing communications such as advertising, sales promotion, and public relations. In addition, sales staff are endorsed and supervised by sales management which educates, motivates, and evaluates sales staff, and the assessment process is needed to see if goals are being met, giving the company the opportunity to respond or not. In small and medium-sized businesses, the limits between marketing management and sales management are often very hard to differentiate. Marketing and sales are often one department in which sales and marketing plans are prepared (Havlicek & Roubal, 2013).

The second indicator is *manufacturing cost increase unit output*. Production cost relates to the expenses of producing or obtaining products and services that directly generate a company's income. A higher variance in profitability implies that there is a financial issue. Production is the method of changing resources or inputs to fulfil more desires. They must be manufactured before products can be distributed or sold.

More specifically, manufacturing determines the price of manufacturing by the technology used in the manufacturing of a good or service and the prices of inputs (Reynolds, 2005). As Traynor (2013) stated, production factors are those resources used in the manufacture of products and services.

These are the following: land, labor, capital, and business. An enterprise's productivity is based on using its manufacturing ability. Non-use of manufacturing ability leads to higher manufacturing costs per unit (Subramanyam & Reddy, 2013).

The third indicator is *optimizing labour utilization*. Productivity is directly associated with labour, and is a term of everyday watch. Jain, Gupta, Meena, and Dangayach (2016) mentioned that the most practical strategy is to attack the working method itself, which is to review the activities, and to apply automation and mechanization. Productivity is the foundation for assessing each company's worker. Labor adjustment expenses influence both the timing and magnitude of differences in jobs in reaction to exogenous shocks, such as fluctuations in demand, cost variations in inputs, and changes in labor market policies (Trapeznikova, 2009).

In addition, most of the models used to formalize and evaluate the impact of labor adjustment costs tend to focus on changes in the number of workers, largely ignoring the difference in the amount each worker works. However, empirical evidence indicates that companies make extensive use of variability in working hours to adjust their labor input. The biggest element of the operating costs of an underground mine is labor costs (Adegbola & Olunsaya, 2014). Furthermore, manufacturing executives understand that if they can achieve the task with fewer individuals, the complete price will go down. In addition, increasing man-hour productivity is one of the biggest savings in manpower and can be a strong incentive for any mine.

The quality of employment in SMEs, especially in developing nations, is often poor, given, for instance, the lack of social protection and insufficient physical working circumstances, security and health, levels of education and possibilities for skill growth and social dialogue (Kazimoto, 2014). Today's workforce requires better working circumstances for the environment, women's benefits and diversity, and emerging economies are moving in that direction. The evolution of small and medium-sized enterprises in these conditions is not only intended to fill work vacancies, but also to ensure longer survival, economic growth, and competitiveness (Drzajic & Vega 2017).

The fourth indicator is *Optimizing Capital Utilization*. The word equity relates to the company's complete cash and assets investment. It is also called the company's complete wealth. It is called capital when the company is going to spend big amounts of finance in the business. Capital is the original and essential component of the company, both fresh and existing. In every business organization, debt and financial leverage have been an issue.

Researchers assessed the connection between funding decisions and their effect on economic results for many successive years. (Assarlind & Gremyr, 2014). Cost-minimizing companies have an incentive to improve the use of their assets if the rate of return on the scale reduces as their manufacturing rises (Nikiforos, 2012).

Correlations Between Measures

In the study of Jayeola (2018), it shows that in sustainability practices, there is a strong positive relationship with qualitative productivity. He pointed out that sustainability practice is conducted in achieving good quality outcome of the business

organization. Also, small and medium-sized enterprises have some benefits over bigger organizations that address sustainability problems.

Moreover, the study of Blundel et al. (2013) cited that small, medium-sized companies have conducted sustainability practices to address problems in terms of quality features of their product and services. Furthermore, Aminu (2018) indicated that the orientation of stakeholders creates value for all stakeholders, both social and financial as part of their sustainability practices.

Exogenous variables of organizational have been found to have a positive relationship with qualitative productivity. The study of Lo et al., (2016) showed that the organizational performance of small and medium enterprise is based on the performance of the firm in terms of quality. Ndubisi and Agarwal (2014) cited that quality relates to a standard of excellence and is consistent with a product's demands.

Also, financial and market performance contribute to the success of the small and medium enterprise. As Ombongi and Long, (2018) revealed that to survive and attain required efficiency and competitive advantage, organisations need to develop and execute strategies in terms of finances that suit their key company and make them adapt quickly to changes.

Quality management practices have also a strong positive relationship with qualitative productivity defined by leadership. The study of Carvalho and Costa (2014) quoted that quality management method is another factor in determining quality productivity performance.

Madanchian et al. (2017) point out that Leaders are essential for all kinds of organisations and play distinct roles and execute distinct significant tasks in the organisation. The company's decision-making and policies depend on the

organization's development and good leadership. Furthermore, Gachina (2016) proved that small and medium leadership is linked to the ability of one or more people at the top of the organisation to lead in order to achieve good productive quality.

Theoretical Framework

This study is anchored on total quality management program of Ismail and Rassokha (2017), as the study revealed that the endeavour is to gain or remain competitive in this dynamic business environment. Furthermore, total quality management standard helps companies of all types and sizes to work more efficiently, increase productivity and expand into new markets. For small and medium-sized enterprises, such benefits can have a significant impact on their organization in terms of sustainability, management practices, and performance.

Moreover, the study of Malitec (2013) theory on sustainable quality management and organizational performance revealed that sustainability means integrating the stakeholder, economic, ecological and social elements into its strategic and management decisions as well as into its products and services quality characteristics. Pullman, Maloni, and Carter's (2009) theory on sustainability methods and performance results in which the theory shows the complexity of sustainability effects on performance and indicate that it may be hard to acknowledge performance advantages from sustainability programs.

Another theory upon which this research is anchored on is also the theory of Maletic (2013). He further added that organizational performance comprises the actual output or the results of an organization as measured its intended outputs including finance, quality, social, legal, innovation, and organizational development.

The study of Yeung, Lai, and Yee, (2007) about organizational learning, innovation and organizational performance suggest that the connections between organizational learning and innovation and measures of organisational performance. Their research showed that organizational learning occurs when appreciated by senior leadership and backed by a suitable learning infrastructure and culture leading to organisational effectiveness.

In addition, another concept on which this research is anchored on is the theory of Garcia, del Rio Rama, and Alonso (2014). In their study, they examined the direct and indirect effects of quality management practices on key results and identified the relationship between quality practices. They further added that leadership can stimulate employees in implementing changes. Quality policy and planning are developed based on the information about customer's requirements and company's capacities. Also, alliances and resources are done according to the strategy. And, employees' management is done in line with business strategy.

The study of Samson and Terziovski (2009) cited that there is a connection between total quality management methods and operational planning. The purpose of their research was to examine a big amount of production companies' complete quality management practices and operational efficiency to determine the relationships between these practices, separately, and collectively, and company performance. Their findings showed that in a cross-sectional context the connection between total quality management practices and organizational performance is important, in that the intensity of total quality management practices explains a substantial percentage of performance variance.

Conceptual Framework

This study presented models that were treated for the best fit that could contribute to the qualitative productivity of SMEs in Region XI. Moreover, the first conceptual paradigm demonstrates the direct influence of the exogenous variables namely: sustainability practices, organizational performance, and quality management practices towards the endogenous variable, qualitative productivity as supported by the theories.

The first exogenous variable is sustainability practices with the indicators: *stakeholder orientation, process management, sustainability and features of products and services and learning orientation* (Maletic, 2013). *Stakeholder orientation* refers to the benefit of all parties that are affected by the future success or failure of an organization (Aminu, 2018). *Process management* refers to aligning processes with organization's strategic goals, designing and implementing process architecture (Rahimi, Moller, & Hvam, 2015). *Sustainability and features of products and services* refers to products and services that provide benefits to economic and society. *Learning orientation* refers to one's knowledge and skills as a means to accomplish a task.

Consequently, another exogenous variable that affects the productivity of the organization is organizational performance. This is evaluated by financial and market performance, quality performance, environmental performance, and social performance (Maletic, 2013). *Financial and market performance* refers in utilizing scarce resources to meet consumers' demands for goods and services. *Quality performance* refers to the assessment through measurements of physical products and through the surveys of purchasers of goods and services. *Innovation performance* encompasses the strategy driven enterprise that allows maximizing the

impact of the innovation process. *Environmental performance* is the result of an enterprise's environmental management. While, *social performance* refers to the principles, practices, and outcomes of businesses' relationships with people, organizations, institutions, and communities (Edquist, Iturriagagoitia, Barbero & Zofio, 2018).

Finally, the third exogenous variable is qualitative management practices. It has four observed indicators, namely: *leadership, quality policy and planning, alliances and resources* and *employees management* (Garcia, del Rio Rama, & Alonso, 2014). *Leadership* is the art of motivating a group of people to act toward achieving a common goal. *Quality policy and planning* refers to creating and implementing as well as quality control. *Alliances and resources* encompasses of joining together between two organizations or more and using resources such as products, distribution channels and other benefits that the company may avail. *Employee's management* is the effort of the organization to help employees to do their best work to achieve the goals of the organization.

The latent endogenous variable is qualitative productivity which has four indicators, *sales revenue; increase output in unit cost of production; optimize labour utilization; and optimize capital utilization* (Asian Productivity Organization Journal 2014). *Sales revenue* is the amount realized by a business from the sale of goods or services. *Increase output in unit cost of production* it represents the total expenses involved in creating one unit of a product or service. *Optimize labour utilization* refers to the enhancement of total labour content and the total idle time. *Optimize capital utilization* is a measure of the extent to which the capital of a business is being used (Afrifa & Tauringana, 2015).

Thus, a model generation approach is essential in Structural Equation Modelling (SEM) to arrive at the best fit model. In this study, the hypothesized models were generated showing the potential causal dependence between the hypothesized models of the two latent constructs, namely the exogenous and endogenous variables. The hypothesized model shows the following: the oval shapes represent the latent variables of the study, the rectangular figures connected from the oval are the measured variables of a latent construct, single headed arrow represents the direct relation from one variable to another while the double headed arrow signifies correlation between the two variables. In hypothesized structural model, there were 5 models presented.

Hypothesized Model

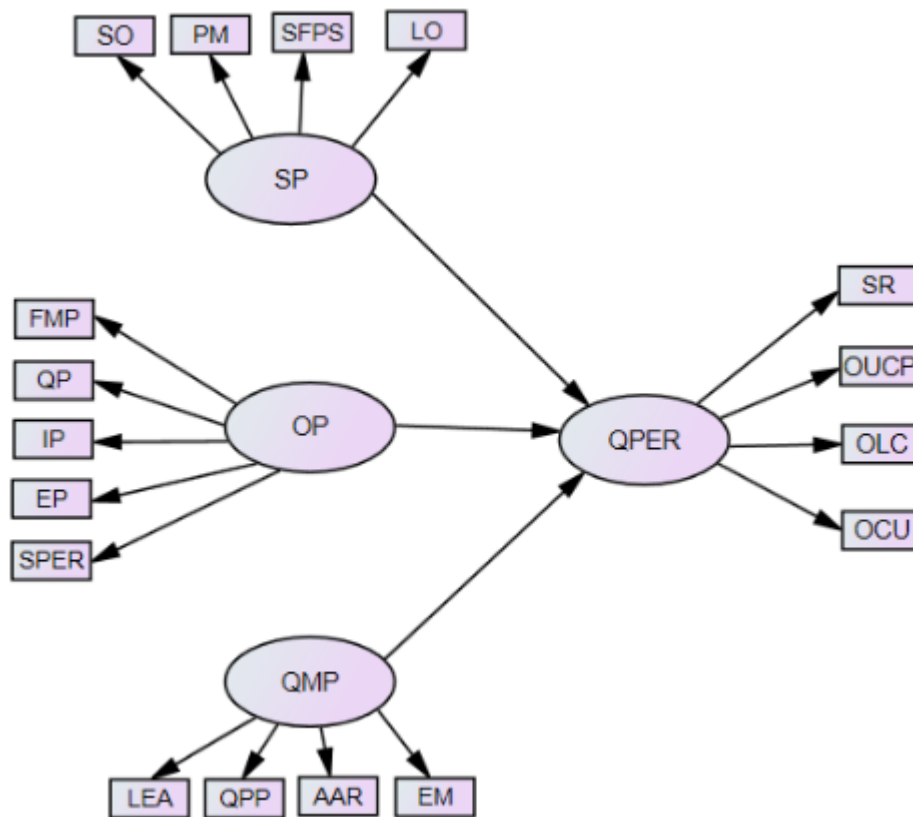


Figure 1. The Conceptual Model Showing the Direct Relationship of the Latent Exogenous Variables towards the Latent Endogenous Variable

Legend:

SO	- Stakeholder Orientation	OP	- Organizational Performance
PM	- Process Management	LEA	- Leadership
SFPS	- Sustainability Features of Products/Services	QPP	- Quality Policy/Planning
LO	- Learning Orientation	AAR	- Alliance and Resources
SP	- Sustainability Practices	EM	- Employees Management
FMP	- Financial and Market Performance	QMP	- Quality Management Practices
QP	- Quality Performance	SR	- Sales Revenue
IP	- Innovation Performance	ICP	- Increase Output in Unit Cost of Production
EP	- Environmental Performance	OLC	- Optimize Labor Capitalization
SP	- Social Performance	OCU	- Optimize Capital Utilization

Significance of the Study

The purpose of this study is to shed more light on the value of qualitative productivity as a heuristic tool that could provide a better understanding of the small and medium sized enterprises (SMEs) and the basic/key role played by the owner/manager/entrepreneur in the competitiveness and performance of the SME (Piperopoulos, 2010).

This study is a masterpiece that will open a wide horizon in understanding globally the performance, sustainability practices, organizational performance and quality management practices of small and medium enterprise in a global business stands. First this study may give additional input to the body of information about qualitative productivity as influenced by sustainability practices, organizational performance and quality management practices through the perspective of the small and medium enterprises personnel across the country. Moreover, this study will help the small and medium enterprise management as well as the members to understand

the global business arena. Eventually, this will shed light on every complex systems present in the small and medium business organizations from its day-to-day operations.

This study further expresses the social importance of the small and medium enterprises in the community. Small and medium-sized enterprises are the kind of company that entrepreneurs with low capital because they have difficulty competing with corporations and other big business institutions. But, with the brilliant ideas on how to take care of the sustainability practices, organizational performance and quality management practices, the small and medium enterprise and the personnel could definitely improve the performance of their respective businesses. Eventually, they could find their edge to compete with the big businesses especially in Region XI.

Likewise, the findings of this study can be used as the basis for businessmen and administrators in formulating specific programs and activities that will enhance the organizational commitment of employees and competitive advantage in general. It is important that they shall be furnished with the latest basis for their management practices, and the commitment of their members and employees to the organization as a whole. The output of this research may aid as an input for small and medium-sized as well as the other businesses and the board of directors and in top management to contribute in their decision making, in recognizing noteworthy procedural problems, to reveal strategies that will improve the sustainability practices, organizational performance and quality management practices of their businesses.

Another beneficiary of this research undertaking are the customers, since customers are among the key benefits of small businesses and it could guide them in their decisions. Lastly the community, small and medium enterprises contribute to local economies by bringing growth and innovation to the community in which the business is established. Small and medium enterprises also help stimulate economic growth by providing employment opportunities to people who may not be employable by larger corporations.

Definition of Terms

The following terms were defined operationally to have a clear understanding of the terms of the readers.

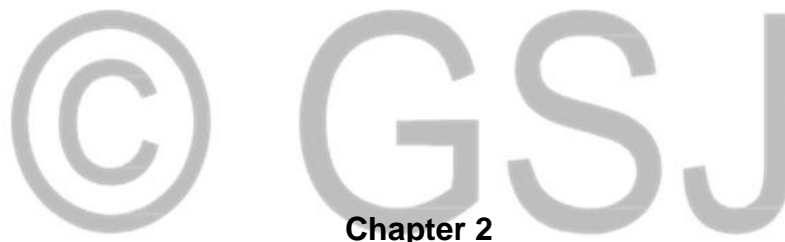
Sustainability Practices. It refers to the method of evaluating whether a small and medium enterprise can maintain existing practices without placing future resources at risk. It is characterized by stakeholder orientation, process management, sustainability features of products and services and learning orientation.

Organizational Performance. It refers to how well a small and medium enterprise is doing to reach its vision, mission, and goals. It is an analysis of company's performance such as financial and market performance, quality performance, innovation performance, environmental performance and social performance.

Quality Management Practice. It refers to the managing of quality leadership, policy and planning, alliances and resources and employees management of a small and medium enterprise.

Qualitative Productivity. It measures the output of the small and medium enterprise such as sales revenue, increase output unit cost of production, optimization of labour utilization and optimization of capital utilization.

Structural Equation Modelling. This refers to the statistical tool used to examine the multiple regression of the relationship between variables and their direct or indirect causal relationship with the endogenous variable.



Chapter 2

METHOD

Presented in this chapter are the research procedures employed in this study. It includes the research design, research locale, population and sample, research instruments, the data collection and statistical tools utilized to achieve the expected outcomes of this study.

Research Design

The descriptive-correlation using SEM was used in this research. A descriptive research mainly deals with describing how reality is and does so by making inventories; correlation on the other hand, is described in general as a measure of an

association between variables (Voordt & Lans, 2014). Voordt and Lans (2014) posit that “in a correlated data, the change in the magnitude of 1 variable is associated with a change in the magnitude of another variable, either in the same (positive correlation) or in the opposite (negative correlation) direction”. Structural equation modelling is a multivariate method of statistical analysis used to analyse structural interactions. Structural equation modelling or SEM is a powerful technique that can combine complex track models with factors of latent variables (Hox & Bechger, 2013). This method is the mixture of factor analysis and assessment of multiple regressions and is used to analyse the structural connection between measured factors and latent constructs.

The researcher chose this technique because in a single assessment it estimates the various and interrelated reliance of the relationship between variables. In this study, endogenous variables and exogenous variables are used in two kinds of variables. Endogenous variables are equivalent to dependent variables and are equal to the independent variable. Also, in the extraction of the best fit model, structural equation model will be used. The research used modelling of structural equation that seeks to develop the best fit model on productivity quality that can assist SMEs' productivity. This is a sophisticated multivariate method for simultaneously examining various relationships of reliance between variables.

Research Locale

The study was conducted in the Davao Region. It is located in the South-eastern portion of the island of Mindanao surrounding the Davao Gulf. As shown in the vicinity map, Region XI consists of four (5) provinces namely, the provinces of

Davao del Norte, Davao Del Sur, Davao Oriental and Compostela Valley Province and the cities of Davao, Panabo, Tagum, Digos and Island Garden City of Samal.



Figure 2. Map of the Philippines and the Research locale

Population and Sample

Scientific process was employed in choosing 402 respondents from small and medium-sized companies under Region XI. Under this region, there are six provinces, small and medium-sized businesses will be selected based on their capitalization. The number of respondents appropriate for structural equation modelling should range from 300 to 400 respondents (Yuan, & Chan 2016). The research will include small businesses with a capital of ₱500, 000 up to ₱5,000,000. The research will also include medium-sized businesses with an original capital of ₱5,000,001.

Scientific process was used to select the participants. Quota sampling for this research was used to determine the participants. The total target participants were calculated at 0.05 significance level using the Slovin formula. The researcher asked for a list of SMEs from distinct areas as his grounds for selecting the participants. Those SMEs had the required capital and qualified as research participants according to public policies such as license renewal and licenses.

Meanwhile, those SMEs that do not follow the protocol as prescribed by the government will be withdrawn as participants to this research, such as: not renewing company licenses, selling products that may cause health issues to their customers or clients. Small and medium-sized enterprises with ethical issues and/or pending cases in trial courts will also be a ground for not being included in the research.

At any time, a participant may leave a research study. The participant should let the investigator know that he / she wants to withdraw from the research.

Participants may for any reason, without penalty, withdraw from a research study. In this case, the SME may withdraw for the following reasons: it may be higher than initially expected to reconsider both the magnitude and probability of study hazards. Reassessment of risk reasonableness in relation to anticipated advantages and if the investigator violates their freedoms. The study was conducted last May to June 2019.

Research Instrument

Primary data were used to collect research information consisting of four components: sustainability practices, organisational performance, quality management practices, and qualitative efficiency. The survey questionnaires used in conducting the study was adapted from Maletic, (2013) and Garcia, del Rio Rama, and Alonso, (2014). Restructuring will be carried out in order to make the tool more suitable for present and local operations. The survey questionnaire was reviewed and validated by five experts in the field of business management to make it comprehensible. After validation, pilot testing was conducted. Cronbach alpha was used to check the validity of the questionnaire with the following measures: sustainability practices (0.945), organizational performance (0.879), quality management practices (0.938) and qualitative productivity (0.942). The closer the Cronbach's alpha coefficient is to one, the larger the internal constancy of the items in the scale (Gliem & Gliem, 2003).

The survey on sustainability practices was also adapted from Maletic (2013). The instrument was designed to measure the level of effectiveness sustainability based on the following factors: stakeholder orientation, process management, sustainability features of products and services and learning orientation.

Range of Means	Descriptive Level	Interpretation
4.20-5.00	Very High	This means that the sustainability practices are always manifested
3.40-4.19	High	This means that the sustainability practices are often manifested
2.60-3.39	Moderate	This means that the sustainability practices are sometime manifested
1.80-2.59	Low	This means that the sustainability practices are seldom manifested
1.00-1.79	Very Low	This means that the sustainability practices are never manifested

The survey on organizational performance was also adapted from Maletic (2013). The tool was intended to evaluate the level of organisational performance based on the following variables: financial and market performance, quality performance, innovation performance, environmental performance, and social performance.

Range of Means	Descriptive Level	Interpretation
4.20-5.00	Very High	This means that the organizational performance is always observed.
3.40-4.19	High	This means that the organizational performance is often observed.
2.60-3.39	Moderate	This means that the organizational performance is sometimes observed.
1.80-2.59	Low	This means that the organizational performance is seldom observed.
1.00-1.79	Very Low	This means that the organizational performance is never observed.

The tool of Garcia, del Rio Rama, and Alonso (2014), was adapted in the study on quality management procedures. The tool intended to evaluate the quality management practices level based on the following variables: leadership, quality policy and planning, alliances and resources, employees management, leaning, process management, and continuous improvement.

Range of Means	Descriptive Level	Interpretation
4.20-5.00	Very High	This means that the quality management practices is always practiced.
3.40-3.19	High	This means that the quality management practices is often practiced.
2.60-3.39	Moderate	This means that the quality management practices is sometimes practiced.
1.80-2.59	Low	This means that the quality management practices is seldom practiced.
1.00-1.79	Very Low	This means that the quality management practices is never practiced.

The survey qualitative productivity was adapted from Asian Productivity Organization (2014). This tool was used to evaluate productivity performance based on the following variables: sales income, boost manufacturing unit output cost, optimize labor usage, and optimize capital usage.

Range of Means	Descriptive Level	Interpretation
4.20-5.00	Very High	This means that the quality of productivity is always observed.
3.40-4.19	High	This means that the quality of productivity is often observed.

2.60-3.39	Moderate	This means that the quality productivity is sometimes observed.
1.80-2.59	Low	This means that the quality of productivity is seldom observed.
1.00-1.79	Very Low	This means that the quality of productivity is never observed.

Data Collection

Several procedures were performed in collecting the data used in the study. First, the acquisition of consent to administer the study was secured from the University of Mindanao Ethics Review Committee last May 19, 2019. Second, the researcher requested a list of small and medium-sized enterprise from the business bureau. A request letter signed by the adviser was distributed to the respective cooperatives for their perusal. Third, the researcher explained the purpose of the study to the head of the SMEs the data gathering flow. Along the way the researcher had a hard time in administering the questionnaire because there were SME's who refused to answer the survey questionnaire. What the researcher did was to find again another SME that was willing to answer the survey form. Fourth, the researcher then administered the survey questionnaires and waited patiently for any queries on the given set of questionnaires. Fifth, the researcher collated and tabulated the data taken from the respondents. After retrieving all the questionnaires, data screening was performed to minimize the possible outliers during the analysis. After which, encoding, tabulating, and analyzing were applied and lastly, interpretation of data were analyzed and interpreted based on the purpose of the study.

A time table was then set for the duration of the floating and retrieval of the questionnaire which was from May 23 – June 22, 2019. Gradual administration, and

retrieval of data, collation and tabulation of data were conducted, then a screening was done to lessen the possible outliers during the analysis. Out of the 500 questionnaires printed, only 432 were returned and 402 completed the survey and were deemed useful for the study. Lastly, analysis and interpretation of data was done wherein results were analyzed and interpreted based on the purpose of the study.

Statistical Tools

The data gathered were classified, analyzed, and interpreted by using the following appropriate statistical tools.

Mean. This will be used to measure the level of sustainability practices, level of organizational performance, level of quality management practices and level of qualitative productivity of SMEs.

Pearson Product Moment Correlation. This will be employed to determine the interrelationships between sustainability practices, organizational performance, quality management practices and quality on productivity.

Multiple Regression. This will be used to determine the significant predictors of quality on productivity.

Structural Equation Modelling. This study will require the use of SEM in order to explore best fit model. In testing the factors, there is a need to carry out factor analysis on latent variables suggested a cut-off value of 0.50. The essence of the test is to ensure the elimination of attributes with low correlations with the attributes of other latent factors in the final SEM. The cut-off value is affected by

sample size but a range of 0.45 to 0.50 is deemed appropriate. It is very important to make sure about the goodness of fit of the model used. The goodness of fit of a statistical model describes how well it fits a set of observations. Measures of goodness of fit typically the scatter plot with ellipse test or with proposed model graphed on the scatter plot, sum-of-the-squared errors (SSE), correlation coefficient (r), and residual plots (Kline, 2008).

Ethical Consideration

Ethics in the behavior of the research was noted. To guarantee that ethics was observed in the behavior of the research, the researcher submitted chapters 1 and 2 to the University of Mindanao Ethics Review Committee before the questionnaire was administered. The research was evaluated and conducted in accordance with frequently accepted norms of excellent research methods in order to guarantee integrity, quality, and transparency.

When collecting information, an informed consent form was appended to the questionnaire in which participants were required to attach their signature to guarantee that they voluntarily answered the study questionnaire and were not compelled. In addition, in any section of the study, the identity of the participants and the chosen SMEs will not be disclosed. The research participants were involved in a voluntary manner to ensure that respondents were prepared to participate in the inquiry after full knowledge of the study's purpose. Before deciding to participate, participants were allowed to read information first and ask anything if they did not understand.

After the information had been collected, the researcher used coding to safeguard and provide privacy in terms of the company's name. The name of each organisation was not disclosed during the final lecture. To protect the rights and welfare of participants involved in the study, the researcher kept the study records confidential. A Non-Disclosure Agreement (NDA) was provided by the researcher to safeguard both parties' integrity and confidentiality.

The significance of this research was to provide data on productivity performance. The primary participants of this research were business organisations such as SMEs. The study's primary goal is the owner and staff of these company organisations. The basis of these company organizations selections was based on their capitalization. This was the subject of the informed consent process applying the principle of regard for the individual who may seek consent. This was achieved in the form of a letter requesting approval from business organization owners as a research participant.

The small and medium-sized companies in Region XI were the suitable recruited parties for this study. They were the researcher's perfect partners to accomplish a well-established working relationship with the chosen participants. The researcher assumed that this research involved a minimal risk in which the probability and magnitude of possible harm implied by participation in the research was no greater than those encountered by participants in those aspects of their everyday life that was related to the research. However, it is the researcher who had the greater danger of being harmed by physical injury or physiological damage owing to travelling to distant places of this study project of this study.

To mitigate this, the researcher assessed the hazards and decided on precautions such as accompanying health and safety travel, awareness of travel alternatives, awareness of physical setting such as streets, open spaces, and awareness of study sites health and security policies. This study also guaranteed the respondents of the researcher's duty to maximize the advantages as indicated in the study's importance while minimizing the danger to individual respondents and/or society of research damaged.

The researcher also guaranteed that there is no proof that someone else's work is misrepresented as their own. The use of Turnitin software and/or Plagiarism Detector is in position to make this certain. In addition, the study demonstrated no trace or evidence of intentional misrepresentation of what had been done, no making of data and/or outcomes, or deliberately drawing conclusions that were not precise and were not inconsistent with the current literature among the information included in the manuscript. No trace of deliberately misrepresenting the job to suit a model or theoretical expectation as well as no proof of over-representation or exaggeration appeared on this study. Similarly, there was no trace of conflict of interest (COI), e.g. disclosure of COI on this research that was observed. COI was a set of circumstances under which a professional decision of ^{the} main concern such as the welfare of the participant or the validity of the study tends to be affected by a secondary interest such as economic or academic profits or recognition.

In principle, this research did not use deception in order to avoid the falsehood about the identity of the author and the nature and real purpose of the study. Deceiving is intentionally misleading others. This problem was the most important in

experimentation where private understanding of reasons may alter the conduct of people, so this did not apply in this research.

The author of this study was one whose name appeared on this manuscript's title page was the author of this study because he made significant contributions to the design, or data acquisition, or data analysis and interpretation; drafted the article or critically revised it for significant intellectual material and was liable for publishing the final approval version.

He also made an important and new contribution to the study and agreed to take responsibility for at least some of the manuscript's material, including reviewing the appropriate raw information; reading and agreeing to the manuscript prior to publishing, and agreeing to be named as an author. Agreement to be responsible for all parts of the job to ensure that issues related to the precision or integrity of any portion of the job are adequately investigated and addressed. This study adds to the science material mentally and spiritually, shaping the study element in a presentable and understandable form.

Chapter 3

RESULTS

This chapter presents the results of the data obtained from the 400 employees of the small and medium enterprises (SMEs). It also presents the discussion of the mean, the standard deviation value, correlation coefficients, and structural equation modelling based on the specific questions raised in the previous chapter. The

analysis and interpretation of data including the findings of the study both in textual and tabular forms are also presented.

Level of Sustainability Practices

Shown in Table 1, is the level of sustainability practices of SME's in terms of stakeholder orientation, process management, sustainability features of products/services, and learning orientation. It shows that, overall, SME's in Region 11 have high level of sustainability practices. Specifically, all indicators have high level of sustainability, garnering a mean score of 4.14 and standard deviation of 0.507.

Table 1
Level of Sustainability Practices

Indicators	SD	Mean	D.L.
<i>Stakeholder Orientation</i>	0.541	4.16	<i>High</i>
<i>Process Management</i>	0.588	4.15	<i>High</i>
<i>Sustainability Features of Products/Services</i>	0.573	4.07	<i>High</i>
<i>Learning Orientation</i>	0.619	4.19	<i>High</i>
Overall	0.507	4.14	<i>High</i>

The data in the table showed that *learning orientation* had the highest mean, with a mean of 4.19 and a standard deviation of 0.619 and a descriptive equivalent of *high*. The next was *stakeholder orientation* with a mean of 4.16 and a standard deviation of 0.541. This was followed by process management with a mean of 4.15 and a standard deviation of 0.588. Lastly, the sustainability features of product and/or services with a mean of 4.07 and a standard deviation of 0.573. All of them had a description equivalent of *high*.

Level of Organizational Performance

In Table 2 is displayed the level of organizational performance of SMEs in Region 11 in terms of *financial, market, quality, innovation, environmental, and social performance*. It can be observed that, in general, small and medium enterprises have a high level of *organizational performance* with a mean of 3.88 and a standard deviation of 0.577. In details, small and medium enterprises have high *financial, market performance* with a mean of 3.84 and a standard deviation of 0.809; *quality performance* with a mean of 3.93 and a standard deviation of 0.733, *innovation performance* with a mean of 3.89 and a standard deviation of 0.666, *environmental performance* with a mean of 3.77 and standard deviation of 0.711, and *social performance* with a mean of 3.98 and a standard deviation of 0.741.

Table 2
 Level of Organizational Performance

Indicators	SD	Mean	Descriptive Level
<i>Financial and Market Performance</i>	0.809	3.84	<i>High</i>
<i>Quality Performance</i>	0.733	3.93	<i>High</i>
<i>Innovation Performance</i>	0.666	3.89	<i>High</i>
<i>Environmental Performance</i>	0.711	3.77	<i>High</i>
<i>Social Performance</i>	0.741	3.98	<i>High</i>
Overall	0.577	3.88	High

Data shows that *social performance* had the highest mean of 3.98 and a standard deviation of 0.741 with descriptive equivalent of *high*. The next was *quality performance* with a mean of 3.93 and a standard deviation of 0.733, followed by

innovation performance with a mean of 3.89 and a standard deviation of 0.666. This was also followed by *financial and market performance* with a mean of 3.84 and a standard deviation of 0.809, and lastly, *environmental performance* with a mean of 3.77 and a standard deviation of 0.711.

Level of Quality Management Practices

Shown in Table 3 is the level of quality management practices of SMEs in Region 11 in terms of *leadership*, *quality policy/planning*, *alliance* and *resources*, and *employment management*. It is displayed that, overall, there is a high level of quality management practices among the small and medium enterprises with a mean of 4.11 and a standard deviation of 0.538. Specifically, on average, SMEs have high level of leadership with a mean of 4.16 and a standard deviation of 0.663, *quality policy/planning* with a mean of 4.13 and a standard deviation of 0.605, *alliances and resources* with a mean of 4.00 and a standard deviation of 0.631, and *employment management* with a mean of 4.14 and a standard deviation of 0.603.

Table 3
 Level of Quality Management Practices

Indicators	SD	Mean	Descriptive Level
<i>Leadership</i>	0.663	4.16	<i>High</i>
<i>Quality Policy/Planning</i>	0.605	4.13	<i>High</i>
<i>Alliances and Resources</i>	0.631	4.00	<i>High</i>
<i>Employment Management</i>	0.603	4.14	<i>High</i>
Overall	0.538	4.11	<i>High</i>

Data show that *leadership* had the highest mean with 4.16 and a standard deviation of 0.663 with descriptive evaluation of *high*. Next to leadership was *employees' management* with a mean of 4.14 and a standard deviation of 0.603. Next was *quality policy and planning* with a mean of 4.13 and a standard deviation of 0.605. Then lastly are *alliances and resources* with a mean of 4.00 and a standard deviation of 0.631.

Level of Qualitative Productivity

Shown in Table 4 is the level of qualitative productivity of SMEs in Region 11, in terms of *sales revenue, increase output unit cost of production, optimizes labour capitalization, and optimize capital utilization*. Overall, SMEs have high level of qualitative productivity based on the results with a mean score of 4.16 and a standard deviation of 0.560. Specifically, *sales revenue* with a mean of 4.20 and standard deviation of 0.661, and *optimize labor capitalization* with a mean of 4.23 and a standard deviation of 0.608 are considered very high; whereas *increase output unit cost of production* with a mean of 4.10 and a standard deviation of 0.687, and *optimize capital utilization* with a mean of 4.12 and a standard deviation of 0.625 are considered high.

Table 4
Level of Qualitative Productivity

Indicators	SD	Mean	Descriptive Level
<i>Sales Revenue</i>	0.661	4.20	<i>Very High</i>

<i>Increase Output Unit Cost of Production</i>	0.687	4.10	<i>High</i>
<i>Optimize Labor Capitalization</i>	0.608	4.23	<i>Very High</i>
<i>Optimize Capital Utilization</i>	0.625	4.12	<i>High</i>
Overall	0.560	4.16	High

The result shows that *optimize labor capitalization* has the highest mean with 4.23 and a standard deviation of 0.608. Next is *sales revenue* with a mean score of 4.20 and a standard deviation of 0.661. The third is *optimize capital utilization* with a mean of 4.12 and a standard deviation of 0.625. There is increase output unit cost of production with a mean of 4.10 and a standard deviation of 0.687.

Significance on the Relationship between Levels of Sustainability Practices and Qualitative Productivity

Shown in Table 5 is the level of linear relationship between sustainability practices and qualitative productivity tested using 0.05 level of significance. Overall, sustainability practices and qualitative productivity had a significant positive linear relationship with a Pearson correlation coefficient of 0.786, and with p-values<.05 had positive linear relationship.

Table 5

Significance on the Relationship between Levels of Sustainability Practices and Qualitative Performance

Sustainability Practices	Qualitative Productivity				Overall Qualitative Performance
	Sales Revenue	Increase Output Unit Cost of Production	Optimize Labour Utilization	Optimize Capital Utilization	

Stakeholder Orientation	0.600* (0.000)	0.559* (0.000)	0.584* (0.000)	0.457* (0.000)	0.635* (0.000)
Process Management	0.648* (0.000)	0.565* (0.000)	0.612* (0.000)	0.472* (0.000)	0.662* (0.000)
Sustainability Features of Products/ Services	0.638* (0.000)	0.626* (0.000)	0.593* (0.000)	0.577* (0.000)	0.702* (0.000)
Learning Orientation	0.678* (0.000)	0.669* (0.000)	0.664* (0.000)	0.551* (0.000)	0.740* (0.000)
Overall Sustainability Practices	0.736* (0.000)	0.695* (0.000)	0.704* (0.000)	0.590* (0.000)	0.786* (0.000)

*Significant at 0.05 significance level.

This meant that as the sustainability practices increases, the qualitative productivity may also increase. Inversely, as the organizational performance decreases, the qualitative productivity may also decrease. Specifically, it can be observed that all indicators of sustainability practices have a significant positive linear relationship when paired with all the indicators of qualitative productivity with a Pearson coefficient ranging from 0.457 with a p-value less than 0.05, *stakeholder orientation* paired with *optimize capital utilization*, to 0.669 with a p-value of less than 0.05, *learning orientation* paired with *increase output unit cost of production*. This means that, if any of the indicators under *sustainability practices* increases, indicators under *qualitative productivity* may also increase.

Significance on the Relationship between Levels of Organizational Performance and Qualitative Productivity

Shown in Table 6 is the level of linear relationship between organizational performance and qualitative productivity tested using 0.05 level of significance and had positive linear relationship. Similar to previous results, in general, *organizational performance* and *qualitative productivity* had a significant positive linear relationship with a Pearson correlation coefficient of 0.713 with a p-value of less than 0.05.

Table 6

Significance on the Relationship between Levels of Organizational Performance and Qualitative Performance

Organizational Performance	Qualitative Productivity				Overall Qualitative Performance
	Sales Revenue	Increase Output Unit Cost of Production	Optimize Labor Utilization	Optimize Capital Utilization	
Financial and Market Performance	0.399* (0.000)	0.409* (0.000)	0.455* (0.000)	0.448* (0.000)	0.492* (0.000)
Quality Performance	0.517* (0.000)	0.622* (0.000)	0.473* (0.000)	0.543* (0.000)	0.624* (0.000)
Innovation Performance	0.538* (0.000)	0.657* (0.000)	0.550* (0.000)	0.547* (0.000)	0.662* (0.000)
Environmental Performance	0.384* (0.000)	0.461* (0.000)	0.476* (0.000)	0.518* (0.000)	0.529* (0.000)
Social Performance	0.423* (0.000)	0.403* (0.000)	0.499* (0.000)	0.486* (0.000)	0.520* (0.000)
Overall Organizational Performance	0.571* (0.000)	0.642* (0.000)	0.620* (0.000)	0.643* (0.000)	0.713* (0.000)

*Significant at 0.05 significance level.

This meant that as the organizational performance increases, the qualitative productivity may also increase. Inversely, as the organizational performance decreases, the qualitative productivity may also decrease. Specifically, it can be observed that all indicators of organizational performance have a significant positive linear relationship when paired with all the indicators of qualitative productivity with a Pearson coefficient ranging from 0.384, environmental performance paired with sales revenue, to 0.657, innovation performance paired with increase output unit cost of production.

This means that, if any of the indicators under organizational performance increases, indicators under qualitative productivity may also increase.

Significance on the Relationship between Levels of Quality Management Practices and Qualitative Productivity

Shown in Table 7 is the level of linear relationship between quality management practices and qualitative productivity tested using 0.05 level of significance and had positive linear relationship. Similar to previous results, overall, quality management practices and qualitative productivity had a significant positive linear relationship with a Pearson correlation coefficient of 0.862.

Table 7

Significance on the Relationship between Levels of Quality Management Practices and Qualitative Performance

Quality Management Practices	Qualitative Performance				
	Sales Revenue	Increase Output Unit Cost of	Optimize Labor Utilization	Optimize Capital Utilization	Overall Qualitative Performance

Production					
Leadership	0.654*	0.583*	0.700*	0.674*	0.750*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Quality Policy/Planning	0.707*	0.551*	0.709*	0.682*	0.760*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Alliance and Resources	0.598*	0.682*	0.638*	0.629*	0.735*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Employment Management	0.649*	0.561*	0.663*	0.622*	0.717*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Overall Quality Management Practices	0.758*	0.692*	0.788*	0.758*	0.862*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

*Significant at 0.05 significance level.

This meant that as the quality management practices increases, the qualitative productivity may also increase. Inversely, as the quality management practices decreases, the qualitative productivity may also decrease. Specifically, it can be observed that all indicators of quality management practices have a significant positive linear relationship when paired with all the indicators of qualitative productivity with a Pearson coefficient ranging from 0.551, quality policy/planning paired with increase output unit cost of production, to 0.709, quality policy/planning paired with optimize labour utilization. This means that, if any of the indicators under quality management practices increases, indicators under qualitative productivity may also increase.

Structural Equation Models

In this research, there are four hypothesized structural equation models that were tested using the Kline (2008) approach. The goodness of fit were tested using

the Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), P of Close Fit (P-Close) and its corresponding criterion.

Structural Model 1. Shown in Table 8 are the goodness of fit measures of the first structural model considered by the researcher. Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), P of Close Fit (P-Close) and its corresponding criterion are presented. The first structural model has a model chi-square value of 5.702 with a significant p-value which is less than 0.001. Moreover, it has a normed fit index of 0.883, a Tucker-Lewis index of 0.883, a comparative fit index of 0.901, a goodness of fit index of 0.841. In addition, it has a root means square error approximation of 0.109. Finally, it has a *p* of close fit value of less than 0.001. Interpreting these results, it can be observed that the generated model failed on each fit index except the RMSEA. This meant that Model 1 did not fit well on the data.

Table 8

Goodness of Fit Measures Generated Model 1

INDEX	CRITERION	MODEL FIT VALUE
CMIN/DF	$0 < \text{value} < 2$	5.702
P-value	> 0.05	< 0.001
NFI	> 0.95	0.883
TLI	> 0.95	0.883
CFI	> 0.95	0.901
GFI	> 0.95	0.841

RMSEA	< 0.05	0.109
P-Close	> 0.05	< 0.001

In Figure 3 is Kline (2008) illustrated Structural Model 1 in standardized solution. Based on empirical result, it can be observed that process management strongly represents the latent variable sustainable practice with a beta value of 0.87 whereas learning orientation weakly represents the latter with a beta value of 0.79. In terms of organizational performance, it is strongly represented by innovation performance and weakly represented by financial and market performance with beta values of 0.87 and 0.55, respectively. In terms of quality management practices, quality policy/planning is the strongest representative whereas alliance and resources is the weakest with a beta value of 0.83 and 0.78, respectively.



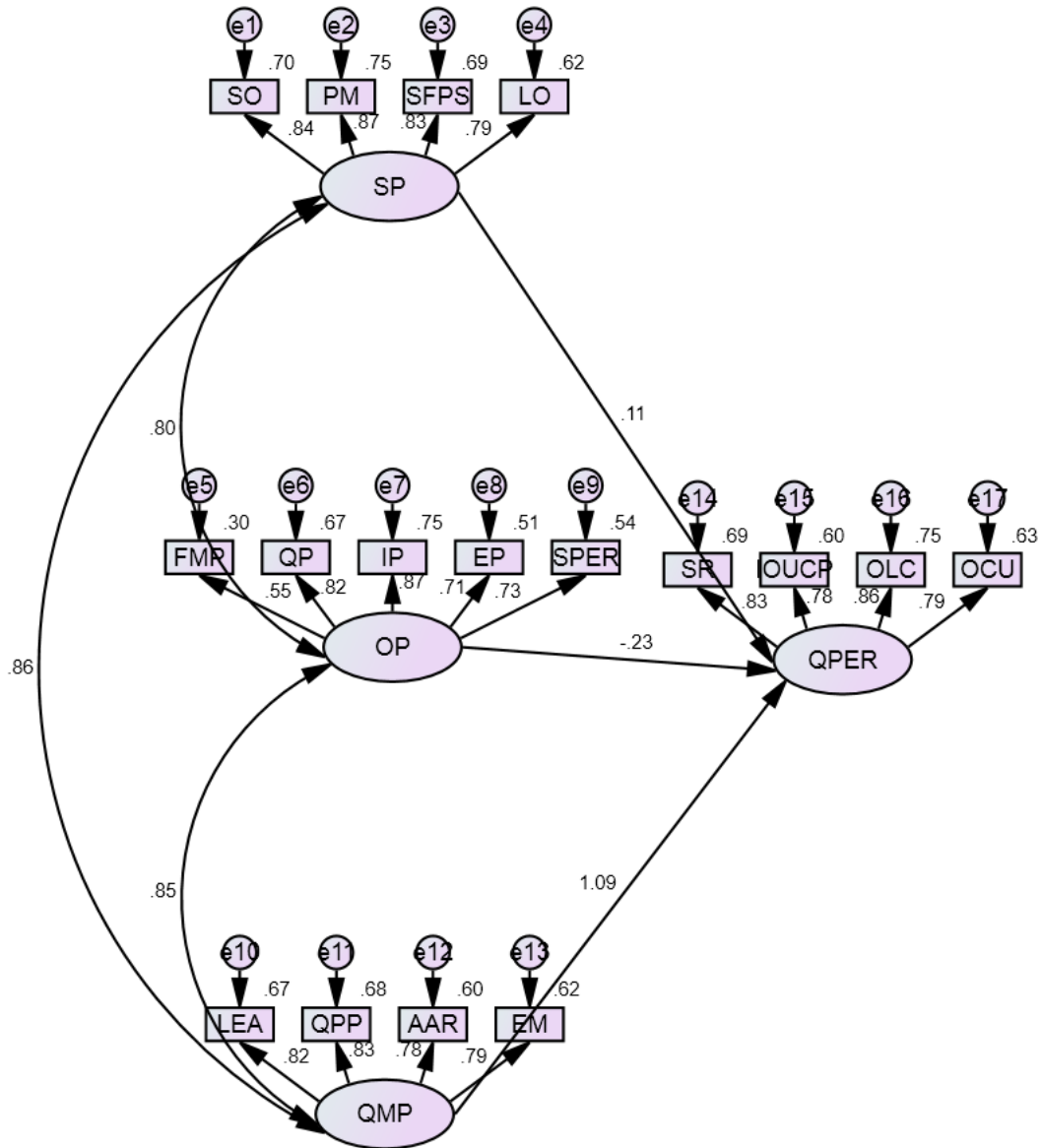


Figure 3. Structural Model 1 in Standardized Solution

- | | |
|---|--|
| <p>Legend: SO –Stakeholder Orientation
 PM –Process Management
 SFPS –Sustainability Features of Products/Services
 LO –Learning Orientation
 SP –Sustainability Practices
 FMP –Financial and Market Performance
 QP –Quality Performance
 IP –Innovation Performance
 EP –Environmental Performance
 SP –Social Performance</p> | <p>OP –Organizational Performance
 LEA –Leadership
 QPP –Quality Policy/Planning
 AAR – Alliance and Resources
 EM –Employees Management
 QMP –Quality Management Practices
 SR –Sales Revenue
 ICP –Increase Output in Unit Cost of Production
 OLC –Optimize Labor Capitalization
 OCU –Optimize Capital Utilization</p> |
|---|--|

Structural Model 2. Shown in Table 9 is the goodness - of - fit measures of the second structural model considered by the researcher. Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), P of Close Fit (P-Close) and its corresponding criterion are presented. The second structural model has a model chi-square value of 4.300 with a significant p-value which is less than 0.001, a slight improvement relative to structural model one. Moreover, it has a normed fit index of 0.943, a Tucker-Lewis index of 0.937, a comparative fit index of 0.955, a goodness of fit index of 0.930. In general, for indexes structural model two shows improvement relative to structural model one. In addition, it has a root means square error approximation of 0.091. This shows a slight improvement in the results relative to structural model one. Finally, it has a *p* of close fit value of less than 0.001. Nothing has changed on this value relative to structural model one. In conclusion, it can be observed that, although there are slight improvements in the fit indices relative to Model 1 (CMIN/DF, NFI, TLI, CFI, GFI, and RMSEA), the generated model still failed to fit to the indices except the comparative fit index since they exceed the acceptable values for each indices. Therefore, based on empirical results, the structural model 2 did not fit well on the data.

Table 9

Goodness of Fit Measures Generated Model 2

INDEX	CRITERION	MODEL FIT VALUE
CMIN/DF	0 < value < 2	4.300
P-value	> 0.05	< 0.001
NFI	> 0.95	0.943

TLI	> 0.95	0.937
CFI	> 0.95	0.955
GFI	> 0.95	0.930
RMSEA	< 0.05	0.091
P-Close	> 0.05	< 0.001

Shown in Figure 4, following Kline's structural modification (2008) is Model 2 in standardized solution. For *sustainability practices* (SP) the remaining indicators are the following: *stakeholder orientation* (SO) *sustainability features of products and service* (SFPS). For the *organizational performance* (OP) are: *financial market performance* (FMP), *innovation performance* (IP), and *social performance* (SPER). Also for the *quality management practices* (QMP) are the following: *leadership* (LEA), *alliances and resources* (AAR), and *employees management* (EM).



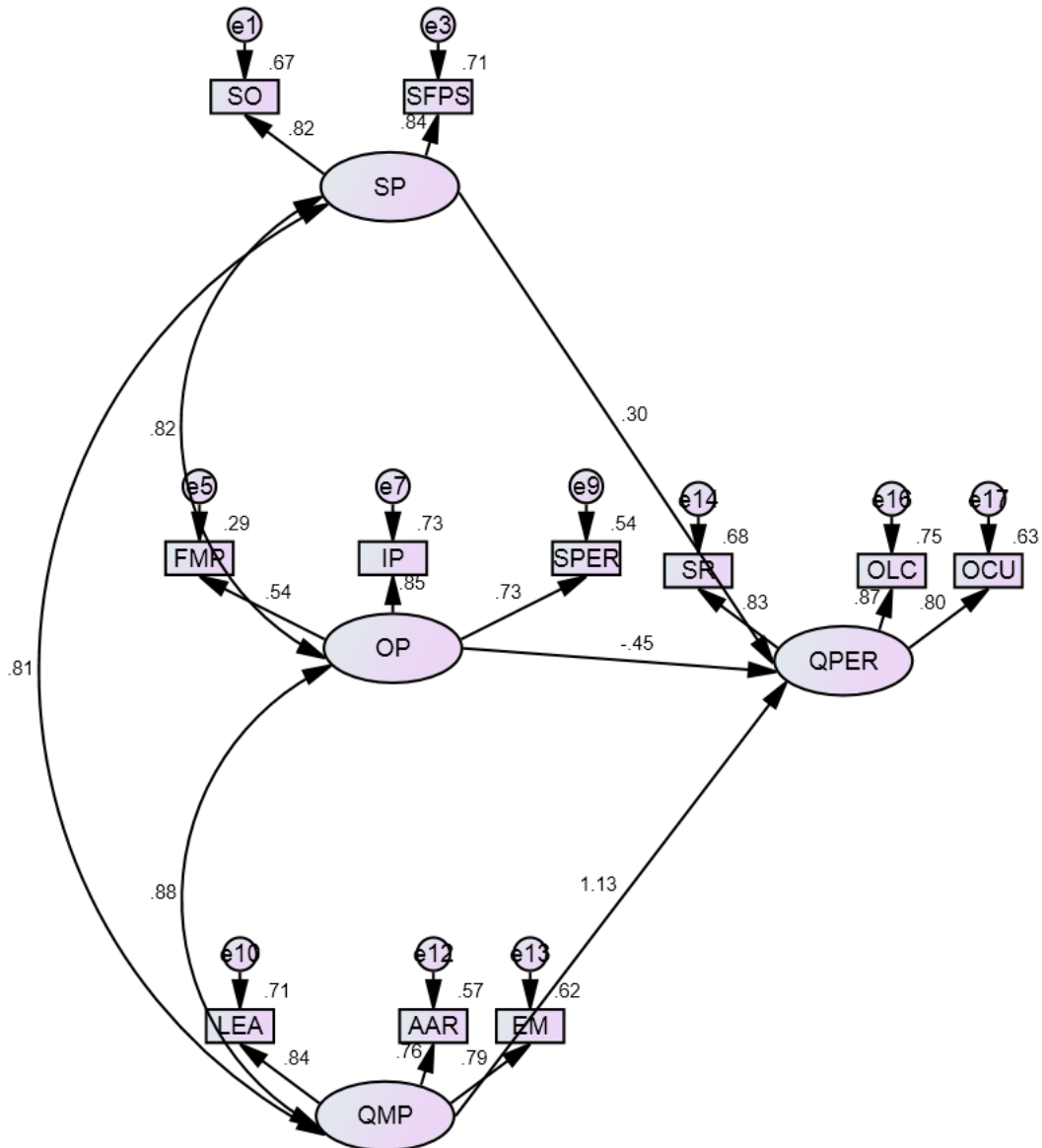


Figure 4. Structural Model 2 in Standardized Solution

- | | |
|---|--|
| <p>Legend: SO –Stakeholder Orientation
 PM –Process Management
 SFPS –Sustainability Features of Products/Services
 LO –Learning Orientation
 SP –Sustainability Practices
 FMP –Financial and Market Performance
 QP –Quality Performance
 IP –Innovation Performance
 EP –Environmental Performance
 SP –Social Performance</p> | <p>OP –Organizational Performance
 LEA –Leadership
 QPP –Quality Policy/Planning
 AAR – Alliance and Resources
 EM –Employees Management
 QMP –Quality Management Practices
 SR –Sales Revenue
 ICP –Increase Output in Unit Cost of Production
 OLC –Optimize Labor Capitalization
 OCU –Optimize Capital Utilization</p> |
|---|--|

Structural Model 3. Shown in Table 10 are the goodness of fit measures of the third structural model considered by the researcher. Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), P of Close Fit (P-Close) and its corresponding criterion are presented. Relative to the previous models generated, there are improvements on the fit indices of model 3. The third structural model has a model chi-square value of 2.422 with a significant p-value which is less than 0.001, an improvement relative to structural model 2. Moreover, it has a normed fit index of 0.976, a Tucker-Lewis index of 0.977, a comparative fit index of 0.986, a goodness of fit index of 0.973. In general, for indexes structural model three shows improvement relative to structural model two. In addition, it has a root means square error approximation of 0.60. This shows an increase in the results relative to structural model two which suggest high predictive errors. Finally, it has a *p* of close fit value of less than 0.200 which is an improvement relative to structural model 2. In general, it can be observed that the model passed the NFI (0.976 > 0.95), TLI (0.977 > 0.95), CFI (0.986 > 0.95), and GFI (0.973 > 0.95). Overall, however, the model may still be improved based on other fit indices such as CMIN/DF, P-value, RMSEA, and P-Close.

Table 10
Goodness of Fit Measures Generated Model 3

INDEX	CRITERION	MODEL FIT VALUE
CMIN/DF	0 < value < 2	2.422
P-value	> 0.05	< 0.001
NFI	> 0.95	0.976
TLI	> 0.95	0.977
CFI	> 0.95	0.986

GFI	> 0.95	0.973
RMSEA	< 0.05	0.060
P-Close	> 0.05	0.200

Shown in Figure 5 is Kline's (2008), Structural Model 3 in standardized solution. For *sustainability practices* (SP) the remaining indicators are the following: *stakeholder orientation* (SO) and *sustainability features of products and service* (SFPS). For the *organizational performance* (OP) are: *financial market and performance* (FMP), *innovation performance* (IP), and *social performance* (SPER). Also for the *quality management practices* (QMP) are the following: *leadership* (LEA), *alliances and resources* (AAR), and *employees management* (EM).



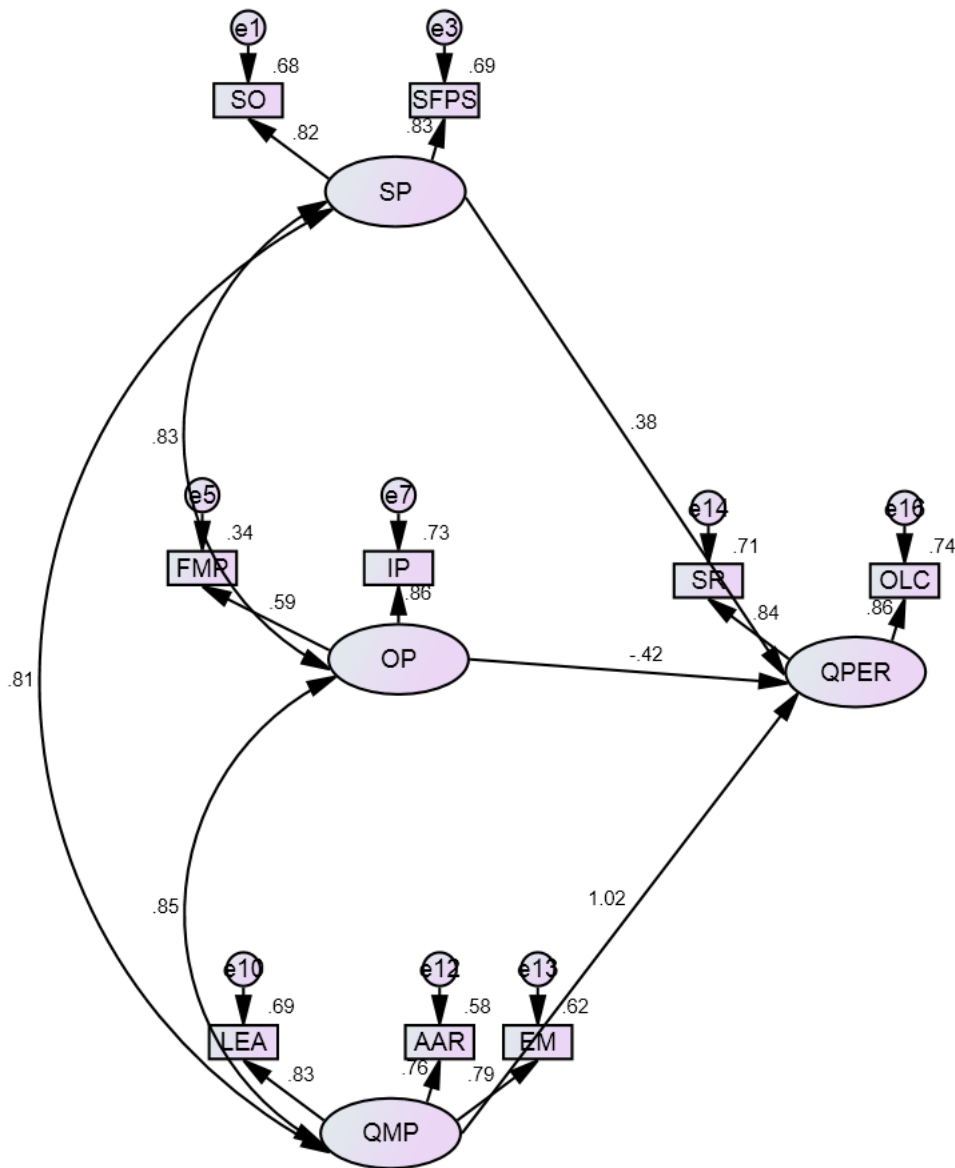


Figure 5. Structural Model 3 in Standardized Solution

- | | |
|---|--|
| <p>Legend: SO –Stakeholder Orientation
 PM –Process Management
 SFPS –Sustainability Features of Products/Services
 LO –Learning Orientation
 SP –Sustainability Practices
 FMP –Financial and Market Performance
 QP –Quality Performance
 IP –Innovation Performance
 EP –Environmental Performance
 SP –Social Performance</p> | <p>OP –Organizational Performance
 LEA –Leadership
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 AAR – Alliance and Resources
 EM –Employees Management
 QMP –Quality Management Practices
 SR –Sales Revenue
 ICP –Increase Output in Unit Cost of Production
 OLC –Optimize Labor Capitalization
 OCU –Optimize Capital Utilization</p> |
|---|--|

Structural Model 4. Shown in Table 11 is the goodness of fit measures of the Structural Model 4 considered by the researcher. Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), P of Close Fit (P-Close) and its corresponding criterion are presented. The fourth structural model has a model chi-square value of 1.717 with a significant p-value which is less than 0.001, an improvement relative to structural model three. Moreover, it has a normed fit index of 0.990, a Tucker-Lewis index of 0.990, a comparative fit index of 0.996, a goodness of fit index of 0.990. In general, for indexes structural model four shows improvement relative to structural model three. In addition, it has a root means square error approximation of 0.042. This shows an improvement in the results relative to structural model three. Finally, it has a *p* of close fit value of less than 0.042 which is an improvement relative to structural model two. In general, relative to the previous models generated, there are improvements on the fit indices of the structural model four. Furthermore, it can be observed that the fourth model passed all the fit indices as shown on the results. In conclusion, based on empirical results, the fourth structural equation model may be considered the best fit model based on the fit indices considered.

Table 11

Goodness of Fit Measures Generated Model 4

INDEX	CRITERION	MODEL FIT VALUE
CMIN/DF	0 < value < 2	1.717
P-value	> 0.05	0.079
NFI	> 0.95	0.990
TLI	> 0.95	0.990
CFI	> 0.95	0.996
GFI	> 0.95	0.990
RMSEA	< 0.05	0.042
P-Close	> 0.05	0.592

Shown in Figure 6 is Kline's (2008), Structural Model 4 in standardized solution. For *sustainability practices* (SP) the remaining indicators are the following: *stakeholder orientation* (SO), and *sustainability features of products and service* (SFPS). For the *organizational performance* (OP) are: *financial market and performance* (FMP), and *social performance* (SP). Also for the *quality management practices* (QMP) are the following: *leadership* (LEA), and *employees' management* (EM).

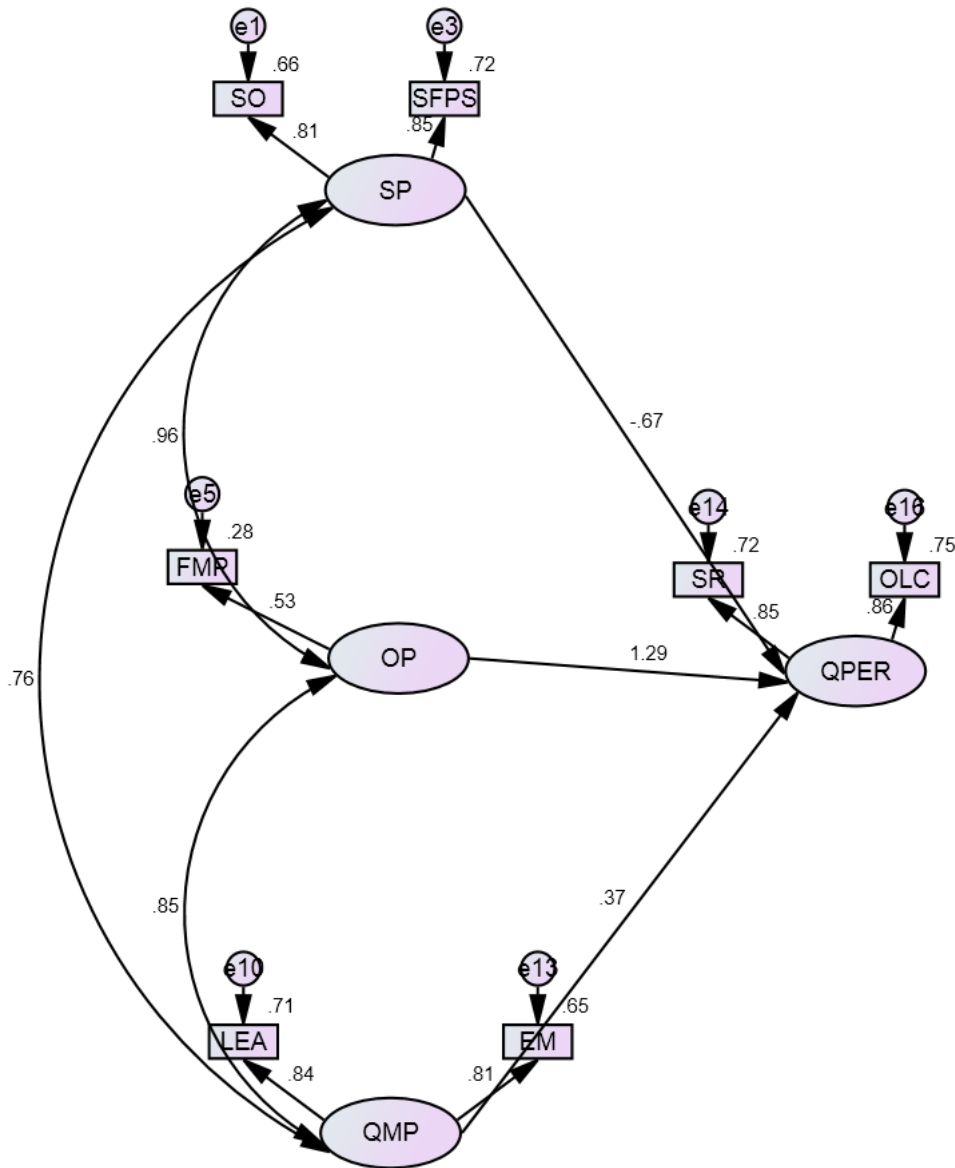


Figure 6. Structural Model 4 in Standardized Solution

- | | |
|---|--|
| <p>Legend: SO –Stakeholder Orientation
 PM –Process Management
 SFPS –Sustainability Features of Products/Services
 LO –Learning Orientation
 SP –Sustainability Practices
 FMP –Financial and Market Performance
 QP –Quality Performance
 IP –Innovation Performance
 EP –Environmental Performance
 SP –Social Performance</p> | <p>OP –Organizational Performance
 LEA –Leadership
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 EM –Employees Management
 QMP –Quality Management Practices
 SR –Sales Revenue
 ICP –Increase Output in Unit Cost of Production
 OLC –Optimize Labor Capitalization
 OCU –Optimize Capital Utilization</p> |
|---|--|

Shown in Table 12 is the summary of goodness of fit measures of the four structural equation models considered by the researcher. Fit indices such as Model Chi-square (CMIN) and its corresponding p-value (P-value), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Means Square Error Approximation (RMSEA), and P of Close Fit (P-Close) are presented. Based on the results, in terms of CMIN and P-value, only Model 4 passed the test with a Chi-square test statistic of 1.717, which is within the suggested interval of greater than 0 but not more than 2, and p-value of 0.079, which suggests that there is no sufficient evidence to say that the model is not a good fit to the data. In addition, in terms of NFI, TLI and GFI, only model 3 and 4 passed the test with an index greater than 0.95. Furthermore, in terms of CFI, Models 2, 3, and 4 passed the test with an index greater than 0.95. Moreover, in terms of RMSEA, only Model 4 passed the test with an index less than 0.05. Finally, in terms of P-close value, only Model 4 passed the test with an index greater than 0.05. In conclusion, Model 4 may be considered as the best fit model based on the empirical results presented.

The most parsimonious model (Model 4) conveyed a generalized new concept that qualitative productivity performance of small and medium enterprises was significantly influenced by sustainability practices which was grounded primarily on stakeholder orientation and sustainability features of product/services highly reinforced by organizational performance which was defined solely by financial and market performance and further strengthened by quality management practices as defined by leadership and employees management. In conclusion, the final Model 4 depicted the direct causal relationships of sustainability practices, organizational performance, and

qualitative management practices and was found to be the best model on qualitative productivity.

Table 12

Summary of Goodness of Fit Measures of the Four Structural Models

Model	CMIN	P-Value	NFI	TLI	CFI	GFI	RMSEA	P-Close
1	5.702	0.000	0.883	0.883	0.901	0.841	0.109	0.000
2	4.300	0.000	0.943	0.937	0.955	0.930	0.091	0.000
3	2.422	0.000	0.976	0.977	0.986	0.973	0.060	0.200
4	1.717	0.079	0.990	0.990	0.996	0.990	0.042	0.592

The most parsimonious model (Model 4) conveyed a generalized new concept that qualitative productivity performance of small and medium enterprises was significantly influenced by sustainability practices which was grounded primarily on stakeholder orientation and sustainability features of product/services highly reinforced by organizational performance which was defined solely by financial and market performance and further strengthened by quality management practices as defined by leadership and employees management. In conclusion, the final Model 4 depicted the direct causal relationships of sustainability practices, organizational performance, and qualitative management practices and was found to be the best model on qualitative productivity.

Chapter 4

DISCUSSION

Presented in this chapter are the discussions of the level of sustainability practices, organizational performance, quality management practices, and qualitative productivity. Also revealed in this section are the correlations between sustainability practices, organizational performance and quality management practices on quality on productivity. Moreover, the regression analyses of the influence of sustainable practices, organizational performance, and quality management on quality on productivity are also discussed. Lastly, the best fit model that predicts quality on productivity of SMEs in Region XI is presented.

Level of Sustainability Practices

The very high level of sustainability practices among small and medium enterprises in Region XI is due to the high rating given by the respondents on stakeholder orientation, process management, and learning orientation. The small and medium enterprises maintain good relationship with their business partners and employees. Their procedures are aligned to their vision and goals. The employees of small and medium enterprises have the capacity and knowledge to perform their task. These practices therefore are expected to increase the sustainability level since it is congruent to the views of various authors (Abiodun & Kida, 2016; Aminu, 2018; Kolar, 2014) who pronounced that the efficacy of sustainability practices would be increased by valuing their people and maintaining a good relationship, among others.

Level of Organizational Performance

The very high level of organizational performance among small and medium enterprises in Region XI is due to the high rating given by the respondents' on quality performance, innovation performance, and social performance. The quality of products and services of small and medium enterprises has improved which led to the satisfaction of their customers and reduce poor quality of their products and services and brings competitiveness in the organization. The small and medium enterprises adopt new technologies and integrate new strategies in their operations. These practices, therefore, are expected to increase the organizational performance level since it is congruent to the views of various authors (Prasanna, et al. 2019; Rahman & Ramos, 2013; Zhang & Thiam, 2014) who specified that the organizational performance would be increased by continuing to improve the quality performance of the product and adopting to technological changes, among others.

Level of Quality Management Practices

The very high level of quality management practices among small and medium enterprises in Region XI is due to the high rating given by the respondents' on leadership, alliance and resources, and employment management .The management ensures the alignment of their goals of the company and makes the right decision. Small and medium enterprises work well with their business partners to create a win-win situation. Also they strengthen their employees' management and ensure the smooth flow of their operation. These practices therefore are predicted to increase the quality management level since it is congruent to the views of various authors (Hernandez, Yesenia, & Lerma, 2017; Mallet & Wapshott, 2017; Salisu & Bakar, 2018) who indicated

that quality management practices would be increased by maximizing earnings and ensuring smooth flow of operations, among others.

Level of Qualitative Productivity

The very high level of qualitative productivity among small and medium enterprises in Region XI is due to the high rating given by the respondents' on sales revenue and optimizes labour capitalization. The small and medium enterprises always established sales projections and targets to achieve sales growth. Labour capitalization were observed and practiced, as enterprise's productivity is based on using its manufacturing ability. These practices therefore are predicted to increase the qualitative productivity level since it is congruent to the views of various authors (Gupta, Meena, & Dangayach, 2016; Haataja, 2016) who pointed out that qualitative productivity would be increased by continuing to forecast and minimize the cost of labour.

Correlations between Sustainability Practices and Qualitative Productivity

The test of the relationship between variables reveals a significant relationship between sustainability practices and qualitative productivity leads to the rejection of the null hypothesis. This implies that sustainability practices have something to do with qualitative productivity. This means that the awareness of stakeholders creates impact to the organization. The overall result of sustainability practices of small and medium enterprises in Region XI are significantly correlated with qualitative productivity. In a singular state, indicators such as sales revenue, increase output unit cost of production, optimize labour utilization, and optimize capital utilization are correlated to sustainability practices.

The findings of the study were congruent to the findings of Jayeola (2018) and Blundel et al. (2013) that there were significant correlations between sustainability practices and qualitative productivity. The study highlighted that sustainability practices plays a significant role on productivity. Sustainability is conducted in achieving good quality outcome of the business.

Correlations between Organizational Performance and Qualitative Productivity

The test of the relationship between variables reveals a significant relationship between qualitative productivity and organizational performance leads to the rejection of the null hypothesis of the study. This implies that organizational performance is correlated with qualitative productivity. The overall result of organizational performance of small and medium enterprises in Region XI is significantly correlated with the productivity. In a singular state, indicators such as sales revenue, increase output unit cost of production, optimize labour utilization, and optimize capital utilization are correlated to sustainability practices.

The findings of the study were aligned to the findings of Lo et al., (2016) on the critical success factors for organizational performance of SMEs in Malaysia, that there were significant correlations between organizational performance and qualitative productivity. It showed that the organizational performance of small and medium enterprise is based on the performance of the firm in terms of quality. In line with this, the organization's profit and share have grown for past years and they execute strategies that suit their key company and make them adapt quickly to changes for the growth of the organization.

Correlation between Quality Management Practices and Qualitative Productivity

The test of the relationship between variables reveals a significant relationship between qualitative productivity and quality management practices leads to the rejection of the null hypothesis of the study. This implies that quality management practices are associated with qualitative productivity. In a singular state, indicators such as sales revenue, increase output unit cost of production, optimize labour utilization, and optimize capital utilization are correlated to quality management practices.

The findings of the study were congruent to the findings of Gachina (2016) and Madanchian et al. (2017) that there were significant correlations between quality management practices and qualitative productivity. The study emphasized that people at the top of the organisation will lead to achieve good productive quality. The company's decision-making and policies depend on the organization's development and good leadership.

Best Fit Model for Qualitative Productivity

Displayed in Figure 6 in Chapter 3 is the generated structural model 4. It shows the direct causal link of the exogenous variable on the endogenous variable. The endogenous variable is the qualitative productivity, which is measured in terms of Sales and Revenue (SR); Increase Output Unit Cost of Production (ICP); Optimize Labour Utilization (OLC); and Optimize Capital Utilization (OCU).

It could be seen from the model that only sales and revenue and optimize labour capitalization remained as the measurement construct of qualitative productivity, out of the four indicators. Sales and revenue, an observed variable that predicts qualitative

productivity, which means the process of products allows the manufacturer to benefit better result of productivity which contributes to an improve quality of the product. The study of Maksum, Rahayu, and Kusumawardhani (2020) cited that the higher the revenue the faster productivity of products.

Another indicator is optimize labour utilization, means that organization focuses on improving employees' efficiency. The small and medium enterprises implement strategies and monitors a specific position's activity and then assigning the appropriate number of employees to meet the expected activity. Productivity is directly associated with labour, and is a term of everyday watch (Jain, Gupta, Meena, & Dangayach, 2016). Moreover, labor strongly affects productivity in a positive way (Ngoc & Phuoc, 2017).

For sustainability practices as one of the exogenous variables in the best fit model, only two out of four observed variables appeared to have a causal link to qualitative productivity. Stakeholder orientation makes value for all stakeholders in the business organization. Sustainability practices strongly impact shareholders' satisfaction through productivity and financial performance (Metts, Rao, & Hong 2015). Furthermore, Aziz, Awais, Hasnain, Shahzadi, and Afzal (2017) suggest that different dimensions of orientation (innovativeness, proactivity, risk-taking, autonomy, and competitive aggressiveness) may positively influence the performance of the SMEs in terms of productivity.

Sustainability features of products and services are another indicator of sustainability practices. It provides environmental, social and financial advantages while protecting public health and the environment. The management of small and medium enterprises specialized in producing products that have diversified perceptions

about growth and internationalisation of their organization (Kislali & Boz, 2016). Good product and service design and use of ICT will develop sustainable productivity in SMEs (Pardo, Bhamra, & Bhamra, 2012).

Organizational performance as one of the significant exogenous variables showed only one out of five observed variables appeared to have a causal link to qualitative productivity. Financial and market performance serve as firm's overall financial health and the efficiency of production over a given period. The small and medium enterprises maintain an efficient flow of savings and investments in the economy which facilitates the accumulation of capital and contribution in the production of goods and services. Financial performance measures are the most commonly used measures of productivity and efficiency in companies, with less consideration for non-financial performance measures (Matsoso & Benedict, 2016).

Quality management practices as one of the significant exogenous variables showed that two out of four observed variables appeared to have a significant causal link to qualitative productivity. One is leadership, leaders are essential for all kinds of organisations and play distinct role. The small and medium enterprises develop people to reach their potential and equip with the right tools and strategies to maximize the success of an organization. There is a clear connection between leadership and success in doing business and its productivity (Kocherbaeva, Samaibekova, & Isabaeva, 2019). In addition, SMEs owners and managers as leaders, pave the way for their companies' success and growth.

Another is employees' management, the organization exert more effort to help employees do their best work each day in order to achieve the larger goals of their

organization. Employees involvement reflect a management agenda concerned with increasing understanding and commitment from employees and securing an enhanced contribution to the organisation (Wilkinson, Dundon, & Grugulis, 2016). Furthermore, employees with stronger engagement at work are more likely to have higher level of organizational commitment, contributing to the organization's productivity (Cheng & Chang, 2019).

Conclusion

In light of the findings of the study, the following conclusions are drawn. The respondents perceived that the level of qualitative is high. The respondents manifested a high level of sustainability practices which means that it is observed oftentimes by the respondents. The respondents observed a high level of organizational performance; this shows that it is often manifested by the management. A high level of quality management practices on the part of the respondent means that it is often observed. Overall, the results indicated that sustainability practices, organizational performance and quality management practices have a significant relationship with qualitative productivity. Importantly it is concluded that model 4 is the best fit model that predicts qualitatively. The remaining predictors of qualitative productivity are the following: sales revenue, optimize labour utilization, stakeholder orientation, sustainability features of product and services, financial and market performance, leadership, and employees' management.

The results of the study is congruent with the propositions that there is positive correlation between sustainability practices and qualitative productivity by Maletic (2013); there is an association between organizational performance and qualitative

productivity by Yeung et al. (2007), and that there is a connection between quality management practices and qualitative by Garcia et al. (2014) as espoused in the theoretical framework of this study. However, the measures under each of the exogenous and endogenous variables have been reduced in the best fit model as can be seen in Figure 10 found in the “results” chapter.

Recommendation

Based on the results of the study, the researcher proposes the following recommendations:

The high-level rating of sustainability practices, organizational performance, quality management practices, and qualitative productivity of small and medium enterprises suggest that they still face a challenge in raising it to a very high level. Stakeholder orientation and sustainability features of products and services will be given more attention to improve to a very high level. This can be done by creating favourable policies for stakeholders and making superior products. Also, small and medium enterprises in Region 11 are highly encouraged to improve their financial and market performance by involving key non-market stakeholders' issues early in the product/service design. Lastly, the small and medium enterprise may give priority to their leaders and employees by building a better teamwork.

The significant relationship of the three variables: sustainability practices, organizational performance and quality management practices with qualitative productivity indicates that these variables may be given focus by top management because the higher the level of these variables the higher the level of performance will

follow. This can be done by formulating good sustainability and quality management practices while maintaining utmost organizational performance to ensure optimal qualitative performance.

The best fit model showing the three variables as predictors, however, a few indicators influenced on productivity, the top management may improve systems and programs of their businesses, like establishing a clear procedure in every operations. Likewise, stakeholders are encouraged to participate in generating ideas in innovating new products and protect them from imitators. Further, with leadership as one of the key indicator, the management of small and medium enterprises may value their employees through allowing them to participate in the matters that affect them or by acknowledging the new business ideas coming from them. Furthermore, with human sustainability practices as one of the variables with significant influence on qualitative productivity, it is suggested the management may initiate activities, or program that will enhance the learning and education, and experience and expertise of their stakeholders. It could be seminars or team building.

The results and findings on this research suggest that the level of sustainability practices, organizational performance, quality management practices, and qualitative productivity are high. Thus, SMEs in Region 11 are highly encouraged to improve their performance and practices by involving key non-market stakeholders' issues early in the product/service design and development stage; performing preliminary market assessments to obtain customers' view of green product ideas; improving their financial, market, quality, innovation, environmental, and social performance; and managing alliances and resources according to their formulated strategies.

In addition, it is recommended that sustainability practices (as measured by stakeholder orientation and sustainability features of product/services), organizational performance (as measured by financial and market performance), and quality management practices (as measured by leadership and employees management) may be used to predict qualitative performance of SMEs in Region 11. Hence, business owners, micro, and cottage business owners may consider formulating good sustainability and quality management practices while maintaining utmost organizational performance to ensure optimal qualitative performance. Finally, future researchers may perform residual analysis to test several assumptions of the model and conduct forecast evaluation to ensure the goodness of fit of the model suggested by the researcher.

Conclusion

Model 4 of this study was the best fit model that predicts qualitatively. The remaining predictors of qualitative productivity are the following: sales revenue, optimize labour utilization, stakeholder orientation, sustainability features of product and services, financial and market performance, leadership, and employees' management.

The results of the study is that there is positive correlation between sustainability practices and qualitative productivity. However, the measures under each of the exogenous and endogenous variables have been reduced in the best fit model as can be seen in Figure 10 found in the “results” chapter.

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