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Performance evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Scorecard Approach

By

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A dissertation submitted in partial fulfilment of the requirements for the degree of Master of Commerce in Business Management

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2021

DECLARATION

I Mandisa Precious Mgabhi declare that:

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ACKNOWLEDGEMENTS

A word of sincere thanks and appreciation to the following people, without whose assistance and support this study would not have been possible:

My supervisor Dr Vangeli Gamede for his input and Irene Loubster the course administrator for her warm heart and support. I would also like to thank my mentor Dr Lucky Makhanya and dear friend Dr Hector Moloi for their input, support and guidance throughout this mini dissertation.

A special thanks goes to my former Hulamin colleagues which contributed significantly on collecting data from 187 participants: Boxer, Siboniso Mtolo, Michael Ndlovu, Mbali Shangase and Sakhile Kubeka.

Finally, I would like to thank all my kid's nannies for keeping my son Monwabisi and daughter Yibanathi well-cared while I pursued my studies.

ABSTRACT

The current state of manufacturing industry in South Africa is in decline. Measuring and evaluating the firm's performance to compete, grow and withstand harsh external forces is necessary. This will assist business executives to formulate and implement strategies that will provide a clear roadmap to achieve desired objectives.

To address performance of a manufacturing company, literature related to business performance measurements and evaluation methods was reviewed. Furthermore, the research explored literature related to Kaplan and Norton Balance Scorecard as theoretical framework adopted for this study. The literature reviewed the Balance Scorecard as a business performance measuring tool by exploring each Balance Scorecard perspective individually and its relationship with business strategy.

This study adopted post-positivism (positivist) paradigm as the data was quantitative nature. The primary data was collected by means of questionnaires which were analysed by means of descriptive statistics. There were 217 questionnaires distributed to participants, 187 completed responses were received, yielding a response rate of 86%. The results were measured to be reliable using Cronbach's alpha.

The aim of this study was to evaluate business performance within a South African manufacturing company using Hulamin as the case. The results showed inconsistency amongst the four Balanced Scorecard perspectives. The respondents indicated positive response on customer perspective, internal business process perspective and performance management whereas on financial and learning and growth perspective respondents indicated negative responses. Furthermore, the results and literature indicated that the Balanced Scorecard is not an adequate tool to be solely used to evaluate overall business performance.

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CHAPTER 1: OVERVIEW OF THE STUDY

1.1 Introduction

In this economic changing world manufacturing companies are developing strategies that will sustain their businesses in the long run. Measuring performance allows the organisation to constantly monitor business activities to ensure that strategies become a reality. Beyond measuring performance, business performance must be evaluated to identify the organisation's strength and weaknesses. This study evaluates business performance of Hulamin using the Kaplan and Norton Balanced Scorecard (BSC).

Chapter 1 is the introductory chapter which provides the study background, information on research site and research problem. Furthermore, this chapter outlines the research questions, study objectives and the outline of the whole dissertation. The main purpose of this chapter is to give a scope of this study.

1.2 Study Background

South Africa is a developing country facing many economic challenges including energy, old infrastructure, inefficient regulatory processes and government long-term strategic vision which hinders both local and international investments (Pollet, Staffell and Adamson, 2015). South African manufacturing industry has also been deteriorating slowly over the last few years. The manufacturing industry contributed approximately 20% of the country's GDP in 1994, in 2020 the GDP was approximately 14% (South African Market Insight, 2020). Furthermore, the South African manufacturing sector has recently reported a further decrease of 5.4% of its production in March 2020 compared to March 2019, metal products being the biggest contributor to the drop (Statistics South Africa, 2020). Manufacturing industry utilises 80.8% of its capacity and the remaining 19.2% unused capacity is mainly as a result of low demand (South African Market Insight, 2020). Locally manufactured goods are in decline due to high competition, high manufacturing cost and unreliable power from Eskom (South African Market Insight, 2020).

Most companies are under pressure to meet the global trade standards hence, organisations are working on improving the quality of products and services, adopting new technology and are ensuring productive workforce (Hitt, Ireland and Hoskisson, 2007). The growing internationalisation of economic systems is also a concern because it has created a borderless global economy (Bailey, Mankind, Kelliher and Garavan, 2018). Globalisation has intensified the competition within the manufacturing sector.

Labour productivity has since remained unchanged from 2011 while the wages kept on increasing this has contributed negatively to most of the companies because they cannot be price competitive (Hanusch, 2019). A higher productivity rate seems to be higher in finance and construction, while agriculture, mining, and manufacturing are slowly declining (Hanusch, 2019).

South African manufacturing industry is not doing well. Adequate performance management system has become a necessity for the existing firms to find ways to strengthen their core competencies and improve their weaknesses in order to remain relevant and adapt in this challenging time.

Performance management allows the firm to find a solution on internal factors that hinders performance because the firm cannot change situation that arise from the external forces i.e. politics, regulations and law, environment, technology and social factors. The ability of a business to measure performance is the most important enabler of achieving the set goals (Gawankar, Kamble and Raut, 2015). Measuring performance gives management feedback on objectives they have set and client satisfaction (Tan, Zhang and Khodaverdi, 2017). Figure 1.1 below shows the process of how performance should be measured.

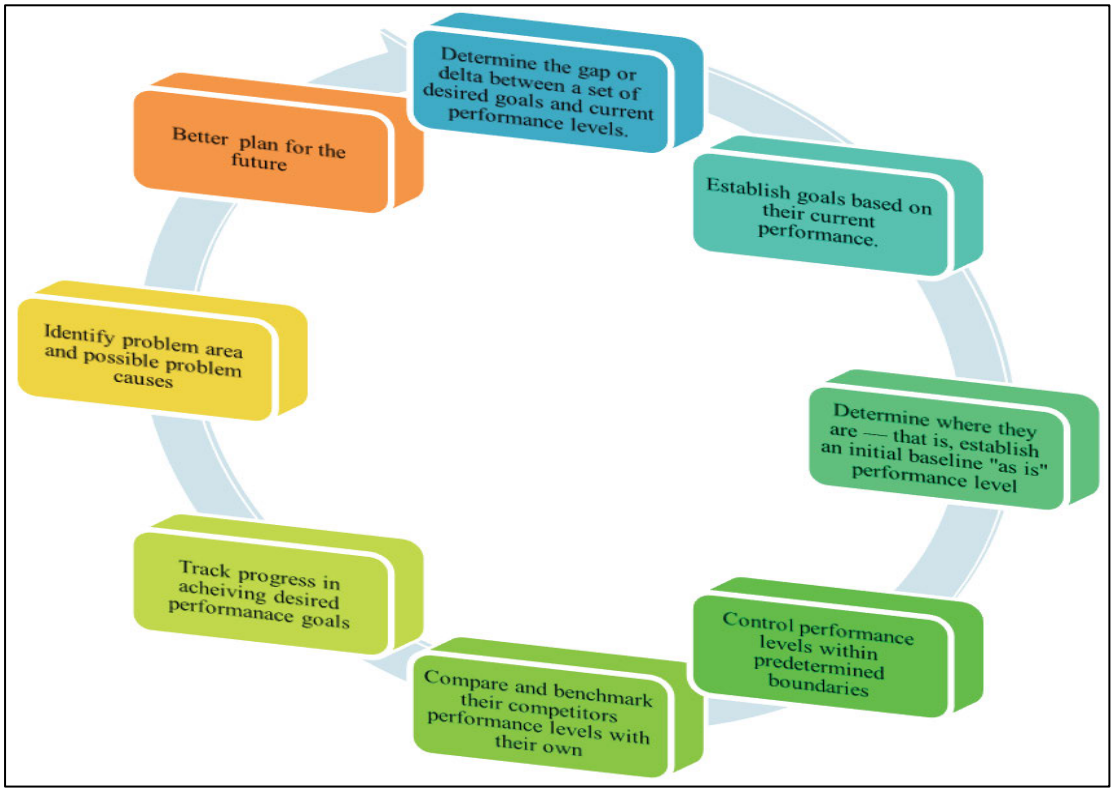

Figure 1.1 The Performance Measurement Process (Gawankar *et al*., 2015:7)

According to Mihaela and Alexandru (2018), business performance is too subjective, and more factors must be considered. Large firms are now using the Kaplan and Norton BSC approach to evaluate financial and non-financial performance of the firm (Wheelen and Hunger, 2015). Another main advantage of BSC is its use in the implementation of long-term strategies. BSC aligns business management processes in order to achieve the desired goals (Lavy, 2010). Furthermore, the Balanced Scorecard perspectives give a holistic view of the organisation (Gawankar *et al*., 2015). The BSC is not a tool to measure performance only; it is also used as a change management strategic tool to align the organisational strategy across all departments and across all levels of employment. Measuring performance allows the organisation to look back at their previous and current decisions in order to determine the future goals that are

aligned with their strategies to ensure effective organisation (Lavy, 2010). The importance of measuring performance is as important as its evaluation. Evaluating performance should not be a waste of time but should be part of the strategy to ensure that objectives set are carried out efficiently and effectively to achieve the set goals.

1.3 Research Problem

The performance of manufacturing industry is very important in South Africa as it accommodates many unskilled and semi-skilled employees who are the source of income for many communities. The poor performance of manufacturing industry in South Africa has caused some of the firms to close down and this is compounded by the high number of labour related protests the country is experiencing. Furthermore, the competition from goods manufactured in China has intensified. Hulamin is also part of the manufacturing firms affected by the changes in the economy and trade globalisation. In 2019, Hulamin reported strong competition from the United States and China as the major threat to the company's performance (JSE SENS, 2019). Therefore, firms must change their daily activities to sustain their businesses. Firms must monitor, measure, collect and analyse data and rectify poor performance to develop strategies that will not only improve profits but sustain business in a long term. Huang and Badurdeen (2017) proposed that performance evaluation must be mandatory across all levels in a manufacturing organisation to ensure sustainability in the long run.

This study has adopted Kaplan and Norton Balanced Scorecard (BSC) theoretical framework to evaluate performance at functional level in four departments at Hulamin. The BSC is the most popular strategic management model adopted by many organisations in developed countries. There is a good performance outcome of organisations in developed countries like Unites States, United Kingdom, Canada, Spain, China that have adopted BSC (Rafiq, Zhang, Yuan, Naz and Maqbool, 2020). Bain (2018) reported that about 57% companies were using BSC in 2004 and approximately 37% in 2017. However, the satisfaction level on companies using the BSC in 2017 was at the highest compared to previous years. Many organisations are still battling with BSC implementation and execution (Gowindasamy and Jantan, 2018). ArcelorMittal South Africa (AMSA) is the largest steel manufacturer in South Africa which has been using the BSC system for the past eight years (de Jager, 2009). However, AMSA has encountered issues in executing BSC due to poor communication and implementation which has resulted in BSC to fail (de Jager, 2009). The BSC tool is used in this study because it is simple and integrate well financial and non-financial perspectives of performance. Moreover, BSC has successfully been widely used by large firms globally (Rafiq *et al.*, 2020).

1.4 Study Site

Hulamin rolling operations based in Pietermaritzburg KwaZulu-Natal was targeted as a study site for this research. Hulamin is a manufacturing company based at Edendale within the city of Pietermaritzburg. It is the largest producer and supplier of semi-fabricated aluminium products in Sub-Saharan Africa. The company originated back in 1935 when it was a sales office of an aluminium company based in Canada (Hulamin, 2016) . In 1940 the company was registered as Aluminium Company of South Africa (ALCAN) which was followed by the

establishment of the first aluminium rolling mill in 1949 (Hulamin, 2016). In 1974 ALCAN merged with Hulett Corporation to form Tongaat Hulett aluminium (Hulamin, 2016). The restructuring of Tongaat Hulett aluminium in late 1990s resulted in addition of two shareholders Anglo American and the Industrial Development Corporation which caused Tongaat Hulett share-price to decrease by 50% (Hulamin, 2016). In 2007, the organisation was named Hulamin and was listed on the main board of JSE after it was unbundled from Tongaat Hulett Limited (Hulamin, 2016).

Hulamin has two major processes that the business is involved in, rolled products and extruded products. Rolling is the process of thickness reduction and extrusion is a multifaceted process that involves production that varies in output from yacht masts to window frames (Boulton, 1982). This study will only focus on the rolled products processes, as it constitutes approximately 90% of the overall business products.

Table 1.1 Shows published Hulamin business results from 2015 to 2019

Table 1.1 Overall Hulamin business performance for year 2015 to 2019

Key Perfomance indicator		Indicator	UOM	2015	2016	2017	2018	2019
Financial Performance	Financial Capital	Revenue	(R million)	8 395	10 099	10 160	11 534	10709
		EBITDA1	(R million)	444	808	754	742	18
		Operating profit (excluding impairment)	(R million)	295.0	622	538	-950	-1421
		Headline earnings per share	(cents)	37	119	104	91	76
		Return on capital employed	%	4.7	9,2	7,8	6,0	
		Return on equity	(%)	3,1	9,3	7,7	6,9	10.6
		Profit margin	(%)	3.5	6.2	4.9	-8.2	-13.3
		Cash flow before financing activities	(R million)	-420	415	296	90	222
	Manufacturing Capital	Capital expenditure	(R million)	605	328	261	242	311
		Repairs and maintenance	(R million)	255	259	282	286	306
		Depreciation/amortisation	(R million)			216	241	136
		Hulamin group sales volumes	('000 tons)	198	232	233	245	219
		Rolled Products sales volumes	('000 tons)	179	214	215	228	210
Non Financial Performance	Human Capital	Total number of employees		1 972	1 932	2 020	2 039	1937
		Employee costs	(R million)	943	1048	1145	1241	1200
		Skills development		23.7	38.8	65	47	39
		Lost time injury frequency rate		0,32	0,03	0,22	0,05	0.14
		Total recordable frequency case rate		0,99	0,27	0,58	0,24	0.37
	Social, relationship and interllectual Capital	Taxation Paid	(R million)		128	128	74	37
		B-BBEElevel			3	6	5	6
		B-BBEE expenditure	(R billion)	6,2	2.2	4.0	4.9	4,4
		CSI spend	(R million)	2,8	2.1	2.1	4,1	3,1
	Natural Capital	Carbon emissions intensity5	(MT CO2e/MT production)	1,92	1.76	1,68	1,56	1.73
		LPG Consumption (GJ)			6.58	6.55	7.53	
		Fuel gases	(%)				61	62
		Electricity Consumption	(KWh/MT produced)		1274	1241	1172	1203
		Water consumption intensity	(Kℓ/MT production)	3,33	2.66	2,49	2.52	2.96

Source: Researcher's own compilation data adapted from Hulamin's annual financial reports from the year 2015 to 2019.

1.5 The Aim of the study

The aim of this study was to evaluate Hulamin's business performance using the Balance Scorecard.

1.6 Research Objectives

The study objectives were:

- To determine how Hulamin as a manufacturing company measures its performance.
- To determine the effectiveness of BSC attributes in a manufacturing company.
- To find out to what extent does learning and growth assist the business to perform better.
- To determine the impact of business processes on business performance.
- To evaluate customer satisfaction management systems impact on performance of a manufacturing company.
- To determine the impact of financial measures of performance on overall business performance.

1.7 Research Questions

The research questions were:

- How does Hulamin measures business performance?
- What are the BSC's attributes present in Hulamin's performance management system?
- To what extent does learning and growth affect business performance?
- To what extend does the customer management systems in place influence business performance?
- How are the business processes managed in order to improve performance?
- What are Hulamin's financial indicators of performance?

1.8 Significance of the Study

Hulamin is the largest manufacture of semi-fabricated aluminium in Africa and the largest employer within the manufacturing sector in Pietermaritzburg (Hulamin, 2020). The success of Hulamin means the success of the society within the Midland's region which will contribute to the economy of KwaZulu-Natal and South Africa as a whole. This study explores employees' perceptions on the overall performance of the company across all the business functional units using the BSC approach.

The study aims to contribute to the theory with the new knowledge pertaining measuring and evaluation of business performance in a South African context. Furthermore, this study will benefit the manufacturing firms to improve on business performance attributes that affect the overall performance of the firm.

The outcome of this study can assist Hulamin management evaluate the effectiveness of the current performance measurement and evaluation systems. Furthermore, Hulamin can formulate new strategies and set new business goals that will improve the performance of the company based on scientific data collected in this study. This can benefit Hulamin with highly

skilled employee turnover, high employee productivity, improved customer satisfaction and increased financial performance in future.

1.9 Format of the Dissertation

This study consists of six chapters which are outlined below:

1.9.1 Chapter 1: Overview of the Study

Chapter 1 outlines the summary of this research.

1.9.2 Chapter 2: Literature

Chapter 2 reviews published literature from different scholars. The literature review is based on performance measurement and evaluation systems. Furthermore, business strategy literature is briefly reviewed as it plays a major impact on overall performance outcome. The Kaplan and Norton's Balance Scorecard is the theory underpinning this study and is reviewed in detail in this chapter.

1.9.3 Chapter 3: Research Methodology

Chapter 3 presents the research methodology which outlines the process this study followed, data collection and data analysis methods. This chapter also outlines the processes adopted to protect the organisation where the study was conducted and the participants privacy.

1.9.4 Chapter 4: Results Presentation

Chapter 4 presents the results collected from 187 respondents at Hulamin using questionnaires. The chapter presents results in a form of tables and graphs and the analysis of results is also presented.

1.9.5 Chapter 5: Discussion

Chapter 5 is the discussion of results presented in chapter 4.

1.9.6 Chapter 6: Conclusion

Chapter 6 concludes the discussion of results and presents findings and recommendations.

1.10 Chapter Summary

Chapter 1 outlined the overview of the study and rational of the study. This chapter has introduced the background of the study, overview of the study site, problem statement, research questions and the research objectives. The methodology adopted for this study was briefly outlined together with the techniques used to collect and analyse data.

The next chapter (Chapter 2) outlines the reviewed literature.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review objective is to resonate the study into context by showing how the research fits to the field (Somekh and Lewin, 2011). The literature review must accurately indicate a summary of different views, agreements, disagreements and trends about the phenomenon and must be acknowledged (Stilwell, 2000). The aim of this chapter is to review previous published research on the business performance measurement and evaluation systems. According to Bhattacherjee (2012), the review of literature must serve three purposes: must find knowledge that abounds the phenomenon, unearth theories and authors related to the field of study, and must determine the gap in knowledge.

The literature presented in this chapter is organised into three sections. Section 2.2 defines and explains the importance of organisational performance including measuring and evaluating performance. This section explores different views from scholars in relation to the importance of the business to measure and evaluate its daily activities. Section 2.3 is a review of performance measurement and evaluation theories. Section 2.4 explores the literature related to the BSC. The history of BSC is explored in detail and the use of BSC as a performance measurement and evaluation system is also explored. Furthermore, section 2.4 gives a holistic view of BSC four perspectives. The key concepts that form literature presented in this chapter were drawn from the theories related to business performance, performance measurement and performance evaluation systems. The concepts related to the study objectives which also formed the literature of this study were used to construct the survey questionnaire.

2.2 Organisational Performance

Modern industries regard performance management as a critical activity because it determines long term business success (Richard, Devinney, Yip and Johnson, 2009). Business performance is mainly affected by competitive uncertainty, changing technology, changing consumers needs and new competition (Brown, 2011). Managing organisational performance in large firms becomes a challenge because spill overs that exist amongst different business units and within departments put managers in difficult positions where they must take decisions which are not aligned with the objectives of the firm (Bouwens, Hofmann and Van Lent, 2018). Hence, managers in complex manufacturing firms tend to focus on maximising productivity at the expense of the performance of the firm (Anderson, 2001). However, there are many other factors in a firm that result in failure of performance management systems other than business complexity and external factors highlighted by Brown (2011). According to Bourne, Neely, Platts and Mills (2002), approximately 70% of performance management systems fail due to the following reasons:

- Poor leadership
- Resistance to change
- No perceived benefits
- Fear of consequences of performance outcome

There are different methods and approaches that have successfully been used to measure and evaluate business performance these include: financial performance, stakeholder theories, Resource based capabilities, IT capabilities, Balanced Scorecard etc. The traditional performance measurement systems were mainly based on financial performance and excluded non-financial measures. The non-financial measures identify measures that indicate how management can have full control of the business (Chytasa, Glykasb and Valiris, 2011). Hence, measuring non-financial measures is as important as measurements of financial measures.

2.2.1 Performance Measurement

Performance measurement systems are implemented to document and make informed decisions (Gowindasamy and Jantan, 2018). The system gives details about the past actions of the company which assist to derive strategic actions. According to Marshall (2002), the main purpose of measuring performance is to look back, look ahead, roll up, cascade down, compare, compensate and motivate. Performance measurement is a system of monitoring daily operations in accordance with the firm's strategic objectives (Wu, Tzeng and Chen, 2009). Furthermore, performance measurement system involves setting daily targets, monitoring internal processes and collecting data for the purpose of identifying key indicators of performance (Gowindasamy and Jantan, 2018). According to Kaplan (2010), firms cannot evaluate what they cannot measure. Hence, intangible assets must be converted into scientific numbers to ensure that results are reliable and will help managers to make informed decisions based on performance measures (Kaplan, 2010). Performance measures are used to monitor, manage and improve business competitiveness (Gomes, Jabbour, Adriana and Charbel, 2011). Therefore, performance measures must be clearly defined prior to integrating dimensions of performance.

The Key Performance Indicators (KPIs) of the firm and control systems determine what the business should measure (Richard *et al*., 2009). A good performance measurement system must address how the existing systems will be improved and how organisation's objectives will be aligned with the individual performance measurements and objectives (Gowindasamy and Jantan, 2018). Therefore, the firm's internal performance measurement system affects each individual and the organisation's effectiveness. The role of performance measurement system is to improve organisational effectiveness (Gowindasamy and Jantan, 2018). Business performance is a subset of organisational effectiveness, which incorporates operational performance and financial results. Organisational performance indicates business effectiveness, which is the firm's ability to achieve its mission (Gowindasamy and Jantan, 2018) (Mahmudi, 2005). Therefore, organisational effectiveness is an important component of performance because its influence has a greatest impact on overall performance (Ozcan, 2008).

An adequate business performance measurement system should encourage a cooperative functioning of the firm's business units. Performance measurement systems must be applied from the lower level of the organisation throughout all departments to ensure that they are functional because functional strategies are the foundation of the business strategy (Williams, Souza, Derrick, Rosenfeldt and Martin, 1995). Organisations now adopt extensive measurement systems which incorporates both objective and subjective measures to improve

business performance (Van der Stede, Chow and Lin, 2006). This approach is also known as Contemporary Performance Measurements (CPM) which advocates both financial and non-financial measures (Van der Stede *et al*., 2006). The CPM system is more relevant now with high competition, advanced manufacturing practices, new technology and flexibility (Van der Stede *et al*., 2006).

Measuring performance does not guarantee improved performance (Gawankar *et al*., 2015). Furthermore, measuring performance comes at a high cost because it must be implemented, maintained and affects the processes' productivity and delays operations (Gawankar *et al*., 2015). Despite costs and production delays associated with the implementation of performance measurement systems, measuring performance has a positive effect on overall business performance. Measuring performance benefits the company positively because it minimises risk of a firm from not satisfying its stakeholders and achieving set objectives (Gawankar *et al*., 2015). Measuring performance eases strategy implementation and improves organisational performance.

2.2.2 Performance Evaluation

Performance evaluation is a management tool used to control the systems and resources for the purpose of aligning the strategy with the business operations (Evans, Ashworth, Chellew, Davidson and Towers, 1996). Performance evaluation is monitoring of organisation's set goals achieved in a specified period (Wu *et al*., 2009). Wheelen and Hunger (2015) define performance evaluation as a completion phase of chronological phases of strategic Management System (SMS), where the business strategy is being evaluated and monitored after execution. Moreover, performance evaluation is a comparison of achieved performance of corporate activities with set goals and taking actions to resolve problems where needed (Wheelen and Hunger, 2015). Rue and Byars (2005) view performance evaluation at an individual level, as a revelation of an employee's understanding of their own work and triggers actionable findings and continuous improvement.

According to Wu *et al*. (2009), successful firms have a clear vision, positive action and adequate performance evaluation system. Evaluating performance allows managers to adjust formulated strategy (Wheelen and Hunger, 2015). When evaluating performance, the time frame (comparison between past and present duration interval) and reference point (competitors, target, past performance) are important factors to consider (Richard *et al*., 2009). Therefore, it is crucial that business measurement system is adequate and managers receive proper feedback from the firm's daily activities to ensure actions taken post performance evaluation will benefit the firm in a long term.

2.3 Performance Measurement and Evaluation Theories

There are many theories articulated by researchers relating to how performance should be measured and evaluated. According to Mihaela and Alexandru (2018), many factors must be considered when evaluating performance like income cash flow, research and development expenses, employee satisfaction, social responsibility because business performance is complex and subjective.

Different approaches have been used to evaluate performance these include but not limited to ratio analysis, total production analysis, regression analysis, Delphi analysis, Balanced Scorecard (BSC), Analytic Hierarchical Process (AHP), Data Envelopment Analysis (DEA) (Wu *et al*., 2009). However, the recent researchers have shown a high interest on Social responsibility, BSC and stakeholders' theories which are reviewed below. These theories are very important bases for measures of performance in manufacturing. However, they are biased because they only relate to non-financial aspects of performance unlike the BSC which gives the holistic view of the firm's performance by measuring both financial and non-financial aspects of performance. Furthermore, the BSC aligns the performance attributes with the organisation's strategy.

2.3.1 The Social Responsibility Theory

Santos and Brito (2012) proposed a subjective model to measure the firm's performance which incorporates social performance and environmental performance in addition to profitability, growth, customer satisfaction and employee satisfaction. Social and environmental performance activities of the company such as product quality and safety, employment of disadvantaged individuals and community projects gives satisfaction to the community and government (Santos and Brito, 2012).

Social responsibility theory proposes a corporate's responsibility beyond profit maximisation (Wheelen and Hunger, 2015). The corporate social responsibility theory was also developed to respond to the unprecedented emergence of global warming (Richard *et al*., 2009). Friedman (2007) study disagreed with the corporate social responsibility theory. According to Friedman (2007), the business primary goal is to make profit and not to spend stockholder's money on social interests. Therefore, social responsibility becomes an ethical act a business embarks on to benefit the society.

Investors are recognising how the firms manage sustainability of natural resources on their business performance results (Bonner, 2014). Sustainability report indicates how the company manages its impact on environment and the role it plays to the global society to ensure sustainability of natural resources (Bonner, 2014). Manufacturing firms projecting good environmental corporate responsibility results attract investors to invest on projects that sustain the natural resources consequently improving corporate financial performance (Testa and D'Amato, 2017). Therefore, South African manufacturing firms trading at international and global level must incorporate social responsibility factors on their performance measurement methods because they affect the image of the firm and future possibilities of investments. The social responsibility theory was not used in this study to evaluate performance because its focuses on the environment and social needs more than business daily activities that have the biggest impact on overall performance. However, Ardito and Dangelico (2018) argue that a firm's contribution to the environment is an important strategic factor that will make a firm stand-alone among rivals.

2.3.2 Resource Based Theory

The findings on a firm's performance study conducted between Apple, Microsoft and Google revealed that business core competencies give the firm the greatest competitive advantage to

perform better financially (Mihaela, 2017). The shortage of technical skills in South Africa affects the competitiveness of manufacturing firms against global manufacturing rivals (Madonsela, Mbecke and Mbohwa, 2013). Manufacturers globally reported talent as the main driver of manufacturing competitiveness (Deloitte, 2016). Skills and competency of employees in a firm determine the company's competitiveness and consequently affect the business performance and the country's economy. A core competence in the form of a resource or capability can provide stability to an organisation and make organisational growth possible (Hindle, 2008). According to Bharadwaj (2000), the adoption of resource-based view framework will provide competitive advantage to the firm, this framework links information technology capability as an enhancer to the performance. Therefore, resource-based theory suggests that the firm's resources determine the firm's capability to achieve greatest performance.

According to Todorov (2020), the international competitiveness of the manufacturing sector is mainly determined by the technological capabilities and knowledge for new product developments. The transition to the fourth industrial revolution is no longer a hype in manufacturing industry but an urgent need that must be attended to (Ghobakhloo, 2018). The fourth industrial revolution will present new business opportunities and disrupt the global community in terms of communication, behaviour and how they relate with the environment (Ross and Maynard, 2021). The new technologies such as Artificial Intelligence (AI), Internet of Things (IoT) and autonomous vehicles have influenced many organisations and employees to change and adapt in many countries (Ross and Maynard, 2021).

Manufacturing industry has a major challenge to adapt and explore new business opportunities that arise with the fourth industrial revolution. South African manufacturing industry does not have sufficient infrastructure to improve its competitiveness to compete globally (Madonsela *et al.*, 2013). South African manufacturing sector's competitiveness can be improved by adequate implementation of Information and Communication Technology (ICT) which will improve internal business processes by delivering products of high value that will ensure customer expectations are met (Madonsela *et al.*, 2013). The resource-based view theory evaluates the firm's strengths and capabilities to compete with the rivals to improve customer satisfaction and business financial performance.

2.3.3 The Stakeholders Theory

According to Santos and Brito (2012), stakeholders' theory is part of the firm's social responsibility. Stakeholders' theory measures a firm's performance based on stakeholders' satisfaction level (Santos and Brito, 2012). Stakeholders' theory defines the expectations of each stakeholder before defining the business strategy (Kaplan, 2010). A stakeholder is anyone that benefits directly (internal stakeholders) or indirectly (external stakeholders) from the firm's activities (Santos and Brito, 2012). The stakeholders' theory incorporates people who have an impact on the business functionality either inside (shareholders, customers and communities,) or outside the organisation (suppliers and employees) (Kaplan, 2010). According to Atkinson, Waterhouse, and Wells (1997), these individuals have their views and expectations of how the firm should perform.

The internal stakeholders contribute to daily activities i.e. planning, designing, and distributing goods and services to the customers, whereas the external stakeholders do not contribute to the firm's daily activities but generally tend to have psychological contracts with the organisation (Kaplan, 2010). A business that does not fulfil either of the three stakeholder; customers, employees and shareholders will suffer in the long run (Yeung and Berman, 1997). The important groups like shareholders and employees must be prioritised because it can be impossible for a company to please all the stakeholders (Clarkson, 1995).

Organisations tend to focus on the expectations of a single stakeholder i.e., shareholders and ignore the primary stakeholders (suppliers and customers) which have been proven to have the greatest impact on Return On Assets (ROA) and Earnings-Per-Share (EPS) (Richard *et al*., 2009). Some authors have combined the stakeholder and shareholder theories with the aim to recognise the firm's corporate responsibility (Mihaela, 2017). The relevance of stakeholders can be seen at both organisational and country level. European countries organisations predominantly consider stakeholders interest of employees, partners, NGOs, and society (Dore, 2000). Adopting the stakeholders' approach to measure and evaluate business performance may is highly likely to omit important attributes that affect performance because some stakeholders are prioritised more than others. It is evident that the stakeholders' theory lacks to find a balance across internal and external stakeholders.

The government can be the most influential external stakeholder on business performance. According to the UNIDO's annual Competitive Industrial Performance (CIP) Index, the five best performing countries are Germany, China, the Republic of Korea, the United States and Japan (Todorov, 2020). Moreover, China and India secured the first and eleventh position on the 2016 Global Manufacturing Competitiveness Index respectively (Deloitte, 2016). Deloitte (2016) reported that China based companies indicated that they receive enormous support from their government on science, technology and innovation. This indicates the impact government has on the business performance and competitiveness. The founder of World Economic Forum Professor Klaus Schwab raised concerns over inequality and society fragmentation because of governments failing to adapt to the new fourth industrial revolution (World Economic Forum, 2016). The South African manufacturing industry has a challenge to adapt to the global standards in order to be competitive on cost of goods and capabilities. Therefore, external stakeholders like government tend to have a direct impact to the firm's competitiveness and consequently have impact on the business overall performance.

Santos and Brito (2012) measured firm's performance based on stakeholders' theory and results indicated that stakeholders have different business interests on the firm which must be managed independently. The stakeholders' theory defines the needs of the business stakeholders prior to defining the business needs that will improve business competitiveness and business performance. Managing different needs of stakeholders can compromise business strategy and business performance. Moreover, unlike the BSC approach the stakeholder theory does not incorporate the internal business processes which have the greatest impact on customer satisfaction.

2.3.4 The BSC Approach

BSC caters for the three main stakeholders: customers, employees and shareholders. The behaviour and attitude of these stakeholders have casual linkages because an employee behaviour affects customer satisfaction which plays a significant role on shareholders returns and shareholders themselves affect employee satisfaction (Yeung and Berman, 1997). This casual linkage is demonstrated on Kaplan and Norton's strategic map on Figure 2.1 below.

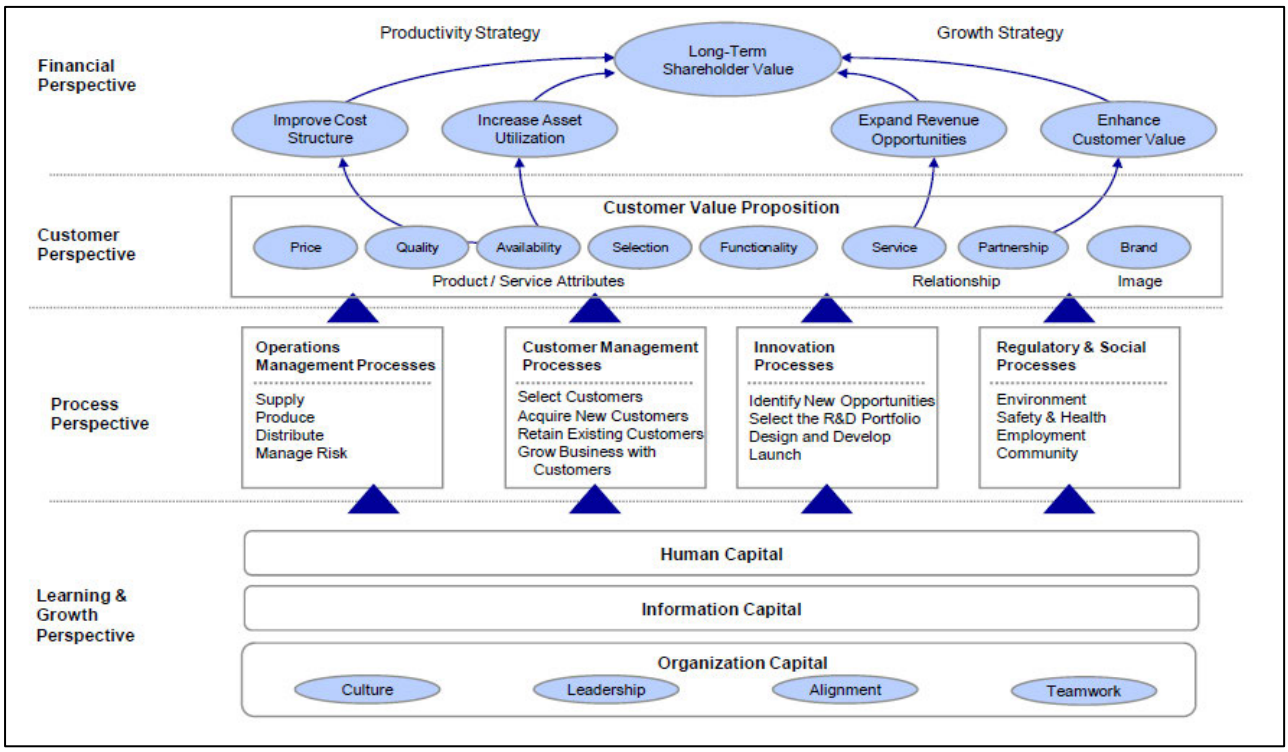

Figure 2.1 The Strategic Map developed by Kaplan and Norton (Kaplan, 2010:22)

BSC is an unbiased tool as it evaluates both financial and non-financial perspectives of managerial activities (Chimtengo, Mkandawire and Hanif, 2016). The BSC's main objective is to measure strategic objectives, integrate and manage business strategy (Kaplan and Norton, 2001). The strategic map demonstrates how the business strategy is defined by linking the objectives derived from the BSC four perspectives to the overall business strategy (Kaplan and Norton, 2004). The BSC approach assists organisations to improve and invest on their systems, employees and processes in order to produce innovative products and distinctive value proposition (Phillips and Louvieris, 2005) (Karabulalut, 2015). Therefore, the BSC framework assists managers to navigate to a more competitive and sustainable environment.

The BSC function is more than measuring performance. BSC should be used to manage the business by ensuring that all strategic goals appear in Key Indicators of Performance including employee's performance (Othman, Khairy, Domil, Senik, Nor Liza, Abdullah and Hamzah 2006). Davis and Albright (2004) refer to the BSC as a complete and adequate tool used to plan and control organisational activities and evaluate performance. A performance measurement system must have these attributes to be considered a Balanced Scorecard; the measures must be derived from the business unit strategy, there must be a balance amongst the measures and measures must be linked in a series of cause-effect relationship (Soderberg, 2006). Soderberg

(2006) examined a BSC pyramid to describe the BSC framework as indicated on Figure 2.2 below. The pyramid framework describes BSC as strategic management system function in three aspects: structure, implementation, and use.

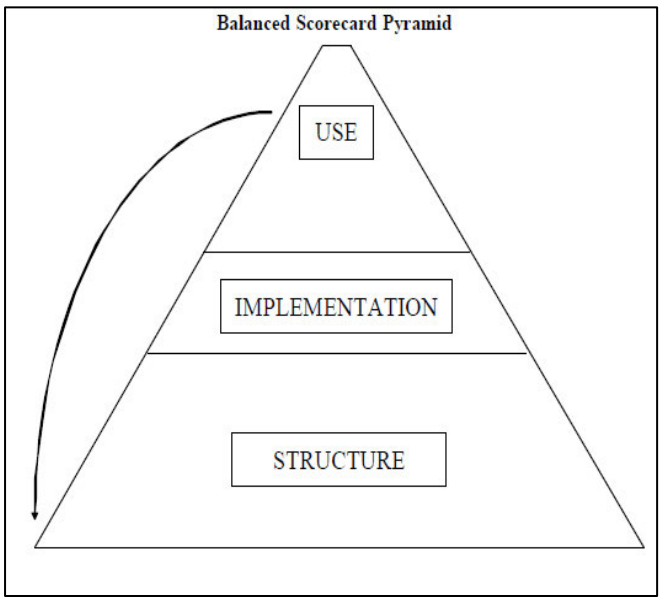

Figure 2.2: The Balanced Score Card Pyramid (Soderberg, 2006:17)

Structure: The BSC has three unique features:

- Derivation of performance measures from the strategy: all performance measures are linked to the business overall strategy to ensure that there is an alignment between management and the functioning of business units (Soderberg, 2006). Strategies at functional level should be the foundation of business strategies and must all be aligned with marketing orientation to achieve desired performance (Williams *et al*., 1995) (Miles and Arnold, 1991). BSC tool enables the organisation to find relevant performance measures prior to implementing strategy with the aim of developing balanced strategies (Norreklit, 2000) (Othman *et al*., 2006).

- Striking a balance among all persperctives: the four perspectives are balanced they work together to give direction to management on what to do and where to focus in order to achieve the objectives (Soderberg, 2006). The BSC is the most suitable performance measurement tool because it consists of a set of balanced performance indicators that are linked to the business strategy to ensure that all stakeholder needs are met and fulfilled (Quesado, Guzmán and Rodrigues, 2008). Gowindasamy and Jantan (2018) disagreed with Kaplan and Norton's philosophy of treating all four perspectives of BSC as equal, because some measures have a greater impact on performance more than other measures.

- Casual linkage among the perspectives: BSC perspectives cause (leading indicators) and effect (lagging indicators) relationship ensures correct activities are measured on a daily basis (Soderberg, 2006). This means measures in all perspectives are linked to ensure alignment with the set objectives. The BSC framework starts at the bottom level

with learning and growth which improves the internal business processes in order to satisfy customers with the aim of getting higher profits margins (Karabulalut, 2015). According to Kaplan (2010), the BSC model was developed to integrate the quality and lean management, the financial performance and stakeholders' theories for the purpose of obtaining a robust performance measurement and management system.

Implementation: The BSC tool allows organisations to implement and execute business strategy and evaluate implemented measures of performance (Wheelen and Hunger, 2015). A successfully implemented BSC will positively benefit the firm by effective teamwork, better strategic thinking and promoting a learning organisation (Kaplan and Norton, 2001). Chimtengo *et al*. (2016) also emphasised the benefits of adequately implementing the BSC because it brings the desired results and enables creation and adaptation of new culture. BSC must be aligned with the organisation culture and technology upon its implementation (Chimtengo *et al*., 2016). Furthermore, management must have a buy-in from across all departments and must ensure full participation of employees for BSC to be successful.

BSC implementation success also depends on human relation norms and the culture of the country (Othman *et al*., 2006). Therefore, organisation culture and a buy-in from employees must always be considered when implementing BSC because they all play a significant role. When implementing the BSC, organisations should consider the history of the organisation and management style of introducing new techniques (Othman *et al*., 2006). Organisation's management practice might clash with the organisation's strategy upon implementing BSC (Norreklit, 2000). BSC implementation does not guarantee positive performance. However, the success of BSC implementation and employee commitment towards BSC can guarantee positive performance (Amaratunga, Baldry and Sarshan, 2001).

Use: The use of BSC involves planning and control and strategy execution. Kaplan and Norton (1992) designed BSC to be used by companies as a communication tool, information sharing and learning system tool. The BSC has widely been used to communicate, integrate and measure performance in order to continuously improve and develop business processes and systems that are aligned with strategic goals of the business (Kopecka, 2015). The use of the BSC as a strategy communication tool creates a point of reference for all individuals in an organisation (Rafiq *et al*., 2020). Kaplan and Norton (2001) also refer to BSC as a change management strategic tool.

2.3.4.1 The Evolution of Balanced Scorecard

The Balanced Scorecard has evolved into three generations from when it was developed in the early 1990s (Gowindasamy and Jantan, 2018).

- **Early-1990s Balanced Scorecard for Performance Measurement**
  BSC was developed by David Norton, the CEO of Nolan Norton Institute, and Robert Kaplan, a professor at Harvard University (Wu *et al*., 2009). According to Kaplan (2010), the BSC was first introduced in 1992 when Norton and Kaplan wrote a Harvard business review research article of a multi-company to study performance measures of how the intangible assets can be integrated into management system together. Firms

were at this point struggling on which perspectives to measure and how to measure them (Gowindasamy and Jantan, 2018). This led to the introduction of strategic objectives, where each perspective measure has its own objectives which are mapped for better alignment and measurement (Kaplan and Norton, 1993). The BSC was developed to incorporate non-financial and financial measures of performance so that business performance is balanced.

- **Mid - 1990s Strategic Objectives and Strategy Maps**
  The BSC strategic map was used to align the performance measures with the firm's strategic objectives to overcome critics over its lack of support at lower levels of the organisation (Gowindasamy and Jantan, 2018). The strategic map shows the cause and effect of each perspective to the overall business performance in a sequential manner (Kaplan and Norton, 1996). The BSC four perspectives are cross-functional dimensions of performance that assist the business to take decisions related to the transformation of business strategies into a reality (Kaplan and Norton, 2001).

- **Early – 2000s The Strategy Management System**
  The BSC was transformed from being a performance measurement system to a strategic communication tool (Kaplan and Norton, 2001). The use of BSC to implement and communicate business strategy was to ensure that all employees across the organisation understand the objectives and measurement systems to be used in order to achieve the set company's objectives (Gowindasamy and Jantan, 2018). The Kaplan and Norton's Balance Scorecard amendments in 2001 revealed that the strategy formulation is as equal as its implementation (Kopecka, 2015). The amendments revealed how the BSC is used to align key strategic processes with the overall business strategy. This led to a proposal of five vital strategy implementation processes: planning of operations, monitoring, learning, testing and adaptation of strategy (Kaplan and Norton, 2008). The aim was to link strategy implementation and communication throughout the organisation for a successful strategy execution process and to help create a strategy focused organisation (SFO) (Kopecka, 2015).

2.3.4.2 The BSC Shortfall

BSC processes must be adopted like any other performance management initiatives and failure to follow these processes will affect BSC effectiveness (Othman *et al*., 2006). Gowindasamy and Jantan (2018) study indicated six barriers of BSC implementation:

- limited understanding of the Balanced Scorecard,
- lack of executive participant,
- lack of training and education,
- poor strategy formulation,
- not involving all the employees
- inadequate KPIs.

BSC has also been criticised for lacking rooting in the external environment including competitor's behaviour (Norreklit, 2000) (Othman *et al*., 2006). Othman *et al*., (2006)

suggested that BSC must be completed with other strategic performance management techniques like PSTEL to link the strategy to the external environment. Chytasa *et al*. (2011) proposed a Proactive Balanced Scorecard methodology (PBSCM) to be used during development and implementation of BSC to address the feedback loops for better decision making.

More authors have integrated BSC with other theories to develop strategic measurement systems and to customise their performance management system according to their business needs. Rothaermel (2017) developed a model which integrated the BSC with triple bottom line and included accounting measures i.e. profitability, shareholder value and economic value to develop a firm's performance model. The study by Saeidi$_1$, Sofian, Saeidi$_2$, Saeidi$_3$ and Saaeidi (2015) is also in agreement with collaboration of BSC with triple bottom line framework as the most suitable tool to achieve superior firm performance.

Hansen and Schaltegger (2016) integrated BSC with sustainability theory and developed SBSC framework which can be used to integrate strategy with sustainability. IMECS (2009) developed a performance evaluation model which integrates BSC with Corporate Social Responsibility (CSR) this framework analyses the firms' social responsibility and sustainability in addition to BSC perspectives. Therefore, BSC may have shortfalls that can be addressed by integrating BSC with other performance measurement theories.

2.3.4.3 Advantages of BSC

The BSC tool has many advantages which include:

- The capability to transform daily activities to strategic concept which will ensure sustainability in a long term. Consequently, overcoming performance measurement weaknesses and vagueness (Gawankar *et al*., 2015).
- The ability to enable the businesses to select relevant processes by reducing number of metrics that companies use to measure performance and develop more meaningful measures which create a balance with non-financial metrics (Yeung and Berman, 1997).
- The usage of data and facts to measure and evaluate performance whistle improving performance (Gawankar *et al*., 2015).
- The ability to integrate internal concerns with external concerns to fulfil external requirements and achieve strategic goals (Gawankar *et al*., 2015).
- The emphasis of business strategy and ensures mutual understanding of strategy across the organisation (Hasan and Tibbits, 2000).

2.4 The BSC As a Performance Measurement Tool

The reasoning behind BSC approach is finding balanced strategies between financial and non-financial perspectives through lead and laggard measures to transform vision into clear and doable performance measures (Othman *et al*., 2006). According to Thanaraksakul and Phruksaphanrat (2009), BSC defines long term strategic objectives and the mechanism for achieving and obtaining feedback regarding those objectives by resembling performance measurement system translated directly from the strategy. The BSC measures both financial and non-financial performances and has four widely known perspectives namely: financial,

customer, internal processes, and learning and growth perspective (Wheelen and Hunger, 2015).

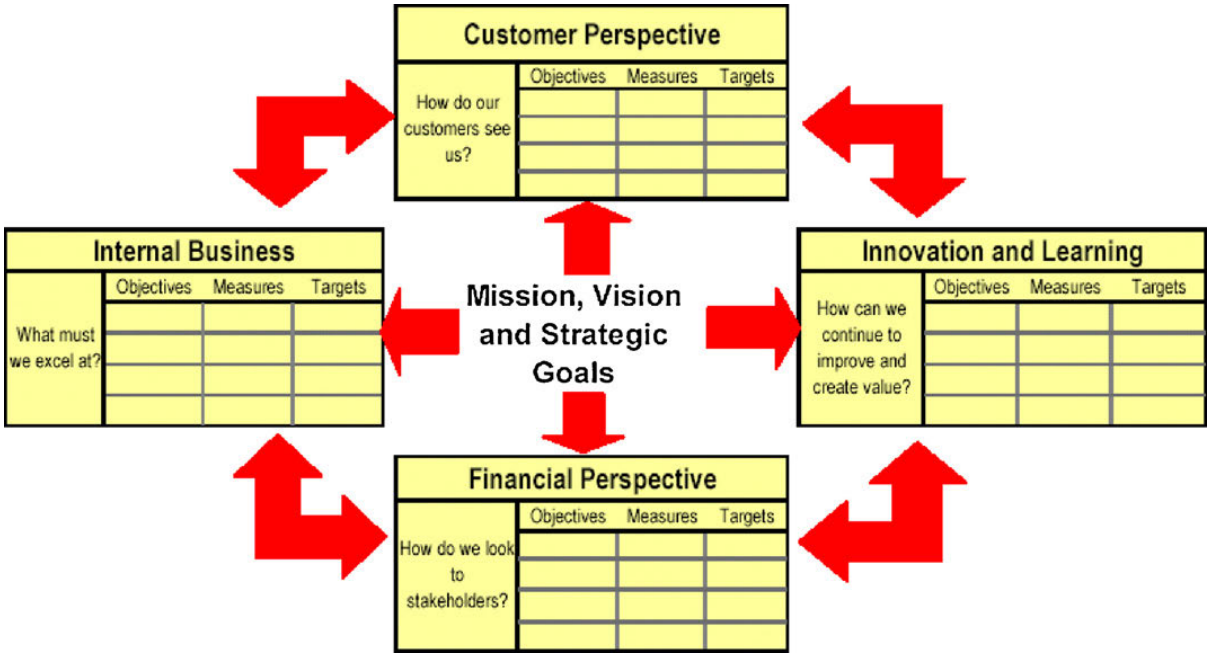

Figure 2.3 The Balanced Scorecard (Chytasa *et al.*, 2011:462)

2.4.1 BSC and Strategy

Strategy is the plan to give direction which the company must take while matching external opportunities with internal capabilities (Hough, Thompson, Strickland and Gamble, 2011). Strategy begins with manager's views and conclusions about the company's direction (Hough *et al*., 2011). Michael Porter defines strategic approaches as low-cost provider, differentiation, niche focus and unique capabilities (Hough *et al*., 2011). Companies adopt one of the Michael Porter's strategies like Walmart adopted a low-cost approach while Armani and Ferragamo adopted a niche focused approach which is price-insensitive (Kaplan, 2010).

A well-defined strategy has a positive effect on business performance (Wheelen and Hunger, 2015). Management set objectives in order to convert strategic vision into measurable performance targets which each individual commits to for the mutual purpose of achieving the business goal (Hough *et al*., 2011). Performance evaluation systems are designed during strategy implementation after the strategy has been formulated (David, 2011). Performance evaluation gives management an understanding of overall firm's performance (David, 2011). Furthermore, evaluating how the strategy performed ensures that internal capabilities and core competencies are strengthened for the business to withstand against threats and exploits opportunities (David, 2011). Strategies can always change after evaluation. A gap in performance, where the business is not achieving its financial goals is one of the main events that usually triggers management to review strategy (Wheelen and Hunger, 2015).

A firm's position and clearly articulated strategy contribution to sustainable environment is one of the greatest competitive advantages of the firm (Rafiq *et al.*, 2020). Therefore, businesses must put more effort on sustainable and distinct strategies to improve performance

and remain competitive (Rafiq *et al*., 2020). However, formulating good strategies does not determine business success, great performance is achieved by the firm's ability to obtain strategic alignment between organisation's environment, strategy, structure and processes (Wheelen and Hunger, 2015). According to the Strategic Management System (SMS) theory, business survival is based on content-oriented approach which focuses on the long term strategic decisions and process-oriented approach which determines strategies to be selected and when to be used (Rafiq *et al*., 2020).

The BSC strategic map is a representative of what Kaplan and Norton believed is a fundamental measurement and evaluation system of performance (Othman *et al*., 2006). The introduction of BSC was a breakthrough of traditional methods. The traditional performance measures were not linked to the business strategy, inflexible and not aligned with continuous improvement initiatives (Chimtengo *et al*., 2016). The BSC approach measures the non-financial metrics to complement the traditional performance measures i.e. financial metrics (Kaplan, 2010).

The Balance Scorecard first defines the business strategy then integrates the performance indicator's objectives to be aligned with the strategy (Kaplan and Norton, 2001). Kaplan and Norton's BSC framework is in agreement with Chandler (1977) articulation that structure must always follow business strategy. This meant restructuring and planning will be determined by strategy to ensure that business resources are allocated adequately to achieve the desired business goals. The BSC's ability to translate business strategy to measurable objectives makes it an efficient tool to be used at both operational and strategic levels (Chimtengo *et al*., 2016). BSC translates strategic ideas to operational activities and links business strategy to the business overall performance (Karabulalut, 2015). Therefore, BSC requires an organisation to have a well-defined strategy to ensure it is implemented successfully and benefits the company.

To reinforce a strategy focused organisation, business strategy must be communicated to all employees to ensure daily activities are conducted in a way that will benefit the organisation in a long run (Kaplan and Norton, 2001). Kaplan and Norton (2001) suggested the five principles of a strategy focused organisation, namely:

- Translation of the strategy to operational terms: Organisation must create a point of reference by translating the strategy to meaningful objectives and develop strategy maps to identify critical measures and actions.

- Alignment of the organisation to the strategy: Strategy focused organisation align the business units by linking individual strategies to the main business strategy. Usually companies have individual specialised sectors or departments which have their goals and objectives which becomes difficult to communicate and implement performance initiatives. Kaplan and Norton (2001) further addressed the need to align employees' functions and shared service units with service agreements between each functional unit.

- Making strategy everyone's everyday job: The business strategy should be communicated down to individual employees; personal objectives should be set along the strategy.

- Make strategy a continual process: Develop processes and operating plans according to the formulated stagey. The outcome of formulated strategy hypothesis becomes the management basis to evaluate the strategy and fine tune the strategy.
- Mobilisation of leadership for change: Leadership must embrace change as transformational change begins with the top management. Leaders must also encourage teamwork to ensure trust between top managers and lower employees to avoid resistance that may arise upon strategy implementation (Wheelen and Hunger, 2015).

2.4.1.1 Strategy Challenges

There are three strategic management challenges faced by most firms when developing strategies (David, 2011)**:**

- Deciding whether the strategic process should be more an art or a science - Thorough research on external environment and business capabilities must be taken to consideration
- Decision on whether strategy to be shared or hidden from stakeholder
- Deciding if strategy should be a more top-down or bottom-up. Decision to include employees across all levels during strategy formulation or top management only to be involved.

2.4.2 Learning and Growth Perspective

Learning forms a basis of an organisation's success; it promotes communication among employees and improves employees' skills and competency. Recruiting talented employees seems to be the challenge for many organisations (Branine, 2008). Therefore, businesses must embrace the existing employees through learning and skills development so that they are competent and can be valuable future assets. Punniyamoorthy and Murali (2008) also assert that competency and skilled labour force complement business infrastructure. Competence is the employee's ability to use acquired skills and knowledge to carry out work as required (Wibowo, 2007).

The study conducted by Rahmawati *et al*., (2016) revealed that leadership and high competency positively influence OCB **(**Organisational Citizenship Behaviours**)** of employee's performance. Organisation must ensure they have effective leadership, competent workforce and must encourage performance-based culture (Yeung and Berman, 1997). Both the employee and the leader play a big role in the success of the work because the leader motivates and gives directions while the employee execute tasks (Rahmawati *et al*., 2016). Competency changes the employee behaviour because it improves employee's quality of work, because of the skills and knowledge they possess (Rahmawati *et al*., 2016). Therefore, organisations that encourages learning culture and target competent workforce will improve their overall performance.

When employees are clear of what is expected of them, it is easier to perform their jobs to their best ability because they are certain of what is expected of them (Ingram, 2013). It is therefore necessary that the firm gives required and necessary training and knowledge to its employees to ensure they perform to their best level. Skills development empowers employees and results in greater employee satisfaction (Edwards and Cable, 2009). Customer expectations cannot be met if employees and the management are not aligned with the organisations marketing strategy. Therefore, employees must be motivated to participate and execute business strategies (Grönroos, 2009). According to Kaplan (2010), the learning and growth perspective should not be treated as employees being the internal stakeholders only, but employees being part of the business strategy.

According to Gawankar *et al*., (2015), learning and growth perspective also includes corporate cultural attitude within the individual and the individual's self-improvement. Learning and growth also encourages employees to adapt to a more flexible environment by encouraging employee rotation and employees to perform more than one function (Rogersa, Ojhab and White, 2011). Furthermore, learning and growth promotes employee involvement by adding value through human resource to improve internal business processes, and lead to greater customer satisfaction and better financial performance. Moreover, learning and growth perspective measures people's abilities to manage resources and their responsiveness to change for the purpose of achieved objectives set for financial, customers and internal business processes (IMECS, 2009). Therefore, learning and growth perspective promotes adaptation to change, empowers employees and improves employee satisfaction.

Learning and growth perspective focuses on the human capital i.e., employees, attitude, knowledge and skills and employee development and abilities (Gowindasamy and Jantan, 2018). Investing on future capabilities is important more than existing capabilities (Phillips and Louvieris, 2005). Companies need to invest on their employees by providing training, proper career development, and incentive bonusses (Rahmawati *et al*., 2016). Moreover, developing incentive packages for all employees for their commitment to business strategy and performance is the best way to empower employees (David, 2011). Employees must benefit from the company's performance through skills development and incentive bonuses because human resource is an essential capability that an organisation must invest on.

Human resources improve organisational effectiveness and business performance because they are used as a tool to achieve the objectives and goals provided they are used efficiently (Apriani, 2011). Human behaviour is a main important perspective of organisation effectiveness because it has a huge impact on the business in a long-term (Rahmawati *et al*., 2016). Organisational effectiveness can be achieved through (1) maintaining stable workforce, (2) celebration of employee's success and (3) Innovative employees (Katz and Kahn, 1978). Hence, employees must be treated as valuable business assets.

2.4.3 Internal Business Processes Perspective

Internal business processes perspective influences customer satisfaction (Papenhausen and Einstein, 2006). Business process is defined as a collection of integrated tasks which results in

an outcome within the organisation (Davenport and Short, 1990). Business process refers to the actions that a business will embark on to fulfil the business objectives (Ray, Barney and Muhanna, 2004). Process is the ability of transformation a product can achieve (Mortensen, Hvam, Haug, Boelskifte, Lindschou and Frobenius, 2010). Business process is crucial in any business because it resembles the existence of the business.

Businesses must identify core processes and support business processes to ensure that they have a mutual goal and are not operated independently (Gawankar *et al*., 2015). The communication flow between the business units or functional areas helps the firm to easily execute strategies. Business processes in bigger firms can be overwhelming; hence some businesses tend to outsource some of their functions which are not primary tasks e.g., human resource and payroll so that they focus on the business core competencies (Wüllenweber and Weitzel, 2007). Business process outsourcing is contracting some of the tasks with the third party this could include software and hardware or business support tasks (Ouyang, Adams, Wynn and ter Hofstede, 2015).

The aim of internal business process perspective is to improve business operations to satisfy shareholders and customers. Improving a firm's internal activities consequently improves customer satisfaction (Gowindasamy and Jantan, 2018). Kopecka (2015) regards internal business processes as the heart of the business with four major core processes which the firm must excel on which are (1) Business operations process; responsiveness to customer demands, manufacturing costs, supplier selection, capacity utilisation. (2) Customer management process; retention of existing customers, acquiring of new customers. (3) Innovation process; excellency in research and development, innovative goods and services (4) Regulatory and social processes: maintaining social responsibility for long term sustainability.

Effectiveness of internal business process is measured by quality of products or services, on-time delivery, manufacturing costs and responsiveness to the market (IMECS, 2009). Performance in manufacturing is mainly determined by cost, time, flexibility and quality (Rogersa *et al*., 2011). According to the Devil's Quadrangle framework developed by Linhart, Manderscheid, Röglinger and Schlot, (2015), process improvement attributes include time, cost, quality, and flexibility. These attributes are used as indicators of process performance to reflect how work is performed and organised and ensure the process is consistent (Linhart *et al*., 2015).

Below are the attributes highlighted by Linhart *et al*. (2015) and Rogersa *et al*. (2011):

Time: The business key success factor is the ability to incorporate customer specifications and requirements into operations (Dash, 2017). Business operations should be the focus where the firm should excel in order to satisfy the customers (Soderberg, 2006). However, customer satisfaction activities tend to be consuming time in production area. Nevertheless, the challenge to obtain both customer satisfaction and improving productivity at the same time can be overcome by implementation of good information technology systems (Anderson, Fornell and Rust, 1997). Ramdas (2003) suggests selection of variegation or decoupling point as a strategic solution to ease the flow of material while reducing lead time. Point of variegation is the buffer stock which is kept between upstream and downstream (Ramdas, 2003).

Machine setup is another critical component with huge impact on the operations processes, because it affects throughput and production performance. Machine setup is a process or activities involved during preparation to run a job, such as job positioning and alignment, changing and positioning tools, cleaning workstation etc. (Onyeocha, 2015). There are two types of setup; sequence-independent (depends on current work to be processed) and sequence-dependent (depends on both current and past work processed) (Onyeocha, 2015). A sequence-dependent setup is mostly preferred because it ensures effective manufacturing capacity management (Wortman, 1992) (Panwalkar, Dudek and Smith, 1973). Reducing setup time through continuous improvements has proven to improve throughput times and productivity (Onyeocha, 2015).

Quality: Successful companies are quality conscious (Brown, 2011). Firms must eliminate production of non-conforming goods to increase customer satisfaction and create customer value because most customers associate themselves with firms that meet their standards of good quality of products and services (Santos and Brito, 2012). Quality is an overall condition of product or service, process and measurements (Schonberger, 1990). Failure to provide consistent quality is a major threat to the firm. Williams *et al*., (1995) found that companies whose focus is on quality assurance have a significant market improvement than those emphasising on making variety of products, innovative manufacturing and control systems. Customers require exceptional products and services. Therefore, firms must provide products and services of high value compared to their rivals to create superior competitive advantage (Hitt, Ireland and Hoskisson, 2007).

Quality incorporates business processes and customer services. Hence, all the processes must be designed from customer's point of view (Mortensen *et al*., 2010). Many organisations tend to ignore the downstream processes these include delivery, after-sales support, and end-of-lifecycle management (Ramdas, 2003). Customer value must be reinforced throughout the organisation from the lower level to the strategic level position to ensure greater customer satisfaction. Therefore, quality is beyond the product or service a company sells.

Flexibility: A flexible manufacturing company's greatest advantage is to manage demand and capacity (Rogersa *et al*., 2011). There are three most popular flexibility factors, (1) volume flexibility: ability to produce large volumes while maintaining high performance (Zhang *et al*., 2003), (2) process flexibility: ability of a process to adjust to risky demands that may arise and unplanned outputs (Afflerbach, Kastner, Krause and Röglinger, 2014) (Goyal and Netessine, 2011) and (3) functional flexibility: is related to the product design and specification to adapt to changes that may be required by customers (Haisjackl, Barba, Zugal, Soffer, Hadar, Reichert, Pinggera and Weber, 2014).

Internal business processes determine the firm's capability to respond and adapt to changing environment e.g., globalisation, innovation, standardisation (Dumas, La Rosa, Mendling and Reijers, 2017). Therefore firms must design efficient and innovative business processes to ensure better communication and smooth flow of material. Furthermore, Brown (2011) regards successful firms as those that are faster to respond to environmental changes.

2.4.4 Financial Perspective

Business financial performance is the most valuable visible outcome of strategy (Gowindasamy and Jantan, 2018). These measures are also known as lagging indicators of performance because they are the outcome of non-financial measures which are qualitative in nature (Gowindasamy and Jantan, 2018). Business financial performance motivates investors. Organisation's interest is mainly on this perspective because it is mainly visible to the shareholders and investors (Soderberg, 2006). It is usually a preferred measure of performance because it gives an indication of future cash flow and incorporate intangible assets (Richard *et al*., 2009).

Business financial analysis indicates company's progress with no action plan (Gawankar *et al*., 2015). However, financial analysis indicates an overview of the outcome of implemented strategies and strategic choices executed in non-financial perspectives i.e. customer, internal processes and learning and innovation (Amaratunga *et al*., 2001). The purpose of financial perspectives is to review the implemented strategies if they contribute to (1) business growth: the bigger the size of the company, how powerful it is to the market, (2) market value: indication of business future performance expectations and (3) profitability: generation of returns (IMECS, 2009) (Santos and Brito, 2012). Some authors have pointed positive relationship between the profitability of the firm and market share (Gowindasamy and Jantan, 2018) (Rigby, 2001). However, Chan and Ho (2002) study found a negative correlation and further cautioned business to reconsider strategist focusing on increasing market share related strategies (Gowindasamy and Jantan, 2018).

Profit is perceived a measure of a company financial performance. Manglik (2016) defines profit as a figure calculated from an income after tax deductions, which is an overview of business operations performance and quality of the company output. A company must achieve a sufficient profit to remain in business. However, profit alone cannot be used to measure or conclude on the organisations' effectiveness, operational efficiency and financial efficiency (Tulsian, 2014). Financial ratios must be used to measure company's profitability because they evaluate both company's achievements and operational achievements (Fahmi and Saputra, 2011). Furthermore, financial ratios identify financial risks to creditors, investment possibilities to investors and assist managers with future strategic planning (Husna and Desiyanti, 2016).

The profitability ratios are mostly recommended because they do not only measure a company's profitability, but they also indicate the organisation's capability to gain profits from its processes, capabilities and resources (Husna and Desiyanti, 2016). Profitability is the company's ability to return investments and make profit (Manglik, 2016). Company's profitability affects many stakeholders including, government; the amount of tax to be paid and economy progress, employees; source of income and customers; lower prices possibility (Manglik, 2016).

According to Husna and Desiyanti (2016), the most used profitability ratios are Net Profit Margin (NPM), Gross profit margin (GPM), Return on Assets (ROA) and Return on Equity (ROE). Manglik (2016) found that most companies use the net profit ratio and Return on Investment ratio (ROI) to determine the profitability and efficiency of the company. An increase on NPM can be achieved by reducing indirect expenses whereas the (ROI) also known as return on shareholder's equity can be improved by allocating resources efficiently (Manglik, 2016). Tulsian (2014) study proposed the use of Gross Profit Ratios (GPR) to measure the business profitability because it is the prime variable used to measure business financial performance. According to Tulsian (2014), a decreasing GPR trend is related to inefficient management of costs (Tulsian, 2014).

Islam, Khan, Choudhury and Adnan (2014) have a different view of financial ratios to be used. The study found that investors and stockholders are mainly interested on ratios showing market price per share i.e. Earnings Per Share (EPS), Price and Earnings ratio (PandE), Dividend Per Share (DPS), Dividend Pay-out (DandP) and Dividend Yield (DY) (Islam *et al*., 2014). EPS is the most important determinant and driver of share price (Islam *et al*., 2014). EPS is used to determine history of the company's performance and the performance of other companies (Stainbank and Harrod, 2007). EPS is also used to determines the firm's share price and value and is used as a barometer to gauge company's ability to return investment per shareholder's shares (Islam *et al*., 2014). Hence, many investors invest their money based on the EPS value.

In South African it is a listing requirement that companies listed on the JSE publish EPS results on their financial statements. EPS categories are basic EPS (BEPS), diluted EPS (DEPS) and headline EPS (HEPS) (Robbetze, de Villiers and Harmse, 2016). HEPS has been found to have no relationship with share prices compared to the other EPS categories (Robbetze *et al*., 2016). It is still unknown which EPS category best reflects the share price behaviour (Robbetze *et al*., 2016). It has been found that share price movement is mainly dependent on micro and macro-economics (Islam *et al*., 2014).

Specific managerial activities which are advocated by Kaplan Balanced Scorecard proponents must be combined with the financial measures to measure business performance (Bouwens *et al*., 2018). According to Kaplan and Norton (2001), managers must use the shareholder value metric which incorporates cost reduction, improved asset productivity and revenue growth to measure financial perspectives. Business financial goals can be achieved by reducing expenses and improving physical and financial assets (Kopecka, 2015). Furthermore, the ability of a firm to generate revenue from its customers and market new products also improves business financial performance (Kopecka, 2015).

2.4.5 Customer Perspective

Customers are the source of business profit. Customer perspective indicates customer's views and their satisfaction regarding cost, response time, product quality or measures customer value and customer retention (IMECS, 2009). Customer perspective evaluates customer value by measuring customer satisfaction, retention and acquisition (IMECS, 2009). A business can either retain or chase away customers depending on satisfaction level (Gawankar *et al*., 2015).

Higher customer satisfaction is associated with improved financial performance which enables the business to invest on internal business processes and innovation and learning perspectives (Lee, 2006) (Chimtengo *et al*., 2016). Customer satisfaction is a post purchase assessment and overall feeling of a specific transaction, towards a perceived specified function (Bastos & Gallego, 2008).

Krajnakova, Navikaitė and Navickas (2015) study found that firms within strong competitive industries have a challenge of attracting new customers and retaining the existing customers. The study suggested that these firms must improve customer satisfaction in terms of quality and service value to establish and maintain long term relationships (Krajnakova *et al., 2015*). According to Anderson (1994), overall customer satisfaction must be the main company's performance indicator because it is related to behavioural and economic consequences gain to the company. Sarkar (2011) study also articulates that customer satisfaction is the key factor of business growth and survival from the industry.

Furthermore, improving customer satisfaction saves costs of reduction of reworked or replaced material, costs reduction related to complaints handling and warranty costs (Anderson *et al*., 1997). Moreover, satisfied customers attract new customers by word of mouth which improves company's reputation (Anderson, 1998). It has emerged from different studies that customer satisfaction has a greater impact on customer loyalty (Anderson and Sullivan, 1993). Customer loyalty as a result of customer satisfaction will ensure future revenues, decrease price elasticity and minimise customer returns (Anderson *et al*., 1997) (Anderson and Sullivan, 1993).

2.5 Summary

This chapter first discussed organisational performance management, performance measurement and performance evaluation systems. In addition, business strategy literature was briefly discussed as it plays a major role on overall performance of the business. The literature relating to other performance measurement and evaluation theories was reviewed. These theories mainly focus on non-financial aspects of the business. However, their relevance is very important and acknowledged in the manufacturing industry. The chapter concluded by reviewing literature related to the Balanced Scorecard approach which forms the theoretical framework of this study. The literature reviewed formed the basis of research questionnaire.

This chapter has reviewed different measurements and evaluation methods used by different organisation. The literature reveals that there is no one-fit all performance management method, organisations adopt methods that are aligned with their strategies and current industry regulations within countries they operate. Furthermore, it can be concluded that BSC is not a complete adequate tool to measure and evaluate business overall performance. Therefore, this study agrees with Othman *et al*., (2006) study which suggested BSC must be combined with other strategic perfomance management techniques.

The following chapter (Chapter 3) discusses the research methodology and methods used to collect and analyse data.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The previous chapter reviewed the literature related to business performance which will contribute to the knowledge of this research. This chapter outlines research methodology adopted to evaluate business performance in accordance with Kaplan and Norton BSC approach using Hulamin Rolled Products as a case study. The case study is based on a quantitative approach which was adopted for this study. The purpose of this chapter is to present clarity on how the study was conducted and to justify the techniques and instruments adopted to collect and analyse data. The survey questionnaire was used as a data collection instrument and the data was analysed by means of descriptive statistics.

3.2 Research

Research is a systematic process that a person must follow in order to determine the unknown concept with the aim of getting new knowledge (Saunders, Lewis, and Thornhill, 2003). The main research objective is to find the answer to the research question (Kumar, 2018). A research process is undertaken within a framework of set of philosophies and uses methods that are reliable and valid, unbiased and objective (Kumar, 2018). Saunders *et al*. (2003) developed a research process onion framework which gives an overview of what a research should entail, philosophy orientation, structure approach, adopted strategy, research timeline and data collection and analysis methods. Therefore, a research can be defined as a systematic investigation which is adopted to explore new facts with the aim of contributing to the existing body knowledge.

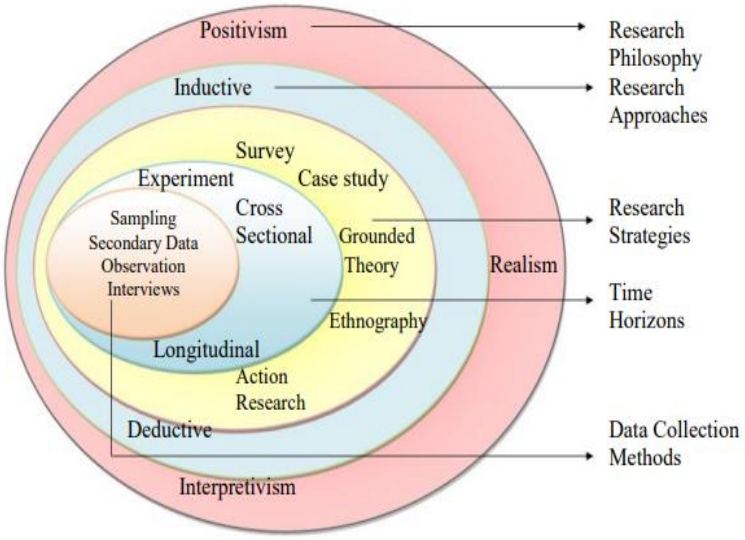

Figure 3.1 The research process onion (Saunders *et al*., 2003:83)

There are three major research dimensions which define the nature of enquiry: methodology, ontology and epistemology (Creswell, 2013). Research methodology can be defined as the research plan and procedure that spans decisions from broad assumptions and detailed methods of data collection and analysis (Creswell, 2013). Research methodology constitutes theories of

inquiry proceedings (Schwardt, 2007). A theory can be developed through deductive or inductive approach. In deductive approach the researcher tests proposed hypotheses whereas in inductive approach the researcher develops new theory based on collected data results (Knox, 2004). This study adopted deductive approach; objectives and research questions were developed from the concepts pertaining business performance measurement and evaluation systems. Conclusions were drawn after data was analysed with the aim of developing a new theory.

Ontology and epistemology research are a person's view of word perspective which have a significance importance in real life aspects (Bryman & Bell, 2007). Below is the research methodology process which has been adopted for this study.

3.3 Research Paradigm

Research paradigm is a worldview's philosophy consisting of thoughts and practices which define the phenomenon along ontology, epistemology and methodology (Creswell, 2013) (Kuhn, 1962). Bertram and Christiansen (2014) refer to research paradigm as a person's view perspective of what and how the phenomenon should be investigated. There are four widely known research paradigms: post-positivism, constructivism, transformative and pragmatism (Creswell, 2014).

Post-positivism: Recognises only scientific research as objective, certain and valid (Mertens, 2014). Researcher develops new knowledge based on scientific measured facts. Hence, the results are collected from experimental procedures. (Creswell, 2014).

Constructivism or Interpretivism: The researcher aims to get more views of participants, this research normally consists of open-ended questions (Creswell, 2014). It is usually used on qualitative research studies (Creswell, 2014)

Transformative: The research is mainly based on social issues of the day such as empowerment, inequality, oppression, domination, suppression and alienation (Creswell, 2014). This research advocates for marginalised people with the outcome that may change the participants and researchers lives (Creswell, 2014). Furthermore, the focus of this paradigm is on power, justice and privilege (Chouinard, 2010).

Pragmatism: The focus tends to be on the research problem because it rises from actions, situations and consequences (Creswell, 2014). This paradigm is almost like post-positivism as it adopts a quantitative approach. The researcher collects and analyse data by means of scientific measurement techniques.

This study has adopted post-positivism (positivist) paradigm which employs deductive logic as the data is quantitative in nature. The data collected from questionnaires was analysed by scientific statistics tools which allowed the researcher to generalise the results from the sub-group to the whole target population.

3.4 Research Design

Research design refers to the researcher's plan to gather, collect and analyse data according to the phenomenon being investigated (Leedy and Ormrod, 2014). Research design is a framework of how the study will be conducted as it outlines the sources of existing data, research approaches contact methods, sampling plans and instruments that researchers will use to gather new data (Armstrong and Kotler, 2016). Kumar (2018) refers to the research design as the road map a researcher wants to follow to get accurate and objective responses to the research questions using valid and reliable procedures. Kumar's study further describes research design as a collective plan that entails and justifies how the respondents will be selected, how the information will be collected and analysed from the respondents.

Research design conceptualises operations and logistics required for the study to be undertaken and emphasises the importance of quality of methods and procedures to be undertaken (Kerlinger, 1986). Different strategies can be adopted when one wants to conduct a research, these strategies include ethnography, grounded theory, case study, phenomenological and narrative research.

Ethnography Research: Emanates from anthropology, it is rooted mainly in the inductive approach (Saunders *et al*., 2003). Ethnography research happens over a long period of time, the researcher collects primary data by observing culture and interviewing the participants (Creswell, 2009)

Grounded Theory: Originates from a systematic data, it was first introduced by Glaser and Strauss in 1967 (Knox, 2004). Grounded theory interacts both inductive and deductive approaches (Knox, 2004).

Phenomenological Research: This study is based on lived experiences as described by participants (Creswell, 2009).

Narrative Research: This study is mainly based on a certain individual's life. The researcher studies and interviews a particular individual and present the study in a narrative way (Creswell, 2009).

Case Studies: Researcher derives data from in-depth analysis of a process, activity, or individuals (Creswell, 2009). The case study examines a phenomenon in its natural state (Bhattacherjee, 2012). According to Kumar (2011), a selected case becomes the basis of a thorough, holistic and in-depth exploration of aspect the researcher wants to examine.

This study is based on a manufacturing organisation's case. The study examined in-depth analysis of Hulamin business performance using the BSC approach as an evaluation tool. The researcher developed an in-depth analysis of business performance using the BSC attributes namely financial perspectives, customer perspectives, internal business perspectives and learning and growth perspectives. The study was mainly focused on the core-business

departments which have a direct impact on the daily activities of the company that affect the overall business performance.

3.5 Research Approach

There are two alternative structural approaches of research design, qualitative research unstructured approach and quantitative research structured approach (Kumar, 2011) (Kalof, Dan and Dietz, 2008). The two approaches can be combined in one study to form the mixed methods research (Creswell, 2013). The researcher can decide on research method and enquiry within qualitative, quantitative, and mixed methods research approaches. The nature of data to be collected will give an indication to the researcher which approach to use (Creswell, 2013).

This study adopted a quantitative research approach because it is objective (Creswell, 1994). Moreover, quantitative study provides a numeric description of the selected subgroup of the target population and generalises results from a subgroup to a population (Maree, 2007) (Creswell, 2003). This study had 37 structured questions which were collected from 187 respondents. The use of quantitative approach is justifiable because the data was complex due to the large number of respondents and the questions were closed-ended and structured. Furthermore, the researcher aimed to generalise the findings from a sample to the target population. Therefore, data was supposed to be scientific in nature.

Quantitative approach invokes the postpositivist phenomenon which can be experiments, correlational studies and specific single-subject experiments (Creswell, 2009). The quantitative data is presented in numbers and uses closed-ended questions (Creswell, 2013). There are two quantitative strategies which a researcher can partake: a survey or an experimental research. Survey research uses numeric data to generalise a sample to a population whereas an experimental research seeks to determine the cause and effects of a particular treatment (Creswell, 2009). Quantitative research helps to quantify variation and diversification (Kumar, 2011).

3.6 Target Population

Population can be defined as the entire group of people or events which the researcher has targeted to investigate (Creswell, 2013). Target population is an entity with special characteristics a researcher wishes to study which can be an individual, a group, an organisation, a country or objects a researcher wants to draw scientific inference from (Bhattacherjee, 2012). Another word for a target population is unit of analysis in scientific terms. Deciding on a study population is an important aspect of research, because it determines if the respondents are suitable (Kumar, 2018).

Hulamin population is highly diversified; African 61%, coloured 11%, Indian 23% and whites 5%. As of December 2019 Hulamin, had 1937 number of employees of which 77% are male and 23 % female (Jacob, 2019). Hulamin was the case for this study. The core departments within the rolling division at Hulamin were the target population. The targeted four core departments were; Marketing, Manufacturing, Planning and Technical. The target population constituted of 506 employees.

3.7 Sampling

Sampling is a scientific method of selecting a sample from the target population for the purpose of making an inference about the population (Bhattacherjee, 2012). According to Creswell (2014), the researcher either chooses single stage or multistage (clustering) sampling design. A single stage design occurs when the population is known to the researcher and it makes sampling easier (Creswell, 2014). In a multistage sampling design usually the population is bigger, the researcher identifies the individuals to be sampled and categorises them into clusters which the sample is drawn from (Creswell, 2014).

This research used a multistage sampling design because the population is large and consists of individuals from different departments and occupy different positions at different levels. The sample was initially grouped according to the selected departments within the rolling division. The employees were then classified according to their job positions in each department. The sample was grouped to clusters i.e., departments and job positions.

3.8 Sampling Method

A sampling method refers to a selection criterion of the individuals who are the sample (Creswell, 2014). There are generally two sampling methods: probability sampling and non-probability sampling.

3.8.1 Probability Sampling

There are four different methods under probability sampling; simple random, systematic, stratified and cluster (Kothari, 2004). Simple random sample: all the individuals have equal probability to be part of the study. Systematic sample: the researcher populates individuals from the target population and select every *i*th item on a list and collect as a sample, this *i*th item is based on the fraction from the list of target population (Creswell, 2014). Stratified sample: the researcher groups the individuals according to their specific characteristic to show a true reflection of the population (Creswell, 2014).

3.8.2 Non-probability Sampling

Non-probability sampling is the most preferred method in qualitative studies because it is cheaper and quicker (Diamantopoulos and Schlegelmilch, 2000). The five common non-probability sampling techniques are quota sampling, convenience sampling, purposive sampling, self-selection sampling and snowball sampling (Guetterman, 2015).

This study used a probability sampling – stratified method. A stratified probability allows the researcher to divide the population into homogeneous non-overlapping groups called strata (Maree, 2007). Employees were grouped according to their job positions in the four departments selected for the study. This was to ensure the sample represented all the employees from each department in order to generalise the results to the entire population. Hence, stratified probability sampling was adopted for this study.

3.9 Sample and Sample Size

Sample is defined as a representative segment of population for a research (Armstrong and Kotler, 2016). According to Maree (2007), larger samples are accurate and represent target population efficiently than smaller samples. Krejcie and Morgan (1970) used a formula published by National Education Association to determine a scientifically acceptable sample size. Furthermore, Krejcie and Morgan (1970) developed a sample size determination table derived from the calculation illustrated below.

$s=X^2NP(1-P) \div d^2(N-1)$. (Krejcie and Morgan, 1970)

1.96 x 1.96 = 3.38416

Where:

s = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.8416)

N= the population size

P= the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05)

Source: By (Krejcie and Morgan, 1970) (Makhanya, 2018)

This study used Krejcie and Morgan (1970) sample size determination table (Table 3.1) to obtain a sample size to ensure that all the employees within the selected departments were represented in the study so that the results are generalised. Using the Krejcie and Morgan sample size determination table as a reference for a statistical representative sample is more convenient and easier. The departments who occupied positions with less than 10 number of employees were all regarded as sample and were all issued with the questionnaires. Hulamin rolling division has 506 employees in core departments therefore a sample size for this study was 217. About 30 respondents did not return their questionnaires which resulted on the total of sample to be 187.

Table 3.1 Krejcie and Morgan Table

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source (Bukhari, 2021:2)

Table 3.2 Summary of Targeted Population, Sample and Sample Size

Department	**Job Position**	**No. of Employees**
Marketing	Marketing and Accounts Manager	8
	Sales Reps	6
	Inside sales	30
Manufacturing	Area Manager and Coordinator	6
	Shift leader	22
	Process Specialist and Technicians	14
	Engineers and Artisan	51
	Operators	330
Planning	Planning managers and Planning specialist	10
	Sequencer	7
Technical	Product Metallurgists	17
	Process engineer	4

3.10 Data Collection

The main sources of data collection are primary data sources and secondary data sources. These methods are explored below.

3.10.1 Primary Data

According to Kothari (2004), primary data is fresh and original in character. Primary data source is the information gathered using the first approach (Kumar, 2011). This study opted to use primary data because the researcher wanted views directly from respondents about the topic. A survey questionnaire was used to collect primary data for this study.

3.10.1.1 Survey Questionnaire

Questionnaire is a research system where pre-formulated set of questions are compiled for respondents or participants to use to answer about the phenomenon (Bryman & Bell, 2007). Kothari (2004) defines questionnaire as compiled questions that are sent to specific respondents who are required to respond and send back their views. Questionnaire design provides a quantitative or numeric description of trends, attitudes, or opinions of a population which the researcher generalises or draws inferences to the population (Creswell, 2009).

Survey questionnaires can be self-administered, electronically distributed, or emailed (Leedy and Ormrod, 2014). This method allows the researcher to draw a large sample at low cost. It is the researcher's choice to select well-known software to design a survey e.g. Survey Monkey and Zoomerang using custom templates (Creswell, 2014). The data can either be collected at one point which is known as cross functional study or over a period of time known as longitudinal study (Creswell, 2009).

For this research a cross-functional primary data was collected by the means of survey questionnaire. The Slavek and Drnovšek (2012) three phase questionnaire development guided the researcher to compile the questionnaire to ensure reliable and valid data was collected. The first phase involved the theoretical importance and existence of important concepts of the study. The second phase explored the appropriateness and representativeness of data collection. The third phase entailed the statistical analysis and evidence of the concept of the study.

The online survey questionnaire was created through Microsoft forms and sent via emails to the respondents, which made the administration easier and more affordable. A survey questionnaire was administered to all respondents by e-mail (staff) and self-administered to the shop-floor employees who have no access to e-mails. Some staff respondents that were hesitant to complete online questionnaire were issued with hard copies as well. The use of survey questionnaire was appropriate because the research study adopted a quantitative approach which requires data to be statistical in nature.

The questionnaire was compiled by the researcher using Microsoft Office forms. The questionnaire was designed into two parts as indicated below:

Part 1

This section provided participants demographic data. The data includes gender, age, race, educational level, job position and department

Part 2

Part 2 consisted of five sections which were structured in such a way that each section represented the study objectives which are related to the BSC. The statements and questions under each section were all close ended to ensure collected data was quantitative in nature. The questionnaire was compiled by the researcher using a five-point Likert scale on Microsoft Office forms. The Likert scale presents a set of mental or behavioural statements pertaining a particular concept to capture the level of agreement or disagreement of respondents (Joseph, Hair, Bush and Ortinau, 2009). The responses were categorised from strongly agree, agree, neutral, disagree and strongly disagree.

- **Section A:** This section provided statements related to performance measurement and evaluation systems in place at Hulamin.
- **Section B:** This section provided learning and growth perspective statements and questions which mainly focused on employee's growth and development.
- **Section C:** This section provided statements and questions that were based on customer satisfaction and customer value.
- **Section D:** This section was based on internal business processes perspective, questions and statements were based on the attitudes of respondents towards daily business activities.
- **Section E:** This section provided statements aimed to get respondent's perception and involvement on business financial performance.

3.10.1.2 Survey Questionnaire Administration

Salant and Dillman (1994) proposed a four-phase survey administration process which was also adopted for this study. The researcher at first must send the advance notice mail to the individual sample, after a week the second mail with the survey-questionnaire must be sent, a follow up third mail must be sent to all members a week after the survey-questionnaire is sent and lastly the fourth mail must be sent to all individuals which did not return or complete the survey-questionnaire. The last e-mail must have a cover letter and the questionnaire attachment which will be collected by the researcher in person.

However, it was not precisely a four-phase for this study due to respondents that preferred hard copies after e-mails were sent and those that were meant to get hard copies i.e. operators who have no e-mail access. Some respondents preferred the link to be sent to their mobile WhatsApp messenger. Questionnaire administration was conducted between the 15th of December 2020 and the 8th of February 2021.

3.10.2 Secondary Data

Secondary data refers to the data that has been collected and published by someone else, common sources are government or semi-government publications, earlier research, personal records, and mass media (Kumar, 2011).

This study used secondary data to review literature related to performance measurement and evaluation systems and Balance Scorecard theories.

3.10.3 Document Collection

Data can be collected from the company's database system (Kothari, 2004). Annual audited financial reports were used to present background on Hulamin's performance for the duration of five years from 2015 to 2019 financial years. Documents were retrieved from the internet where financial results are published.

3.11 Data Analysis

A quantitative data is scientific in nature, therefore it must be described and analysed by means of statistical methods. Statistical analysis is required in a quantitative research because that is where the author draws the inferences to the population (Creswell, 2009). There are two common statistics data analysis tools namely descriptive and inferential statistics (Sutanapong and Louangrath, 2015).

This study used descriptive statistics to analyse data. Descriptive statistics explains data properties where data is described by means of mean, median, mode, variance, and standard deviation using charts (Sutanapong and Louangrath, 2015). This study used percentages, mean and standard deviation to analyse primary data. The results for part one which presents the demographic data were analysed using Microsoft Excel, and the results were presented using the table, pie chart and bar graphs. The SPSS software and Microsoft Excel were used to analyse part two results and the results were presented on tables and bar graphs. SPSS software tool is mostly used to enter, analyse and summarise both the descriptive and inferential data (Esterhuizen, 2018).

3. 12 Validity and Reliability

Validity and Reliability are the measurement systems used in a scientific research study to evaluate the concept being measured and the instrument used to measure the concept respectively (Mohajan, 2017).

3.12.1 Validity

Validity refers to the extent to which a measure adequately represents the underlying construct that it is supposed to measure (Kumar, 2011). Heale and Twycross (2015) define validity as the degree of accuracy a concept can be measured at. An instrument is valid if it fulfills the purpose (Maree, 2007). The importance of application of valid instrument is to give assurance to the researcher that answers from the procedure applied are accurate (Kumar, 2018).

Validity of the questionnaire was ensured by using pilot testing. Maree (2007) recommended that a pilot study must be conducted to test if the respondents can interpret the questions and statements and that the response categories are well structured. The pilot study consisted of 10 participants of which five were Hulamin employees which did not participate on the actual study and the other five participants worked in other different organisations. All participants that responded to the questionnaire affirmed that the questions were easily understandable. Therefore, the success of pilot study assured the researcher that the survey questionnaire designed will fulfil the purpose.

3.12.2 Reliability

Reliability is the extent to which the research instrument can accurately measure the results on repeated occasions (Heale and Twycross 2015). Reliability refers to the quality of measurement instrument and its ability to provide repeatability and accuracy (Kumar, 2018). Reliability assures the consistency of an instrument (Maree, 2007). This study used an internal consistency method to check reliability of the research instrument. The internal consistency method is measured using the coefficient alpha also known as Cronbach's alpha (Kabak, Yakut, Cetin and Duger, 2016).

The coefficient alpha gauges the instrument reliability by measuring the degree of correlation of items (Cooper and Schindler, 2008). An acceptable coefficient alpha value is 0.7 to 0.80 (Peterson, 1994). According to Bryman and Bell (2007), any value above 0.7 is acceptable, above 0.8 is good and above 1-0.9 is excellent to generalise the results to larger sample. A value of 0.4 and below is unsatisfactory (Peterson, 1994). To determine the Cronbach's alpha, the factors were grouped into common themes using factors analysis. Factor analysis was performed by uncovering common themes from the survey questionnaire. The data was initially tested if it was suitable for factor analysis. The test was conducted by using Bartlett's test for sphericity and Kaiser-Meyer-Olkin test with the former being statistically significant with P-value equals 0.0 and the latter giving a value of 0.93.

3.13 Ethical Consideration

It is important for this study to ensure that the human rights and freedom of participants is obtained.

The researcher provided declaration consent to all participants which provided information about the study and assurance of the participant's confidentiality was maintained. Furthermore, the declaration informed participants that participation to the study was on a voluntary basis.

A non-disclosure agreement between the interviewer and the participant abides the two parties to the survey privacy (Leedy and Ormrod, 2014). The names of the participants were not used neither their email addresses were not recorded to ensure the participants privacy was maintained.

A gate keeper's permit is required for a researcher that seeks to use a research site (Creswell, 2014). Gatekeepers' letter was duly sought and obtained from Hulamin. This was to ensure that

the rights of the organisation where the study was conducted is protected. As indicated on the gate keeper's permit provided by Hulamin, restriction was given on financial records only published financial records were used, bank financial statements were not part of the data collected.

Ethical clearance letter was obtained from Humanities and Social Sciences Research Ethics Committee (HSSREC) at University of KwaZulu-Natal Westville Campus to ensure that humanity and the rights of the participants is protected.

3.14 Chapter Summary

This chapter presented the process which was adopted to conduct this study. The research methodology adopted for this study was discussed in detail and it includes research design, research method, data collection and analysis. Furthermore, ethical considerations followed to protect the integrity of the participants were discussed. This chapter explained the research procedure adopted to collect the data presented on the following Chapter 4.

Chapter 4 outlines the data collected

CHAPTER 4: RESULTS PRESENTATION

4.1 Introduction

This chapter presents all the results collected as indicated on the previous research design and methodology chapter. The results consist of data collected by means of questionnaires. The questionnaires had two parts, part one was demographics information of participants and part two was the statements related to the study objectives. The demographic data is presented using pie charts, bar graphs and the frequency table. SPSS was used to analyse the data which was then presented using Microsoft Excel graphs. The study objectives statements are presented using graphs, mean and standard deviation table. Furthermore, each study objective details responses from four departments which were sampled on this study namely, Manufacturing, Marketing, Planning and Technical. This chapter also presents the reliability results of the survey questionnaire which was used to collect the data. Therefore, this chapter presents the findings based on the survey questionnaire used to collect data.

4.2 Demographic

The first part of the questionnaire requested respondents to provide their demographic information regarding age, race, gender, education, job position and department of which they are based. The results for sample demographic are displayed in Figure 4.1, Figure 4.2, Figure 4.3 and Table 4.1.

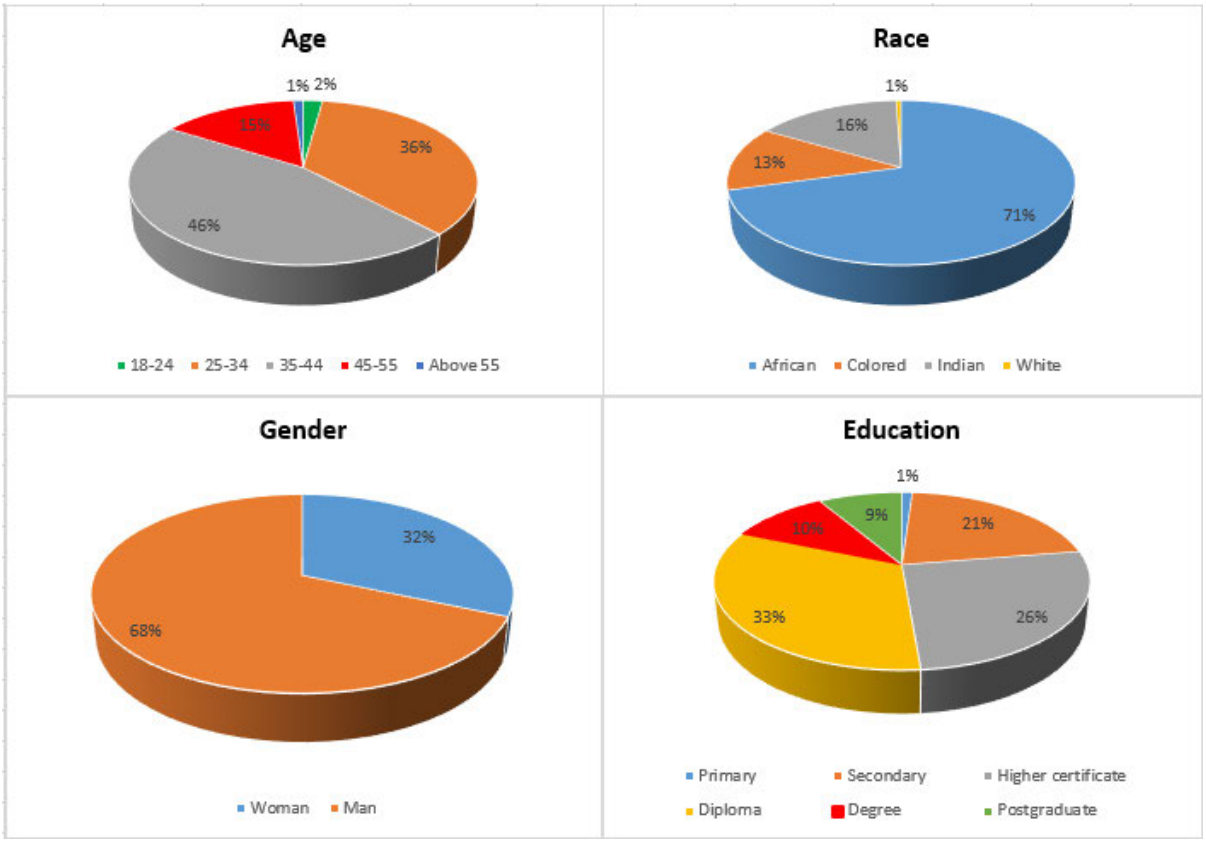

Figure 4.1 Sample Demographic Pie chart

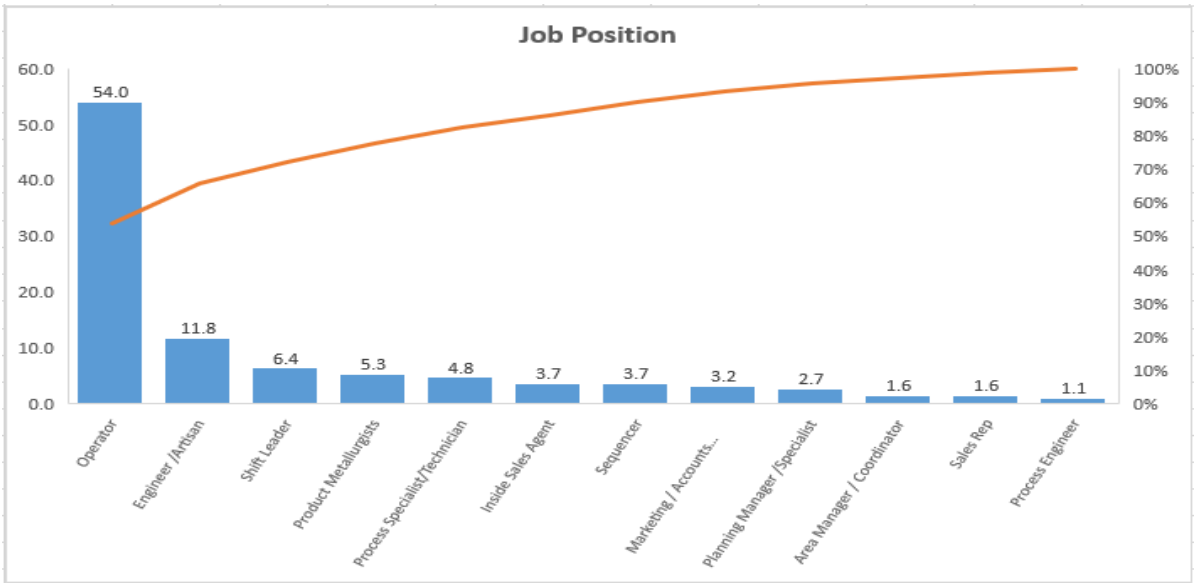

Figure 4.2 Respondents Job Position Bar Graph

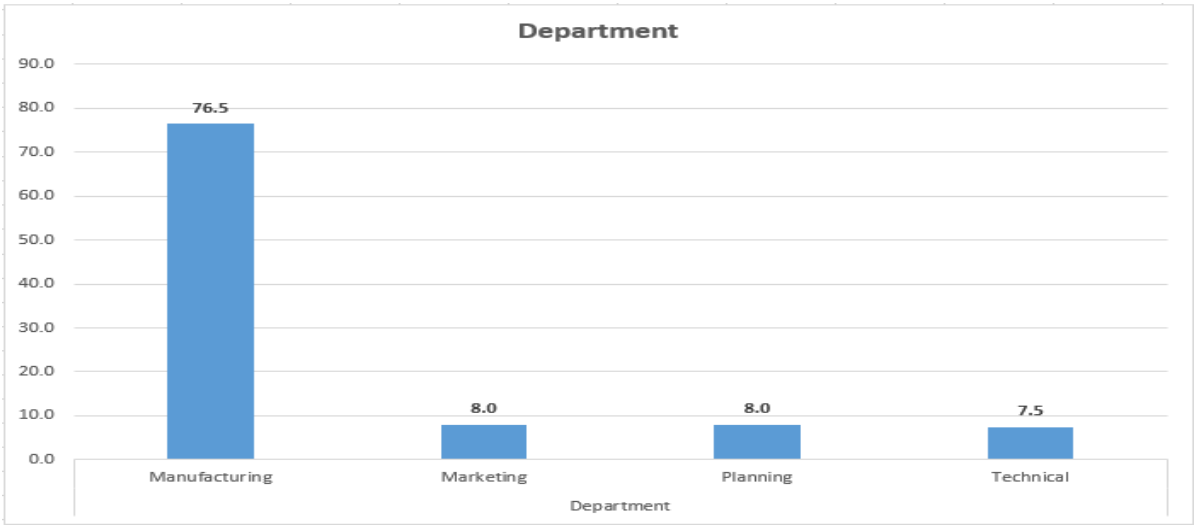

Figure 4.3 Respondents Department bar graph

Table 4.1 Frequency Table for Demographic Data

Variable	Category	Frequency	Percent
Gender	Man	128	68.4
	Woman	59	31.6
Race	African	132	70.6
	Coloured	24	12.8
	Indian	30	16.0
	White	1	0.5
Education	Degree	19	10.2
	Diploma	61	32.6
	Higher certificate	49	26.2
	Postgraduate	16	8.6
	Primary	2	1.1
	Secondary	40	21.4
Age	18-24	4	2.1
	25 -34	67	35.8
	35-44	86	46.0
	45-55	28	15.0
	>55	2	1.1
Department	Manufacturing	143	76.5
	Marketing	15	8.0
	Planning	15	8.0
	Technical	14	7.5
Job title	Area Manager and Coordinator	3	1.6
	Engineer andArtisan	22	11.8
	Inside Sales Agent	7	3.7
	Marketing and Accounts Manager	6	3.2
	Operator	101	54.0
	Planning Manager and Specialist	5	2.7
	Process Engineer	2	1.1
	Process Specialist and Technician	9	4.8
	Product Metallurgists	10	5.3
	Rep and Scrap	0	0.0
	Sales Rep	3	1.6
	Sequencer	7	3.7
	Shift Leader	12	6.4

The demographic results from the graphs (Figures 4.1, 4.2 and 4.3) and Table 4.1 are analysed below.

4.2.1 Age

The highest responses were respondents between the ages of 35 and 44 at 46%, followed by 25 to 34 at 36% and 45 to 55 at 15%. The lowest age groups represented were between 18 to 24 and those above 55 years which made 2% and 1% respectively.

4.2.2 Race

The results show that Hulamin is dominated by African population. The sample represented 71% of Africans, 16 % Indians, 13% Coloured's and 1% White population.

4.2.3 Gender

The sample was dominated by men. There were 68% males and 32% females.

4.2.4 Education

The level of education distribution in their descending order is as follows; 33% had diploma, 26% higher certificates, 21% had secondary school, 10% hold degrees, 9% had postgraduate and 1% had primary education. The respondent's education level was mainly diplomas, higher certificates and secondary school.

4.2.5 Job Position

The respondent's functional areas were Operators at 54%, Engineers and Artisans at 11.28%, Shift Leaders at 6.4%, Product Metallurgist at 5.3%, Process specialists and Technicians at 4.8%, Inside Sales Agents at 3.7%, Sequencers at 3.7%, Accounts and Marketing Managers at 3.2%, Planning Specialists and Managers at 2.7%, Area Managers and Coordinators at 1.6%, Sales reps at 1.6% and Process Engineers at 1.1%.

4.2.6 Department

The data was also categorised according to respondent's functional areas of work in order to draw conclusion according to each functional area or department. Respondents from Manufacturing department represented highest number of population at 76.5%, followed by Marketing and Planning both at 8.0%, and lastly Technical at 7.5%.

4.3 Interval-scale Data

The second part of the questionnaire gauged respondents' attitude towards Hulamin's performance management tool, learning and growth perspective, customers perspectives, internal business processes perspectives and financial perspectives.

4.3.1 Performance Management

The aim was to get respondents perception on performance measurement and evaluation systems in place at Hulamin. Figure 4.4 to Figure 4.7 show the responses from different departments.

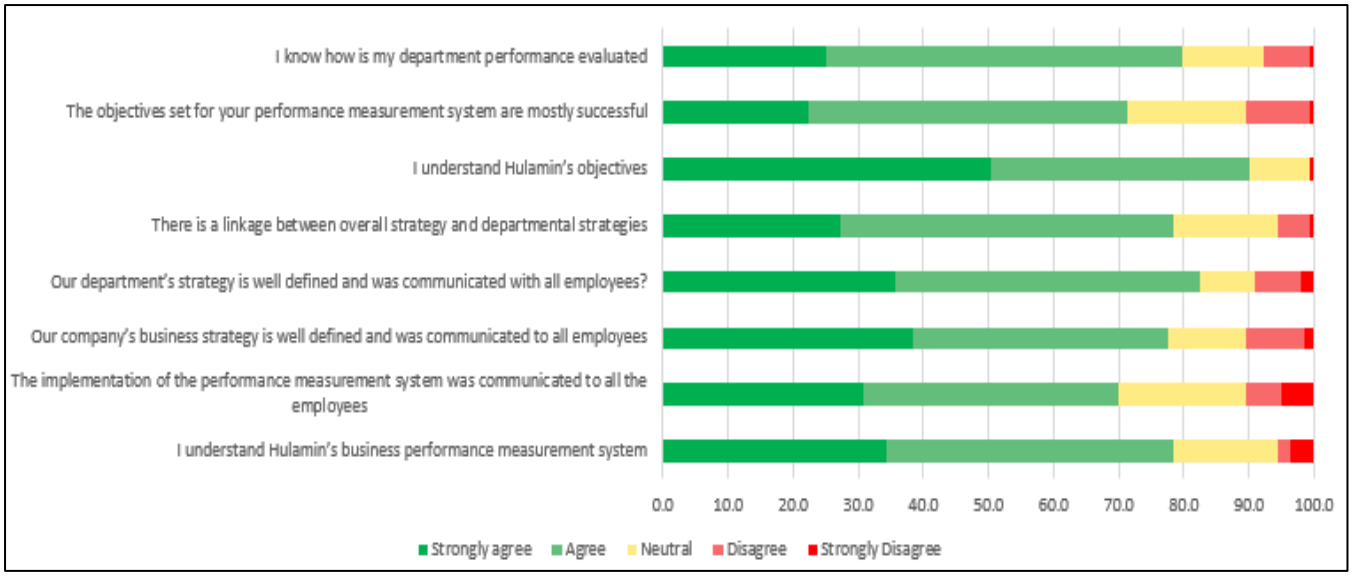

Figure 4.4 Statements on Performance Management from Manufacturing

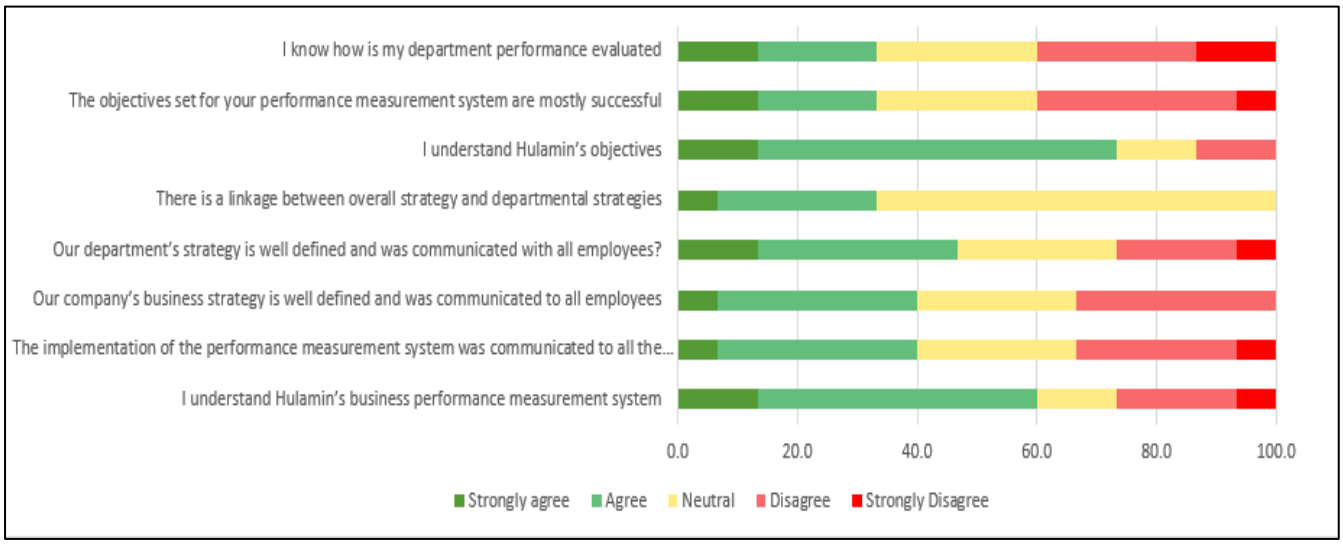

Figure 4.5 Statements on Performance Management from Marketing

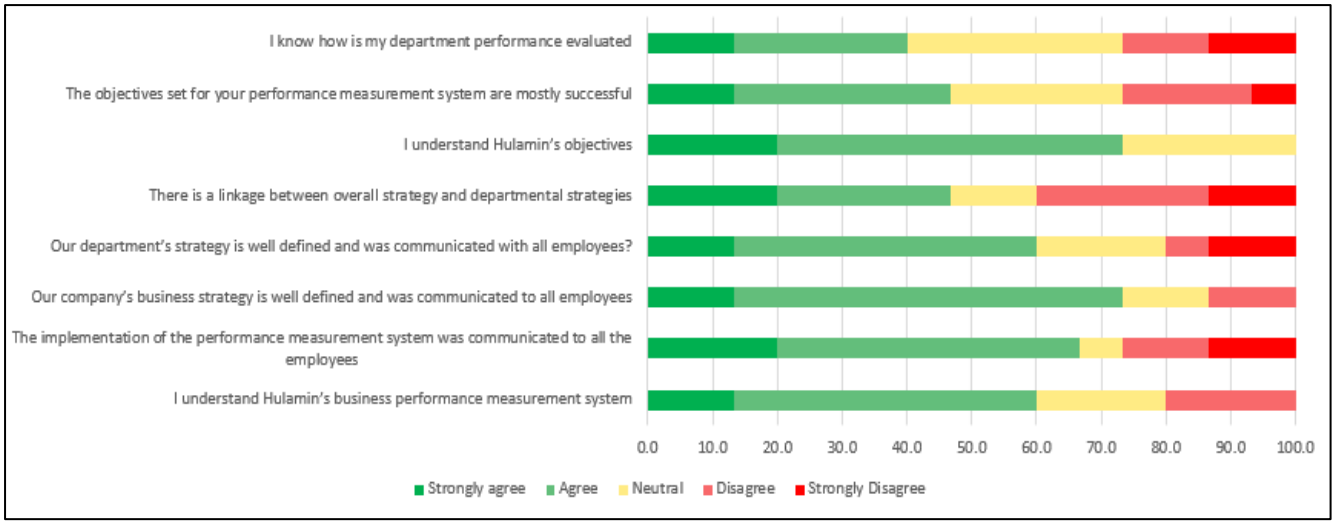

Figure 4.6 Statements on Performance Management from Planning

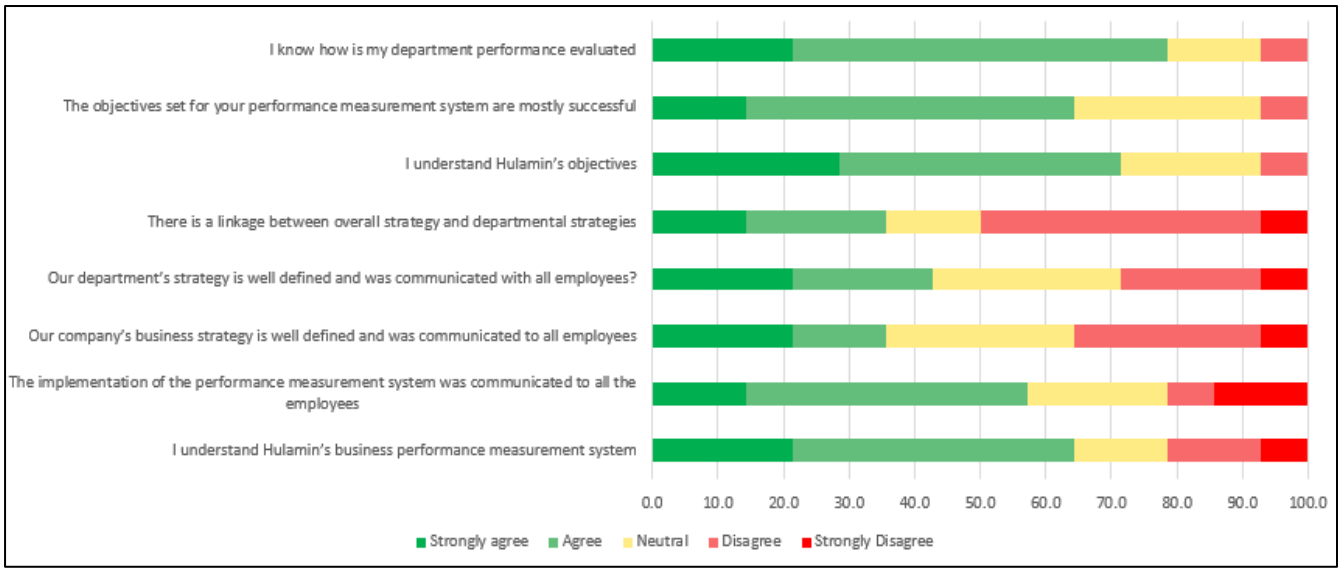

Figure 4.7 Statements on Performance Management from Technical

4.3.1.1 I understand Hulamin's business performance measurement system

- **Manufacturing:** 78% of respondents agreed to understand business performance measurement system, 16% neutral and 16% disagreed.
- **Marketing:** 60% of respondents agreed that they understand Hulamin business performance measurement system, 27% disagreed and 13.3% remained neutral.
- **Planning:** 60% of respondents agreed, 20% neutral and 20% disagreed.
- **Technical:** 64% respondents agreed to understand the company's performance measurement system, 21% disagreed and 14% remained neutral

4.3.1.2 The implementation of the performance measurement system was communicated to all the employees.

- **Manufacturing:** 70% of respondents agreed that the implementation of performance measurement system was communicated to all the employees, 20% remained neutral and 11% disagreed.
- **Marketing:** A significant difference of opinions as 40% respondents agreed, 27% were neutral and 33% disagreed.
- **Planning: 67% of respondents agreed that** the implementation of performance measurement system was communicated to all the employees, 7% remained neutral and 26% disagreed.
- **Technical: 57% of respondents agreed that** the implementation of performance measurement system was communicated to all the employees, 21% remained neutral and 22% disagreed.

4.3.1.4 Our company's business strategy is well defined and was communicated to all employees.

- **Manufacturing:** 78% of respondents agreed that the company's business strategy is well defined and was communicated to all employees,12% neutral and 10% disagreed.
- **Marketing: A** significant difference of opinions as 40% respondents agreed, 27% remained neutral and 33% disagreed.
- **Planning:** 74% of respondents also agreed on that business strategy is well defined and was communicated to all respondents 13% disagreed and 13% were neutral.
- **Technical:** 36% of respondents disagreed with that the company strategy is well defined and was communicated to all respondents, 36% agreed and 29% were neutral.

4.3.1.5 Our department's strategy is well defined and was communicated with all employees.

- **Manufacturing:** 83% agreed that their departmental strategy is well defined and was communicated to all respondents, 8% remained neutral and 9% disagreed.
- **Marketing:** 47% of respondents agreed that department strategy is well defined and was communicated to all employees, 27% disagreed and 26% remained neutral
- **Planning:** 60% of respondents agreed, 20% neutral and 20% disagreed.
- **Technical:** 29% of respondents disagreed on that the department strategy is well defined and was communicated to all employees, 29% remained neutral and 42% agreed.

4.3.1.6 There is a linkage between overall strategy and departmental strategies

- **Manufacturing:** 78% of respondents agreed that there is a linkage between overall strategy and departmental strategies,16% remained neutral and 6% disagreed.

- **Marketing:** Many respondents (67%), opted to remain neutral towards the statement "There is a linkage between overall strategy and departmental strategies", 33% agreed and no respondents disagreed.
- **Planning:** 47% of respondents agreed that there is a link between overall strategy and departmental strategy, 13% remained neutral and 43% disagreed.
- **Technical:** A significant number of the respondents (50%) disagreed with the statement, only 36% agreed and 14% were neutral.

4.3.1.7 I understand Hulamin's objectives

- **Manufacturing:** 90% of respondents agreed to understand Hulamin objectives, 9% remained neutral and 1% disagreed
- **Marketing:** A higher number of respondents (73%) agreed that they understand Hulamin's objectives, 13% remained neutral and 13 % disagreed.
- **Planning:** 73% of respondents mostly agreed that they understand Hulamin objectives, 27% were neutral and none of the respondents disagreed.
- **Technical:** 72% of respondents agreed that they understand Hulamin objectives, 21% remained neutral and 7% disagreed.

4.3.1.8 The objectives set for your performance measurement system are mostly successful

- **Manufacturing:** 71% of respondents agreed that the objectives set for their performance measurement systems are mostly successful, 18% remained neutral and 11% disagreed.
- **Marketing:** There was a significant difference of opinions on the statements; 33% agreed, 27% remained neutral and 40% disagreed.
- **Planning:** 47% of respondents agreed that objectives set on their performance measurement systems are mostly successful, 27% remained neutral and 26% disagreed.
- **Technical:** 64% of respondents agreed that performance management objectives are mostly successful, 29% remained neutral and 7% disagreed.

4.3.1.9 I know how is my department performance evaluated?

- **Manufacturing:** 80% of respondents agreed that they understand how their department is evaluated, 13% remained neutral and only 7% disagreed.
- **Marketing:** Only 33% of respondents agreed that they understand how their department is evaluated, 27% remained neutral and 40% disagreed.
- **Planning:** 40% of respondents agreed that they understand how their department is evaluated, 33% remained neutral and 27% disagreed
- **Technical:** Many respondents (79%), agreed that they know how the department is evaluated, 14% remained neutral and 7% disagreed.

4.3.2 Learning and Growth and Respondents Perspective

The learning and growth perspective statements or questions mainly focused on employee's growth and development. Figure 4.8 to Figure 4.11 show the responses from different departments.

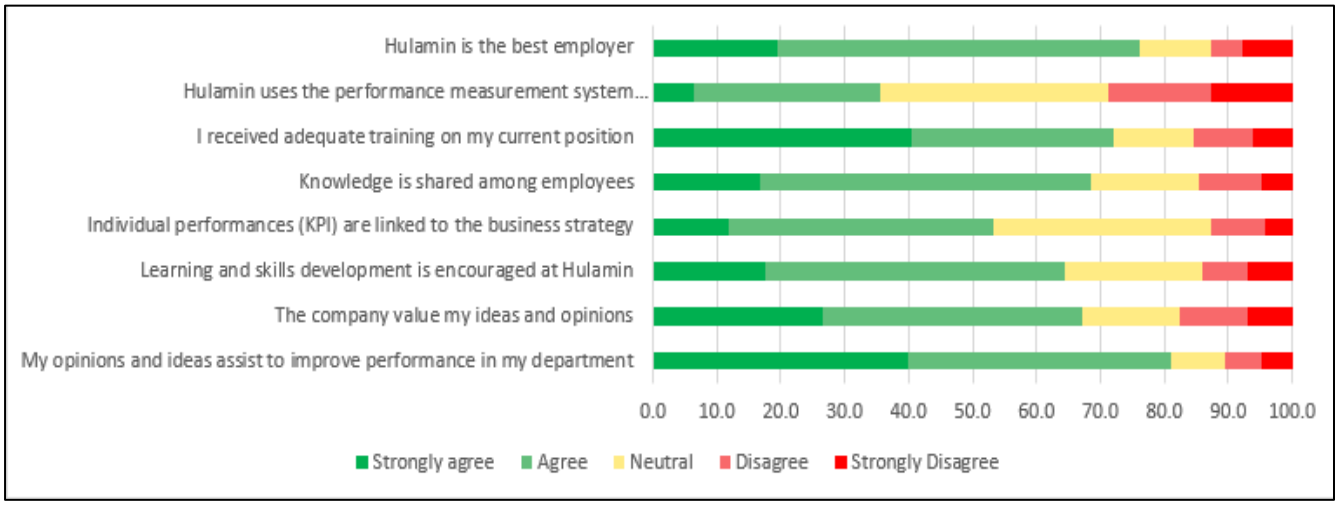

Figure 4.8 Statements on Learning and Growth Perspective from Manufacturing

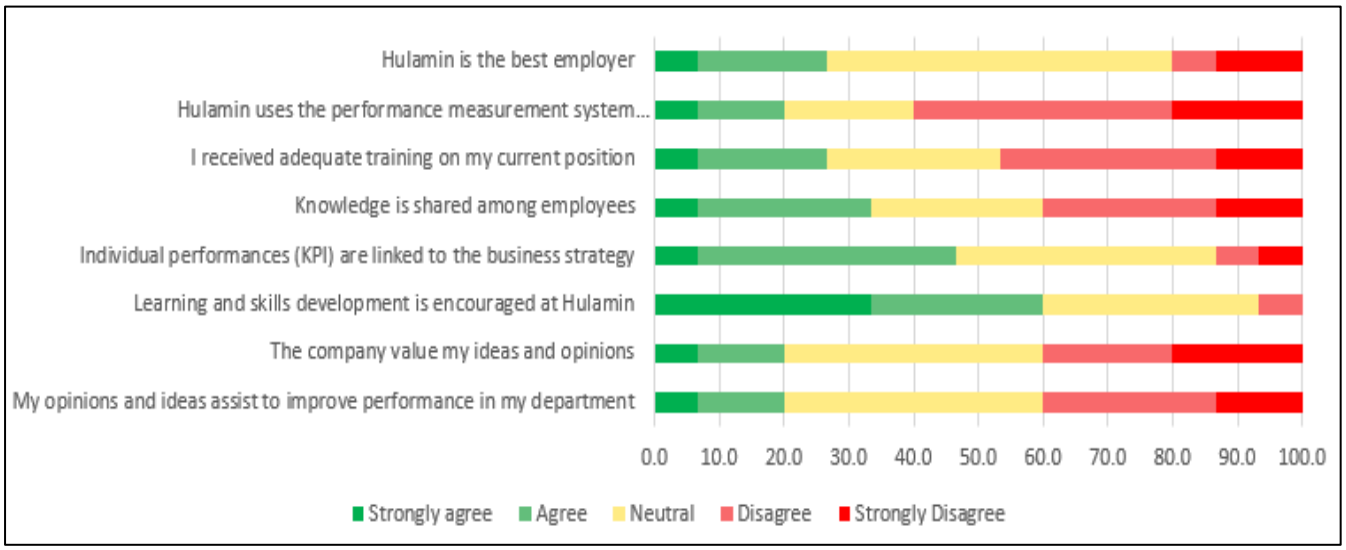

Figure 4.9 Statements on Learning and Growth Perspective from Marketing

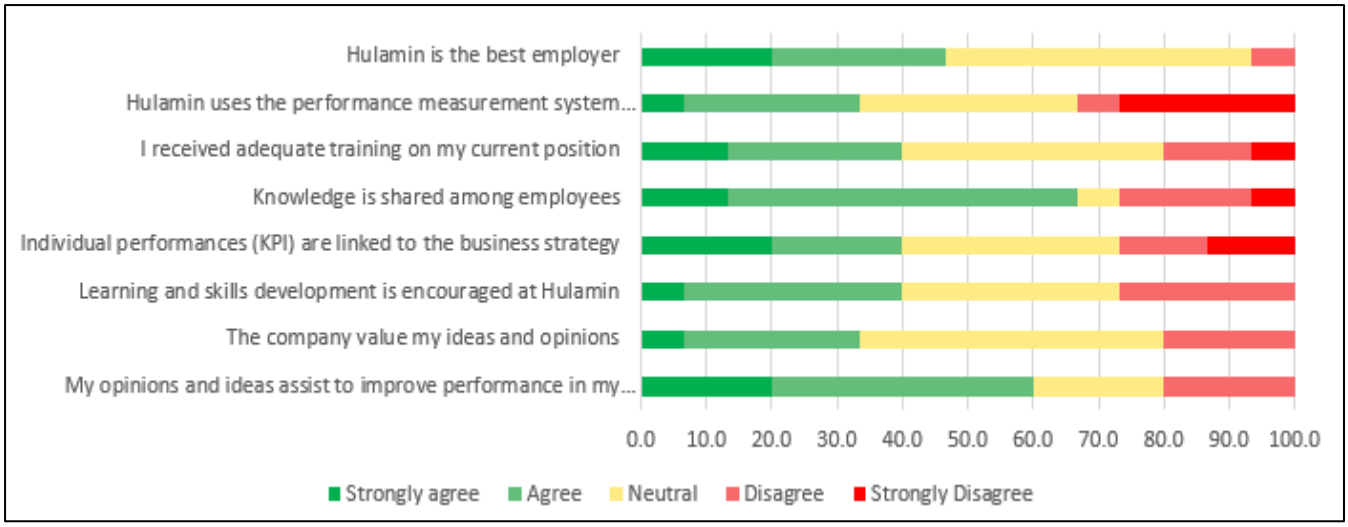

Figure 4.10 Statements on Learning and Growth Perspective from Planning

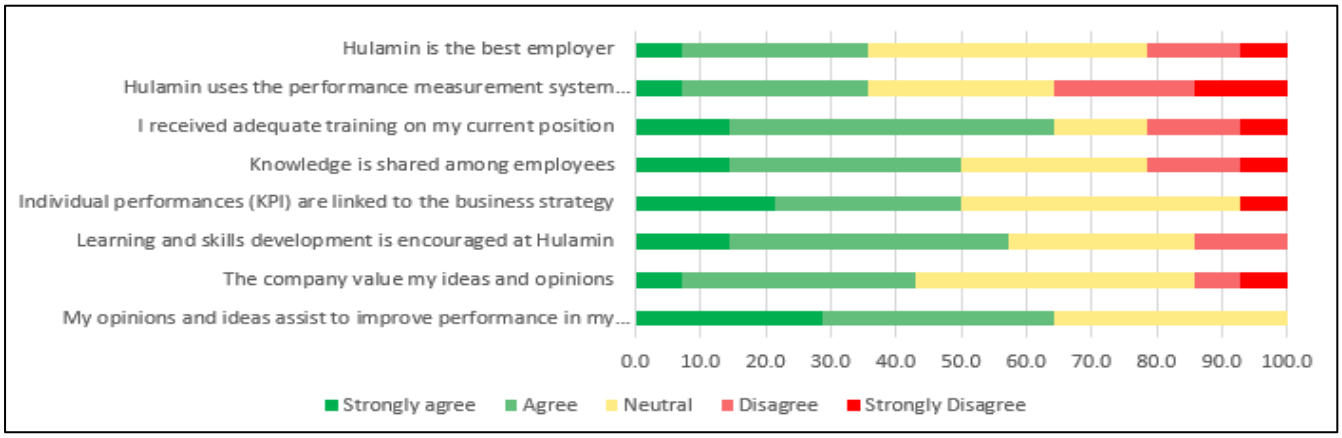

Figure 4.11 Statements on Learning and Growth Perspective from Technical

4.3.2.1 My opinions and ideas assist to improve performance in my department

- **Manufacturing:** Many respondents agreed (81%) with the statement, 9% remained neutral and 10% disagreed.
- **Marketing:** A negative response was noted 40% of respondents disagreed, 40% remained neutral and 20% agreed.
- **Planning:** 60% of respondents agreed that their opinions and ideas assist to improve performance within their department
- **Technical:** 64% of respondents agreed that their opinions assist to improve performance, no respondents disagreed and 36% remained neutral.

4.3.2.2 The company value my ideas and opinions

- **Manufacturing:** 67% of respondents agreed that the company values their opinions and ideas, 15% remained neutral and 18% disagreed.

- **Marketing: A significant number of respondents** 40% disagreed, 40% remained neutral and 20% agreed.
- **Planning:** Only 33% agreed, 47% remained neutral and 20% disagreed.
- **Technical:** 43%agreed that the company values their ideas and opinions, 43% remained neutral and 14% disagreed.

4.3.2.3 Learning and skills development is encouraged at Hulamin

- **Manufacturing:** 64% agreed that learning and skills development is encouraged at Hulamin, 22% remained neutral and 14% disagreed.
- **Marketing:** Many respondents (60%), agreed with the statement; learning and skills development is encouraged at Hulamin, 33% remained neutral and 7% disagreed.
- **Planning:** 40% of respondents agreed with the statement, 27% disagreed and 33% remained neutral.
- **Technical:** 57% agreed that learning and skills development is encourage at Hulamin, 29% neutral and 14% disagreed.

4.3.2.4 Individual performances (KPI) are linked to the business strategy

- **Manufacturing:** 53% respondents agreed with the statement, 34% remained neutral and 13% disagreed.
- **Marketing:** 47% of respondents agreed with the statement that KPIs are linked to business strategy, 40% remained neutral and 13% disagreed.
- **Planning:** 40% of respondents agreed, 27% disagreed and 33% remained neutral.

- **Technical:** 50% agreed that Individual performances are linked to the business strategy, 43% neutral and 7% disagreed.

4.3.2.5 Knowledge is shared among employees

- **Manufacturing:** 68% of respondents agreed that knowledge is shared among employees, 17% neutral and 15% disagreed.
- **Marketing:** 33% agreed that knowledge is shared among employees, 27% neutral and 40% disagreed.
- **Planning:** 66% of the respondents agreed on statement; Knowledge is shared among respondents, 37% disagreed and 7% remained neutral.
- **Technical:** 50% of the respondents agreed that knowledge is shared among employees, 29% remained neutral and 21% disagreed.

4.3.2.6 I received adequate training on my current position

- **Manufacturing:** 72% of respondents agreed to have received adequate training on their current positions.
- **Marketing:** 46% of respondents disagreed with the statement; I received adequate training on my current position, 27% neutral and 27% in agreement.

- **Planning:** 40% of respondents agreed to have received adequate training for their positions, 40% remained neutral and 20% disagreed.
- **Technical:** 64% of respondents indicated that they received adequate training, 21% disagreed, 29% remained neutral.

4.3.2.7 Hulamin uses the performance measurement system to compensate and reward all its employees

- **Manufacturing:** Only 37% of respondents agreed that Hulamin uses the performance measurement system to compensate all its respondents", 35% remained neutral and 28% disagreed.
- **Marketing:** Many respondents 60%, disagreed with the statement, 20% remained neutral and only 20% agreed.
- **Planning:** Only 33% of respondents agreed, 33% disagreed and about 34% remained neutral
- **Technical:** Only a few 36% of respondents agreed that Hulamin uses performance measurement system to compensate its employees, 29% was neutral and 36% disagreed

4.3.2.8 Hulamin is the best employer

- **Manufacturing:** 76% of respondents agreed that Hulamin is the best employer 11% remained neutral and 13% disagreed.
- **Marketing:** Only 27% respondents agreed that Hulamin is the best employer, 53% remained neutral and 20% disagreed with the statement.
- **Planning:** 47% of the respondents agreed that Hulamin is the best employer, 47% remained neutral and 6% disagreed.
- **Technical:** Only 36% of the respondents agreed that Hulamin is the best employer. 42% remained neutral and 22% disagreed.

4.3.3 Customers Perspectives

The statements and questions were based on customer satisfaction and customer value. Figure 4.12 to Figure 4.15 show the responses from different departments.

Figure 4.12 Statements on Customer Perspectives from Manufacturing

Figure 4.13 Statements on Customer Perspectives from Marketing

Figure 4.14 Statements on Customer Perspectives from Planning

Figure 4.15 Statements on Customer Perspectives from Technical

4.3.3.1 I know my internal customer

- **Manufacturing:** 85% of respondents agreed to know their internal customers, 11% were neutral and 4% disagreed.
- **Marketing:** 73% of respondents agreed that they know internal customers, 20% remained neutral and 7% disagreed.
- **Planning:** Many respondents 93% agreed to know their internal customers and 7% remained neutral.
- **Technical:** 86% of respondents agreed to know their internal customers, 7% remained neutral and 7% disagreed.

4.3.3.2 I know my external customers

- **Manufacturing:** 76% of participants agreed that they know their external customers, 15% remained neutral and 9% disagreed.
- **Marketing:** 80% respondents agreed to the statement, 13% remained neutral and 7% disagreed.

- **Planning:** 80% of respondents agreed to know their external customers, 7% disagreed and 13% were neutral.
- **Technical:** 72% of respondents agreed to know their external customers 14% disagreed and 14% remained neutral.

4.3.3.3 Hulamin is a customer focused organisation

- **Manufacturing:** 81% agreed that Hulamin is customer focused 13% neutral and 6% disagreed.
- **Marketing:** 47% of respondents agreed with that Hulamin is a customer focused organisation, 27% neutral and 26% disagreed.
- **Planning:** 87% of respondents agreed that Hulamin is a customer focused organisation and 13% disagreed with the statement.
- **Technical:** 64% of respondents agreed to the statement, 29% were neutral and 7% disagreed.

4.3.3.4 My performance is measured based on customer satisfaction

- **Manufacturing:** 76% of respondents agree that their performance is measured based on customer satisfaction, 14% neutral and 10% disagreed.
- **Marketing:** Many respondents 60%, disagreed to that their performance is measured based on customer satisfaction, 27% neutral and 14% agreed.
- **Planning:** A significant number of respondents 40%, disagreed that their performance is measured based on customer satisfaction, 20% neutral and 40% agreed.
- **Technical:** 43% of respondents agreed that their performance is measured based on customer satisfaction, 43% neutral and 14 % disagreed.

4.3.3.5 I understand customer requirements

- **Manufacturing:** A significant high number of respondents 95%, agreed to understand customer requirements, 4% remained neutral and 1% disagreed with the statement.
- **Marketing:** A high number of respondents 93%, agreed that they understand customer requirements, no respondents disagreed, only 7% neutral.
- **Planning:** 93% of respondents agreed that they understand customer requirements, only 7% remained neutral and none disagreed.
- **Technical:** 86% of respondents agreed to understand customer requirements and 14% remained neutral and no respondents disagreed.

4.3.3.6 I understand customer satisfaction measures in place at Hulamin

- **Manufacturing:** 86% respondents agreed that they understand customer satisfaction measures in place at Hulamin, 11% neutral and 3% disagreed.
- **Marketing:** 47% respondents agreed, 33% remained neutral and 20% disagreed.
- **Planning:** 73% of respondents agreed to the statement, 20% remained neutral and 7% disagreed

- **Technical:** 64% of respondents agreed that they understand customer satisfaction measures in place at Hulamin and 36% remained neutral and none of respondents disagreed.

4.3.3.7 I understand customer satisfaction measures in place in my department

- **Manufacturing:** 90% of respondents agreed that that they understand customer satisfaction measures in place in their department, 6% remained neutral and only 4% disagreed.
- **Marketing:** 47% respondents agreed to understand customer satisfaction measures in place in their department, 33% remained neutral and 20% disagreed.
- **Planning:** 60% of respondents agreed that they understand customer satisfaction measures within their department, 27% were neutral and 13% disagreed.
- **Technical:** 64% of respondents agreed that they understand customer satisfaction measures in place in their department, 29% neutral and only 7% disagreed.

4.3.3.8 My department receives and communicates back customer feedback will all employees

- **Manufacturing:** Many respondents 85% agreed that the department receives and communicates back customer feedback.
- **Marketing:** Many respondents (60%), agreed that customer feedback is communicated with all employees, 27% neutral and 13% disagreed.
- **Planning:** 67% of the participants agreed that their department receives and communicates customer feedback, 27% neutral and 6% disagreed
- **Technical:** 57% of respondents agreed that their department receives and communicates customer feedback, 36% neutral and 7% disagreed

4.3.3.9 I am satisfied with quality of product and service we give our customers.

- **Manufacturing:** 76% of participants agreed that they are satisfied with the quality of product and service given to their customers, 13% remained neutral and 11% disagreed.
- **Marketing:** Only 33% of respondents indicated they were satisfied with the service and products given to customers, 27% disagreed and 40% remained neutral.
- **Planning:** 47% of respondents agreed that they are satisfied with the quality of products and services that they give to their customers, 33% remained neutral and 20% disagreed.
- **Technical:** 50% of respondents agreed that they are satisfied with the service and product quality given to customers, 43% remained neutral and 7% disagreed.

4.3.3.10 My customers are satisfied with our service and product quality

- **Manufacturing:** 67% of respondents agreed that their customers are satisfied with the service and product quality given to them, 20% remained neutral and 13% disagreed.
- **Marketing:** Many respondents disagreed 60% with the statement, 27% remained neutral and 14% agreed.

- **Planning:** Only 40% of respondents agreed that their customers are satisfied with their service and products, 47% remained neutral and 13% disagreed.
- **Technical:** 50% of respondents remained neutral to the statement, 7% disagreed and 43% agreed.

4.3.4 Internal Business Processes Perspectives

Internal business processes perspective questions were based on respondents' attitudes towards daily business activities. Figure 4.16 to Figure 4.19 show the responses from different departments.

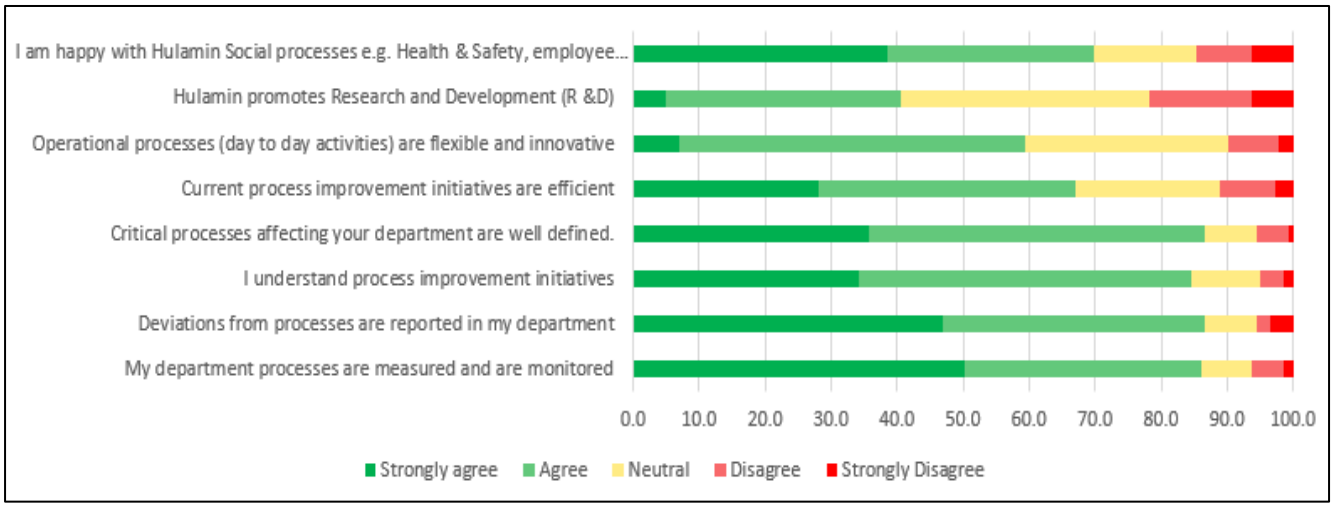

Figure 4.16 Statements on Internal Business Processes Perspectives from Manufacturing

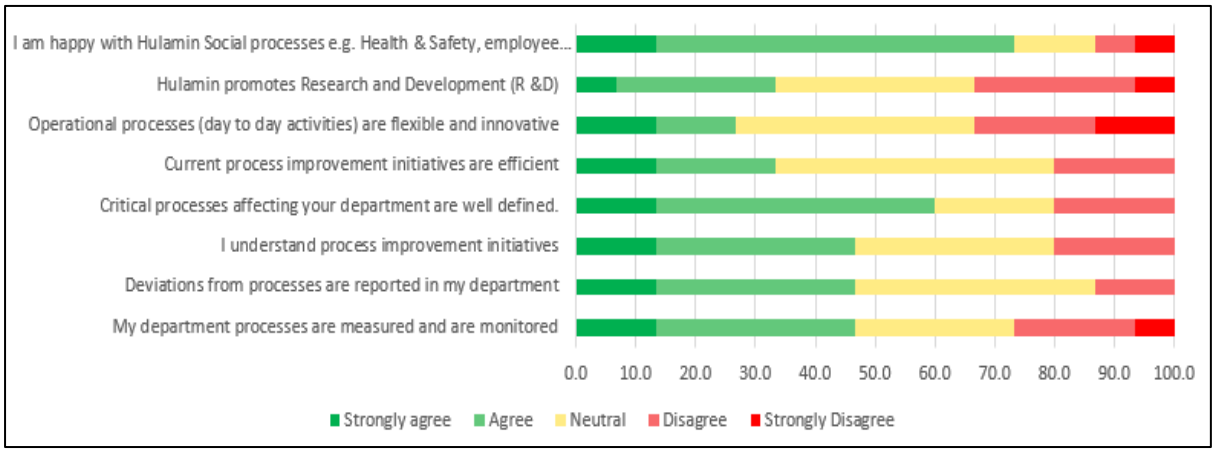

Figure 4.17 Statements on Internal Business Processes Perspectives from Marketing

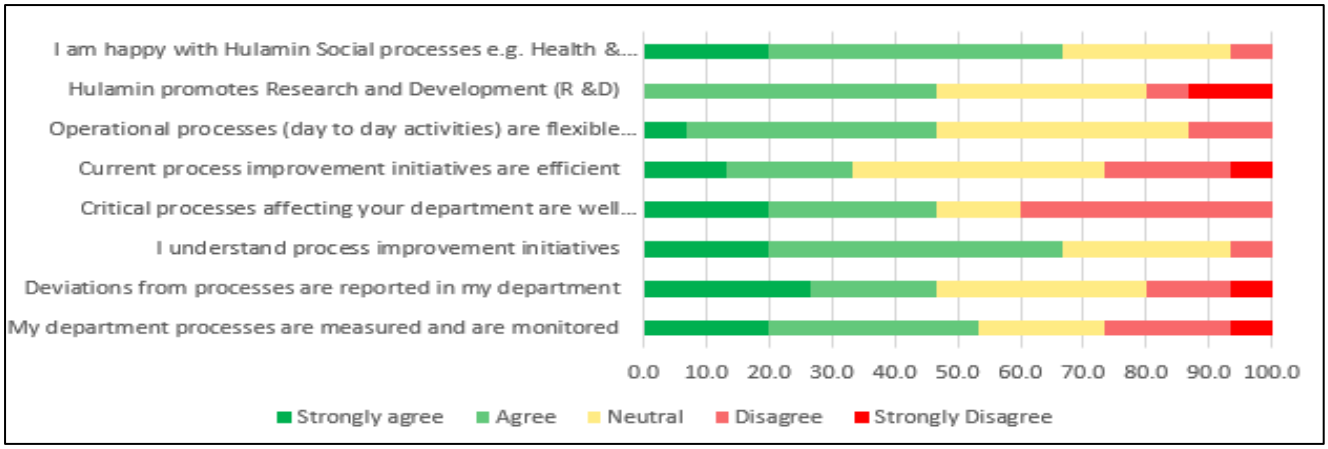

Figure 4.18 Statements on Internal Business Processes Perspectives from Planning

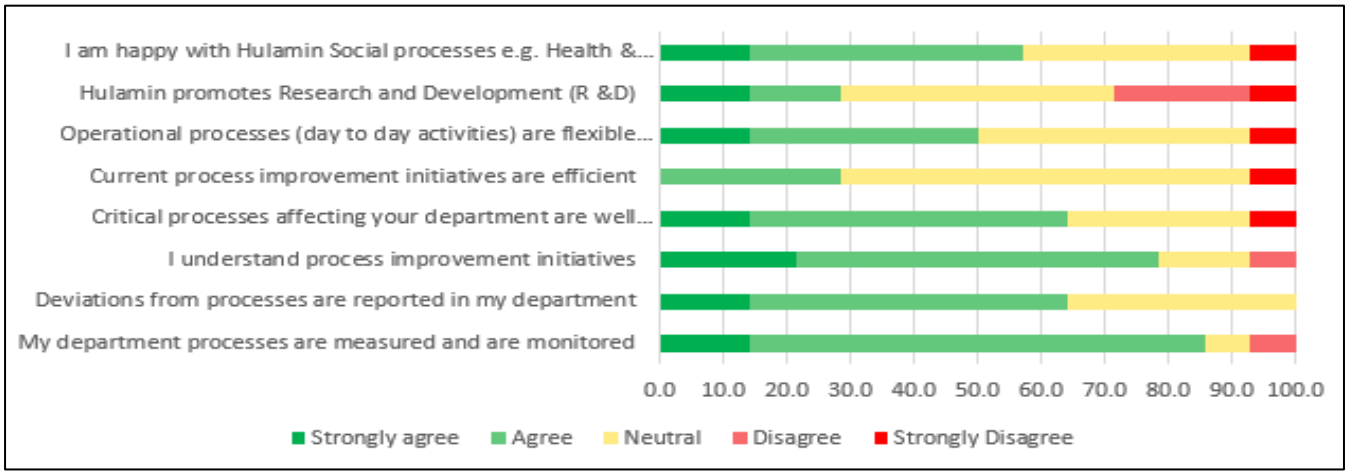

Figure 4.19 Statements on Internal Business Processes Perspectives from Technical

4.3.4.1 My department processes are measured and are monitored

- **Manufacturing:** 86% of respondents agreed that departmental processes are measured and are monitored, 8% remained neutral and 6% disagreed.
- **Marketing:** 46% of respondents agreed that process is measured and evaluated, about 20% disagreed and more than 30% remained neutral.
- **Planning:** 53% of respondents agreed that departmental processes are measured and evaluated, 20% disagreed and 27% remained neutral.
- **Technical:** A very high number of respondents (85%), agreed that departmental processes are measured and monitored, 7% neutral and 8% disagreed.

4.3.4.2 Deviations from processes are reported in my department

- **Manufacturing:** 87% of respondents agreed that deviations from processes are reported, 8% neutral and 5% disagreed

- **Marketing:** 46% of respondents that process deviations are reported, 20% disagreed and more than 30% remained neutral.
- **Planning:** 47% of respondents agreed that deviation from processes are reported in their department, 33% remained neutral and 20% disagreed.
- **Technical:** 64% of respondents agreed on that deviations are reported within the department, no respondents disagreed and 36% were neutral.

4.3.4.3 I understand process improvement initiatives

- **Manufacturing:** 85% of respondents agreed to understand process improvement initiatives, 11% remained neutral and only 4% disagreed.
- **Marketing:** 46% of respondents that they understand process improvement initiatives, 20% disagreed and 34% remained neutral.
- **Planning:** 67% of repondents agreed that they understand process improvement initiatives, 26% remained neutral and 7% disagreed.
- **Technical:** 79% of respondents agreed that they understand process improvement initiatives, 14% remained neutral and 7% disagreed.

4.3.4.4 Critical processes affecting your department are well defined.

- **Manufacturing:** 87 % of respondents agreed that critical processes affecting their department are well defined, 8% neutral and 5% disagreed
- **Marketing:** 60% of respondents agreed that critical processes affecting their department are well defined, 20% remained neutral and 20% disagreed
- **Planning:** 47% of respondents agree that critical processes affecting performance are defined, 40% disagreed and 13% were neutral.
- **Technical:** 64% agreed that critical processes are measured and monitored, 29% remained neutral and 7.1% disagreed.

4.3.4.5 Current process improvement initiatives are efficient

- **Manufacturing:** 67% of respondents agreed that current processes improvement initiatives are efficient, 22% remained neutral and 11% disagreed.
- **Marketing:** Only 33% agreed that the current process improvement initiatives are efficient, 47% remained neutral and 20% disagreed.
- **Planning:** A lowest number of respondents agreed with the statement 33%, 20% disagreed and 47% remained neutral.
- **Technical:** A significant number of respondents remained neutral (64%), only 29% agreed and 7% disagreed that current processes improvement initiatives are efficient.

4.3.4.6 Operational processes (day to day activities) are flexible and innovative

- **Manufacturing:** 59% of respondents agreed that processes are flexible and innovative, 31% remained neutral and 10% disagreed.
- **Marketing:** Only 27% of respondents agreed that operational processes are flexible, 33% disagreed and 40% remained neutral.

- **Planning:** 47% agreed that operational processes are flexible, 40% neutral and 13% disagreed.
- **Technical:** 50% of respondents agreed that operational processes are flexible, 43% neutral and 7% disagreed.

4.3.4.7 I am happy with Hulamin Social processes e.g. Health and Safety, employee engagement and social activities

- **Manufacturing:** 70% of respondents agreed that they are happy with Hulamin social processes, 15% remained neutral and 15% disagreed
- **Marketing:** A significant number of respondents (73%) agreed that they are happy with Hulamin social processes, 13% neutral and 14% disagreed.
- **Planning:** 67% respondents agreed that they were happy with social processes, 26 % remained neutral, and 7% disagreed
- **Technical:** 57% of respondents agreed that they are happy with Hulamin Social processes, 36% remained neutral and 7% disagreed.

4.3.4.8 Hulamin promotes Research and Development

- **Manufacturing:** Only 40% agreed that Hulamin promotes research and development, 22% disagreed and 38% remained neutral
- **Marketing:** There was mixed opinions on this statement as 33% of respondents were in agreement, 33% neutral and 34% disagreed.
- **Planning:** Only 47% agreed that Hulamin promotes research and development, 33% remained neutral and 20% disagreed
- **Technical:** 42% of respondents remained neutral, 29% agreed and 29% disagreed that Hulamin promotes research and development.

4.3.5 Financial Perspectives

The statements aimed to get respondents perceptions and involvement on business financial performance. Figure 4.20 to Figure 4.23 show the responses from different departments.

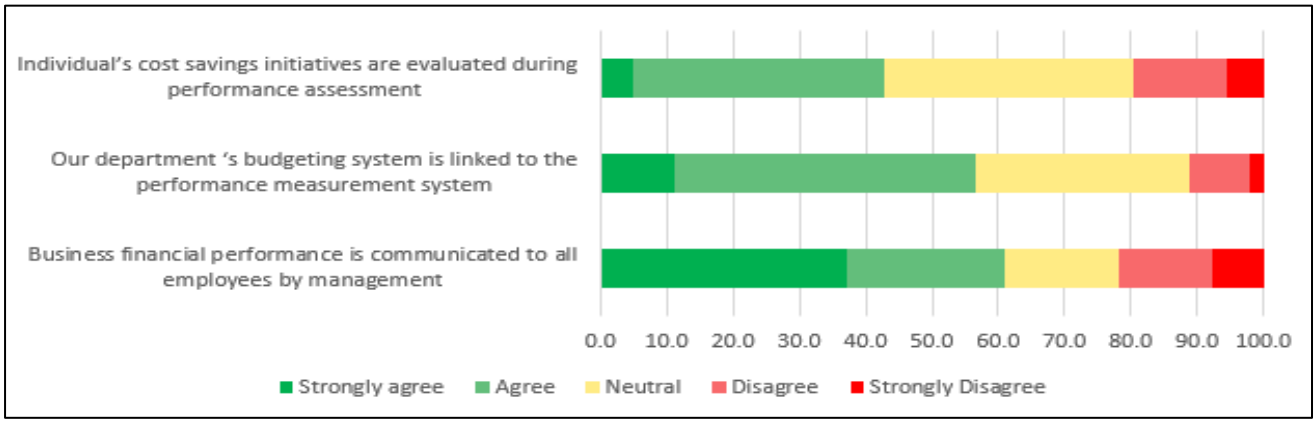

Figure 4.20 Statements on Financial Perspectives from Manufacturing

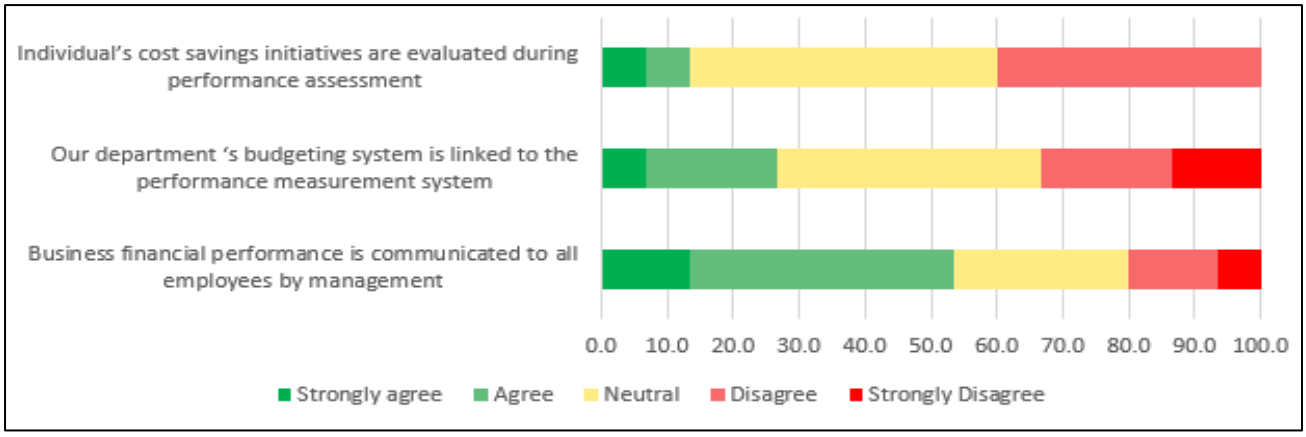

Figure 4.21 Statements on Financial Perspectives from Marketing

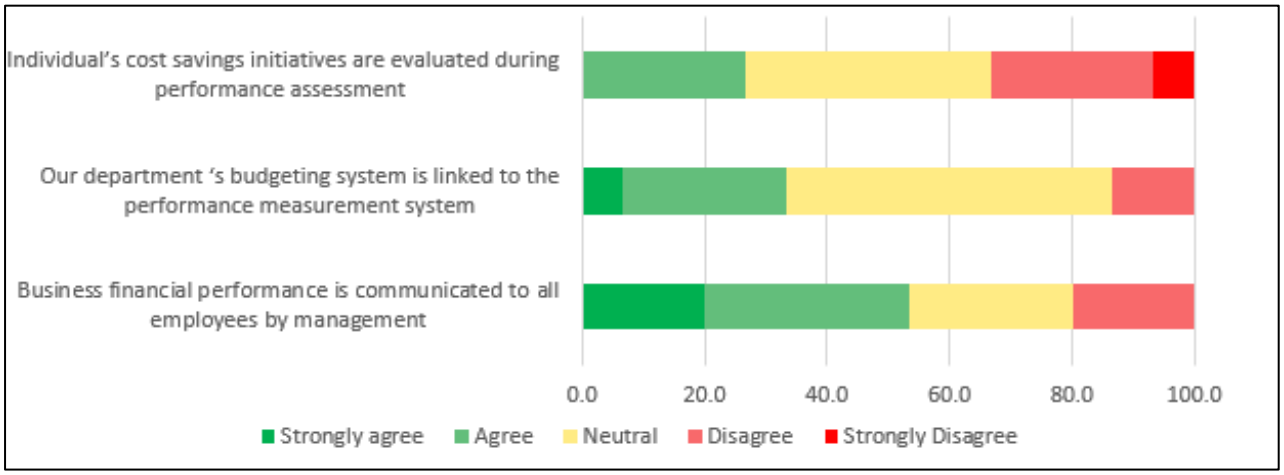

Figure 4.22 Statements on Financial Perspectives from Planning

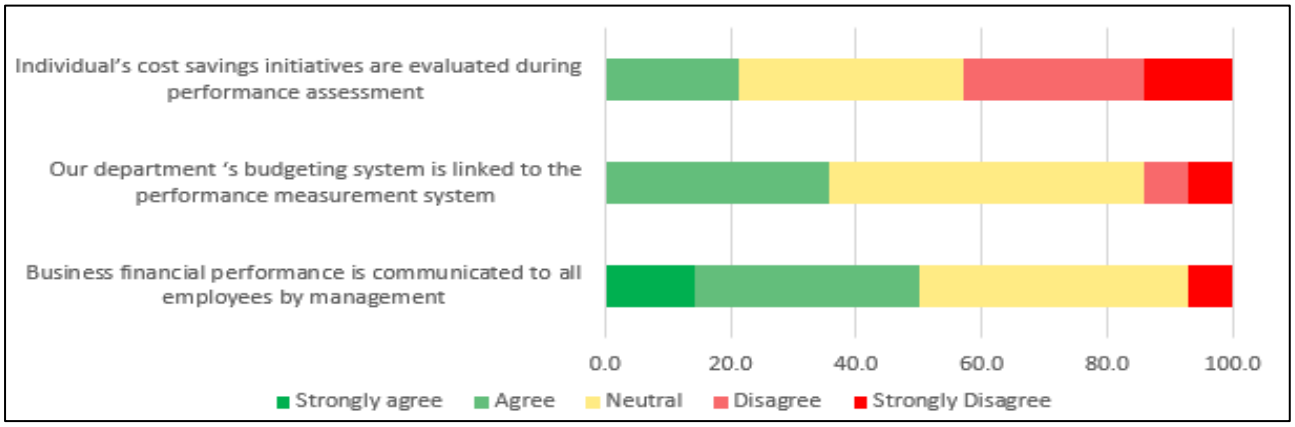

Figure 4.23 Statements on Financial Perspectives from Technical

4.3.5.1 Business financial performance is communicated to all employees by management

- **Manufacturing:** 60% of respondents agreed that financial performance is communicated to all employees, 22% disagreed and 18% remained neutral.
- **Marketing:** Many respondents (53%) agreed that financial performance is communicated to employees by management, 27% gave neutral response and 20% disagreed.
- **Planning:** Many respondents (57%), agreed that business financial performance is communicated to all employees by management, 20% disagreed and 23% neutral.
- **Technical:** 50% of respondents agreed that business financial performance is communicated to all employees by management, 43% neutral and 7% disagreed.

4.3.5.2 Our department ‘s budgeting system is linked to the performance measurement system

- **Manufacturing:** 57% of respondents agreed that department budgeting sytem is linked to the performance measurement system, 32% neutral and 11% disagreed
- **Marketing:** There was a mixed response to the statement as 33% of respondents disagreed on department's budgeting system being linked to performance management, 27% agreed and 40% remained neutral.
- **Planning:** 53% of respondents were neutral when asked about their department budgeting sytem being linked to performance measurement system, 13% disagreed and 33% agreed.
- **Technical:** 50% of respondents remained neutral on the statement; our department budgeting system is linked to the performance measurement system, 36% agreed and 14% disagreed.

4.3.5.3 Individual’s cost savings initiatives are evaluated during performance assessment

- **Manufacturing:** A negative response on cost savings initiatives is evaluated during performance assessment 43% agreed, 38% neutral and 19% disagreed.
- **Marketing:** 40% of respondents disagreed with the statement, 47% remained neutral and only 13% agreed.
- **Planning:** Only 27% agreed that cost savings initiatives are evaluated during performance assessment, many respondents remained neutral at 40% and 33% disagreed.
- **Technical:** Only 21% of respondents agreed that that individual's cost saving initiatives is part of performance evaluation, 36% neutral and 57% disagreed

Table 4.2 Descriptive Statistics

Descriptive statistics for interval data									
Statement	Manufacturing		Marketing		Planning		Technical		Overall Results
	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean Average
1.1	1.97	1.67	2.60	2.34	2.47	2.13	2.43	2.20	2
1.2	2.15	1.90	2.93	2.61	2.53	2.37	2.64	2.42	3
1.3	1.96	1.69	2.87	2.50	2.27	1.90	2.86	2.62	2
1.4	1.93	1.64	2.73	2.45	2.60	2.37	2.71	2.48	2
1.5	2.01	1.65	2.60	2.13	2.87	2.68	3.07	2.80	3
1.6	1.61	1.22	2.27	1.90	2.07	1.63	2.07	1.73	2
1.7	2.17	1.84	3.00	2.71	2.73	2.45	2.29	1.89	3
1.8	2.03	1.68	3.07	2.80	2.87	2.61	2.07	1.69	3
Perfomance Management	**1.98**		**2.76**		**2.55**		**2.52**		**2**
2.1	1.94	1.73	3.27	2.92	2.40	2.10	2.07	1.69	2
2.2	2.31	2.10	3.33	3.01	2.80	2.39	2.71	2.36	3
2.3	2.39	2.12	2.13	1.83	2.80	2.42	2.43	2.07	2
2.4	2.52	2.17	2.67	2.31	2.80	2.58	2.43	2.14	3
2.5	2.34	2.05	3.13	2.83	2.53	2.28	2.64	2.36	3
2.6	2.09	1.93	3.27	2.94	2.73	2.42	2.50	2.24	3
2.7	2.99	2.68	3.53	3.20	3.20	2.94	3.07	2.78	3
2.8	2.24	1.98	3.00	2.66	2.40	2.03	2.86	2.51	3
Learning and Growth	**2.35**		**3.04**		**2.71**		**2.59**		**3**
3.1	1.73	1.44	2.20	1.79	1.67	1.21	1.86	1.51	2
3.2	1.95	1.70	2.07	1.67	2.20	1.86	2.14	1.85	2
3.3	1.81	1.57	2.73	2.53	2.07	1.71	2.14	1.81	2
3.4	2.05	1.79	3.73	3.41	2.93	2.66	2.43	2.14	3
3.5	1.56	1.15	1.73	1.26	1.87	1.37	1.86	1.41	2
3.6	1.71	1.36	2.60	2.34	2.20	1.79	2.21	1.77	2
3.7	1.69	1.35	2.60	2.34	2.33	2.00	2.14	1.81	2
3.8	1.82	1.54	2.33	2.00	2.13	1.79	2.36	2.07	2
3.9	2.00	1.75	3.00	2.71	2.73	2.39	2.50	2.07	3
3.10	2.26	1.93	2.80	2.53	2.80	2.39	2.57	2.24	3
Customers	**1.86**		**2.58**		**2.29**		**2.22**		**2**
4.1	1.71	1.43	2.73	2.45	2.60	2.37	2.07	1.65	2
4.2	1.76	1.49	2.53	2.16	2.53	2.31	2.21	1.77	2
4.3	1.87	1.53	2.60	2.25	2.20	1.83	2.07	1.69	2
4.4	1.84	1.49	2.47	2.13	2.73	2.48	2.36	2.04	2
4.5	2.19	1.91	2.73	2.37	2.87	2.56	2.86	2.42	3
4.6	2.45	2.06	3.07	2.78	2.60	2.19	2.50	2.17	3
4.7	2.83	2.47	3.00	2.66	2.87	2.53	2.93	2.62	3
4.8	2.13	1.95	2.33	2.03	2.20	1.83	2.43	2.10	2
Internal Business Perspective	**2.10**		**2.68**		**2.58**		**2.43**		**2**
5.1	2.31	2.18	2.60	2.31	2.47	2.16	2.50	2.17	2
5.2	2.45	2.09	3.13	2.80	2.73	2.31	2.86	2.45	3
5.3	2.78	2.41	3.20	2.78	3.13	2.73	3.36	2.98	3
Financial Perspetive	**2.52**		**2.98**		**2.78**		**2.90**		**3**

1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree and 5= Strongly Disagree

The descriptive statistics indicate the mean and standard deviation. The mean indicates average response of participants. Table 4.2 is dominated by 2 which denotes participants agree with the statement. Table 4.2 further indicates performance management, customer perspective and internal business processes were positively experienced. These findings correspond to the results obtained from the data analysed using the graphs.

The maximum standard deviation for manufacturing, marketing, planning and technical was 2.68, 3.41, 2.94 and 2.98 respectively. The maximum acceptable standard deviation is ±2. Only marketing department standard deviation of 3.41 is not acceptable as this means there was a large variability of responses. The majority of statements standard deviation ranged around ±2 which is the maximum acceptable range. Manufacturing department showed consistency on the standard deviation which is below 2.

4.4 Reliability Results

The precision of data was described by measuring reliability of the survey questionnaire. Cronbach alpha was determined by grouping the factors as indicated on Figure 4.24, Table 4.3 and Table 4.4. Cronbach's alpha coefficient indicated good reliability results.

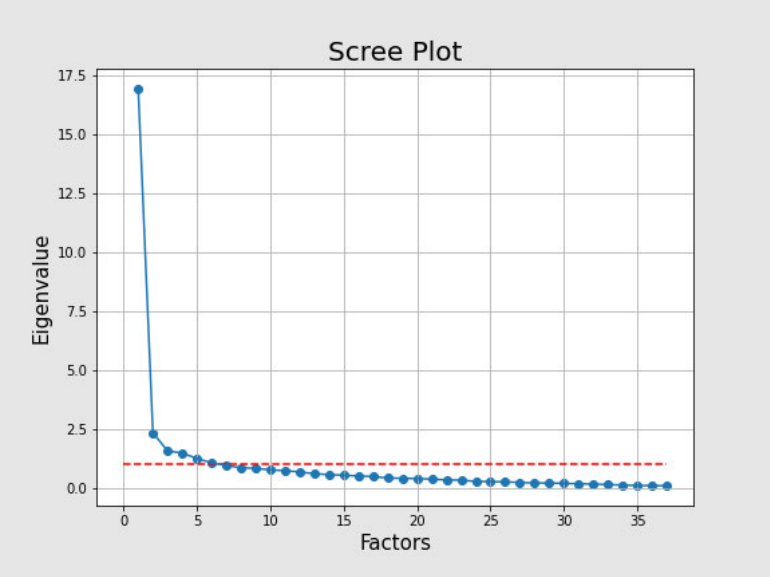

Figure 4.24 The Scree Plot: Determining Number of Factors Based on Eigenvalues

Table 4.3 Factor Loading Values

Questions	Factor1	Factor2	Factor3	Factor4	Factor5
1.1	0.48	0.02	0.37	0.07	0.2
1.2	0.62	0.04	0.29	0.27	0.21
1.3	0.68	0.27	0.35	0.25	0.08
1.4	0.63	0.33	0.33	0.22	0.05
1.5	0.54	0.23	0.43	0.22	0.1
1.6	0.3	0.32	0.49	0.12	0.27
1.7	0.35	0.23	0.58	0.25	0.06
1.8	0.38	0.06	0.51	0.22	0.24
2.1	0.5	0.18	0.47	0.16	0.16
2.2	0.41	0.17	0.61	0.26	0.19
2.3	0.12	0.33	0.41	0.34	-0.06
2.4	0.23	0.11	0.39	0.5	0.03

2.5	0.18	0.43	0.39	0.5	0.21
2.6	0.23	0.44	0.58	0.22	0.17
2.7	0.1	0.06	0.29	0.73	0.06
2.8	0.34	0.18	0.29	0.58	0.26
3.1	0.13	0.22	0.3	-0.04	0.73
3.2	0.27	0.28	0.06	0.15	0.68
3.3	0.4	0.5	0.17	0.29	0.17
3.4	0.41	0.36	0.26	0.38	0.16
3.5	0.14	0.66	0.09	-0.07	0.43
3.6	0.29	0.68	0.24	0.17	0.22
3.7	0.34	0.69	0.21	0.23	0.16
3.8	0.48	0.41	0.03	0.23	0.19
3.9	0.59	0.46	0.18	0.16	-0.04
3.1	0.51	0.47	0.18	0.18	0.02
4.1	0.57	0.48	0.27	0	0.2
4.2	0.63	0.33	0.2	0.05	0.25
4.3	0.53	0.37	0.27	0.1	0.19
4.4	0.58	0.35	0.3	0.22	0.03
4.5	0.71	0.37	0.23	0.18	0.06
4.6	0.45	0.17	0.14	0.45	0.07
4.7	0.02	0.06	-0.01	0.69	-0.11
4.8	0.42	0.39	0.25	0.36	0.16
5.1	0.66	0.18	0.18	0.16	0.3
5.2	0.44	0.06	0.09	0.43	0.26
5.3	0.4	0.14	0.13	0.43	0.06

Table 4.4 Internal Reliability Measures for the Selected Factors

Factors	**Cronbach Alpha**
Factor 1	0.96
Factor 2	0.94
Factor 3	0.94
Factor 4	0.93
Factor 5	0.89

- There were five significant factors returned for further analysis. Figure 4.24 shows Scree plot showing the choice of the number of factors returned based on Eigenvalues.

- All questions were grouped into different themes. Table 4.3 shows the factor loading values indicating the relationship of each variable with each factor e.g., factor one is made of themes with values greater than 0.5.

- Table 4.4 shows the Cronbach alpha values for each factor. These Cronbach alpha values close to one indicate that the identified factors are internally reliable.

4.4 Summary

The objective was to get perceptions and views of respondents from different departments regarding all five study objectives. The results were analysed by means of Microsoft Excel and SPSS. The results on all five objectives showed the mean was ranging from 1.15 to 3.36 which signifies responses were mainly strongly agree, agree or neutral. Also, the graphical statistics was dominated with color green which was for strongly agree and agree.

The overall results from the graphs and descriptive statistics indicate a positive response on customer perspective throughout all four departments followed by performance management and internal business perspectives. The results also indicate a negative response on financial and learning and growth perspective from all departments.

The Cronbach alpha value was above 0.8. The Cronbach alpha indicates good reliability results that can be generalised to the entire population (Bryman & Bell, 2007).

The next chapter (Chapter 5) is the discussion of the results

CHAPTER 5: DISCUSSION

5.1 Introduction

The aim of this study was to evaluate business performance of an aluminium manufacturing company. A quantitative data was collected as indicated in Chapter 3 through a survey questionnaire from participants in Manufacturing, Marketing, Planning and Technical departments, then was analysed as indicated in Chapter 4. This chapter discusses results which are outlined in the previous chapter (Chapter 4). The results are supported by the reviewed literature in Chapter 2 and the study site background in Chapter 1. The structure of the discussion is based on the sample demographic and study objectives which are set out in Chapter 1.

5.2 Demographic

The results indicate that Hulamin employs youth and mostly African race is dominating the organisation. Many respondents were aged between the ages of 35 and 44 (46%) and between 25 and 34 (36%) with a few between 45 and 55 (15%). The Africans constituted 71% of the sample. The results indicated males are more dominated 68%, than females. The diversification of age group, race and gender is important in South Africa because it contributes to the BBB-EE (Broad-Based Black Economic Empowerment) evaluation score of the entity. BBB-EE is an intervention programme launched by South African government through Employment Equity Act (EEA) (1998) and other legislative institutions to address imbalances that existed in the past created by an apartheid government (Horwitz and Jai, 2011).

The results indicated Hulamin employees have minimal academic level. The level of education showed 33% of respondents have diplomas, 26% higher certificates, 21% have secondary school, 10% hold degrees, 9% have postgraduate and 1% had primary education. Manufacturing is the most dominant with the highest number of employees (77%), mainly operators at 54%. The work departments for the participants were the most crucial results on the demographic data because they described well the characteristics of the sample. Furthermore, department was a requirement to ensure data can be generalised to the whole organisation. The Manufacturing department responses were significantly different to Marketing, Planning and Technical as their responses were highly in agreement with the statements. Marketing department responses were mainly negative. These results indicated that employees in different working units have different perceptions on the company's overall performance.

This study assumes that management focus of strategy implementation is mainly in the Manufacturing departments compared to Marketing, Planning and Technical. Manufacturing shows mutual understanding of overall business performance. Marketing, Planning and Technical show different opinions. These results are consistent with David (2011) study observations on strategy evaluation. David (2011) indicated that big firms have a challenge to implement and evaluate strategies across all divisional and functional units. However, the

findings are inconsistent with Kaplan and Norton (2001) articulation of strategy focused organisation. According to Kaplan and Norton (2001) a strategy focused organisation ensures that all employees understand strategy and their day-to-day activities are designed in a way that contributes to the success of strategy.

5.3 Study Objectives Results

This section presents results pertaining to the study research objectives which are:

- To determine how Hulamin as a manufacturing company measures its performance.
- To determine the impact of financial measures of performance on overall business performance.
- To find out to what extent does employees' learning, and growth assist the business to perform better.
- To determine the impact of business processes on business performance.
- To evaluate customer satisfaction management systems impact on performance of a manufacturing company.
- To determine the effectiveness of BSC attributes in a manufacturing company.

5.3.1 Hulamin Performance Measurement and Evaluation System

The overall consolidated results were mostly positive to statements pertaining to performance management; Manufacturing 78%, Marketing 45%, Planning 58% and Technical 58%. The results show the perception of the participants on performance management system differs within the departments, with the Manufacturing departments showing a more positive attitude. There appears to be a consensus among respondents on understanding Hulamin objectives across all departments, more than 70% of respondents indicated that they understand Hulamin objectives. All departments showed a better understanding of Hulamin measurement system as well; 79% Manufacturing, 60% Marketing, 60% Planning and 64% agreed in Technical. Many of the respondents agreed when they were asked if the implementation of performance measurement system was communicated to all employees, 76% Manufacturing, 67% Planning and 58% Technical apart from Marketing department where only 40% agreed.

These results are aligned with Kaplan and Norton's strategic management system developed in the early 2000s, where BSC was transformed to a strategic communication tool to ensure that everyone in the organisation understands the set objectives and measurement systems to be used in order to achieve the objectives of the company. The response showing many respondents understanding objectives also suggests that Hulamin business strategy is well defined. According to Wheelen and Hunger (2015), a well-defined strategy is related to an improved better business performance.

The following results show the perception of participants of business performance at departmental level. Manufacturing and Technical participants 80% and 79% agreed respectively to understand how their department performance is evaluated. Marketing and Planning participants 33% and 40% respectively agreed to understand how their departments are evaluated. A negative response was also observed when respondents were asked if there is a linkage between overall strategy and departmental strategy. Few respondents agreed;

Marketing 33%, Planning 47% and Technical 36%. Manufacturing had a different view as 79% of respondents agreed. These results suggest respondents understand overall business strategy better than their departmental strategies. This finding is inconsistent with Kaplan and Norton (2008) where BSC was modified to link strategy implementation and the way it was communicated throughout the organisation for a successful strategy execution process. Furthermore, the amendments aimed to align key strategic processes with the overall business strategy.

Table 1.1 shows that Hulamin uses both financial and non-financial scorecard to measure and evaluate business performance. However, the scorecard used is not Kaplan and Norton's Balanced Scorecard. The difference lies on the non-financial measures which are human capital, social, relationship and intellectual capital and natural capital where else BSC non-financial measures are, learning and growth perspective, customer perspective and internal business processes perspective. The literature by Santos and Brito (2012) supports Hulamin non-financial measures as the study indicates that in addition to profitability, organisations must incorporate social and environmental performance measures. Social responsibility and environmental measures are an ethical act in response to societal needs and global warming pandemic respectively.

Othman, *et al*., (2006) and Norreklit (2000) critic of Balanced Scorecard that it lacks rooting on external environment is evident on this study. The study agrees with Othman *et al.,* (2006) suggestion that BSC must be used in combination with other strategic performance management techniques like PSTEL to link the strategy to the external environment. This will ensure that matrix like Corporate Social Investment (CSI) and natural capital are considered. The SBSC framework developed by Hansen and Schaltegger (2016) which integrated BSC with sustainability theory and IMECS (2009) framework which integrates BSC with CSR are equally not sufficient performance measurement systems. However, if these two frameworks are integrated and form a BSC, Sustainability and CSR framework the framework will be suitable for performance evaluation of Hulamin.

This study disagrees with Karabulalut (2015) study which suggested that BSC is an efficient tool to be used both at operational level and at strategic level. However, BSC is a good tool to link business strategy to overall performance and to communicate business strategy to all employees.

5.3.2 The Impact of Learning, and Growth Perspective on Business Performance

The overall average response indicates 48% of sample is satisfied with learning and growth measures in the company (Manufacturing 65%, Marketing 32%, Planning 35% and Technical 50%). It was noted that Manufacturing and Technical respondents showed a positive attitude towards the learning and growth perspective measures compared to the respondents from Marketing and Planning.

Hulamin encourages learning and skills development. However, it must be maintained throughout the organisation. The respondents in Manufacturing and Technical 72% and 64% respectively agreed to have received adequate training on their current positions where else only a few respondents from Marketing and Planning 46% and 40% respectively agreed

attested to have received adequate training. The results also revealed that many respondents agreed that the company encourages learning and skills development; Manufacturing 64%, Marketing 60%, Planning 40% and Technical 57% . The results indicate that Hulamin embraces learning and skills development. However, learning and skills development must be reinforced across all departments to ensure consistency so that Marketing and Planning departments can uplift their skills as well. Ingram (2013) advised firms to train their employees so that they are certain of what is expected of them for them to perform at their best level. Furthermore, skills development empowers employees and results in greater employee satisfaction (Edwards and Cable, 2009).

Few respondents across all departments (37% Manufacturing, 20% Marketing ,33% Planning and 36% Technical) agreed that Hulamin uses performance measurement system to compensate its employees. It was noted that this statement received poorest response compared to all other questionnaire statements. David (2011) suggested that developing incentives packages for the commitment of employees to the business strategy and performance is the best way to empower employees. According to Rahmawati *et al*. (2016), providing training, proper career development, and incentive bonuses is the best way to invest in employees. Both David (2011) and Rahmawati *et al.* (2016) contest to that compensation empowers employees. Therefore, this study recommends Hulamin to find a strategy to reward its employees according to their performance because it is a good act to show appreciation to employees.

Manufacturing industry in South Africa is mainly dependent on human resources unlike the developed countries that have advanced robotic processes. Therefore, the company must invest on its employees to gain employee satisfaction. The overall learning and growth perspective results at 48% are unsatisfactory. This finding can also be attested by participants response when they were asked if Hulamin is the best employer, only Manufacturing showed a positive response at 76%, 27% marketing, 47% Planning and Technical at 36%. The results reveal that Hulamin embraces its employees, this can be attested by the skills development budget which is shown on Table 1.1. However, the collected data indicates that the focus is mainly in Manufacturing departments. Furthermore, the results indicate a linkage between employee empowerment and compensation. The study suggests that Hulamin spreads the focus to all departments so that it can be regarded as the best employer by all employees. Best employers are regarded as those with common focus on sustaining employee practices, emphasising on doing few core things very well and maintain an organisational culture that reinforces adaptability (Looi *et al*., 2004).

5.3.3 To Evaluate Customer Satisfaction Management Systems Impact on Performance of a Manufacturing Company

The results revealed that participants across all departments (Manufacturing 82%, Marketing 52%, Planning 68% and 63% Technical) understand customer requirements and they know their customers. An overwhelming number of respondents; 95% manufacturing, 93% Marketing, 90% Planning and 86% Technical agreed to understand customer requirements. Participants also agreed that departments receive and communicate customer feedback with all employees (85% Manufacturing, 60% Marketing, 67% Planning and 64% Technical). These

results indicate that Hulamin has instilled a customer-based culture, employees are always informed of customer needs. Furthermore, respondents gave positive results when asked if Hulamin is customer focused 81% Manufacturing, 87% Planning and 64% Technical except for Marketing at 47%. The results are consistent with Brown (2011) description of successful firms as those that are customer oriented and involve their employees. Understanding and fulfilling customer requirements is a major challenge for most firms across all industries. The positive attitude of employees across all departments to understand their customer requirements is the competitive advantage of an organisation. Dash (2017) study articulates that the business key success factor is the ability to incorporate customer specifications and requirements into operations.

Concerning responses were noted on customer satisfaction related statements. A high number of respondents in Manufacturing 67% agreed that they were satisfied with the service and products given to customers, few respondents from Marketing 33% and Planning 40% and average in Technical 50% that agreed that they are satisfied with the service and products given to customers. Furthermore, respondents in manufacturing 76%, agreed that their performance is measured based on customer satisfaction and few respondents in Marketing 14%, Planning 40% and Technical 43% agreed to that their performance is measured based on customer satisfaction. Another observation on statement "my customers are satisfied with our service and product quality" the agreement level was 69% Manufacturing, 33% Marketing, 40% Planning and 43% Technical.

In Chapter 1 the study revealed that Hulamin is facing high competition from imports as a results the company has seen a decline in the demand of goods. Krajnakova *et al.,* (2015) suggested that Firms within strong competitive industries must improve customer satisfaction in terms of quality and service to establish and maintain long term relationships in order to overcome the challenge of attracting new customers and retaining the existing customers. Anderson (1994) also emphasised that overall customer satisfaction must be the main performance indicator of a company because it is related to behavioural and economic consequence gain to the company. Furthermore, Brown (2011) highlighted that firms that want to be successful in the 21st century must be of quality conscious. The study has found that Hulamin customer satisfaction measures are not reinforced to sustain the business. The study also agrees with Ramdas (2003) finding that many organisations tend to ignore the downstream processes these include delivery, after-sales support, and end-of-lifecycle management. The results indicate Hulamin focuses on Manufacturing departments and ignores other processes that may affect customer satisfaction.

The overall response indicates that Hulamin is customer oriented. However, the business strategy needs to define customer satisfaction measures across all departments and levels of employment and align them with the performance of an individual to sustain the company and remain competitive. Furthermore, customer satisfaction measures should not only be focused on Manufacturing departments, the quality of service from Planning, Technical and Marketing should also be emphasised. This is in accordance with Hitt *et al*. (2007) study which emphasises on the need for firms to provide their customers with exceptional products and services of high value compared to their rival to create superior competitive advantage. Higher customer

satisfaction improves business financial performance (Lee, 2006). Moreover, customer satisfaction is the key factor of business growth and survival from the industry (Sarkar, 2011).

5.3.4 To Determine the Impact of Business Processes on Business Performance

Many respondents indicated that they understand process improvement initiatives; 80% Manufacturing, 67% Planning and 79% Technical with the least respondents That agreed in Marketing at 46%. The respondents gave a negative response to the statement "Current process improvement initiatives are efficient" 33% Marketing, 33% Planning and 29% Technical. The respondents from manufacturing department had a different view as 67% of respondents agreed that the current process initiatives are efficient. It can be concluded that the Manufacturing department processes are mostly prioritised. These results are consistent with Soderberg (2006) study stating that business operations should be the focus where the firm should excel to satisfy the customers. However, company continuous improvement initiatives in Marketing, Planning and Technical must be improved as well to ensure they are at the same level as Manufacturing departments because currently they are not efficient.

Gawankar *et al*. (2015) also agree when stating that business core and support processes must be identified to ensure that they have a mutual goal and they are not operated independently. Moreover, excellence on internal processes satisfies shareholder and customers (IMECS, 2009). The study by IMECS (2009) emphasises on quality of product or service, on time delivery, manufacturing costs and responsiveness to the market as important measures of effectiveness of internal business process. Furthermore, Kopecka (2015) regards internal business processes as the heart of the business with four major core processes which the firm must excel on. These major processes are: (1) Business operations process, (2) Customer management process, (3) Innovation process and (4) Regulatory and social processes. Therefore, the focus of Hulamin must be on all processes throughout the organisation to ensure smooth flow of goods and services for improved performance.

Hulamin internal business processes are mostly controlled, attention must be given to Marketing and Planning departments to uplift the performance. Many respondents agreed that departmental processes are measured and monitored; 84% Manufacturing, 46% Marketing 67% Planning and 85% Technical. A high number of respondents also agreed that critical processes are well defined 85% Manufacturing, 60% Marketing, 47% Planning and 79% Technical. Respondents from Manufacturing 87%, Marketing 47%, Planning 47% and Technical 64% also agreed that deviations from processes are reported. These results are in-line with Kaplan and Norton (2001) first principle of strategy focused organisation which says strategies must be translated to measurable meaningful objectives and critical measures and actions must identified. It is therefore evident that Hulamin business processes are controlled, monitored, and actioned. Kaplan and Norton (2001) emphasise that operational processes should be derived from the strategy and daily activities should be based on set objectives. It is also evident from the results that Hulamin should focus on Marketing and Planning departments to ensure all employees are aligned and are aware of the operational objectives to be met. The literature by Kaplan and Norton (2001) further indicates that the use of BSC as the

strategy communication tool can overcome inconsistency of strategic alignment amongst business units.

The results have indicated a gap on internal business processes flexibility, innovation and research and development. A low number of respondents (below 50%) agreed to that Hulamin promotes Research and Development across all departments 41% manufacturing, 33% Marketing, 47% Planning and 29% Technical). These results indicate that research and development is not a priority in the organisation, which is inconsistent with Kopecka' s study. Kopecka (2015) indicates that excellency in research and development is one of the core processes which every firm must excel on to provide innovative goods and services. Furthermore, the study by Mihaela and Alexandru (2018) regards research and development as an intangible asset which firms must invest on to ensure future sustainability.

There was a mixed response on the statement "Operational processes are flexible and innovative" the respondents agreement level was low Manufacturing 59%, Marketing 26%, Planning 47% and Technical 50%. The planning department in particular is responsible for coordination of material flow and supply and demand. A negative response from the Planning department regarding flexibility implies that management must transform to innovative and flexible processes to improve operational activities to improve overall performance. The literature by Dumas *et al*. 2017 is also in agreement, which stipulates that internal business processes determine the ability of a firm to respond and adapt to changing environment. Furthermore, flexibility gives a company a greatest advantage to manage demand and capacity (Rogersa *et al.,* 2011), by adjusting process whenever unplanned situations arise (Afflerbach *et al*., 2014).

When respondents were asked about Hulamin social processes, all departments indicated positive feedback 70% manufacturing, 73% Marketing, 67% Planning and 57% Technical. These results agree with Kopecka (2015) where the study states that maintaining social responsibility is a core process which the firm must excel on for a long-term sustainability.

Table 1.1 also indicates that social responsibility is part of Hulamin' s strategy as it is evaluated in Social, Relationship and Intellectual Capital. The CSI spend is Hulamin' s act of goodwill to the employees and community of Pietermaritzburg. Between 2015 and 2017 the amount spent on CSI was ranging from R 2.1 to R 2.8 million. In 2018 there was a sharp increase on CSI by 95% from R 2.1 million reported in 2017 to R 4.1 million. In 2019 the company spent R 3.1 million towards CSI. The results indicate that the company is strongly involved in social processes and many respondents attested to this.

5.3.5 The Impact of Financial Perspective Business Performance

The overall performance was the most unsatisfactory compared to all other objectives, an average overall response indicated few respondents agreed to the statements (Manufacturing 53%, Marketing 31%, Planning 38% and Technical 36%). The participants indicated that management communicates financial performance back to all employees (Manufacturing 61%, Marketing 53%, Planning 53% and Technical 50%). Financial performance is the outcome of strategy on non-financial measures (Gowindasamy and Jantan, 2018). IMECS (2009) and Santos and Brito (2012) also agree that financial perspective reviews implemented strategies.

Therefore financial performance must be communicated to all employees because it is the feedback of how the business has performed against set objectives during formulation of strategy. The Kaplan and Norton (2001) BSC also addresses the need to communicate implemented strategies to all employees.

This study found that employee engagement on business departmental financial performance is unsatisfactory. Only a few respondents (Manufacturing 57%, Marketing 27%, Planning 33% and Technical 36%) have agreed that the department budget is linked to performance measurement system. However, 57% of respondents from manufacturing agreed. A few respondents across all departments (Manufacturing 43%, Marketing 13%, Planning 27% and Technical 21%) agreed on that cost savings initiatives are part of individual performance evaluation. The organisation must develop costs saving initiatives that will contribute towards reduction of expenses to improve company profit. Kopecka (2015) highlighted that operational expenses must be controlled to achieve business financial goals. Moreover a decrease in Gross Profit Ratios GPR trend is related to inefficient management of costs (Tulsian, 2014). Therefore, costs must be managed in all departments for the business to make sufficient profit by involving all employees when setting up the budget. Kaplan and Norton (2001) also agree when stating that the Balanced Scorecard must be linked to the budget for managing tactics.

The financial ratios indicated in Table 1.1 shows that the entity is under financial distress as from 2017, the organisation has continued making losses in 2018 and 2019. In year 2017 the entity made a profit, but it was in a decreasing trend as seen by the decline of above 13%. Operating profit has since shown a decline since 2017 to 2019, with the highest decline in 2018 at -276%. The Profit margins as well have slowly been decreasing, the decrease indicates a possibility of the escalation on the cost of goods and labour. Profit margin is an important profitability ratio because it gives an indication to marketers if they are competitive and assist managers to derive pricing strategies (Amedeo, 2020). Many large companies in United States of America are moving manufacturing jobs to foreign countries like Mexico and China because cost of labour in US is very high and this results on their profit margins being compromised (Amedeo, 2020).

The current state of Hulamin financial performance is deteriorating. However, the overall financial performance of Hulamin shows that the business can get back to health and generate profit. As indicated on Gowindasamy and Jantan (2018) and Amaratunga *et al*. (2001) study, financial performance is the outcome of the strategy, the company must change the strategy to get back to the normal state. The year 2016 was evident that the company can turn around within one financial year, all the three measured profitability (return on capital, return on equity and profit margin) ratios were almost doubled in 2016.

The revenue and ROE (Return On Equity) results are positive. In 2018 Hulamin experienced the highest revenue growth by 13%. The revenue indicates positive results on Hulamin production capability. Kopecka (2015) study emphasises that companies must improve productivity to reduce expenses by utilising physical and financial assets efficiently and must focus on revenue growth strategies to achieve their financial goals. The ability of Hulamin to sustain higher revenue is a positive indication of achieving a better financial performance in

future. The overall financial results indicate business expenses must be reduced and resources must be allocated efficiently.

5.3.6 BSC attributes in a manufacturing company

The attributes Soderberg (2006) indicated three attributes that are required in a Balanced Scorecard:

(1) Measures must be derived from the business unit's strategy,
Table 1.1 outlines how Hulamin evaluates business overall performance. The table shows financial analysis (financial capital and manufacturing capital) and non-financial analysis (human capital, social, relationship and intellectual capital and natural capital). The key performance indicator excluded customer perspectives and internal business processes. This contradicts Kaplan and Norton's requirement. A performance measurement system that fulfils BSC requirements have both financial and non-financial measures and must contain of the four perspectives and all the measures must be derived from the business strategy (Malmi, 2001).

(2) There must be a balance among the measures
The overall results showed positive attitude on statements pertaining customer perspective and internal business processes. It was noted that respondent's views on learning and growth perspective and financial perspective were mostly negative. It was observed that on all perspectives manufacturing department was mainly positive compared to the other three departments i.e. Marketing, Planning and Technical.

Therefore, Hulamin' s scorecard is not balanced because some perspectives are superior to other perspectives. This finding contradicts Quesado *et al*., (2008) study which says BSC performance measures are all balanced. This study results are consistent with Gowindasamy and Jantan (2018) study which articulates that it is impossible to treat all four perspectives of BSC as equal, because some measures have a great impact on performance more than other measures.

(3) Measures must be linked in a series of cause-effect relationship.
The BSC resembles a cause-and-effect relationship between financial, customer, internal processes and learning and growth perspectives that link strategic objectives and which ultimately drive organisational performance (Kaplan, 2010). The results have indicated poor performance on learning and growth and financial perspective whistly internal business processes and customer perspectives indicated positive results. The strategic map on Figure 2.1 shows that learning and growth perspective is linked to critical internal processes to enable creation of customer value and better financial performance. The linkage can only be seen between internal business perspective and customer perspective.

5.4 Summary

This chapter has reviewed the literature in accordance with the study results presented in Chapter 4. The results which were obtained from the questionnaires addressed the objectives of the study which were:

- To determine how Hulamin as a manufacturing company measures its performance.

- To determine the impact of financial measures of performance on overall business performance.
- To find out to what extent does employees' learning, and growth assist the business to perform better.
- To determine the impact of business processes on business performance.
- To evaluate customer satisfaction management systems impact on performance of a manufacturing company.
- To determine the effectiveness of BSC attributes in a manufacturing company.

The findings drawn from the results have answered the research questions and objectives in Chapter 5. The conclusions, findings and recommendations from this chapter are outlined in the following Chapter 6.

Chapter 6: Conclusion

6.1 Introduction

The current study involved evaluation of business performance in a South African manufacturing company, Hulamin was the case study. This study adopted Kaplan and Norton Balanced Scorecard (BSC) approach as the theoretical framework underpinning the research. The BSC attributes and literature reviewed in Chapter 2 formed the constructs of the questionnaire which was used to collect quantitative data from respondents.

This chapter presents the findings of the study drawn from the results presented and discussed in Chapter 4 and Chapter respectively. Furthermore, Chapter 6 recommends possible actions that can assist to improve performance of a manufacturing firm.

6.2 Findings

The aim of the study was to evaluate the performance measurement and evaluation system of a South African manufacturing company Hulamin. The theory underpinning the study was the Kaplan and Norton Balanced Scorecard which evaluates financial and non-financial performance of an organisation. The study indicated inconsistency of financial performance between 2015 and 2019. Furthermore, the participants selected in the study indicated negative views on the financial performance of the business. The non-financial performance results were also inconsistent; the customers and internal business perspectives results are positive whereas the learning and growth perspective results are negative. In conclusion, Hulamin must develop new strategies that will address inconsistency of the business financial performance, by reducing the expenses and allocating resources adequately and efficiently. Moreover, financial performance is the outcome of implemented strategies on non-financial performance. Therefore, Hulamin must invest on their employees through skills and development and award all their employees accordingly. Moreover, customer satisfaction measures must be reinforced and internal business processes must be innovated to ensure sustainable performance. The study has also revealed that the culture and country regulations have the greatest influence on performance management of the organisation. In South Africa firms must adhere to department of trade and industry regulations which include paying tax, fulfilling BBBEE requirements etc. This study agrees with Abukari and Corner (2010) and Rahman, Islam, Rohaida and Khaliq (2019) which suggested that performance measurement and evaluation systems must be designed in a manner that suits the culture and regulations of the country.

6.3 Recommendation

- BSC as a performance measurement and evaluation tool: The study showed that the BSC tool will work well at business unit level compared to being used as an overall performance management system. The BSC strategic map can also be adopted to integrate the strategy with business activities and objectives to improve overall performance. BSC is an efficient tool that can be used to implement functional strategies across the company and to integrate internal factors that will enhance business financial performance.

- The need for a balance on performance attributes: The study indicated that BSC attributes are not balanced. The manufacturing companies must invest on the well-being of their employees by providing a safe environment and compensating their employees accordingly. Also, the management must be transparent and communicate financial aspects of the business with the employees to ensure employees are always aligned with business performance. The balance on the performance attributes will build trust between employees and management and will empower employees as they will feel appreciated and acknowledged.

- Communicate business strategy: Executive and senior management must communicate the business and departmental strategies with all the employees throughout the organisation. This will ensure that the daily activities are aligned with overall business strategy and business will likely improve its performance.

6.4 Study Limitation

Potential bias responses in Manufacturing and Marketing departments limit the results to be generalised for the whole company. This study should not be generalised but can rather be assessed per department. Moreover, supporting departments i.e., Procument, Laboratories, Human Resource etc. were excluded in this study.

This study has revealed limitations of BSC approach to be used as a performance measurement and evaluation system. However, this finding cannot be generalised as the study was only based at Hulamin.

6.5 Future Studies

This study presents an opportunity for further research in the similar industry in order to develop a performance measurement and evaluation model that will fit a South African culture. This will help address the performance of South African manufacturing industry that is slowly deteriorating.

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APPENDICES

APPENDIX A: Gatekeeper's Letter

HULAMIN
Think future. Think aluminium.

04 December 2020

Re: Request to conduct study

To whom it may concern:

Permission is granted for the student Mandisa Mgabhi to conduct the research at Hulamin for the fulfilment of her degree of Master of Commerce with University of KwaZulu Natal.

However, the study is restricted upon data collection for financial perspectives, student has been advised to use published information available in the public domain for business financial records.

Yours Faithful

[redacted]

Lulu Sililo

HR Operations Manager

Tel: 033 395 6911

Direct: 087 285 7025

Email: Lulu.Sililo@hulamin.co.za

www.hulamin.com

APPENDIX B: Declaration For Questionnaire

University of KwaZulu-Natal
Researcher: Mandisa Mgabhi / mandisamgabhi66@gmail.com

Supervisor: Vangeli Gamede / 033-260 6101 / gamede@ukzn.ac.za

Project Title: Performance Evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Score Card Approach

Information Sheet and Consent to Participate in Research

Greetings

REQUEST TO PARTICIPATE IN A VOLUNTARY, CONFIDENTIAL RESEARCH PROJECT

I am a student in the School of Management, IT and Governance at the University of KwaZulu-Natal, doing research on (Performance Evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Score Card Approach) for my Master of Commerce qualification. You have been selected as a potential respondent for participation in a voluntary, anonymous survey that I am conducting. I would appreciate your participation and your permission to use your responses for official research purposes only. Your personal identity will be treated with the utmost confidentiality throughout the survey and will at no stage appear in print. The data will be stored securely throughout the study, archived safely for a period of 5 years and destroyed thereafter. If you have any queries or concerns about completing the questionnaire, or about participating in this study, feel free to contact me, or my supervisor at the numbers listed above.

If you are willing to participate, please sign the accompanying declaration of consent that gives me permission to use your responses, and thereafter please complete the accompanying questionnaire. It should take only about 15 minutes of your time to do so.

In the event of any problems or concerns/questions you may contact the researcher at (provide contact details) or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban 4000 KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Mandisa Mgabhi
Researcher name and signature

APPENDIX C: Informed Consent Letter

University of KwaZulu-Natal

Researcher: Mandisa Mgabhi / mandisamgabhi66@gmail.com

Supervisor: Vangeli Gamede / 033-260 6101 / gamede@ukzn.ac.za

Project Title: Performance Evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Score Card Approach

Declaration of Consent

I (*Name of the consent*) have been informed about the study entitled Performance Evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Score Card Approach by Mandisa Mgabhi.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher.

Additional consent, where applicable

I hereby provide consent to participate in this study by completing the questionnaire

_____ _____

Signature of Participant **Date**

APPENDIX D: Questionnaire

DEMOGRAPHIC *(Mark the correct box with an X)*

Gender	Male	Female				
Race	Colored	Black	Indian	White		
Education Level	None	Primary	Secondary	Diploma	Degree	Postgraduate
Age	18 - 24	25-34	35-44	45-54	≥ 55	

Job Title …….

Department ……..

1. Performance Management tool

1.1 I understand Hulamin's business performance measurement system

Strongly agree	Agree	Neutral	Strongly degree	Disagree

1.2 Our company's business strategy is well defined and communicated to all employees.

Strongly agree	Agree	Neutral	Strongly degree	Disagree

1.3 I know how is my department performance evaluated?

Strongly agree	Agree	Neutral	Strongly degree	Disagree

1.4 Our department's strategy is well defined and communicated with all employees?

Strongly agree	Agree	Neutral	Strongly degree	Disagree

1.5 There is a linkage between overall strategy and departmental strategies

Strongly agree	Agree	Neutral	Strongly degree	Disagree

1.6 The objectives set for your performance measurement system are mostly successful

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2. Learning and growth /Employee perspective

2.1 My opinions and ideas assist to improve performance in my department

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.2 The company value my ideas and opinions

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.3 Learning and skills development is encouraged in this company

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.4 Individual performances (KPI) are linked to the business strategy

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.5 Knowledge is shared among employees

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.6 I received adequate training on my current position

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.7 Does Hulamin use the performance measurement system to compensate/reward all its employees?

Strongly agree	Agree	Neutral	Strongly degree	Disagree

2.8 Hulamin is the best employer

Strongly agree	Agree	Neutral	Strongly degree	Disagree

3 Customer Perspectives

3.1 I know my internal customer

Strongly agree	Agree	Neutral	Strongly degree	Disagree

3.2 I know my external customers

Strongly agree	Agree	Neutral	Strongly degree	Disagree

3.3 Hulamin is a customer focused organisation

Strongly agree	Agree	Neutral	Strongly degree	Disagree

3.4 I understand customer requirements

Strongly agree	Agree	Neutral	Strongly degree	Disagree

3.5 My performance is measured based on measures customer satisfaction

Strongly agree	Agree	Neutral	Strongly degree	Disagree

4. Internal Business Processes

4.1 My department processes are measured and are monitored

Strongly agree	Agree	Neutral	Strongly degree	Disagree

4.2 Deviations from processes are reported in my department

Strongly agree	Agree	Neutral	Strongly degree	Disagree

4.3 I understand process improvement initiatives

Strongly agree	Agree	Neutral	Strongly degree	Disagree

5. Financial perspectives

5.1 Business financial performance is communicated to all employees by management

Strongly agree	Agree	Neutral	Strongly degree	Disagree

5.2 Our department ‘s budgeting system is linked to the performance measurement system

Strongly agree	Agree	Neutral	Strongly degree	Disagree

5.3 Cost savings initiatives are part evaluated during performance assessment

Strongly agree	Agree	Neutral	Strongly degree	Disagree

APPENDIX F: Ethical Clearance Certificate

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

08 December 2020

Miss Mandisa Precious Mgabhi (208505214)
School Of Man Info Tech &Gov
Pietermaritzburg Campus

Dear Miss Mgabhi,

Protocol reference number: HSSREC/00002187/2020
Project title: Performance evaluation of a South African aluminium manufacturing company based in Pietermaritzburg: The Balanced Score Card Approach
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 17 November 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted FULL APPROVAL on the following condition:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 08 December 2021.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 8350/4557/3587 **Email:** hssrec@ukzn.ac.za **Website:** http://research.ukzn.ac.za/Research-Ethics
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville