Performance Measurement and the Reward System of Line Managers in Singapore: Challenges and Changes

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Abstract

Managers are key drivers to the success of an organisation and a reliable performance measurement and reward system is necessary to evaluate the performance of each of the managers. The appropriate performance measures and rewards are motivational tools that will guide them towards the goals of the organisation. These may lead them to be more innovative and satisfied managers who are valuable to their organisations. They may also inspire the other employees in the organisation to work harder (Anthony et al 2014).

The volatile, uncertain, complex and ambiguous (VUCA) environment contributes to the difficulty in setting suitable performance measures and rewards to evaluate and reward managers effectively. The system must influence the managers' behaviour as it is strongly connected to successful business outcomes such as innovation, productivity, and profitability (Roe 2019) and enable managers 'to seize opportunities and react quickly' (Bourne 2021, p. 7314) to changes in the VUCA environment.

This research examined the performance measures and rewards used to evaluate and reward line managers in Singapore. The mixed method approach was adopted with in-depth interviews which provided rich insights to the system and supported by the online cross-sectional questionnaire survey that was used to measure and examine the performance measurement and rewards systems of line managers working in Singapore.

The research found half of the Singapore line managers surveyed were neither satisfied nor dissatisfied with the performance measurement and reward system, 36% were satisfied, 3% very satisfied and 10% dissatisfied. 47% of those surveyed were found with performance measures that remained unchanged even though the operating landscape had changed. When

changes were made to the performance measures to adapt to changes in the operating environment, the line managers surveyed were 10.6% more satisfied with the performance measurement system.

The performance measures that found to be more likely to be effective to motivate managers were profits, process improvements, projects on time and on budget, revenue, return on investment and economic value added are more likely to be effective to motivate managers, while performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas, new products and costs are less likely to be effective to motivate the managers. It was found that there were few performance measures and rewards for creativity, innovation and for taking on risks in the organisations surveyed.

The main contribution from this research is the ‘Adaptive Key Performance Measurement Model’ (AKPM) to improve the performance measurement system in the challenging and changing environment. The model includes the ‘Adaptive Key Performance Indicators’ (AKPIs) that include the ‘Adaptive Budget’ and other AKPIs that measure creativity, innovation, risk taking and adaptability to changes. The objective is to make the performance measurement system more relevant and effective so that managers are motivated to perform better to meet the challenges in the VUCA environment.

The research concluded with evidence that not enough had been done to keep the performance measurement and reward systems up to date to motivate managers to meet the challenges and changes in the volatile, uncertain, complex and ambiguous (VUCA) environment. It requires the AKPM model, a proactive model to motivate managers to take on new opportunities together with the risks, innovate and adapt to the VUCA environment. The performance measurement system is recommended to be named the ‘Strategic Adaptive Performance Measurement System’ (SAPMS).

Keywords: Performance measures, rewards, adaptability, motivation, and satisfaction.

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Should there be any errors or any other faults in this study, they are my sole responsibility.

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List of Abbreviations and Acronyms

AB	Adaptive budget
AKPI	Adaptive Key Performance Indicator
AKPM	Adaptive Key Performance Measurement
BSC	Balanced Scorecard
CIPD	The Chartered Institute of Personnel and Development
EVA	Economic Value Added
F	Financial Measures
KPI	Key Performance Indicators
LT	Long-term
M	Monetary
NF	Non- Financial Measures
NM	Non- Monetary
PM	Performance Management
RI	Residual Income
ROI	Return on Investment
SAPMS	Strategic Adaptive Performance Measurement System
SHRI	Singapore Human Resource Institute

SINGTEL Singapore Telecommunications Limited (Singapore listed company)

VUCA Volatile, Uncertain, Complex and Ambiguous

Note that in this thesis: ‘Managers’ refer to line managers.

Chapter 1 Introduction

Performance Measurement and the Reward System of Line Managers in Singapore: Challenges and Changes

1.1 Introduction

The performance of managers are key drivers to the survival and success of an organisation. In the current volatile, uncertain, complex and ambiguous (VUCA) environment, managers must be motivated to perform and adapt well to the challenges and changes, to make a difference to the success of their organisations. It is important that the performance measurement and reward system should be kept relevant, adaptable and effective. Companies do require a 'good system of measurement to track progress against key goals' (Kenny 2015).

An effective performance measurement system should have appropriate performance measures and the right incentives, to motivate managers to achieve them. Keegan et al (1989, p. 45) modified Descartes well-known philosophical statement to "I am as I am measured". What is being measured, signals to the managers what organisations want them to focus on, that is, to meet the organisational goals. This requires a good and up to date system of measuring the managers' performance and rewarding them. When organisations set the right performance measures and provide the right type of rewards and incentives, they are likely to motivate managers to do their best to reach the goals and objectives of their individual organisations.

Zimmerman (2017) states that a poor choice of performance measures can derail efforts to achieve organisational goals as performance measures were extremely important. As rewards were mostly based on these measures, employees were motivated to act to influence the performance measures.

The Chartered Institute of Personnel and Development (CIPD, 2017) advised that it is necessary to have an effective means of measuring performance for the performance to be rewarded.

Managers are appraised based on a set of performance measures and these measures influences the behavior of the managers. The measures should be openly and clearly communicated to them, so that they know what is expected of them. The objectives of these performance measures are to encourage behavior that are congruent to the organisational's goals.

Managers are most likely to be concerned about the performance measures or targets they must meet. This also includes the types of incentives and rewards that they may be eligible for. Drury (2015, p. 326) added that 'the way that the performance of a manager is measured is likely to have a profound effect on the decisions he or she will make. There is a danger that, because of the way performance is measured, a manager may be motivated to make the wrong decision'. Should the organisation include too many performances measures in the system, managers would focus on those that are easier to achieve to obtain the best outcome for themselves and ignore the other performance measures.

Merchant and Van der Stede (2012, p. 34) felt that 'most people prefer to be given a specific target to shoot for rather than merely given vague statements like 'do your best' or 'work at a reasonable pace' and pointed out that 'performance targets allow employees to assess their performance' and 'failure to achieve the targets signals a need for improvement'.

Organisations today, face many challenges as they operate in a volatile, uncertain, complex and ambiguous (VUCA) environment and managers need to make the right decisions to adapt to the fluidity of times. ‘The highly volatile marketplace has forced businesses to respond rapidly to new opportunities’ (Satzinger, Jackson & Burd 2009, p. 671) and managers must be flexible, adaptable or agile to meet these challenges and changes. These factors contribute to the necessity for organisations to review the performance measurement and reward system from time to time, to keep up with these challenges and changes.

Lawrence (2013) described the challenging and changing environment of today, as the VUCA environment. This ever-changing environment requires organisations to adapt and apply appropriate performance measures to evaluate and motivate the managers to meet the challenges in a ‘crazy world out there’ (Bennet & Lemoine 2014). Managers must be ‘equipped with not just competencies and skills but also the agility, dynamism and responsiveness they need to navigate through the VUCA landscape’ (SIM Global Education 2018, p. 1).

1.2 Line Manager’s Performance Measures and Reward

The line managers are the focus of this research. A line manager is a person who directly manages ‘other employees and the operations of a business while reporting to a higher-ranking manager’ and are ‘responsible for managing employees and resources to achieve specific function or organisational goals’ including ‘measuring individual and team metrics and performance against the targets and monitoring progress’ (Reh 2020). The Chartered Institute of Personnel and Development (2017) added that ‘line managers have responsibility for directly managing individual employees or teams. In turn, they report to a higher level of management on the performance and well-being of the employees or teams they manage’.

‘Line managers are generally seen not only as parental style figures, but also as the ‘doers’ – the ones who make things happen within the organisation’ according to Jensen, McMullen and

Stark (2008, p. 5). They ‘lead in coaching, developing and setting goals for their employees’ (go2HR 2017). Most of all, line managers are ‘the people who understand performance’ (Likierman 2009). All these contribute to the justification on why they were chosen for this research. Line managers are the right kind of people within the organisation, who are able and are likely to be willing to spend time to provide their expert and critical view of the performance measurement and reward system in their organisations. They are also the insiders who know the system well and will be able to recommend improvements that are necessary to make the performance measurement and reward system more effective. These improvements were revealed in the findings of this research. Note that the description ‘managers’ are used in this research to refer to line managers.

According to Anthony, Hawkins and Merchant (2011, p. 693) ‘Line managers are the focal points in management control’ and added that ‘the significant decisions and control actions are the responsibility of the line managers, not the staff’ (Anthony et al 2011, p. 693)

1.3 Aims and Objectives of the Research

The objective of the research is to study the performance measures used to measure and reward line managers of organisations in Singapore, the challenges and changes and its effectiveness in measuring the performance of the line managers, not only from a human resource perspective but also the management accounting viewpoint.

Martin (2005) stated that managers are expected to deliver measurable results so there is a real need for organisations to adopt appropriate performance measures together with the right rewards to motivate managers towards a viable overall corporate direction. Better solutions to improve the performance measurement and reward system in the VUCA environment are required so that the performance of the managers is measured and monitored fairly and effectively to motivate them to better performance.

The aim of the research is to discover the types of performance measures that are effective so that organisations may know what are the measures that motivate their managers and that will improve the performance measurement and reward system.

The research uncovered new aspects of the performance measurement and reward system that added to existing knowledge, and these can be further developed to better understand the performance measures and rewards that motivates the managers to work harder for their organisations. It was the intention of this research to discover the performance measures and rewards that drive managers towards meeting their organisational goals more effectively and efficiently.

The findings from the research revealed the types of performance measures and reward that drive managers towards working more effectively and efficiently. The research also examined whether changes were made to the performance measures over time, the problems and

limitations of the performance evaluation, and whether the managers are receptive to the measures and the types of rewards.

The motivation of the research is to obtain insights to the challenges and changes of the performance measurement and reward system and whether they are effective to motivate the managers. It aims to discover the current performance measures and rewards that are used in the challenging business environment and their effectiveness, to improve the system.

The research aims to contribute to knowledge that will benefit organisations to enable them to:

- improve the performance measurement and reward system, and

- to adopt the performance measures and rewards that will be effective to motivate managers to work more efficiently towards the goals of the organisations they work in.

1.4 The Challenges of Measuring Performances

The measurement of staff performance is an area that is often debated and is often a bone of contention for managers in many organisations. The VUCA environment added to the difficulty of setting an effective performance measurement and reward system that allows it to adapt to the changes in the operating environment of organisations. Changes are required to enable the system to remain relevant and effective in the ever-changing business and working environment, to enable a more accurate measurement of the managers' performance and to reward them appropriately. It empowers managers to be innovative and take risks to improve the organisation, that ultimately lead to being motivated to do their best, to move their organisations forward in the challenging environment.

1.5 Gaps in the Performance Measurement System

There were many gaps in the performance measurement system. Tubb (2018) states that 'measurement goes wrong when it lacks a purpose' and Likierman (2009) added that line managers may be crippled by conflicts of interest in the process of meeting these performance targets. Donovan (n.d.) cautioned that 'wrong measures can cause havoc' and 'inappropriate measures will often lead managers to respond to situations incorrectly and continue to reinforce undesirable behavior'. There were many known cases of organisations using performance measures, which, in theory should work perfectly well, but in reality, they were ineffective and detrimental to the organisations This was due to the manipulation by managers and caused serious adverse financial consequences to the organisations.

Mongiello (2015) commented that the 2008 financial crisis that affected banks and the entire financial industry was likely to be caused by excessive risks taken by them. The high-level bank executives may have set their own performance targets and the related reward without considering the risks as they go about expanding their business aggressively exposing the banks to high levels of risk. In addition, ‘a significant part of those rewards was linked to targets that were easily achievable’ (ibid, p. 122).

Mongiello (2015) also quoted the example of a CEO (Nick Leeson) of a large United Kingdom bank (Barings Bank), who was entitled to enormous bonuses for achieving high performance targets, however, the decisions taken by this CEO to achieve these targets subsequently caused the bank’s collapse as the CEO went on to take high risk stakes that caused massive losses and led the more than a hundred-year-old bank to go bankrupt in 1995.

Barr (2017) commented that ‘using key performance indicators and measures actively prevents a high-performance culture because it directs staff attention to self-preservation, not to creativity, innovation and collaboration’. It points to the fact that the performance measurement system is not working well as ought to be. All these gaps in the performance measurement system motivated this research, which aims to examine and recommend improvements to close these gaps.

Organisations need to reinvent and adopt performance measures that accurately evaluate the managers’ performance and link the rewards to the results. The main research objectives are to discover what are the performance measures, rewards and incentives that are effective to motivate managers towards working more efficiently and effectively, and also to find out whether there are deficiencies within the system and how to overcome them. The research examined the performance measures, their effectiveness and also the ineffectiveness from the lived experience of the managers in the organisations that were studied. The purpose of the performance measures and reward is to enable the measuring of the performances, keep track of their efficiencies, help the managers to work towards beneficial outcomes or goals that the organisation desires and reward them appropriately.

In this research, the performance measurement of line managers was chosen, as line managers are ‘the people who understand performance’ but ‘who, of course, are crippled by conflicts of interest’ (Likierman 2009, p. 8). The gaps were many. There were instances of organisations using performance measures, which are supposed to work well however, they do not work. ‘A poor choice of performance measures can lead to conflicts within the organisation and derail efforts to achieve organisational goals’ (Zimmerman 2017, p. 14). In extreme cases, it can potentially cause the downfall of the whole organisation. Examples of where this has happened include Enron, WorldCom, Barings Bank and others. ‘Malevolently or not, employees will tend towards adopting ‘gaming tactics’ in order to achieve the target performance they have been set’ (Neely, Adams and Kennerly 2002, p. 9).

The performance measurement and rewards must have been flawed as the ‘financial sector workers are still being paid inexplicably large amounts of money and incentivized to behave inappropriately’ (Cottle 2013). The financial performance measures ‘such as profit, residual income and economic value-added serve to focus managers’ minds on the most important factors under their control, but they can also encourage dysfunctional behavior’ (Sims 2014).

Martin (2005, p.16) advocated that today’s organisation must establish tough management moves linked to strategy and managers must individually and collectively produce clearly demonstrable results that validate the vision and demonstrate that the overall corporate direction is viable. Performance goals must be set and the selection of the appropriate performance measurement methods used to measure and report the performances and link rewards to the results must be carefully made.

Business strategies need to be changed to adapt with the changing business landscape and it is imperative that the performance measurement system likewise needs some overhaul to be effective in evaluating the performances of the managers. It must also be aligned to the reward system so as to make those strategies work well. An out-of-date performance measurement system that is not in line with the current business strategies will cause managers to continue with the status quo: on how they are evaluated and rewarded. This may cause the important new strategies not to work as well as intended.

Neely (1999, p. 206) lamented that managers suffer from a performance measurement overload as we often ‘measure everything that walks and moves, but nothing that matters.’ If inappropriate performance measures were applied to evaluate and reward managers, it may incentivize the wrong actions.

There has been always a problem with managers looking to fulfil the short-term targets and there were many measurements used to measure performances. Turban, Sharda, Delen & King (2011, p. 119) highlighted that that the performance measurement system that was in operation currently, was not only plagued by financial myopia but was also caused by measurement overload and measurement obliquity which contributed to the major problems confronting the current crop of systems.

Turban et al (2011) concluded that there were just too many performance measures and provided the hypothetical case of driving a car with two hundred dials on the dashboard. The overload of performance measures causes managers, who are mere human beings, great difficulty in keeping track of all of them and he envisaged that it is highly likely that managers may put aside some or most of them and concentrate on a handful of the more important performance measures only. Moreover, he lamented that ‘this sort of overload is exacerbated by the fact that companies rarely retire the measures they collect.’ (Turban et al 2009, p. 119).

He mentioned that there is also a problem of 'obliquity' that comes about when many performance measures, whether financial or non-financial, such as the earnings per share, return on equity, profitability, market share, and customer satisfaction were being tracked. However, the management lacks direct control for it to be effective and even though plans do change, and opportunities and problems come and go with increasing frequency, there was little effort made to determine whether the list of performance measures being tracked were still applicable in the current situation.

The research looked at these problems to find out what would make an effective performance measurement and reward system that motivates managers to work harder for their organisation.

1.6 Research Questions

The central research question is:

What are the challenges and changes to the performance measurement and reward system used in organisations to effectively motivate line managers?

The sub- questions that arise on these issues are:

1) What are the performance measures that are effective in motivating managers?
2) How satisfied are managers with the performance measurement and reward system?
3) What changes were made to the performance measurement and reward system?
4) What are the challenges in the performance measurement and reward system?

1.7 Significance of the Study

The study examines the performance measurement and reward system of organisations that is used to evaluate and reward the line managers. It is important for organisations to set the right performance measurement policies to adapt to the challenging and changing environment. Managers who are in the forefront of the organisations, should be fairly evaluated for their performance and rewarded for their effort, so that they may be motivated to contribute well to the success of the organisation. The following are the significance of the research:

1. To motivate the managers to meet the overall goals of the organisation by setting the appropriate performance measures.
2. To improve the performance measures so that the managers may be motivated to adapt to the VUCA environment.
3. To adopt performance measures and reward that are effective to increase the satisfaction level of the managers so that they are motivated to work harder.
4. This research provides empirical evidence to enhance the performance measurement and reward system of organisations and provide recommendations on what measures and rewards are effective to motivate the managers to perform better and adapt to the challenges and changes of the VUCA environment.

1.8 Contributions from the Research

The research into the performance measurement and reward system contributed to knowledge on the understanding of the performance measures and rewards that are effective in evaluating and influencing the performance of the line managers in Singapore. The volatile, uncertain, complex and ambiguous (VUCA) environment requires changes to improve the performance measurement system to enable managers to face the challenges in the changing landscape and to be able to adapt to these challenges and changes so as to be effective in motivating the managers to work smarter, harder and better.

The key contribution to the research is to recommend a ‘Strategic Adaptive Performance Measurement System’ (SAPMS) that includes the following:

(i) The ‘Adaptive Key Performance Measurement’ (AKPM) Model to the performance measurement systems that are necessary to meet the challenges and changes that are necessary to adapt to the volatile, uncertain, complex and ambiguous (VUCA) environment.

(ii) The AKPM model includes the ‘Adaptive Key Performance Indicators’ (AKPI) that are suitable to measure the performances of the line managers that are conducive to motivate them to perform better, to be receptive to the changes in the business environment and to step out of their comfort zone to embrace risks and make changes to bring the organisation to run at a higher level of efficiency. The performance measures must be tailored to the individual line managers and the organisations, and when they meet the targets, they will be recognized and rewarded. The overall performance measurement system of the organisation is kept up to date as a result.

(iii) The ‘Adaptive budget’ (AB), one of the Adaptive Key Performance Indicators’ (AKPI) of the AKPM model, to enable the managers the take up opportunities in the VUCA environment which benefit the organisation, even though these were not in the original budget.

(iv) Revise or replace the Bell Curve Forced Ranking of the line managers, with a merit-based system to identify and reward the performing managers using the AKPI.

Managers who do not meet the performance targets will be given a chance to improve through training and mentoring.

1.8.1 Details on the Research Contribution

The research contributes to knowledge on the performance measures and rewards that are effective to measure, reward and motivate line managers in Singapore. The findings of the research identify the performance measures and rewards that are more likely to be effective to motivate managers in Singapore are: profit, process improvements, projects on time and on budget, ROI / EVA and revenue, while the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs are less likely to be effective to motivate the managers. The results found that managers were more motivated by financial performance measures than non-financial measures.

The budget as a performance measure, was one of the measures that was found to be used in measuring the performance of the managers. The managers surveyed agreed that the budgets do drive them to meet the standards and targets set. They also declared that the budgets do help them to manage their departments, units or divisions better. However, it was found from the results in the logistic regression model (Table 4.17: Logistic Regression Model Output on Effectiveness of Meeting Budgets as a Performance Measure) that the budget used as a performance measure is less likely to be effective to motivate the managers. The reasons given by the managers are that the budget hindered them from taking up new opportunities that were not planned in the budget. As a result, the 'Adaptive budget' (AB) is proposed (refer to para.1.5 (iii)).

Another important contribution from the research is that the performance measures need to be changed to adapt to the VUCA environment. Most of the managers surveyed felt that the performance measures and reward system were not updated to keep up with the changes in the operating environment. They felt that the performance measurement and reward system had remained unchanged as there was inertia or a lack of knowledge and expertise on the suitable new performance measures and rewards to be used to adapt to the changes in the VUCA environment.

The research also found that the 'Bell Curve Forced Ranking' system of ranking the line managers' performance with the other line managers in the organisation, demotivates them. Most of the participants felt that it was not fair to evaluate and reward them in this way, as the system ranks all managers who worked in the same organisation, with some of them from different departments and with different responsibilities. According to most of the line managers surveyed, they felt the Bell Curve Forced Ranking system was unfair and biased. The participants felt the ranking did not reflect their true performance especially when compared to the other managers, as it was subjective. It depended on the personal judgement of their appraisers. A few of the managers surveyed were unhappy as they recall that they encountered some appraisers who rate their own line managers much higher than the managers in the other departments, to get their managers ranked near the top of the league, so that they and the departments they control are seen as performing better than all the others.

These findings contributed to the theories and added to the knowledge on the performance measures that are effective in measuring and rewarding managers and that are likely to help organisations improve the performance measurement and reward system.

1.8.2 Research Contribution to Practice

1.8.2.1 Adaptive Key Performance Measurement Model

The main contribution to practice is the ‘Adaptive Key Performance Measurement’ (AKPM) Model to measure the performance of managers to motivate them to adapt to the changes in the VUCA environment. It consists of the performance measures: the ‘Adaptive Key Performance Indicators’ (AKPI) with the ‘Adaptive Budget’ as one of the measures. The objective is to improve the performance measurement system, to keep up with the changes and challenges of the environment. It promotes change, adaptability to changes, creativity and innovation and to reward the managers to take on risks.

Organisations today do need managers who are able to respond in a timely manner, to changes in this VUCA environment, to take risks, be creative and innovative, to enable them to adapt and succeed in today’s challenging and changing environment. Adaptive performances are expected of the line managers to adapt to the rapidly changing work situation (Towler 2020). The recommendations from the Adaptive Key Performance Measurement Model are likely to motivate managers to improve their performance and will help organisations to survive and thrive in the VUCA environment.

1.8.2.2 Adaptive Budget

The ‘Adaptive Budget’ (AB) is an APKI performance measure in the AKPM model that improves on the current Budget measure. It is a supplementary budget that sets aside funds specially for managers to promote creativity and innovation and encourage them to take on calculated but not reckless risks, on any new opportunities that were not in the original plan and to make changes to adapt to the VUCA environment. The flexibility of this model allows line managers to be more willing to take on new opportunities that benefits the organisation, without being restricted by the lack of funds that was not in the original plan, which is the master budget. The line managers must be adequately rewarded when the new innovative ventures are successful and advanced the interests of the organisation.

The new AKPM model is likely to motivate line managers to take the initiative to make changes, be creative, innovative, take on risks and take up new opportunities. It encourages the entrepreneurship, the organisation benefits when goals were met, and the managers are rewarded. This AKPM model is intended to overcome the challenges and changes in the VUCA environment. The result is a win-win situation for both the managers and the organisation.

1.8.2.3 Bell Curve Forced Ranking

The research had found that there is need for the Bell curve forced ranking system of evaluating and rewarding managers to be reformed or replaced. The majority of the Singapore line managers surveyed felt that the Bell curve forced ranking system, where the individual managers' performances were ranked based on the scores from a set of performance measures with their peers, was not a fair system of evaluating and rewarding employees and it was detrimental to the morale and performance of the affected managers. As quoted from one of the managers during the research interview, the Bell curve forced ranking system 'does not truly reflect the staff worth and contribution'. The same manager added that the system had been applied in his organisation for as long as he had been there, and he felt that the organisation he worked for, just could not find a better alternative, so, even though the organisations knew it was not a good performance measurement system, there are no better alternatives, so he was resigned to it and have to live with it. The other participants from the questionnaire survey whose performances were ranked based on the Bell curve forced ranking system had expressed almost similar views.

The result from these findings lead to the recommendation for the Bell curve forced ranking system to be replaced by a more transparent merit-based system, with the criterion of the performance measurement and reward more specific. In this new model, recommendations were made for the adaptive key performance indicators to be included. For example, additional performance rating points for new ideas, process improvements, other creative and innovative measures that benefits the organisation are proposed to be in the criterion. This way, the managers who contributed positively will be recognized and rewarded. However, those who do not meet the standards should be given opportunities to improve their performance through training and development, or even mentoring or coaching. Timely feedback needs to be provided. These recommendations were made by the respondents from the interviews and questionnaire survey.

1.9 The Organisation of the Thesis

This research examined the challenges and changes of the performance measurement and reward system. It researched into the types of performance measures, rewards and incentives, the changes and whether they are effective to measure and reward the line managers in Singapore.

The organisation of this thesis is guided by the approaches as recommended by Creswell (2009) and consists of seven chapters as follows:

Chapter One provides an introduction on the rationale for the research on the performance measurement and reward system in Singapore, the research problem, research questions and the contributions to the research. It provides an introduction to the research and outlines the aim and objectives of the study, the significance, scope and the organisation of the thesis.

Chapter Two reviews the literature on management control and motivation theories, and other human resource practitioners' views on the performance measurement and reward system.

Chapter Three presents the research methodology and design with the justification why the mixed method employed, including the justification for using the survey method with the online questionnaire survey and in-depth interview. A discussion on the development of the questionnaire, pilot survey, the sampling method and the response rate. In addition, the details of the in-depth interview method are discussed. It will include details on how the data is edited, coded, screened and analysed.

Chapter Four is on Analysis and Interpretation. It presents the analysis of the results in the research.

Chapter Five is the discussion chapter. It discusses the results and findings of the research.

Chapter Six consists of the conclusion of the research including a summary of the results, the limitations of the research, recommendations and also recommendations for future research.

1.10 Summary

The rationale and basis of this research had been explained in this chapter. The chapter introduced and addressed the research problem, research questions and the hypotheses. It provides an outline of the methodology, definition of the key terms and presented the limitations of the thesis and its structure. On these foundations, the thesis can proceed with a detailed description of the research. The next chapter of this thesis reviews the literature related to the research problem theories.

Chapter 2 Literature Review

2.1 Introduction

This chapter provides a literature review of the various performance measures used to evaluate the performance of managers and the different types of rewards. It includes the theoretical framework drawn from motivational, behavioural and results control theories in the research on the performance measures and reward system. The performance measures both financial and non-financial measures by the various existing literature will be discussed and it includes the study of the various financial and non-financial performance measures currently in use. It also includes the literature on rewards and incentives describing how the intrinsic and extrinsic rewards are aligned to performance measures and how they are linked to performance measurement system. Existing theories on how the rewards motivate managers to perform better is included. This chapter includes the literature review on the motivational and behavioural effects on the managers and also the challenges, changes and effects of the performance measures and its gaps.

2.2 Performance Measurement

‘What gets measured gets done’ and ‘What you measure is what you get’ (Francke 2014, p. 120) are common management axioms and they originate from guru, Peter Drucker, and many others. In today’s VUCA environment: the volatility, uncertainty, complexity and ambiguity are causing upheavals to the operating environment in the technological, social, economic and even the political scene. Managers are affected by all these challenges and changes and must adapt to these changes to perform well, however, the question is, have the performance measurement and reward system been changed to keep up with these challenges to motivate the managers?

This research aimed at looking into the current performance measurement and reward system to find out whether the performance measures and rewards are relevant and effective to motivate the managers today and the changes required.

Neely, Gregory and Platts (2005, p. 1229) defined performance measurement as 'the process of quantifying the efficiency and effectiveness of action'. He went on to define performance measure as 'a metric used to quantify the efficiency and/or effectiveness of an action' and specified that the performance measurement system is therefore: 'the set of metrics used to quantify both the efficiency and effectiveness of actions'.

Organisations require a good and reliable performance measurement system to enable them to evaluate the performances of managers effectively and to reward them appropriately. The performance measures are indicators of how well the managers and their subunits are managed and the linkage of the rewards to the performance helps motivate managers. (Horngren, Datar, Foster, Rajan, Ittner, Wynder, Magurie & Tan 2011, p. 12).

According to ACCA Global (2016), a good performance measure should provide incentives to the divisional manager to make decisions that are in the best interests of the overall company (goal congruence), include factors for which the manager (division) can be held accountable and recognise the long-term objectives as well as short-term objectives of the organisation.

'Performance measures serve a critical role in attaining goals' (Garrison, Noreen, Brewer, Cheng & Yuen, 2012, p. 550) and managers must understand clearly their role in meeting the firm's goals and how they are measured and rewarded. Becker, Huselid & Ulrich (2001, p. 21) believe that 'effective measurement systems serve two important purposes. Firstly, they guide decision making throughout the organisation and secondly, they serve as a basis to evaluating performance. They further prescribed three ways to the measurement approach:

First, to provide managers with a clear, consistent, and shared views of their role to value creation,

Second, to force managers to focus on a vital few performance measure that really make a difference, and

Third, to express these vital few measures in terms that the managers of these organisations understand and value them.

The Chartered Institute of Management Accountants (CIMA) (2008, p. 4) added that 'effective performance measurement is key in ensuring that an organisation's strategy is successfully implemented. It is about monitoring an organisation's effectiveness in fulfilling its own predetermined goals or stakeholder requirements'.

The way performance is measured is important as it either motivate managers to perform effectively and efficiently or it 'might actually encourage employees to take actions that are detrimental to the organisation,' as they 'concentrate on improving the performance measures even when they are aware that their actions are not in the firm's best interests' (Drury 2015, p. 407). Neely, Gregory & Platts (2005, p. 1228) provideded in an example that *'Effectiveness refers to the extent to which customer requirements are met, while efficiency is a measure of how economically the firm's resources are utilized when providing a given level of customer satisfaction'*.

Organisations that measure manager's performances based mainly on accounting profits, may inevitably motivate managers to maximize profits at all costs in the short-term, however, these measures may be detrimental to the survival of the organisations in the long term, as managers may aggressively drive out costs to improve profitability and may even cut off vital expenses such as research and development that will have long term effects that affect the future viability and survival of the organisation.

‘*A divisional manager whose current return on investment (ROI) is 30 per cent might reject a project that yields an ROI of 25 per cent because it will lower the division’s average ROI, even though the project has a positive Net Present Value (NPV), and acceptance is in the best interests of the organisation*’ (Drury 2015, p. 407)

These management decisions are likely to come about because the performance measurement is only focused on ROI and are not appropriate. It motivates managers to make decisions that benefit themselves as they are rewarded for the profits, they make in the short run but do not benefit the organisation in the long run. Drury (2015) recommended that a good management control system should include output or results controls involving the establishment of performance measures that minimize undesirable behavior, set appropriate performance targets, measurement of the performances and providing rewards or punishment.

Satzinger (2009) recommended that managers need to be agile to adapt to the changes in the environment their organisation operates and so it is imperative that suitable performance measurements are adopted to measure the effectiveness and efficiency of managers in the ever-changing environment. ‘Adaptability is a substantial component of the job performance domain’(Stokes, Schneider & Lyons 2009, p. 213). The human factor involvement is an important and critical component in any human performance measurement technology and intervention so, the individual, that is the managers, must not be overlooked (Gerson & Gerson 2006).

Harman (2012) advocated that ‘a well-designed and well-executed performance measurement process can drive managers towards the strategic objectives of an organisation and provide a competitive edge.’ Eccles (1991) mentioned that every company will have to redesign how it measures its business, so performance measurements must be continuously updated to keep pace with the dynamic and changing environment, to stay relevant and effective.

Walker and Sorkin (2007, p. 51) stated that it would be very difficult to hit a target that cannot be seen and added that the clarity of the performance targets must be made clear to managers. The targets set must be attainable. Organisations are required to set realistic and challenging performance goals and targets and it is important, as the setting of lower or easy targets can lead to self-fulfilling prophecies, and as such, organisations must develop the right targets and put in place practices that will enable people to meet or exceed those targets (Charan 2009, p. 55) and of course, to reward them appropriately.

Performance measurements such as meeting the budget, should be challenging, that is, it must be tight but achievable. Horngren et al (2011, p. 421) prescribed that ‘budgets enable a company’s managers to measure the actual performance against predicted performance’ and Garrison, Noreen and Brewer (2010, p. 373), added that competent managers ‘exerting a reasonable effort’ should be able to meet these budget targets and ‘bonuses based on meeting and exceeding budgets are often a key element of management compensation.’ However, Horngren et al (2011) cautioned that evaluating performances relative only to a budget creates an incentive for managers to set a target that is relatively easy to achieve and so, the budget targets must be made more challenging by using not only the company as a benchmark but consider those of their peers as well, when setting those targets. However, Coombs and Johnson (2015) criticized that the budgets with a fixed plan were made long before the current period and resources were planned for and allocated at that time, so it slows down and impedes the managers from being able to respond expeditiously to changes in today's business environment. Performance measurements ‘involve either objective or subjective performance measures or combination of both’ according to Leow (2010, p. 1). He stated that objective criteria may include explicit, verifiable measures such as pay for performance while the subjective criteria may be focused on multiple hard-to-measure factors. Examples of objective measures include the meeting budgets, schedules and affirmative action hiring targets while the examples of subjective performance measurements may include a variety of factors such as team spirit and getting along with peers (Leow 2010, p. 1).

Organisations need to identify the right mix of factors to include in the performance measurement system and it is important that these factors are measured and reported. (Stivers, n.d). The carrot and stick approach are often used, that is, if targeted performance measures are attained, they are rewarded and are penalised if they do not.

According to Kennerley & Neely (2003, p. 220), a 'reflection on the set of performance measures is intended to identify whether the right things are being measured' and it 'should help the organisation to reflect on whether the set of performance measures is balanced; aligned to strategies, philosophies, and incentive schemes; comprehensive and consistent.'

Becker, Huselid & Ulrich (2001, pp. 110-111) advocated that 'A sound performance measurement system improves HR decision-making by helping to focus on those aspects of the organisation that create value' and added that 'a well-thought-out measurement system thus acts as both a guide and a benchmark for evaluating HR's contribution to strategy implementation.'

Becker et al (2001, p. 110) also mentioned that the performance measurement system 'provides a valid and systematic justification for resource-allocation decisions' and in the process, it provides feedback that can be used to evaluate current HR strategy and predict the impact of future decisions'.

Finley (2018) recommended that 'objective performance measures are the fairest way forward'. He asked whether 'bankers lack the skill or the motivation to measure objectively the contribution individuals make to shareholder value'.

Ryan (2015) commented on the ‘Performance Prism’ theory by Neely and Adams, that was cited as ‘a second-generation performance management framework’. He summarised that the three major reasons why a new framework was needed to replace first generation models of performance measurements, such as the balanced scorecard and the performance pyramid was that firstly, it was no longer acceptable or even feasible for organisations to focus solely on the needs of one or two stakeholder groups as most performance measurement frameworks focus on the needs of the owners, and possibly the customers of an organisation. They felt that it was important that other stakeholders such as employees and suppliers who are normally left out should be considered. This means that managers who are employees should be considered.

Secondly, ‘*most performance measurement frameworks ignore the changes that must be made to the organisation's strategies, processes and capabilities in order to meet the needs of stakeholders' and that mean it is assumed implicitly that if the right things are measured, the rest will fall into place automatically and this is often not the case'* (Ryan 2015). This means that the performance measures to evaluate managers need to be changed to meet the changes in these areas.

Thirdly. Ryan (2015) added that managers must contribute to the organisation. He added that ‘there is a ‘quid pro quo’ between the organisation and its stakeholders – stakeholders expect something from the organisation – but the organisation also wants something in return’. Thus, the purpose of the performance measurement is to consider whether stakeholders such as the managers, deliver what their organisations expected from them.

Ryan (2015) referred to Neely and Adams’ research that many organisations ‘were obsessed with measurement. The management were measuring too many things, in the belief that by doing so they must be controlling their organisations well’. He mentioned that the increase in measurement is an issue as the management start to ‘micro-manage their organisations and lose sight of the strategic side of management'. It is costly and time consuming, with questionable benefits that the measurement brings.

Eccles (1991) commented that every company will have to redesign how it measures its performances in the years to come. He foresaw the requirement for performance measures to be continuously updated to keep up with the dynamic and changing environment. The performance measures have to be continually redesigned and kept up to date, in order to be relevant.

Managers are motivated to work towards achieving the targets that are set and when these are achieved, appropriate recognition and rewards should be given to acknowledge their success. Managers who are satisfied are highly likely to be motivated to contribute positively to their organisations, as 'the more they feel like winners, the higher their self-esteem and their happiness about their work' (Tracy 2013, p. 25).

In Singapore, the Singapore Exchange listing rules, practice note 7.6 Sustainability Reporting Guide (Singapore Exchange Limited 2022), requires listed companies on the mainboard of the Singapore Stock Exchange, must have a performance measurement system that links performance measurement to performance incentives so that sustainability risks and opportunities are mitigated. It states:

> *An effective policy and operational response to sustainability risks and opportunities requires performance measurement and its linkage to performance incentives. Having a good performance measurement system allows the issuer to benchmark performance against stated objectives and facilitates comparison over time and across entities. Clearly linking sustainability risks and opportunities with strategy, other organisational risks, operational indicators, performance measures and performance incentives not only enhances understanding but provides an engine for improvement, innovation and accountability.*

(Singapore Exchange Limited 2022)

2.3 Theories on the Performance Measurement, Rewards and Motivation

The performance measurement and the reward system come under the ambit of the management control system (Merchant & Van der Stede 2012). It is in the area of results control, which is used in controlling the behaviour of employees as the performance measures used to evaluate employees. The management guru Peter Drucker & many others advocated that when the performance of employees is measured, they will get the job done to what is measured. This research was carried out to find if this actually happens.

A performance measure is defined as ‘a metric used to quantify the efficiency and/or effectiveness of an action’ (Neely, Gregory & Platts, 2005, p. 1229). It is a ‘specific measure of management accomplishment’ according to Horngren, Sundem, Stratton, Burgstahler & Schatzberg 2011, pp. 407-8). Hakala (2008) added that performance indicators should be assessed by some means in order to measure performance itself.

The research examined whether the performance measurement and reward system are effective to motivate managers to work towards the performance measures that they are evaluated upon and at the same time, whether the rewards are linked to these measures.

Robbins (cited in Langfield-Smith et al, 2018, p. 637) defines motivation as ‘the processes that account for an individual’s intensity, direction and persistence of effort towards attaining goals’.

The motivation theories are relevant in the study of the manager’s behavior in this research. McGregor (1960) Theory X and Theory Y are two contrasting theories of human motivation. Theory X assumes employees dislike work, avoid or shirk responsibility, ordinarily employ inefficient and wasteful methods, need to be coerced to perform and are motivated by money, status, rewards or punished with penalties for non-performance. This theory means that managers are motivated only by the performance measures or targets set and the rewards or punishment that goes with it. On the other side, Theory Y assumes employees are self-motivated, as they like work, are responsible and exercise self-direction without the need of supervision, rewards or punishments and these are managers who are willing to go the extra mile and will be motivated to meet the performance targets regardless the rewards or penalties.

Maslow's theory of human motivation describes the motivational effects on the behaviour of the managers. The Hierarchy of Needs Theory developed by Maslow (1943, 1954) explained the hierarchy of needs where different levels of needs influence the behavior of people. The needs include the following five main needs in the following order:

(i) Physiological needs (example: food, water, shelter)

(ii) Safety and security needs (example: security, stability, freedom from fear)

(iii) Social (sense of belonging) needs (example: friends, family, affiliation)

(iv) Self-esteem needs (example: achievement, mastery, respect, recognition)

(v) Self-actualisation needs (example: aspiration, fulfillment, creativity)

In each of the needs from the lowest basic level starting with the physiological needs, once it is satisfied it ceases to motivate the individual at that level and that individual focus his attention on the next higher level: the safety needs and so on. However, an individual may not necessarily attain the self-actualisation phase. These affect the reception of the managers to the performance measures and the rewards that is awarded to them when they meet the performance targets set.

According to Kremer and Hammond (2013), 'managers use Maslow's hierarchy to identify the needs of their staff and help them feel fulfilled, whether it's by giving them a pet project, a fancy job title or flexible working arrangements, so they can pursue their interests outside the workplace'.

Alderfer (1972) condensed these Maslow's five hierarchy of needs into three categories: Existence, Relatedness and Growth or the 'ERG' theory. Existence consists of the physiological material and safety needs, relatedness includes interpersonal safety, esteem and love needs while growth includes self-confirmed esteem and self-actualisation needs (Talib 2002). The 'elements of the hierarchy remains and 'ERG theory' held that human beings need to be satisfied in all three areas of the ERG if that's not possible then their energies are redoubled in a lower category. So, for example, if it is impossible to get a promotion, an employee might talk more to colleagues and get more out of the social side of work' (Kremer and Hammond 2013). Depending on their level of needs, managers may work harder to meet the targets of the performance measures if they feel that the performance measures are reasonable and worth making the effort in meeting those measures set by the organisations they work in, so as to obtain the reward or incentives.

The Positive Accounting Theory developed by Jensen and Meckling (1976) and Watts and Zimmerman (1978) assumed that individuals are self-interested and opportunistic and are prone to making management decisions in the organisations they worked for, that will lead to an increase in their own personal wealth, that is, they are principally motivated by self-interest (Deegan and Unerman 2011). The theory literally assume that a rational manager would be opportunistic, with self-interest a core belief and the manager is motivated to perform to get the most out of the performance measurement and reward system. However, Gray et al (1996) went on to reject the central assumption of Positive Accounting Theory of self-interest, arguing that it portrays 'a morally bankrupt view of the world' although he admitted that it did provide 'some useful insights' that there could be some instances where managers are self-interested and opportunistic, however, not every manager behaves that way.

'Jensen and Meckling (2000) referred to Maslow's model as the psychological model of human behavior and is a step up of the revolutionary ladder from the sociological model' (cited in

Talib 2002, p. 41). This theory can be related to behavior of managers, some are resourceful and take care of their own self-interests, so they may go strictly to meet the measurement they are evaluated on to benefit themselves, while others may be altruistic and may work in the best interests of their organisations.

The Motivation-Hygiene theory by Hertzberg (1968) addresses how far job satisfaction affects motivation. In this theory, Langfield-Smith, Smith, Andon, Hilton & Thorne (2018) explained that hygiene factors and motivators are the two factors that affect employee behavior. Hygiene factors are 'factors that provide the necessary setting for motivation but do not themselves motivate employees' (Langfield-Smith et al 2018, p. 638). Examples of hygiene factors are: wage levels, working conditions, job security, organisation policies, supervision and relationships with colleagues. However, these factors even though when adequate, will not make the employees satisfied nor dissatisfied. Motivators on the other hand, are factors that 'relate to job content or to outcomes of the job that will encourage motivation' (ibid). Examples of these are: recognition, advancement, nature of work, achievement, stimulating work, responsibility and opportunities for personal growth. 'These factors are said to be intrinsically rewarding' according to Langfield-Smith et al (2018, p. 638). The theory concludes that 'employees need a certain level of hygiene factors to prevent dissatisfaction, however, adding more of these factors will not result in motivation or even satisfaction and only the motivators can help in this area' (ibid, p. 638). There were critics who debunked this theory, however, the theory does 'highlight the fact that many people are not motivated just by increased pay and conditions - attention must be paid to their higher-order needs' (Langfield-Smith et al 2018, p. 638).

Another motivation theory, the Expectancy theory by Vroom (1964) assumes that 'employee motivation is a function of the strength of expectancy, instrumentality and valence' (Langfield-Smith et al 2018, p. 638). The Expectancy Theory suggests that expectancy is when individuals are motivated to perform when they perceive that the effort, he or she puts into a task will lead to a certain performance, that is, achieving the performance measure that is set to measure their performance. Instrumentality is the perception that when the individual achieves the performance, it will lead to the reward when the desired outcome is attained. Valence is when the 'degree to which the outcome satisfies the individual goals, and the attractiveness of the reward for that individual' (ibid, p. 638). The Expectancy theory suggests that it is the 'factors such as achievement, recognition and responsibility that are strong motivators' (Langfield-Smith et al 2018, p. 639).

Langfield-Smith et al (2018) states that the Expectancy theory helps managers to design and implement effective incentive schemes, however, it is dependent on the level of expectancy, instrumentality and valence. If the individuals perceive that their effort will lead to achieving the performance level they are measured by, which means, it has a high level of expectancy, and there is high instrumentality and valence, which is: the individuals perceive that the reward that they value will be provided when they achieve the targeted performance, then, it will motivate these individuals to perform.

Lloyd and Mertens (2018) sums up the expectancy theory model that motivation 'is based on an individual's belief that a certain effort will lead to a given performance (expectancy) and that performance will lead to attainment (instrumentality) of a desirable or undesirable (valence) reward'

There are differences when the Expectancy theory is compared to the Herzberg (1968) Motivation-Hygiene theory. From the literature review, the Expectancy theory suggests that individuals will be motivated when they perceived that the performance measures are achievable and will lead to the rewards they value, however, the Herzberg theory suggests that it is factors that relate to job content or to the outcomes of the job such as achievement, recognition and responsibility that are likely to motivate the individuals (Langfield-Smith et al 2018).

The Porter and Lawler Model of Motivation (1968) is another comprehensive theory of motivation that combines the various aspects of the other motivation theories and added more variables to the model. It added on to the Vroom's Expectancy model providing a wholistic approach to motivation with a number of variables. The multi-variate Porter and Lawler model explained the relationship that exists between job attitudes and job performance.

Figure 2.1 summarizes the Porter and Lawler model:

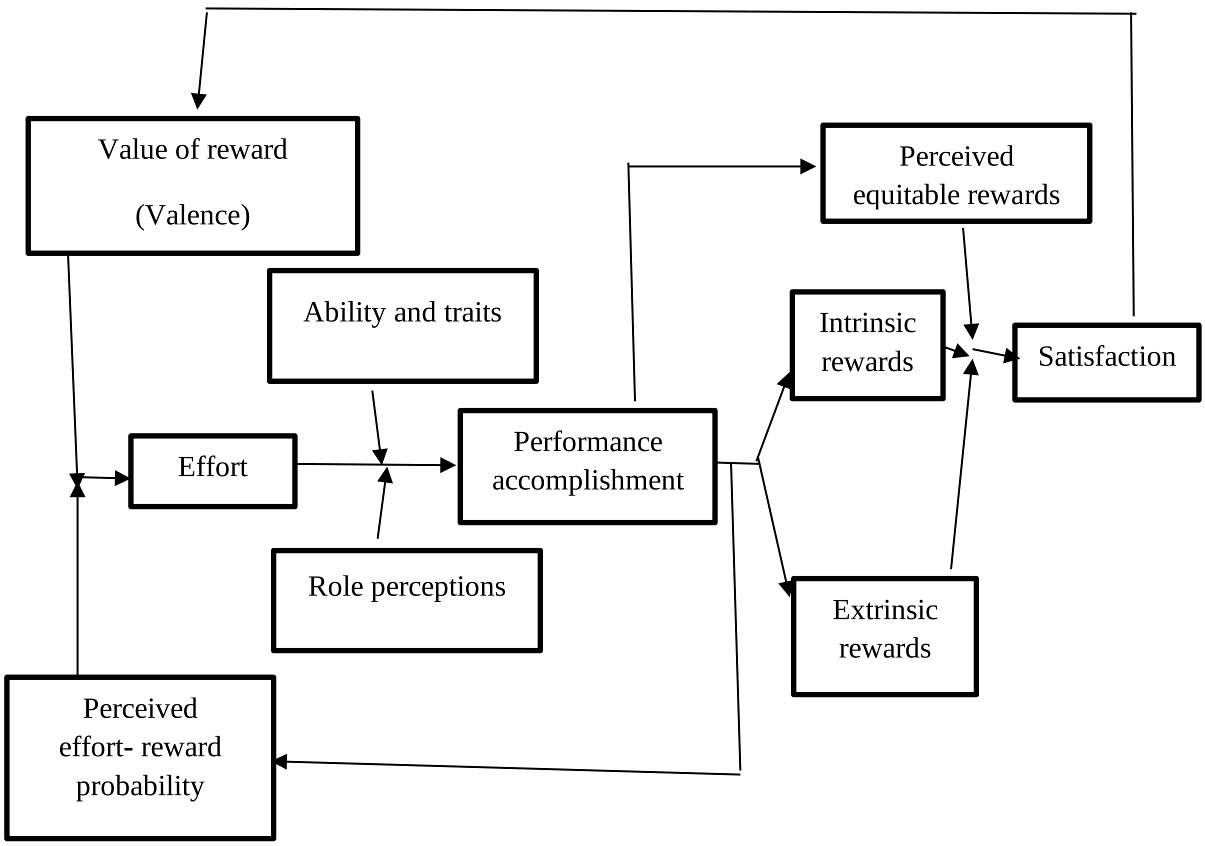

Figure 2.1: Porter and Lawler Model (1968)

The Porter and Lawler model (1968) is significantly different from the other motivation theories as it does not go with the traditional analysis of satisfaction and performance relationship. The justification for the model was that motivation is not a simple case of a cause-and-effect relationship but a complex phenomenon with many factors. The factors are effort, value of reward, perceived effort reward probability, performance, rewards, and satisfaction. These are factors that are relevant to this research.

The performance by the managers depends on the effort made by the manager. Effort is when the manager 'strives to carry out his responsibilities to achieve the goals of the organisation.' (Horngren et al 2015). Next is the value of reward, which refers to the incentives The reward must be attractive enough to the managers, otherwise, they are likely to lower their effort. The valence of the reward and the managers' perceived effort reward probability affects the level of effort made by the managers. The 'Perceived Effort Reward Probability' in the Porter and Lawler model refers to how managers may assess the probability of a certain level of effort that will lead to a desired level of performance and the possibility of that performance leading to certain kinds of rewards and such decision was made before doing the job.

The performance of managers will depend on the amount of effort they put in, their individual abilities and traits and their perception on their role as managers. The amount of effort will have an affect the expected level of performance. The abilities of the managers which include knowledge, skills, and intellectual capacity to perform the job. The traits of the managers that include endurance, perseverance and goal directedness are important factors. These abilities and traits moderate the effort- performance relationship.

Performance measures and targets are required as managers must know what is expected of them in terms of the level of performance. They should be aware of their responsibilities and have a clear idea of what is expected of them in their role as managers. Managers must be aware of the expectations of the organisation, so only those managers, who clearly understood their role and take ownership of their managerial responsibility, those who are accountable, and who possess the right qualities will meet the objectives set by their organisations, but that is if they do make an effort, and these will perform well.

The reward should be linked to performance, so when managers met the targeted performance levels, they should be rewarded with the type of reward that are attractive to them. There are two main types of reward: extrinsic and intrinsic reward. Extrinsic rewards are the external rewards given in monetary form, that is, money-related or it could be in non-monetary form such as recognition or praise. Intrinsic rewards, on the other hand, are rewards based on the manager feeling good about a job they have accomplished. It makes them feel good, with a sense of accomplishment and it boosts their self-esteem when they have met the performance targets.

It culminates in a sense of satisfaction which is the extrinsic and intrinsic reward award for the achievements by the manager. The result is an increase or decrease in satisfaction level of the manager. However, the degree of satisfaction depends on each of the managers. They are likely to compare the actual rewards with the perceived rewards they had envisaged. When the actual rewards meet or exceed what they perceived to be equitable rewards, the manager is likely to be satisfied but if the manager feels that the rewards are less than the equitable, they will be dissatisfied, and this may affect their motivation and effort in the future.

The Porter and Lawler model was said to be a good model that made significant contributions to the understanding of how to motivate managers and for a better understanding on the relationship between performance and satisfaction.

2.3.1 The VUCA Model

The VUCA model relates to the changing and challenging environment of today. It ‘identifies the internal and external conditions affecting organisations today’ (Bennet & Lemoine 2014, p. 6).

The VUCA acronym: “V” stands for volatility that means the nature, speed, volume, and magnitude of change that is not in a predictable pattern’. “U” stands for uncertainty, or the lack of predictability in issues and events, “C” stands for complexity and “A” stands for Ambiguity is the lack of clarity about the meaning of an event’ (Bennet & Lemoine 2014, p. 5).

‘The chaotic, turbulent, and rapidly changing business environment that has become the “new normal’(Bennet & Lemoine 2014, p. 3). It includes ‘financial turbulence, digitization, connectivity, trade liberalization’(ibid) and recently moving towards protectionism including signs of an impending US-Sino trade war, ‘global competition, and business model innovation’ (ibid) that almost every organisation including those in Singapore is going to be affected in some way or other.

2.4 Theoretical Framework of the Research

The theoretical framework of the research is as follows:

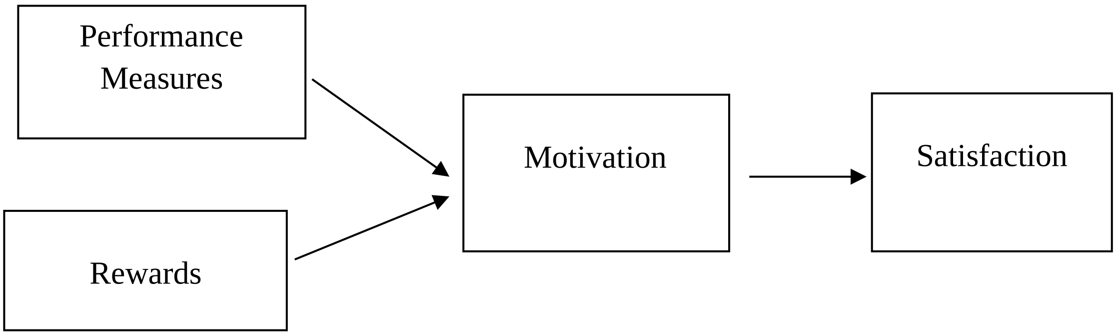

Figure 2.2: Theoretical Framework on the Study on the Performance Measurement and Reward System in Singapore

Figure 2.2 shows the theoretical framework of the research. The main constructs of the study are the performance measures, rewards, motivation and satisfaction of the line managers on the performance measurement system.

The primary objective of this thesis was to understand the effectiveness of the performance measures and rewards to motivate the performance and reward the line managers.

2.5 Types of Performance Measures

There are two main types of performance measures:

(i) Financial measures

(ii) Non-financial measures

Financial and non-financial measures are both used to evaluate the performance of managers and exclusive reliance on either measure is always too simplistic because each gives a different perspective on performance. (Horngren et al, 2011)

The balanced scorecard developed by Kaplan and Norton (1996a) is one of the tools that contain a diverse set of performance measures that includes financial and non-financial measures. It was developed to 'complement traditional financial measures of business unit performance' (Lipe and Salterio 2000, p. 283).

The balanced scorecard includes the balancing of a mix of financial and non-financial measures into four main perspectives:

(1) Financial.
(2) Customer,
(3) Internal business processes and
(4) Learning and growth.

It spans from financial performance, customer relations, internal business processes and the organisation learning and growth activities. This large set of measures is designed to capture the firm's desired business strategy. It includes drivers of performance in all areas important to the firm and is used to improve managerial decision making by aligning performance measures to the goals and strategies of the organisation and its business units (Lipe & Salterio 2000).

'Each business unit in the organisation develops its own BSC measures to reflect its goals and strategy. While some of these measures are likely to be common across all subsidiaries or units, other measures will be unique to each business unit' (Lipe and Salterio 2000, p. 284). This broadens the managers' attention to short and long-run performances and provides the framework to implementing an organisation's strategy. They advocate that the goal of the balanced scorecard improves the overall financial performance and non-financial measures serve as leading indicators for the hard-to-measure long-run financial goals. A mix of past, present and future performance measures are included.

In PhD research carried out in Australia by Aryani from Victoria University in 2009, it was found that 'diverse performance measures both in financial and non-financial performance measures' and 'the diversity of performance measures, either financial or non-financial, reflects the diversity of the divisions (business units)' and 'hence, performance measures applied in each division (business unit) may depend on the nature, characteristic and function of the division' and 'each division (business unit) develops unique measures that best capture their strategy' (Aryani 2009, pp. 215-6).

In the results of the 2009 research, divisional managers in Australia 'agreed that performance measures affected their motivation while appropriate performance measures positively influenced their performance.' and they also 'strongly agreed that appropriate performance measures mean they were more likely to try their best to reach the target being set for the performance measures' (Aryani 2009, p. 215).

2.5.1 Financial measures

Financial measures are common and tend to dominate all other forms of performance measurement used to evaluate and reward managers as revealed in the various publications that are discussed in the following paragraphs.

A financial metric is a standard of measurement' (Schwalbe, 2011, p. 295). According to Broderick (2011, p. 127), 'most leaders look at a host of financial metrics to track, measure, and manage the financial health of the business' and this view was supported by Langfield-Smith (2018, p. 680) who commented that 'ultimately, companies measure their performance in financial terms, as profitability is a critical measure of success from a shareholders' point of view'. Profitability measures or other yardsticks related to profitability are commonly used as the key performance measures. Profit or shareholder value is often used as a single measure of success as investors, fund managers and analyst focus intently on it (Kenny 2015). Burney and Swanson (2010, p. 167) mentioned that 'most organisations continue to place most, if not all, of the emphasis in their performance evaluations on financial outcomes.'

There are many financial performance measures used and some of the common measures are: operating income or earnings before interest and tax (EBIT), earnings per share (EPS), revenue growth, net profit margin or return on sales, return on equity (ROE), return on total assets (ROTA), return on investment (ROI) or return on capital employed (ROCE), residual income (RI) and economic value added (EVA®). In most cases, incentive compensation or pay-for-performance systems that provide monetary or extrinsic rewards are based on the results of these financial measures, so if they beat a benchmark performance level, they are rewarded (Atkinson et al 2004).

Palepu, Healy & Bernard (2000) advocated the use of mainly financial measures through the use of various financial measures used in ratio analyses to evaluate the effectiveness of the firm in the areas of operating management, investment management, financing strategy and even dividend policies. It started off with the financial performance measure of the return on equity (ROE), which they describe as 'a comprehensive indicator of a firm's performance because it provides an indication of how well managers are employing the funds invested by the firm's shareholders to generate returns' (Palepu et al 2000, p. 9-3). The use of the net profit margin or return on sales was recommended as the measure for assessing the efficiency of the organisation's operating management. Another measure that is recommended concurrently was the gross profit margin, which measures the efficiency of the procurement and production process, together with the price premium being one of the components of the gross profit margin.

A second driver of the company's return on equity, according to Palepu et al (2000) is the asset turnover. This performance indicator is used to evaluate the effectiveness of the firm's investment management and measures the effectiveness of its asset utilisation and management, looking at both the working capital management and management of long-term assets. The financial performance measures here include the accounts receivable turnover, inventory turnover, accounts payable turnover, operating working capital turnover for working capital management and the net long-term asset turnover and the property, plant and equipment turnover for the long-term asset management.

In the evaluation of financial management, the managers' efficiency in managing the short and long term debt is also important as the firm 'can potentially benefit from financial leverage but it can also increase the risk of financial distress if it fails to meet these commitments.' (Palepu et al 2000, pp. 9-15). Examples of these performance indicators are the liquidity ratios such as the current ratio, quick ratio, cash ratio, operating cash flow ratios, while the long term debt management performance measures are the debt to equity ratio, liabilities to equity ratio, debt to capital ratio and interest coverage.

Blocher, Stout & Cokins (2010 p. 847) mentioned that the top management often use one or a combination of the financial metrics: Return on Investment, Residual Income or Economic Value Added (EVA®) to evaluate the performance of managers. 'The use of the return on investment for performance evaluation purposes is well entrenched in business practice' (Blocher et al 2010, p. 854) and it is 'the most popular approach to measure performance as it blends all the ingredients of profitability – revenues, costs and investment into a single percentage and can be compared with the rate of return on opportunities elsewhere inside or outside the company (Horngren et al 2011, p. 778). As a measure for performances, the return on investment provides motivation for optimal assets utilization and discourages excessive investment in assets.

Another financial measure is residual income. Residual income is defined as an accounting measure of income minus the dollar amount for required return on an accounting measure of investment.' (Horngren et al 2011, p.779). This financial measurement encourages managers to invest in projects that yield a positive residual income. It encourages managers to undertake projects whenever the rate of return on the project exceeds cost of capital. In this way, it overcomes a signal shortcoming of the return on investment method where the manager may act contrary to the interest of the firm as a whole and declines such investment as in the short term, where the rate may be lower.

The Economic Value Added (EVA®) is a financial measure that is a refinement of the residual income measurement. According to Ittner & Larcker (1998), EVA® is a Stern Stewart & Co.'s trademarked measure of the firm's proprietary adaptation of residual income and the formula is obtained by applying the adjusted operating income less a capital charge. It assumes that a manager's action only adds economic value when the resulting profits exceed the cost of capital. Currently, it is used as the central component of strategic performance measurement and reward system. Drury (2015, p. 505) added that 'the EVA® concept extends the traditional residual income measure by incorporating adjustments to the traditional profit performance measure for distortions that can arise in measuring economic value added arising from measuring profit using generally accepted accounting principles (GAAP)' as some of the expenses such as research and expenditure, marketing and advertising may provide benefits over several years but financial accounting requirements often require such expenditure to be taken in the year they are incurred and understates the value added during that period, so the economic value added is 'a better measure of the manager's ability to create value that are likely to provide benefits in future periods'(Drury 2008, p. 742). The main aim of measuring the EVA is to produce an overall financial measure to encourage managers to deliver and maximise shareholders' value and at the same time, to reduce the managers' dysfunction behaviour.

Merchant and Van der Stede (2012, p. 451) suggested that 'the approach to mitigate investment myopia involves changing the measurement rules to make the accounting income measures better' and they recommended that 'economic income or shareholder value creation which is applied by estimating future cash flows and discounting them to present value' would improve and address the deviations between accounting and economic income.

A survey on the professional service firms conducted by Broderick (2011) revealed that the top economic metrics that leaders watch are: revenue, profitability, utilization, realization, costs, margins, pricing strategies, leverage and performance efficiency. In the research on the financial performance measures used in Australia conducted by Aryani in 2009, the research findings indicate that the more commonly applied financial measures used in the divisions are: 'profit (%); ROI (%); revenue/total assets (%); and others (e.g., budget performance-cost; EBIT/sales (%); working capital (%); EBIT).' (Aryani 2009, pp. 215-6)

2.5.2 Non-Financial measures

In today's changing environment, advocates such as Kaplan and Norton (1996) argued that performance cannot be measured based only on financial terms. According to Deshmukh & Patel (2019), 'many times it is difficult to measure performance objectively' that is in financial terms, and subjective measures are required and some of these subjective measures are non-financial measures. Kenny (2015) lamented that there is too much focus on financial measures such as shareholder value or profit, and important non-financial measures such as customer satisfaction, employee motivation, and supplier support tend to be overlooked and the management's narrow view can do long-term damage. There is a need to be balanced and bring in the non-financial measures to measure the performance more effectively.

Non-financial performance measures come in a variety of forms, ranging from quantitative, non-financial metrics, such as employee and customer survey results, to qualitative assessments of performance by the manager's superior. Non-financial measures such as quality, reliability, customer satisfaction ratings, new product lead times, customer response time, and delivery and supplier performances are some of the measures and the development of these non-financial measures in today's changing business landscape has resulted in a proliferation of performance measures. The other non-financial measures are employee satisfaction or happiness index, productivity, market share, defect rate, quality, and job competency which includes initiative, service orientation, teamwork and synergy and attitude to work are subjective and not easy to measure.

The non-financial measures have several advantages over financial measures in the areas of managing resources and creating value and are the drivers of future financial performance, whereas financial measures indicate outcomes of past decisions.

Ittner, Larcker & Meyer (2003, p. 726) wrote that non-financial measures are used to 'overcome the short-run orientation of accounting-based reward systems' and added that 'many firms are implementing compensation plans that supplement financial metrics with additional measures in order to assess performance dimensions that are not captured in short-term financial results'.

Drury (2015) state that there is a greater emphasis on non-financial performance measures today than financial measures of performance as it is necessary to compete successfully in today's global competitive environment. 'Product quality, delivery, reliability, after-sales service and customer satisfaction became key competitive variables' (Drury 2015, p. 598).

Non-financial measures are more understandable and easier to relate to than financial measures, particularly at the operational level. Financial measures may too aggregated and do not tell the managers on what needs to be fixed. Also, financial measures may not be timely enough to guide managers on how to improve performance immediately, since they tend to be reported only at the end of each period so that managers can then get a preview of the progress of the organisation before the financial results are released.

Burney & Swanson (2010) suggested non-financial measures: employee satisfaction and customer satisfaction to project future financial performance. They state that high customer satisfaction ratings should lead to improved future financial outcomes as it is likely that customers will return to purchase once again from the company. However, Drury (2015) cautioned that performance measures can be complicated and even conflict one another when one measure is enhanced at the expense of the other.

2.6 Rewards

The two key principles of the reward or incentive system are firstly, performance measurement and secondly, the 'compensation based on the measured performance' (Hilton, Maher & Selto 2006, p. 843). Organisations should not only measure the performance of managers but should also have a sound reward system that rewards adequately and fairly, to motivate managers to work towards the organisational's goals. 'A reward system consist of processes, practices and systems that are used to provide levels of pay and benefits to employees.'(Langfield-Smith et al 2006, p. 627).

Rewards are usually awarded based on the assessment of each employee's performances. The implementation of the bonus plan by General Motors in 1918, started off one of the first incentive scheme to motivate division managers to act in the best interests of the company and shareholders (Hilton, Maher & Selto 2006, p. 843).

Rewards that are linked to the performance are termed as ‘Pay for performance’, that is, rewards are awarded to the employee when the desired levels of performance are achieved. According to Hilton, Maher & Selto (2006, p. 843), if an organisation would like ‘to motivate people to behave in a particular way’, incentive plans must ‘provide desirable rewards or undesirable penalties’ and it must also have ‘a high probability that behaving as the organisation desires will lead to those rewards or penalties’.

Rewards are normally given in recognition of employees for work done well. Tilley (2012) emphasized that ‘remuneration systems must encourage behaviours that benefit the long-term health of companies’. The ‘tying of some part of the employee rewards to achieving financial and non-financial performance targets can provide strong positive incentives for managers and employees to maximize their performance’ (Langfield-Smith et al 2006, p. 627).

Anthony & Govindarajan (2006, p. 513) advised that ‘the key to motivating people to behave in a manner that furthers an organisation’s goals lies in the way the organisation’s incentives relate to the individual goals’. He said that it is obviously natural that employees are influenced by both positive and negative incentives. The outcome of a positive incentive or reward will increase the satisfaction of the individual needs while, on the other end, the outcome of a negative incentive or ‘punishment’ will result in a decrease in satisfaction’ (Anthony & Govindarajan 2006)

Rewards or incentives can be in any form that the ‘employees’ value, such as salary increases, bonuses, promotions, job security, job assignments, training opportunities, freedom, recognition, and power’ (Merchant and Van der Stede 2012, p. 35). ‘Some organisations offer bonuses, trips, or other rewards to workers that meet or exceed company or project goals’

(Schwalbe, 2011, p. 368). ‘Some of the incentives are financial, others are psychological and social’ (Anthony and Govindarajan 2006, p. 522). Financial incentives include salary increases, bonuses, benefits and perquisites such as: automobiles, vacation trips, club memberships, etc while psychological and social incentives include promotional prospects, increased responsibilities, more autonomy, better geographical location and recognition such as trophy, participation in executive development programs and the like (Anthony and Govindarajan 2006)

Punishments are on the other hand, the opposite of rewards and they are what employees do not like, ‘such as demotions, supervisor disapproval, failure to earn rewards that colleagues manage to earn or, at the extreme end, the threat of dismissal’ (Merchant and Van der Stede 2012, p. 35).

The right performance measures must be adopted and aligned to appropriate rewards to motivate the employees. Organisations can derive motivation value from linking the valued rewards by employees to the results or goals that the employees can influence (Merchant and Van der Stede 2012). Employees meeting or exceeding performance expectations are to be rewarded while those who do not, will be penalised. When the manager’s performance is poor or mediocre, such performance can be penalized through the threat to reduce decision authority and power of the managers that are derived from managing their entities, decline to fund proposed projects and other ways to penalize them when their performance is not up to par.

It is not easy to design a proper reward system that encourages goal-congruent behavior. Most times, managers are rewarded for their past actions and decisions and it is difficult to encourage them to improve their future performance at the same time (Langfield-Smith et al 2006, p. 627).

2.6.1 Aligning the Rewards to Performance Measures

Linking the financial compensation to performance is said to be a powerful lever and some companies have established such a linkage according to Kaplan & Norton (1996a p.230 in Readings in Management Accounting). Pay-for-performance is commonly used in organisations. It is a reward system where 'employees receive extra, performance-dependent compensation for their work if they reach certain performance targets.' (Van der Stede 2007, p. 51), this incentive scheme is often seen as 'a virtually guaranteed means of achieving employee alignment and motivation and hence superior business performance' and the most common example of the incentive award is cash bonuses.

The 'alignment of rewards and incentives' to performance, that is, 'linking pay to performance is important for successful execution' according to Turban et al (2011, p. 109). Pay is 'clearly a motivating factor in any economic entity and an ability to differentiate performance helps in making equitable remuneration decisions' (Mills 2002, p. 76).

According to the Chartered Institute of Personnel and Development (2017), 'Performance-related pay (PRP) is a way of managing pay by linking salary progression to an assessment of individual performance, usually measured against pre-agreed objectives.' Performance measures can be the basis for bonus payments in the form of cash prizes and they are 'a particularly effective way to compel progress' according to Sims (2014).

Hansen & Mowen (2006, p. 595**)** added that 'for any performance management system to be successful, the reward system must be linked to the performance measures' while Austin & Gittell (2002) advocated that rewards should be contingent on measured performance and that there should be a clear linkage between desirable performance and rewards and it should be made known to all parties before work commences. Horngren, Sundem, Stratton, Burgstahler & Schatzberg (2011 p. 409) recommended that 'an ideal performance metric would measure and reward the manager for controllable factors and neither reward nor punish the manager for uncontrollable factors.’

Team-based reward and recognition systems may be adopted in organisations to promote or reinforce people to work more effectively in teams. (Schwalbe, 2011). Rewarding team effort is a good tool to promote teamwork and encourages managers to work with the other units or departments.

There are two main types of rewards:

(i) Intrinsic rewards

(ii) Extrinsic rewards

Atkinson et al (2004) defines intrinsic rewards as those that come from within the individual such as satisfaction from a job well done or taking satisfaction from acting in a way that is consistent with inner values or beliefs while (Thomas 2009) describes them as ‘psychological rewards that employees get from doing meaningful work and performing it well.’ According to McShane and Travaglione (2003 p. 199) ‘work motivation and performance increase when employees feel personally accountable for the outcomes of their efforts’, so motivation should come from within the employee.

Lee (2015) quoted Nicky Wakefield’s ‘intrinsic motivators’ such as ‘training opportunities, lateral career opportunities, a conducive culture and work-life balance’ and ‘flexible working hours and working locations’ as some of the intrinsic rewards that ‘trump more pay in retaining talent’. She added that the top retention initiatives focused on intrinsic motivation and included flexible working arrangements, individualized career planning, support and recognition from superiors and leadership development programmes and notable Singapore companies like Microsoft and DBS Bank had taken these initiatives.

Thomas (2009) suggested four intrinsic rewards and how the workers perceive them:

(i) Sense of meaningfulness.

The reward involves the meaningfulness or importance of the purpose the employees are trying to fulfill. They feel that they have an opportunity to accomplish something of real value—something that matters in the larger scheme of things and are on a path that is worth their time and energy, giving them a strong sense of purpose or direction.

(ii) Sense of choice.

The employees have the freedom to choose how they accomplish their work—to use their best judgment and to select those work activities that make the most sense and to perform them in ways that seem appropriate. They feel ownership of their work, believe in the approach they are taking, and feel responsible for making it work.

(iii) Sense of competence.

Employees feel that they are handling their work activities well—that their performance of these activities meets or exceeds their personal standards, and that they are doing good, high-quality work. They have a sense of satisfaction, pride, or even artistry in how well they handle these activities.

(iv) Sense of progress.

Employees are encouraged that their efforts are really accomplishing something and feel that their work is on track and moving in the right direction. They see convincing signs that things are working out, giving them confidence in the choices they have made and confidence in the future.

In contrast, extrinsic rewards are usually financial and are 'the tangible rewards given to employees by managers, such as pay raises, bonuses, and benefits. They are called 'extrinsic' because they are external to the work itself and other people control their size and whether or not they are granted.' (Thomas 2009).

Superior performance may be rewarded with both monetary and non-monetary compensation, that is: the pecuniary and non-pecuniary rewards. Pecuniary rewards such as: salary, bonuses, variable pay, performance related pay, team goal based incentive systems, gain sharing or profit related pay, skills based pay, employees share / stock options and other monetary awards. Non-pecuniary rewards include 'promotions, praise, self-satisfaction, better offices, and other perquisites' (Horngren, Sundem et al 2011, p. 408). Others include 'granting high performing employees public recognition and additional decision authority'(Merchant and Van der Stede 2012, p. 35). 'Recognition is another dimension' (McConnell 2003, p. 241) and actions such as a kind word or a pat on the back for a job well done do motivate managers to continue with their good work performances.

Atkinson et al (2004, p. 329) mentioned that 'there is a common perception that wage compensates the employee for a minimally acceptable effort and that the organisation must use additional rewards or compensation to motivate the employee to provide additional effort.'

Fox (2010) recommended that employees should have a share in the risks and rewards. He calls it a 'new pay' concept where individual performance and overall organisational success are linked to salaries and pay increases which are in turn, derived from company revenues, so it must be tied a least in part to productivity and performance improvement. He added that 'new pay' options shift a certain amount of bottom-line responsibility onto the employees who also collect a greater share of the rewards for outstanding performance.

According to Fox (2010), there is an army of new pay strategies evolving within companies and the most prevalent are skill-based pay, team pay, and gain sharing. Skill-based pay rewards employees for learning and using new skills. Team pay rewards employees for solving particular business problems and gain sharing rewards employees for creating direct benefits for the bottom line.

On the other end, there should also be some form of a stick that send out a clear signal out, that if the performance level expected of them are not met, they will be penalised. If an organisation does not act on those who do not meet the performance targets set, it may send the wrong message to managers that they can get away with bad performances and that may lead to complacency, and the consequences are, the whole performance management system fails.

The revised Code of Corporate Governance, Principle 8, (2012) from the Monetary Authority of Singapore, states that:

> *The level and structure of remuneration should be aligned with the long-term interest and risk policies of the company, and should be appropriate to attract, retain and motivate (a) the directors to provide good stewardship of the company, and (b) key management personnel to successfully manage the company. However, companies should avoid paying more than is necessary for this purpose.*

The Monetary Authority of Singapore [Code of Corporate Governance] (2012, p. 15) provided a guideline that 'A significant and appropriate proportion of executive directors' and key management personnel's remuneration should be structured so as to link rewards to corporate and individual performance'.

These guidelines were adopted by listed companies in Singapore and the information was included in their published annual reports.

Van Der Stede (2007) recommended three main points to be considered in a reward strategy and they are: the incentive structure, incentive intensity and to complement monetary incentives with various non-monetary rewards. He advised that the incentive structure should be carefully structured because any badly structured incentives will be more likely to have unintended consequences relative to the weaker but possibly more complete incentives across all the important dimensions of an employee's job. Incentive intensity is another consideration. However, he cautioned that there were some downsides, the Pay for Performance (PFP) systems are proportional to their intensity but it is not always better to have more, and 'good incentive effects can sometimes already be achieved at relatively low levels beyond which the (un)desired incentive effects may decrease (intensify) quickly' (Van Der Stede 2007). He also pointed out that not all incentives are about money and added that 'Monetary incentives should be complemented with various non-monetary rewards, which can have good effects and are often less costly to the firm yet valued by employees' Van Der Stede (2007).

According to Horngren, Sundem et al (2011, p. 409), 'People generally avoid risk, so a company must pay managers more if it expects them to bear more risk.' However, the performance measures and reward system must be tweaked to prevent reckless risk taking and a claw back of the bonuses would likely be one of the solutions to prevent reckless risk taking. Reckless risks taking was seen during the sub-prime crisis of 2007-2010, where lenders threw caution to the winds by taking high risks in granting mortgages to borrowers with dubious financial credibility and were subsequently saddled with huge delinquent sub-prime mortgages. Those involved must have been motivated to take on these risks because of the way they are evaluated for their performances, as well as the rewards they get, which are to the detriment of their organisations so it would be wise to introduce claw back measures so that bonuses can be reclaimed in the event of any wrongdoing.

The advice from PricewaterhouseCoopers International Limited (PWC 2012) is to keep the reward system simple.

> *'Complex plans are a motivation killer. The idea that we can manage by incentives has led to evermore complex metrics frameworks and formulae. These have many*

consequences, most of them unintended. But a key one is the further reduction in value they cause in the eye of the executive' (PWC 2012, p. 30).

2.7 Past Research Studies on Singapore Managers

A survey conducted on organisations in Singapore by Christopher Mills in 2002 under the auspices of the Singapore Human Resource Institute (SHRI) revealed the following performance management or appraisal systems used:

(i) Trait Based System – a system that measures performance according to a list of behaviours or skills, attitude and aptitude.

(ii) Management by Objectives (MBO) – a system where staff set individual goals in line with the organisation's business plan, linking targets to organisations goals

(iii) Hybrid System – a progressive system that focus on key achievements in detail but only rate competencies eg commitment to company's goals, service and results focus, teamwork, self management and problem solving.

(iv) Performance Management - a system that set goals that is clearly linked to the organisational strategic direction.

(v) Team Performance Management – a system where team objectives are set once the organisation's expectations are made known.

(vi) No formal system

The survey on the performance management or appraisal systems used in Singapore presented in Table 2.1 are: 35.6% of the organisations used the Trait-based systems, Performance Management: 26.7%, Hybrid System: 19.8%, No formal system: 8.9%, Management by Objectives: 6% and Team Performance Management system: 2.9% (Mills 2002, p. 78).

Table 2.1: Types of Performance Management / Appraisal System in Singapore in 2002

Types of Performance Management / Appraisal System	Percent (%) of Companies Surveyed
Trait-Based	35.6%
Performance Management	26.7%
Hybrid System	19.8%
No formal system	8.9%
Management by Objectives	6%
Team Performance Management	2.9%

(Mills 2002, p. 78)

The research conducted by Mills was made in 2002, was on the performance management and appraisal practices of organisations in Singapore. The findings of this 2002 survey revealed that the reasons for using the performance management and appraisal systems are:

> *Develop individual competencies 82.5%, appraise past performance 75.0%, change organisation culture 74.0%, set performance objectives 72.5%, retain high caliber staff 70.0%, assess future potential / promotion prospects 45.8%, discipline/dismiss non-performing staff 41.0%, determine training and development needs 28.0%, assist career planning decision 7.5% and link pay to performance 2.5%* (Mills 2002, p. 73).

In another survey on the performance management systems in Southeast Asia including Australia and Singapore, Stanton and Nankervis (2011, p. 68), found that the most common features of the current performance management system (PMS) in Singapore include :

> *Objective-setting and review (62.5%), performance-related pay (60%), personal development plans (52.5%), employee discipline (45%); coaching and/or mentoring, and career management and/or succession planning (42.5%). Employee counselling, contribution-related pay, competence-related pay, and team pay, were only minimally reported. Review training is given to team leaders (80%), HR staff (62.5%), department heads (60%), and direct appraisers (55%)*

The criteria for the performance measures found in the Stanton and Nankervis (2011) research was that the Singapore managers were evaluated on: achievement of objectives, quality, productivity, competence, team contribution, customer care, business awareness, skills/learning targets, aligning personal and firm goals, flexibility, working relationships, and financial awareness.

The results of the research from the performance management systems survey in Singapore in 2002 were that ‘The mainstream are happy with the way their company measures and manages performance’ (Mills 2002, p. 139). The results show that 60% rate their current system in terms of its overall effectiveness ‘Effective’, 5% ‘More than effective’ and 28% ‘Less than effective’ and 7% ‘Ineffective’ (ibid, p. 113).

However, the more recent research carried out by Stanton and Nankervis (2011, p. 76) revealed a lower level of effectiveness for the performance management system in Singapore. The research found that 52.5% of the managers in Singapore (both line managers and senior managers included), were of opinion that the individual performance appraisals were ‘very or mostly effective’.

The research found that the major performance measures of the Singapore research were the quality of goods and services, efficiency, profitability, the quality of the workforce, return on investment, innovative capacity, cost, and market share (Stanton and Nankervis 2011).

It should be noted that these two research in Singapore that were carried out previously, were not focused singularly on line managers but managers who are HR professionals and members of SHRI in the Mills 2002 survey and a mix of both senior and line managers in the 2011 survey by Stanton and Nankervis.

2.7.1 The Performance Measurement and Reward System of a Singapore company: Singapore Telecommunications Limited (Singtel)

Singtel, one of the largest telecommunications companies in Singapore, provided some insights to some of the performance measures the company used to remunerate and reward their senior management. It was published in answer to questions from a shareholder on the justification of its Chief Executive Officer (CEO)'s massive pay package.

The chairman of Singtel, Simon Israel (2017) disclosed that Singtel adopted 'a pay-for-performance philosophy that goes beyond current year profits alone to ensure long-term value creation and sustainability' (Israel 2017, p. A26). He revealed that the company's 'compensation framework ensures there is an alignment between compensation and performance' (Israel 2015).

It was disclosed that the company had a range of measures to evaluate short-term, mid-term and long-term performances. The balanced scorecard approach was used to measure and reward for short-term performances by rating individuals against key financial and non-financial performance indicators, while mid-term performances were rewarded by 'a value-sharing bonus that is dependent on the overall economic profit of the group based on the excess return over risk adjusted cost of capital'(Israel 2017, p. A26) which is, in other words, the Economic Value Added (EVA) measure. The EVA measures the value creation for shareholders and 'is not linked in any way to the choppiness of economic cycles nor the vagaries of the stock market'(Israel 2017, p. A26). Singtel also revealed that they do have clawback provisions where bonuses of the senior management 'can be clawed back down the road if the managers do not continue to deliver sustainable value' for the company (Israel 2017, p. A26).

The company disclosed that 'there is a long-term incentive scheme in the form of performance shares to reinforce the delivery of long-term growth, measured by total shareholder returns in relative and absolute terms'(Israel 2017, p. A26).

The company went on to defend the basis of the huge increase in their senior management personnel pay packages, that the team had led their 'company-wide business transformation that has not just revamped their core businesses to stay relevant and compete in the new economy but they 'have also built new digital businesses that are becoming fresh sources of revenue for the mid to long term'(Israel 2017, p. A26). The company revealed that their compensation was also benchmarked against comparable businesses. It defended the huge increase in the CEO'S pay by disclosing that they earned about 70 per cent from their overseas operations through diversification, that contributed to considerable shareholder value that outperformed the other telco companies, citing that Singtel has delivered total shareholder returns of 9.4 per cent over the last five years compared to the MSCI Asia Pacific Telecommunications Index of 9.3 per cent and the Straits Times Index of 4.4 per cent (Israel 2017, p. A26).

2.8 The Effects of the Performance Measures and the Gaps

Organisations have to choose performance measures with careful considerations so that it would encourage goal congruent behaviour in the organisation. Suitable measures of performances have to be implemented to meet the organisational goals and the organisation has to determine the relative weight for each measure so that it is effective. The 'performance criteria should be selected through discussions with the people involved (customers, employees, managers)' and 'objective performance criteria are preferable to subjective ones.' (Neely et al 2000, pp. 1129-30)

Hansen & Mowen (2006) recommended that once the objectives and measures have been identified, performance expectations must be established and communicated. Similarly, Bruce (2006) states that performance measures and standards must be clearly defined and employees must be informed on what is expected of them, only then can performance be linked to results successfully. A clearly communicated and coherent framework is needed in order to succeed according to Saxty (2011) the organisation should clearly spell out what is acceptable or unacceptable performance.

The manager needs to be positioned to manage well and they must be accountable. Eckerson (2006, p. 201) advised that 'without accountability, measures are meaningless. It is critical to assign a single owner and make it part of his or her job description and performance review. It is also important to train those users to interpret the KPIs and how to respond'. Thus, managers must take ownership of the measures they are measured by and be made accountable for their performances.

'According to agency theory, the more a manager's reward depends on a performance metric, the more incentive the manager has to take actions that maximize that measure' (Horngren, Sundem et al 2011). Pink (2009) advised that when performance metrics are used, the organisation using them must make them wide ranging, relevant and hard to game. Pink (2009) also recommended that performance measures should be changed often, so new goals should be set, so that employees will strain a bit higher each time. This can be applied to the organisation's performance measures and how to motivate employees to work harder. 'Top management should define the performance metric to promote goal congruence and base enough reward on it to achieve managerial effort' (Horngren, Sundem et al 2011, p. 409)

Pink (2009) also added that while carrots and stick approach worked successfully in the twentieth century in motivating employees, it is not quite the right way to motivate people for today's challenges. He examines three elements of what he called 'true motivation' and he identifies them as:

(i) Autonomy – the desire to direct our own lives;

(ii) Mastery – the urge to get better and better at something that matters; and

(iii) Purpose – the yearning to do what we do in the service of something larger than ourselves

Drucker (2007) recommended that the innovation strategy requires different measurements and different use of budgets and budgetary controls from those appropriate to an ongoing business and to impose on innovating efforts, the measurements, and especially the accounting conventions, that fit ongoing businesses, is misdirection. He advised that budgets for ongoing businesses and budgets for innovative efforts be kept separate and treated differently. A separate measurement system for innovative effort makes it possible to appraise the three factors that determine innovative strategy, the ultimate opportunity, the risk of failure, and the effort and expenditure needed.

Drucker (2007) also explained that the productivity of capital can be made in two ways: one to make capital work harder or the other to make it work smarter. He also suggested that the productivity of human resources can usually be raised only by making them work smarter, but that physical resources can only be by making them work harder. With the appropriate performance measures, employees would be more productive.

'Performance has to be put into context by relating actual results to something by which the goodness or badness of the results can be gauged.' (BPP 1991, p. 459). Baker (2000) mentioned that decisions about performance measurement often revolve around issues of timing: should employees be evaluated on short-run or long-run results?

Financial measures are easy to understand and popular and if applied appropriately, the organisation may benefit. However, there are many instances of managers manipulating the performance measures to the detriment of the organisation. They make decisions that show better performances in the short term than in the long term and get rewarded for their efforts. They might even adopt accounting policies that report better earnings to meet the financial measures that are set to evaluate their performances.

Burney and Swanson (2010) explained that managers may over-emphasize on the short term if their performance are evaluated on the results of past financial performance in financial measures such as earnings per share and return on capital employed and suggested that a balanced scorecard including non-financial performance measures should be used. However, Lipe and Salterio (2000, p. 286) quoted Kaplan and Norton (1996b, 217-223) that it was problematic to ask managers to focus on balanced scorecard measures when the managers' compensation and performance evaluation are based on traditional financial measures. Turban et al (2011, p. 109) mentioned that 'incentive plans are often linked to short-term financial results, not to the strategic plan or even to the strategic initiatives articulated in the operational plan.' This resulted in a less than rational decision making as managers maximise short-term gains at the expense of the organisation.

'Proper performance measurement systems can affect managers' horizon and alleviate myopia' 'Myopia is indeed a pervasive issue in business' according to Van der Stede (2015). This was the view of countless others as well. Performance measurement is often blamed for it.

Teamwork is an important aspect in any organisation and the team's objectives and each member's expected contribution have to be clearly defined. Team appraisal is similar to peer appraisal except of the team members may hold different positions. It involves the appraisal of each other's work and work styles.

In a highly changing and dynamic environment which is now known as the ‘VUCA’ environment, performance measures cannot be a fixed formula. ‘VUCA’ is the acronym for ‘volatile, uncertain, complex, and ambiguous’ was originally introduced by the U.S. Army War College after the Cold War but the acronym was created only in the late 1990s was subsequently adopted by strategic business leaders to describe the chaotic, turbulent, and rapidly changing business environment that has become the ‘new normal’’ (Lawrence 2013, p. 3). Lawrence (2013) recommended that organisations need to foster a culture that rewards the desired behavior of leaders to survive in a VUCA world. They must ‘play an integral role in developing a VUCA culture by rewarding innovation, agile behavior, and calculated risk-taking’ and ‘performance management systems should reflect VUCA prime values and attributes’ (Lawrence 2013, p. 11).

Satzinger et al (2009) suggested a ‘Scrum’ philosophy which is a team work based system, where, when changes are frequent, managers need to be agile to be able to adapt to changes, as in the example of a system software development. A ‘scrum’ is an adaptive development method where a team sets its own goal for what it can accomplish within a specific period of time. There will be a ‘Scrum sprint’ which is a ‘time-controlled mini project that implements a specific portion of a system’ (Satzinger et al 2009, p. 682). It comprises a fixed ‘30-day time box with a specific goal or deliverable’. Members of the team accepts the work and reports the progress to the ‘Scrum master’ or project manager in daily 15-minutes meetings or some other short time period to report on whether they have met the targets in the last daily Scrum, what impedes or got in the way of completing the work and what will be the targets in the next day. It is described in Satzinger et al (2009) as like the rugby system.

The 360-Degree or ‘Full-Circle’ appraisal is a type of appraisal that is the most comprehensive and expensive way to measure performance and it is generally for key employees. The employee's performance is appraised by everyone with whom he or she interacts, including members of other departments, peers, managers, and even customers. (Hakala 2008)

One of the limitations of the performance measures according to Hope and Fraser (2003, p. 9) is that of 'the extent of 'Gaming the Numbers' that has risen to unacceptable levels.' Senior managers resort to 'managing their earnings' (one of the most common financial performance measures), at Gillete, Coca-Cola and Citicorp, and in some cases to outright fraud, such as at Enron and WorldCom, and the underlying cause is mainly the managers' fear of failure. Some of these performance measures may in theory work really well, but in reality, are ineffective and detrimental, as they are open and easy for managers to manipulate them and may cause serious adverse financial consequences.

'Ratios such as earnings per share and return on equity can be influenced by reducing the denominator rather than by increasing the numerator, so that these metrics can show positive returns even if the underlying value of the business is only maintained or even reduced.' (Van Der Stede 2015)

Budgets are commonly and traditionally used as a performance measure and managers are fixated on meeting these fixed targets and that is one of the main causes that lead to the managers' dysfunctional and even unethical management behaviour. Malpractices occur as managers commit to overly aggressive targets and then resort to 'fudging the numbers to meet them' (Hope & Fraser, 2003, p. 12). Hope and Fraser's view 'is that the budget should be eliminated as it is fundamentally flawed' (Libby & Lindsay 2010, p. 57). In WorldCom, the CEO Bernard Ebber mandated that they had to be 2 per cent under budget and nothing else is acceptable, so managers have to live up to the CEO's demands by resorting to 'managing the numbers.'

Van der Stede (2015b) interestingly quoted one of the diehard maxim of business: 'don't overshoot your performance target this year, because before you know it the one for next year will be tougher yet.' This had become the realities in a business organisation that use budgets as a control tool. It is called 'target ratcheting at work: when you do better than the established goal, your next objective will be even higher; but the converse is not true. If you do worse, the organisation will not reduce expected results next time around as the bar is set higher.

Clearly, such budgeting practices create counterproductive incentives because they motivate managers to withhold effort in order to avoid difficult performance metrics in the future. Why shoot yourself in the foot? Add to this the common belief in budgeting that either you spend it or lose it, and the motivation arises to not only 'not overshoot' your earnings target, but to 'spend more' to boot. A double whammy: leave money unearned and spend more than is necessary.

According to Van der Stede (2015b), target ratcheting may be a truism, but the research earnings targets and annual bonus incentives is only half true at best, literally, because there is an implicit inter-temporal dimension at play in budgeting, meaning these decisions are not made only on a year-over-year basis. They involve longer cycles that take into consideration credible manager performance and firm commitment.

To overcome these problems, Hope and Fraser (2003) recommended that managers should go 'Beyond Budgeting' to free them from the annual budget trap and should adopt an alternative coherent management model specifically tailored to today's volatile marketplace. This innovative toolset includes:

> *a coherent set of alternative processes that support relative targets and rewards, continuous planning, resources on demand, dynamic cross-company coordination, and a rich array of multilevel controls* (Hope and Fraser, 2003, p. xix)

Hope and Fraser (2003) recommended that the current performance measures should move away from traditional budgets as financial performance measures and should instead be set at agreed, market-led benchmarks and the ability to remain in the top of the industry peer group. Its purpose is to enable managers of those organisations to be adaptive to the unpredictable conditions of the environment it is in. They quoted the CEO of Svenska Handelsbanken, Dr Jan Wallander: 'Managers know "what is acceptable performance", that is, 'the managers cannot linger in the depths (bottom) of the performance league table for long, they would do anything to improve performance and peer pressure plays an important part in the process'. 'No manager wants to let down the regional team' and 'there is both pressures to perform and a willingness to help each other. It is this tension between internal competition and co-operative support that enables them to keep improving' (Hope and Fraser, 2003, p. 134).

There is also the limitation of fallible human judgments and human feelings affecting how the performance measurement system is managed. 'Financial measures often are lagging indicators that arrive too late to help prevent problems and ensure the organisation's health' (Horngren, Sundem et al, 2011, p. 371). Effective performance measurements should be 'focussed on key factors' and 'be of a mix of past, present, and future' according to Turban et al (2011, p. 120).

According to Barrows & Neely (2012, p. 17), many performance management practices do not work well in turbulent environments and managers need timely information to detect and interpret and execute more quickly with a narrower margin for error. They have to embrace new ways of operating and focus on exploiting core businesses and so new ways of measuring performances have to be designed for effective functioning in turbulent settings.

In a volatile, uncertain, complex and ambiguous (VUCA) environment, Lawrence (2013, p. 11) provided the following advice on the reward system:

Rewards for desired behaviors could include different incentives including job perks, additional compensation, promotions, and preferred work assignments. A key to the best rewards systems in a VUCA environment is to not be rigid and to offer successful leaders rewards that appeal to them the most—in other words, be adaptable and agile.

He added that the culture of organisations that promotes and rewards agile leaders will then ‘begin to perpetuate itself and attract and retain the type of innovative and agile talent that businesses today are seeking. It will also provide businesses a competitive advantage in our ever-changing global marketplace—which is the ultimate VUCA environment’. (Lawrence 2013, p. 11).

The Top Employer 2015 survey in UK, revealed a trend by employers to offer coaching and development opportunities, rather than rankings. They have previously focused on performance management that were based on the individual and individual tasks, however, the key capabilities are now social awareness, agility and flexibility so that top performing companies aim to assess the effectiveness of employees in the broader work environment.

‘The annual review process is inherently flawed, but it's not necessarily the reviews themselves, or even the timing that's the problem -- it's the fact that the outcome of these reviews is based on forced rankings instead of on overall development and growth.’ (Top-Employer 2015).

According to Florentine (2015), the forced ranking performance evaluation system was ‘Popularized by Jack Welch in the 1980s, these "rank and yank" systems encouraged competition between employees and guaranteed that some workers would be labeled failures, regardless of their true performance and value, and then fired if they fell into the lower ranks of the assessment’. She stated that the ranking employees ‘may or may not paint an accurate picture of a worker's true value and contribution to their workplace’(ibid) and recommended that ‘Getting rid of forced rankings is a step in the right direction, especially in an era where collaboration and engagement are important for business success' (ibid) and 'frequent, consistent coaching and conversations, rid of performance reviews in order to change the habits of the entire workforce across the entire organisational ecosystem'. She advocated that the 'outdated annual reviews and forced rankings should be replaced by having more frequent and candid communication between employees and their direct managers' (ibid).

Becker, Huselid & Ulrich (2001, p. 31) stressed that 'the credibility of HR measures is particularly important when financial and nonfinancial performance measures conflict. Inevitably, there comes a time when people measures are up, but financials are down.' Obviously, the Chief Financial Officer (CFO) will object to the paying out of bonuses as the financial performance is down and it does not warrant it.

Becker et al (2001) then recommended a balanced performance measurement that would pay attention to both lagging and leading performance indicators and leading measures such as HR measures really drive value creation in organisations.

Lewis (2015) reported that Charles Cotton, who was the performance and reward adviser at the Chartered Institute of Personnel and Development (CIPD) said that 'the UK was operating with a system of executive reward that overall is 'not fit for purpose' and adding measures to an 'already broken system' would not rebuild trust.' He added that bonuses and long-term incentives are not incentivising good performance and are too complicated and recommended that successful organisations today thrive on collective endeavour, and that needs to be reflected in the reward strategy (Lewis 2015). This research will provide insights into the state of the reward system in Singapore.

2.9 Bell Curve Forced Ranking Method

The Bell Curve method of performance measurement is 'Forced-distribution method where the rater is required to assign employees in the work group to a limited number of categories so as to approximate a normal frequency distribution' (Deshmukh & Patel 2019, p. 39). It was first implemented in General Electric. The purpose is to rank them based on their performance, identify the high, average and non-performers, nurture and reward the high performers and reprimand, train or if found unsuitable for the job, remove or reallocate to some other portfolio for the non-performers. However, there are problems, and Deshmukh & Patel (2019) highlighted that the Bell curve method forces the distribution and many times, employees are pushed to be classified in order to be ranked. It encouraged employees to concentrate more on visible performance that are noticeable to the management (appraiser) than the actual factors that are crucial to the success and effectiveness of work done as these may not be noticeable. The constant pressure for high performance breeds unhealthy competition among the employees who may fear that fellow employees may get a better rating and hesitate to help each other. It creates a culture of distrust and misbelief and hampers team spirit. It may cause a drop in morale and higher attrition rate (Deshmukh & Patel 2019).

2.10 Summary

There are many performance measures used in organisations today to measure and motivate managers. It is not an easy to task to select the right measures to measure precisely the managers' performance and tracked them regularly. There are problems in adopting the appropriate measures as it is difficult to choose among the many performance measures: financial and non-financial. Some of the financial performance measures are objective and quantifiable but managers can exploit the system by manipulating with those measurements. On the other hand, some of the non-financial performance measures such as managers' attitude are subjective and judgement calls are required, and they may be some degree of biasness, however, they are essential in the overall measurement of the efficiency and effectiveness of the performance of the managers. Managers need to be measured both 'on the results they achieve and the behaviours they exhibit' (Becker, Huselid & Ulrich, 2001, p. 175) so a balanced performance measurement is required. It is important that managers must understand what and how they are measured and that entails a good performance measurement and reward system that is reliable so that every manager is motivated to meet those targets and drive the organisation's success.

The Bell curve forced ranking method caused more problems than benefits as identified by (Deshmukh & Patel 2019) so the research will look into the solutions.

The next chapter will discuss the research methodology and design.

Chapter 3   Research Methodology and Design

3.1 Introduction

This chapter describes the research methodology and design used in this research to investigate the research problem and questions. It describes the details of the data collection methods and procedures. The research questions and hypotheses, sampling method, the quantitative and qualitative research methods including the research instruments, the variables, the measurement of the variables, the reliability and validity of the study, how the data was collected, ethical considerations and data analysis are explained. A summary is provided at the end of this chapter.

3.2 Methodology and Research Paradigm

Crotty (2003, p. 3) defined methodology as 'the strategy, plan of action, process or design that lies behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes'. The epistemological issue relates to the question of what is or should be regarded as an acceptable knowledge in a discipline according to Saunders, Lewis & Thornbill (2007). Epistemology is 'the study of knowledge' (Truncellito 2007). The theoretical perspective is 'the philosophical stance informing the methodology, and thus providing a context for the process and grounding its logic and criteria' (Crotty 2003, p. 3) The four essential aspects to address the research questions are 'the epistemology that informs the theoretical perspective, which methodology governs this choice and use of methods, which theoretical perspective lies behind the methodology in question, and which methods to use'(Tan 2018, p. 68).

There are several research paradigms: positivist, constructivist, interpretivist, phenomenology, transformative, emancipatory, critical, pragmatism and deconstructivist, according to Mackenzie and Knipe (2006). A research paradigm or worldview is 'a basic set of beliefs that guide action' and is 'a general orientation about the world and the nature of research that a researcher holds' (Creswell 2009, p. 6).

This research is guided by the pragmatist paradigm as it 'arises out of actions, situations, and consequences rather than antecedent conditions' (Creswell 2009, p. 10). It is suitable for the mixed method approach as both quantitative and qualitative methods are used in this research. It allows a flexible approach to investigate the phenomenon and the researcher is 'free to choose the methods, techniques, and procedures of research that best meet their needs and purpose' (Creswell 2009, p. 11).

The mixed method approach was used in this research to examine and understand the performance measures and reward system adopted by organisations in Singapore based on the experience of the line managers. The exploratory strategy was adopted with the collection of both quantitative and qualitative data. Creswell (2009, p. 18) states that 'collecting diverse types of data best provides an understanding of the research problem' The qualitative data collection was the initial step, with the face-to-face interviews carried out first, following a pilot testing of the interview question. This was then followed by the collection of the quantitative data using an online questionnaire survey. The rationale was to explore and understand the performance measures, rewards and incentives from the participants in the organisations. This was done by researching the effectiveness of the measures used to motivate the line managers, based on their experiences, their perceptions of the system and also their recommendations to improve the system.

The mix of the qualitative and quantitative methods help to explore the participants views with the intent of building on these views with quantitative research and complemented by the quantitative research that explored a larger sample of the population, ‘to better understand a research problem by converging (or triangulating) broad numeric trends from quantitative research and the detail of qualitative research’ (Creswell 2009, p. 121).

3.3 Justification for Using the Mixed Method

The mixed method, using both the quantitative and qualitative approach, is a better approach as it provides a clearer understanding of the phenomenon. According to Creswell (2009, p. 18), it ‘both generalize(s) the findings to a population as well as develop(s) a detailed view of the meaning of a phenomenon or concept for individuals’. The reasons for combining both qualitative and quantitative data is to ‘explore participant’s views with the intent of building on these views with quantitative research so that they can be explored with a large sample of a population’ (Creswell 2009, p. 121).

The quantitative research examines the relationship among the variables from the data collected from the survey. ‘The survey research provides a quantitative or numeric description of trends, attitudes, or opinions of the population’ (Creswell 2009, p. 12). The qualitative approach on the other hand allows the inquirer to explore generally to learn what variables to study and then study those variables with a large sample of individuals in the quantitative survey (Creswell 2009).

In this research, the line managers' experiences and perceptions of the performance measurement and reward system is central to the research. The research begins with the study of the actual experience of the managers and their perceptions. From the qualitative research, the appropriate variables were identified, assisting in the design of questions used in the questionnaire survey.

The sequential exploratory strategy was adopted with the 'first phase of qualitative data collection and analysis followed by a second phase of quantitative data collection and analysis that builds on the results of the first qualitative phase' (Creswell 2009, p. 234). The qualitative in-depth interviews were conducted first, followed by the quantitative questionnaire survey. The rationale is for 'developing better measurement instruments,' leading to 'a test of better measures for a sample of a population' (Creswell and Creswell 2017, p. 237).

The qualitative method provided a better understanding of the research problem from the experiences and perceptions of the managers. The objective of the qualitative interviews is to explore, identify and describe the performance measures and rewards that are used, to determine which of the measures are effective to evaluate, reward and motivate line managers in Singapore. It also examines the challenges and changes of the performance measurement and reward system and gathers evidence from the line managers on the state of the performance measures and rewards from their lived experience and their recommendations to improve the system. Another benefit of using the qualitative approach first, was to refine the quantitative survey used on the larger population.

3.4 Research Participants

The research targeted line managers working in Singapore. Line managers were chosen because they are the people in the organisation who tend to have a good understanding performance at different levels (Likierman 2009). In addition, they are an important component of the research. Stanton and Nankervis (2011, p. 78) stated that ‘line (and middle) managers are most commonly charged with the responsibility for implementing Performance Management (PM) systems.’ Moreover, Anthony, Hawkins & Merchant (2011, p, 693) added that ‘significant decisions and control actions are the responsibility of the line managers’ and they are the ‘focal points in management control.’ It is primarily for this reason that the line managers were chosen for this research contributing positively to the study on the performance measurement and reward system within their organisations.

The criteria in the selection of the participants for this research are:

(1) They must be line managers who worked in organisations in Singapore.
(2) They must have the experience of being evaluated and rewarded for their performance,
(3) They must have a good knowledge of the performance measurement and reward system in their organisation
(4) They must be willing to provide information on the performance measures and reward.

These criteria must be met to enable the relevant data to be collected for this research and to answer the research questions on the performance measures and rewards used in their organisations.

Line managers are actively involved in the operations of the organisation and are likely to have a good knowledge of the performance measurement and reward system. They are the right personnel who are in a position to provide detailed insights and are likely to have a critical view of the performance measurement and reward system in their capacity as line managers. As line managers, they should be able to express their views effectively on whether they are satisfied and motivated by the system and state the problems they encountered. They should also have the ability to make recommendations for improvement in their organisations.

The research focused on line managers in Singapore. Singapore was chosen as there were few published studies on the performance measurement and reward system in Singapore. This research will add to the knowledge in this under-researched area. It will also help to understand the context and significance of the research questions on the performance measures and reward system of line managers in Singapore.

3.5 Research Objectives

The objective of the research is to study the performance measures and reward system in organisations that motivate line managers in Singapore, which is both a challenging and changing environment. The research is exploratory. It examines the types of performance measures and rewards used as well as their effectiveness to motivate the line managers in Singapore. The research examines the behaviour of the line managers to these measures and the rewards. It also studied their satisfaction level and recommendations are made in this research to improve the systems being currently used. It also provides an insight to the performance measurement and reward system based on the managers' experience and perceptions. The research objectives are explained in more detail in Chapter 1, para. 1.2.

The findings of the research identified the types of performance measures and rewards that were effective to motivate the line managers to work harder to meet the organisational goals and also the changes needed to make the system better.

The research examines the following:

(i) The performance measures and rewards that are effective in motivating the line managers.

(ii) The satisfaction of the line managers with the existing performance measurement and reward system.

(iii) Changes made to the performance measurements and rewards to adapt to the VUCA environment.

(iv) Challenges in the performance measurement and reward system.

(v) Methods to improve the performance measurement and reward systems being used.

These will be discussed in the findings of the research.

3.6 Research Questions and Data Collection

The data collection methods for the qualitative and quantitative approaches for each of the research questions are as follows:

Research Question 1: What are the performance measures that are effective in motivating managers?

Both the qualitative and quantitative methods were used to answer this research question.

Qualitative Method:

Questions 1 and 2 of the qualitative in-depth interviews collected data to support the research question 1. It provided the data on the types of performance measures used to measure the individual managers and whether they are effectively used to motivate the managers.

Quantitative Method:

The quantitative survey questionnaire is similar. Question 1 requires the participant to answer what performance measures were used to measure their performance. Question 2 used the survey to determine whether each of the performance measures that they have identified are effective as a motivator. The response outcome is binary, so the logistic regression model was applied to determine if the performance measures were statistically significant and to estimate the probability that the individual performance measures were 'effective' or 'not effective' as a tool to motivate the manager.

Research Questions 2: How satisfied are managers with the performance measurement and reward system?

Qualitative Method:

Question 31 of the interview questions asked interviewees on their satisfaction level of the performance measurement and reward system in their organisations, with a Likert scale as a guide to the level of satisfaction under the categories of: 'Very dissatisfied', 'Dissatisfied', 'Neither satisfied nor dissatisfied', 'Satisfied' or 'Very satisfied.' Responses were collected as to the levels of satisfaction.

Quantitative Method:

The quantitative questionnaire survey, question 32 asked for their rating of their satisfaction level, also based on an identical Likert scale, from very dissatisfied to very satisfied.

Research Questions 3: What changes were made to the performance measurement and reward system?

Qualitative Method:

Questions 16 of the qualitative in-depth interviews collected data to support the research question 3 on the changes to the performance measures over the past three years. These were due to changes in operations, products, services, political, social, economic, technology, among others. Interviewees were then asked what were the performance measures that were added or changed over the previous three years.

Quantitative Method:

The quantitative questionnaire survey, question 13 collected data on whether there were changes to the performance measures that reflected the changing landscape or other changes in the operating environment. Question 14 investigated whether the current performance measures in their individual organisations were in line with the changes in the operating environment. Question 27 collected data on whether the rewards/incentives in the organisations need to be changed.

Research Questions 4: What are the challenges in the performance measurement and reward system?

Qualitative Method:

Questions 5 of the qualitative in-depth interviews collected data to support the research question 4, asking interviewees on whether budget as a performance measure hinders the line managers from taking up new opportunities that were not planned for in the budget. Question 18 collected data from the interviewees on whether the measures were working and whether the performance measures caused more harm than good to their organisations.

Question 24 collected data on whether the performance ranking (bell-curve) of individuals based on performance measurement scores attained among the managers, are a fair system of evaluating and rewarding employees.

Quantitative Method:

In the quantitative questionnaire survey, question 19 collected data on whether the budget as a performance measure hinders the managers from taking up new opportunities that were not planned for in the budget.

Question 24 collected data on whether the Bell curve/forced ranking of performances among managers, a fair system of evaluating and rewarding employees.

Question 33 collected data from the respondents on their views of the performance measurement and reward system and how to improve them.

These qualitative and quantitative questions led to identifying some of the challenges in the performance measurement and reward systems being used in some companies in Singapore.

3.7 Qualitative Research

3.7.1 Qualitative Research Sampling Method

In the methodology for the qualitative research, purposive sampling was used. Purposive sampling was described by Lee and Lings (2010, p. 213-214) as ‘sampling with a purpose’ and to only ‘sample people who are relevant to the research question’. The qualitative sample ‘relies on small samples and the necessity to generate rich information about the research question’ (Lee & Lings 2010, p. 212). They also added that the purposive sampling method helps to ‘select cases that are likely to be able to provide us with this rich information’ (Lee & Lings 2010, p. 212-213). Based on these recommendations, the participants were carefully picked based on the criteria as described in paragraph 3.5 and were as follows: Participants must be line managers who worked in organisations in Singapore; have the experience of being evaluated and rewarded for their performance; have a good knowledge of the measurement and reward system in their organisation and be willing to provide information on the performance measures and reward system used in their organisation.

The potential participants were approached either personally or via telephone calls. They were first given a brief summary of the purpose of the research and then screened with questions to find out if they meet the criteria. This is to ensure that the potential participants have the experience and knowledge on the performance measurement and reward system used in their organisations and are able to answer the interview questions. This was to ensure that relevant data that would contribute positively to the research were collected. When all these conditions were met, the potential participants were then invited to participate in the research via a face-to-face interview. For those who agreed to participate in the face-to-face interview, an appointment was arranged with an agreed date, time and a place that was convenient to the participants is arranged. All this were done according to the University of Canberra's ethical guidelines, with the participants being advised of their rights.

The participants were invited without undue pressure or coercion, although it did require some persuasion from the researcher to get the participants to agree to take part in the research. It should be noted that it was difficult to get willing participants for the research. Several line managers turned down the invitation to participate in the research. The reasons cited were mainly 'too busy' or they were not allowed to disclose details of the performance measures and rewards used in their organisations due to confidentiality. This was despite the managers being assured that their identity would not be revealed if they do not wish it and the research will be carried out ethically as required by the University, as well as having it approved by the University's Ethics Committee. After much persuasion, there were only nine line managers who accepted the invitation to participate in the face-to-face interviews.

The sample size of nine may be small, but it is within the recommendations of Morse (1994) quoted by Guest, Bunce & Johnson (2006, p. 61), who stated that the sample size for qualitative research should be at least six while Creswell (1998) recommended 5 to 25. So, the sample size of nine in the qualitative part of this research of the mixed method is within the acceptable range of this research. What is important is that the in-depth interviews provided detailed data for the research. Moreover, it was also supported by the data collected from the larger sample size from the quantitative research's questionnaire survey. The two combined sources of data were sufficient to support the findings of the research. The nine interviews provided detailed qualitative information on the state of the performance measurement and reward system as supported by Lee and Lings (2010, p. 212) that ‘reliance on small samples, and the necessity to generate rich information about your research questions’ is enough.

Lee and Lings (2010) added that the qualitative research interviews tend to be a better method in obtaining the information on the lived experiences. However, this research adopted the mixed methods approach. The qualitative interviews provided detailed insights into the performance measurement and reward system of the line managers in Singapore and, in addition it was strengthened and supported by the data collected from the quantitative survey questionnaire. This was based on a larger sample size that is testable and also enriched the research findings.

3.7.2 In-depth Interviews

The in-depth interview is an interactive method, according to Lee & Lings (2010). It involves the questioning of the participants and recording the answers. This enables the researcher to find out what are the different performance measures and rewards and the managers’ judgements on whether they are effective or ineffective to motivate them to work harder to meet the targets and to earn the reward. The participants were also asked to make recommendations on what could improve the performance measurement and reward system and in turn, would motivate them to work harder.

According to Ticehurst & Veal (1999, p. 97), in-depth interviews enable ‘a more detailed study’ and tend ‘to probe more deeply than a questionnaire-based interview’. It helped to find out more details on what the performance measures and rewards were, and whether these measures and rewards were effective in motivating the line managers who were interviewed.

Additionally, recommendations on how the system may be improved were also sought from the managers who were interviewed.

Lee & Lings (2010, p. 218) mentioned qualitative in-depth interviews ‘do tap deeply into the respondents own experiences, feelings and opinions’, so the rationale of using the interviews was to enable the understanding of the nature of performance measurement in practice in Singapore. It will also reveal the types of performance measures applied in those organisations and the effectiveness and efficiency of these measures. This method was chosen because it is less structured and can probe more deeply into what are the different performance measures that are being used in those organisations, the financial or non-financial measures applied and how effective these measures are.

In-depth qualitative interviews on a face to face, one on one, guided by a checklist, with open-ended semi-structured questions were used in the interviews of this qualitative part of the research as prescribed by Creswell (2009).

The in-depth interviews obtained detailed information on the performance measurement and reward system from the line managers’ personal experiences, obtaining their insights and their feelings.

3.7.3 Qualitative Data Collection and Interview Procedures

The selection process for in-depth interview participants was based on purposive sampling. All participants must meet the criteria as described in paragraph 3.5. In this qualitative research, the nine individual line managers who participated in the face-to-face in-depth interviews were from different organisations in Singapore. This allowed a broader range of views and experience to be obtained.

In accordance with the ethics guidelines of the University of Canberra, before every interview, the participants of the face-to-face interviews were provided with a brief overview of what the interview is about. They were informed that they can refuse to answer any question if they feel uncomfortable or withdraw from the interview at any point of time without any penalty. They must sign the Participant Information and Consent form before the commencement of the interview to provide evidence that they have understood the processes and guidelines and have consented to the interviews.

After the individual participant had signed the consent form, the interview commenced. The semi-structured interview open-ended questions were used as a guide for all of the face-to-face interviews. The line managers were asked to provide information on what performance measures and rewards were used in their organisations, and whether these measures and rewards motivate them. They were also asked for their opinions and to comment on the performance measurement and reward system based on their working experiences. They were also asked to rate their level of satisfaction of the system being used in their organisation. It was conducted in an open-ended format where participants were allowed to contribute as much of the information as they wished to provide. Recommendations on how to improve the performance measurements and rewards system were obtained, that included better performance measures and rewards that they feel would be more effective to motivate them to work better and harder for their organisations.

Participants of the first two in-depth interviews had difficulty identifying and classifying (naming) the type of performance measurement system in their organisations, so the order of the questions were changed, with certain of the question being asked nearer to the end of the interview. In addition, the interviewer provided the definitions with examples to help the participants understand better the questions being asked. As a result, there were no similar problems encountered by the participants in the subsequent interviews.

In the qualitative research, the in-depth interviews provided the answers on which of the performance measures and reward would be more effective to motivate the line managers. Also it allowed the researcher to gauge the level of the satisfaction of the performance measurement and reward system being used. The participants were required to choose one of the following ratings of their level of satisfaction: ‘Very dissatisfied’, ‘Dissatisfied’, ‘Neither satisfied nor dissatisfied’, ‘Satisfied’, ‘Very satisfied’. The other interview questions collected information on the types performance measures and rewards and whether these measures and reward systems acted as a motivating or demotivating tool in their organisation. They were asked for their views and recommendations on the performance measures and reward system based on their individual judgement and experience.

3.8 Quantitative Research

The purpose of the quantitative research is to explore the various performance measures and rewards. It is carried out to test the relationship between the variables. The main independent variables are the performance measures and reward while the dependent variables are motivation and satisfaction. The research involves a cross-sectional survey that entails the collection of data, measurements, validation and with the support of theory on the effects of the performance measures and the rewards on the behaviour of the line managers.

The quantitative research was conducted after the qualitative research, via an online questionnaire survey. It complements the qualitative approach and provides a more robust analysis. This is due to the larger sample size to collect the data from the line managers. This then provides further support for the research so that the two sets of data can be compared and triangulated. The quantitative method based on a positivist approach, makes it possible to test the theories deductively though the examination of ‘relationships among the variables’

(Creswell 2009, p. 132) unlike the qualitative approach. The quantitative method was adopted to examine better the relationships of the performance measures and rewards on the behavior of the performance and effectiveness of the line managers from organisations in Singapore.

3.8.1 Unit of Analysis

In this research, the unit of analysis is the individual line managers. It is the primary unit used to examine and understand the performance measurement and reward system and the managers' perceptions and behaviour of this social research.

3.8.2 Measurement of Constructs

Constructs are unobservable human behaviour and they are to 'explain human behaviours, or why people do certain things' (Lee & Lings 2010, p. 148). In this research, the main constructs of the research are motivation and satisfaction. The measurement of the constructs is by 'tapping the perceptions' (Lee & Lings 2010, p. 163) of the line managers.

This research adopted an ordinal scale in the form of a five-point Likert scale for the level of satisfaction, ranging from very dissatisfied to very satisfied.

For the performance measures and rewards, the choice of: 1= 'Yes', 2= 'No' and 3= 'Neither' provides answers on whether they are motivated by these performance measures and rewards.

3.8.3 Questionnaire Survey

The purpose of the questionnaire survey is 'to generalize from the sample to a population so that inferences can be made about some characteristic, attitude or behaviour of this population' (Babbie 1990 as cited in Creswell, 2009, p. 146). It provides insights to the behavior of the line managers towards the performance measures and rewards. The survey was cross-sectional.

The questionnaire survey was carried out on 141 line managers. It examines the types of performance measures and rewards and their effect on the behavior of the line managers – whether it motivates them, their satisfaction level and their perceptions of the performance measures and reward system. The research was conducted to find out whether line managers were satisfied, their level of satisfaction with the performance measures and reward system and which of the performance measures and rewards motivate them to work harder.

3.8.4 Sampling Design and Procedure

The quantitative research was conducted with a cross-sectional social survey. The objective is to examine the relationships of the performance measures and rewards, motivation and satisfaction of the line managers in Singapore. The quantitative method gathered data from a larger sample size than the qualitative interviews and it supported the findings of the research. The quantitative method allows data collected to be summarized into statistical tables, compared and tested statistically (Creswell 2009).

Initially the researcher adopted stratified sampling and sent questionnaire survey links via email to line managers of 200 companies on the Singapore stock exchange. The companies were selected from every three out of around 700 companies listed on the Singapore stock exchange website from each industry category. Unfortunately, there were no responses so the purposive and judgmental, non-probability sampling method was adopted.

The purposive sampling method is 'sampling with a purpose' according to Lee and Lings (2010, p. 213), which is to sample people who are 'relevant to your research question'(ibid). The targeted participants of the questionnaire survey must meet the three following criteria:

(1) Participants must be line managers,

(2) They must be currently working in organisations in Singapore and:

(3) They must have experience of being evaluated for their performance and are willing to share their experience on the performance measures and reward system used in their organisations.

The sampling method was suitable as the line managers who met these criteria are relevant to the research. Lee and Lings (2010) did state that although probability sampling is more ideal than non-probability sampling, purposive sampling is still suitable for the research. It requires two key criteria: firstly, the population should be able to provide the data of interest to test the theory and secondly, whether the sample that are selected have any systematic differences on any variables or characteristics of interest from the population. These two criteria were met as only participants who met these criteria and who are likely to have the potential to provide the relevant data for the research were selected to take part in this research.

The potential participants were approached either personally, via the telephone, through emails or through the social media: the Facebook and LinkedIn. The online questionnaire survey links were sent only to participants who meet the criteria. All in there were 141 line managers who accepted the invitation and participated in the online survey. However, only 133 of the participant's responses were usable in the research, as eight responses were incomplete and were not usable.

The sample size of 133 participants was considered sufficient for the quantitative analysis. This was supported by Chong (2019, p. 97) who quoted Howell (1997), suggesting that at least a sample size of 20 participants was sufficient for the quantitative research, while Cohen (1988) considers the minimum suggested number as 30 participants. Green (1991) arguing for no less than 50 participants for a meaningful representation'. In addition, Waller (2017) states that a sample size of less than 30 participants can be used. However, he added that some statisticians recommend 120 participants as the cut-off point. Besides, Lee and Lings (2010, p. 273) commented that the sample size should be based on practicality, 'within the limits of time and resources.'

The 133 completed responses from the participants of the questionnaire survey were more than the 120 responses received by Mills (2002) when he conducted the quantitative survey on the performance management/appraisal on organisations in Singapore before 2002. The sample size of 133 was also higher than another survey by Stanton and Nankervis in 2011, where a total of 91 responses were obtained from the survey on performance management in Singapore.

The participants of the quantitative questionnaire survey were well represented across the industries, size of organisation, gender and age group as described in the participants' profile in paragraphs 4.17 – 4.17.4.

3.8.5 Questionnaire Survey Design

The questions on the quantitative questionnaire were similar in their aims to the questions from the face-to-face interview questions. The problems encountered by the in-depth interviewees of the qualitative participants in answering the interview questions were considered in the design of the questions of the survey questionnaire. The questions on the questionnaire were revised to include definitions at the end of each of the performance measurement systems listed and it made it easier for the participants to understand and to answer the question. In addition, the more difficult questions were moved from the early part of the questionnaire to the last few questions. This was to minimize the risk of a premature abandonment of the survey by the participants, so that a higher response rate would be achieved. In addition, some changes were made to simplify the language used in the questions. This initial pilot testing improved the understanding of the questions and the response rate.

The questions in the questionnaire did allow for a few open-ended answers such as Question 33. This asked survey participants for their comments and their views on the overall performance measurement and reward system of their organisation and their recommendations to improve it. Question 1 of the survey questionnaire included an open-ended answer for the participants to specify any other type of performance measures that were not listed on the questionnaire while question 22 asked participants to specify any other types of reward that they received. These were included as it is not possible to list all performance measures and reward used in the questionnaire as each organisation may have their own different and unique performance measures and rewards, as the participants are from various organisations and industry as represented in Table 4.11: Industry Distribution. So the questionnaire included an additional choice of answer under “Other (please specify)” to allow the survey participants to add in any other performance measures and rewards that were not listed on the questionnaire. These were in line with the research questions.

3.8.6 Validity of the Survey Questionnaire and Pilot Testing

The validity of the questionnaire as to determine the extent to which they accurately reflect what they are intended for, that is, to ‘establish content validity and to improve on the questions, format and scales’ (Creswell 2009, p. 150).

A draft questionnaire was sent to both the primary and secondary supervisors for their vetting and feedback. The supervisors recommended revisions to the questions in the questionnaire.

Questions were restructured to minimize ambiguity so that it was simpler for the participants and an additional question was added after the review.

After the changes were made to the questionnaire, the questionnaire was sent out to participants for a pilot run. The pilot survey was conducted using convenience sampling and 31 responses were obtained. The purpose was to determine the design quality of the questionnaire, whether the questions were ambiguous, too complex, too long, and for recommendations to improve on or add to the questions.

The participants of the pilot study completed the questionnaire and provided feedback on the cover letter, wording, sequencing and layout. Resulting from this, the questions were revised. They also provided feedback on the time taken to fill in the questionnaire, which according to the respondents, was a satisfactory length of time. Some of the questions were rephrased to simplify them and to remove the ambiguity so that the final participants could better understand and answer the questions without undue difficulty. The feedback from the pilot survey helped minimize the risk of participants sending in incomplete responses or in more severe cases, participants may give up mid-way and result in fewer completed survey questionnaires. Information was given as to the survey being voluntary and participants being made aware that they may withdraw from the survey at any point of time during the survey, without penalty or other consequences, as provided in one of the clauses of the research ethics guidelines.

The research methods were guided by the epistemology and theoretical perspective. The purpose of the research was to understand and improve the performance measurement and reward system in Singapore.

The Logistic Regression Model was applied to estimate the probability that the individual performance measure is ‘effective’ or ‘not effective’ to motivate the manager. It is used instead of the Linear Regression Model as the response outcome was binary (Hosmer, Lemeshow &

Sturdivant 2013). According to Lee and Lings (2010, p. 355), the logistic regression technique can be used 'to examine the influence of variables on categorical outcome variables and it allows the prediction of the outcomes from the categorical predictors'. It allows the transformation of the independent variable, the individual performance measures that has a non-linear relationship with the dependent variable, 'effective' or 'not effective' to motivate the managers. The dependent variable is the dummy variable 1 for 'effective' and 0 otherwise. The model estimates the probability that the performance measure is 'effective' or 'not effective' to motivate the managers. The data set was processed through 'STATA' to generate the logistic regression to determine the maximum likelihood and the relevant betas and the statistical significance on each of the performance measures used.

The use of descriptive statistics, bivariate and multivariate statistical techniques were made to analyze the data from the questionnaire survey. From the descriptive statistics, the mean and standard deviation were obtained from the data collected to support and explain the findings of the research. The bivariate statistics were made to understand the size and direction of the linear relationship between the variables: performance measures and satisfaction. In addition, the multivariate statistics was made to analyze the multiple independent and dependent variables.

The purposive, judgemental approach, that is non-probability sampling was applied in the quantitative research. The participants met the criteria of work experience and have knowledge on the performance measures and reward, as line managers in organisations in Singapore. Lee and Lings (2010, p. 271) advised that so long as it meets the two key criteria in a non-probability sample, firstly, the sample in the population can provide the data of interest to test the theory and secondly, whether those selected 'have any systematic differences on any variables or characteristics of interest from the population' (ibid). Besides, Lee and Lings (2010,

p. 273) also added that ‘First is pure practicality – how big can you get your sample to be within the limits of time and resources? This need to be balanced with the research considerations’.

The purposive judgmental sampling was used so that the response rate would be better for the research and also due to the limited time for the research. The criteria of the participants were that they must be line managers and are working in organisations in Singapore with a performance measurement and reward system, have experienced being evaluated for their performances as line managers and must be willing and able to share their experiences on the performance measurement and rewards.

With the changes made to the questionnaire after the pilot survey, the questionnaire was finalized. There were 141 responses. Of these, 8 responses were incomplete leaving with 133 usable responses for the research. This number was higher than the 120 responses obtained by Mills when the survey on performance management/appraisal on organisations in Singapore was carried out in 2002 and it was also higher than the survey by Stanton and Nankervis on ‘Linking strategic HRM, performance management and organisational effectiveness: perceptions of managers in Singapore’ conducted in 2011, where a total of 91 responses were obtained in the survey on managers in Singapore.

3.8.7 Details of the Questionnaire Survey

There were thirty-three main questions on performance measurement and the reward system and four demographic questions on the survey questionnaire. The questions included mostly multiple choice questions with a few open-ended questions. It included a 5-point Likert Scale to measure the manager’s overall satisfaction level of the performance measurement and reward system. Refer to Appendix 1 Question 32.

The questionnaire includes a list of the existing common performance measures such as profits or profit margin, return on investment (ROI), economic value added (EVA) or residual income, turnover/revenues or revenue growth, costs related, as obtained from the literature and past research by Christopher Mills (2002). There was allowance for respondents to add any other performance measures that are not on the list under “Others, please specify”. This is to enable the research to find any new performance measures that are used that are not in the literature and past surveys as it is expected that there are various performance measures used in different organisations.

For the rewards and incentives, the questionnaire includes some of the common rewards and incentive such as fixed base salary, variable salary, fixed bonus, variable bonuses, salary increases (increments) and a few others.

For both the performance measures and the rewards, the questionnaire includes a category under ‘Others: (please specify)’ with comment boxes provided with ample space for the respondents to add, on any of the performance measures and rewards that were not listed. This is to enable any new and innovative performance measures and rewards that they were actually measured and rewarded in their organisations to be recorded.

For each of the measures that the participant has indicated that are in use in their respective organisations, participants will provide their opinion on whether each of those individual performance measures motivate them to work harder to meet those targets that they are evaluated upon. From analyzing these answers to the questions, conclusions can be drawn on whether the financial measures were more effective than non-financial measures.

Questions were asked on whether there are too many measures, whether there are any changes to the performance measures and rewards in the past three years and whether they will consider how their decisions will impact the other managers in their pursuit of meeting the performance targets set.

The questions were carefully structured to be objective and were checked that they do not unduly influence the respondents to answer in a certain way and cause a bias in the survey results. The questions on the questionnaire were phrased in simple and plain English without difficult to understand words and jargon. It is put forth in a straightforward and easy to understand form and with clear explanations for example, 'claw back provisions' was explained in brackets '(e.g. recovery of bonuses or incentives paid)'. This was made so as to take into consideration some of the participants who may not be too proficient with the language, or the terms used.

The questions in the questionnaire do provide a space to allow respondents to suggest performance measures that they feel are better measures of their performances and rewards or incentives that are more effective in motivating them to work harder towards the targets and objectives of the organisation. It also included questions requesting the managers to fill in the other performance measures that they know are used to measure their peers and to reward them in their organisations. This is to find out more about what the other performance measures and rewards were adopted in their organisations.

Managers were assured of the confidentiality of their questionnaire returns. The assurance of confidentiality was expressly stated on the participant information form to participants of the questionnaire survey and it is important to make that assurance so that so that it would not adversely affect the career of the managers and also the confidentiality of the organisations they work in. It is an important factor as it does have an effect on the willingness of the participants to participate in the questionnaire survey.

The rationale for adopting the questionnaire survey is to enable a wide variety of responses from a good representation of participants to find the types of performance measures, rewards and incentives that are used to measure the performances of managers in Singapore. In addition, it is aimed at examining what motivates managers in Singapore, and to find out if there are any new measures and rewards or better system of performance measures and reward that is recommended to improve the system.

3.8.8 Hypotheses

The following are the hypotheses that relates to the research question on the satisfaction of the line managers:

Hypothesis 1: Financial performance measures are as effective to motivate the line managers as are non-financial measures.

Hypothesis 2: Managers are more satisfied when budgets are used as a performance measure.

3.9 Research Ethics

The research project (Project number 15-29) has the approval of the University of Canberra Human Research Ethics Committee on 3 March 2015. This research was carried out in compliance with the National Statement on Ethical Conduct in Human Research. The rights of the participants and the assurance of privacy and confidentiality of all respondents were emphasized.

The participants of the research were assured that:

Participation in the research is completely voluntary and participants may choose not to participate and may withdraw their consent to participate at any time. Their responses to *this study were strictly confidential and the researcher would not reveal the identity of those who have responded.*

All data collected will be kept confidential. Only the researcher will have access to the individual information provided by participants. Privacy and confidentiality will be assured at all times

The information collected will be stored securely on password protected files throughout the project and then stored at the University of Canberra for the required five year period after which it will be destroyed according to university protocols.

(University of Canberra 2014)

These were included together with the other Ethics Committee approval information in the questionnaire survey form that was sent out to potential participants to request for their participation in this study.

For the qualitative in-depth interviews, the interviewer provided a summary of what the interview is about, to enable the participants to know what is expected of them before the interview commenced. This is to ensure that the participants know what they will have to undergo in the face-to-face interview. Participants were also informed that they may withdraw from the research at any point of time during the interview without penalty.

The interview participants then are required to sign an 'Informed Consent' form just before the interview was conducted, to confirm that they understood what is required of them and most importantly their willingness to participate of their own free will for the interview.

The participants information and consent forms are in Appendix 2 for participants of the questionnaire survey and Appendix 4 for the participants of the in-depth interviews.

3.10 Summary

In this chapter, the research methods and design were described. The research objectives, research questions and the related hypotheses to each of the research questions were discussed. The mixed method research design with qualitative data collected via in-depth interviews and quantitative data collected via a cross-sectional online survey from line managers in Singapore. The reasons for the adoption of the mixed method was explained and the data collection methods for the study were described in detail including the sampling methods and sample size of both the qualitative and quantitative methods were also explained. How the qualitative in-depth interviews and the questionnaire survey were carried out were discussed, including the procedures of the qualitative in-depth interviews and validity of interview questions and the explanation on the validity of the quantitative research with the pilot questionnaire survey and details of the questionnaire survey were made. The detail of the sample demographics was also discussed.

Chapter 4 Analysis and Interpretation

4.1 Introduction

This chapter presents the analysis and interpretation of the research on the study on the challenges and changes of the performance measurement and reward system in Singapore, from the data collected from the qualitative in-depth interviews and the quantitative questionnaire survey from line managers in Singapore. The findings that addressed the research questions are presented in this chapter. It provided the analysis and results of the qualitative and quantitative research components. The analysis of the line managers' experiences on the performance measures and rewards were made. The results on the performance measures and rewards used in the organisations in Singapore are presented. The chapter ends with a summary of the findings obtained from this study.

4.2 Data Analysis of the Qualitative Research

The qualitative research data was gathered from the nine in-depth interviews to understand the participants' lived experience and their views on the research questions on performance measures, the reward system, and the satisfaction level of the managers.

Creswell (2009) suggested that the data analysis in qualitative research involves the collection of open-ended data, based on asking general questions and developing an analysis from the information supplied by the participants.

4.2.1 Protocol for the Qualitative Interview

The qualitative research adopted a semi-structured interview approach in the gathering data, one of the methods recommended by Creswell (2009) that is suitable for exploratory studies. The interview protocol included first, informing the participant what is expected from them and that they may choose not to answer any of the questions if they are not comfortable or willing to provide them and are free to stop the interview without any penalty. The informed consent before the interview was obtained. The interview was conducted, guided by a list of interview questions. The interviews were recorded.

The recorded interviews were transcribed. The transcriptions of the interviews were checked, by the researcher. The transcripts were read through two or more times to ensure that there were no missing parts and transcription errors. There were a few transcription errors found and they were corrected. This process is to ensure the reliability and validity of the data.

The performance measures were coded and segregated into themes. They were classified under the different types of performance measures and rewards, the changes, whether there are rewards for creativity, risk taking and their satisfaction level. The measures are then further classified into financial from the non-financial measures, and the rewards into monetary and non-monetary. The other characteristics of the performance measures and rewards were also coded.

Coding the data collected was carried out by going through the transcripts in detail, line by line and question by question. They were individually examined, and similar characteristics and themes were assembled. The Excel spreadsheet was used. The process model is presented to convey the descriptive information about each participant and the data was presented in a table. It consists of data of the different types of performance measures and rewards, satisfaction level and other related data. A systematic approach was used in the process of analysing and making interpretations of the interview data. These enabled the analysis of the data and led to the report of the findings in this chapter.

4.3 Qualitative Research Participants' Profile

The in-depth interview participants are line managers in Singapore who have experience of being evaluated and rewarded and who are able and willing to participate in the interviews on the performance measures and reward system. There were nine participants, and they were selected as they have good knowledge of the performance measures and reward system and the ability to provide the data required to add to the richness of the mixed method design.

Tables 4.1 to 4.4 provide details on the industry distribution, organisation size, gender and age of the interview participants.

Table 4.1: Industry Distribution – Qualitative Participants

Industry Group:	**Response Percent (%)**	**Frequency**
Engineering	22.2%	2
IT and related	22.2%	2
Healthcare	22.2%	2
Finance and related	11.1%	1
Food and Beverage	11.1%	1
Media and related	11.1%	1
	100%	**9**

Table 4.2: Organisation Size Distribution - Qualitative Participants

Size (No of Employees)	Frequency	Percent (%)
1 - 100	3	33.3
101 - 1,000	2	22.2
More than 1,000	4	44.5
Total	9	100

Table 4.3: Gender Distribution – Qualitative Participants

Gender	Frequency	Per cent (%)
Female	7	77.8
Male	2	22.2
Total	9	100

Table 4.4: Age Distribution - Qualitative Participants

Age Group	Frequency	Per cent (%)
Less than 30	2	22.2
30 to 39	4	44.5
40 to 59	3	33.3
Total	9	100

4.4 Findings of Qualitative Interviews

The findings of the qualitative in-depth interviews that were conducted are explained in this section. The analysis of the interviews was based on qualitative data collected and the main independent and dependent variables were examined and interpreted. The objective is to understand the performance measures and reward system effects on the behaviour of the managers that addressed the following research questions.

4.4.1 Research questions:

The qualitative interviews explore the research questions from para. 1.6 are reproduced as follows:

The central research question is: What are the challenges and changes to the performance measurement and reward system used in organisations to effectively motivate line managers?

The sub- questions that arise on these issues are:

1) What are the performance measures that are effective in motivating managers?
2) How satisfied are managers with the performance measurement and reward system?
3) What changes were made to the performance measurement and reward system?
4) What are the challenges in the performance measurement and reward system?

4.5 Themes and Categories

The qualitative data were classified into key themes and categories. The key themes are the performance measures, reward and satisfaction of line managers in Singapore. The categories under the theme performance measures are the types of performance measures with sub-categories: financial and non-financial performance measures. The reward category consists of the types of reward/incentives and sub-categories: monetary and non-monetary reward. The category on satisfaction consists of the levels of satisfaction of the managers. These are presented in Table 4.5:

Table 4.5: Key Themes and Categories

Themes	Categories
Performance measures	Types of performance measures
	Financial performance measures
	Non-financial performance measures
	Performance measures - changes
Reward	Types of reward/incentives
	Monetary reward
	Non-monetary reward
Motivation	Effective/not effective to motivate the managers
Satisfaction	Satisfaction levels of the managers

4.6 Performance Measures in Singapore from Findings from the Qualitative Interviews

The main theme is on the performance measures used to evaluate and motivate line managers in Singapore. There were many types of performance measures used and it was sub-categorised into financial and non-financial measures.

The interviewees revealed the following performance measures used to measure the performance of the line managers.

4.6.1 Financial Performance Measures

The results from the interviews show that the financial performances measures used are profits/profit margin, turnover/revenue or revenue growth, budgets, economic value added (EVA), return on investment (ROI) and costs related.

Profit or profit margins was the main measure used to measure the performance of three managers and two of the managers felt that profit as a measure was effective to motivate them. The result was supported by Kenny (2015) who claimed that 'managers and boards are often pushed by investors, fund managers, and analysts to focus intently on a single measure of success which is profit or shareholder value'. There were two managers whose performance were measured by revenue related measures, and they agreed that they were motivated by that measure, however, one out of two managers interviewed, who were measured by EVA or residual income and budgets felt motivated by these measures. It should be noted that the managers interviewed who were measured by ROI and cost related measures felt that these measures were not effective to motivate them. Table 4.6 below summarized the results:

Table 4.6: Effectiveness of Financial Performance Measures to motivate the manager - Qualitative Interviews

Financial Performance Measures	**Effective to motivate the managers**
Profits/profit margin	2 out of 3 managers
Turnover/Revenues or revenue growth	2 out of 2 managers
Budgets	1 out of 2 managers
Economic value added (EVA) or Residual Income	1 out of 2 managers
Cost related	1 out of 1 manager
Return on investment (ROI)	0 out of 1 manager

4.6.2 Non-financial measures

The results of the qualitative interviews revealed that the non-financial measures used to measure the performance of the managers and they were: projects on time, work output, performance quality such as: efficiency, errors or accident rate, new ideas, new products, new processes, process improvements, customer satisfaction, new customers added and compliance with regulations.

There were other non-financial measures such as productivity, innovation, manager-subordinate relationships, employee turnover rate, teamwork, calibration and business transformation measures used to measure the managers.

The results shown in Table 4.7 revealed that projects on time, performance quality, namely: efficiency, number of errors or mistakes, accident rate, process improvements, and customer satisfaction were likely to be effective to motivate the managers.

Table 4.7: Effectiveness of Non-Financial Performance Measures to Motivate the Manager - Qualitative Interviews

Non-Financial Performance Measures	**Effective to motivate the managers**
Projects on time	4 out of 6 managers
Performance Quality: Efficiency, number of errors or mistakes, accident rate	4 out of 5 managers
Process improvements (on existing processes)	2 out of 3 managers
Customer satisfaction	2 out of 3 managers
Work output	1 out of 5 managers
Number of new ideas / products / processes	1 out of 4 managers
New customers added	0 out of 2 managers
Compliance with regulations	0 out of 2 managers

4.6.3 Overall Comparison of Financial and Non-Financial Performance Measures from the Qualitative Interviews

The results from the qualitative interviews show that the managers' performance was measured more on non-financial measures than financial measures. It also found that the non-financial measures: projects on time, performance quality, efficiency, error rates, process improvements and customer satisfaction were likely to be effective to motivate the managers while the financial measures of profits and turnover or revenue were the main performance measures that the managers felt were effective to motivate them.

4.7 Incentives and Rewards from the Qualitative Interviews

The incentives and reward used are categorized into monetary and non-monetary.

4.7.1 Monetary Incentives and Rewards

The monetary incentives used to reward the managers that were interviewed are fixed base salary, variable salary, fixed bonus, variable bonuses, salary increases, promotion, group or team bonuses, stock and company shares, employee stock options, transport allowances and cash incentives.

4.7.2 Non-Monetary Incentives and Rewards

The non-monetary incentives and rewards are merchandise prizes, vacation/holiday trips, club memberships, autonomy, power, praise, recognition, job security, free training, courses/seminars, time off, premium class travel, core value award.

4.7.3 Overall Views of Managers on Incentives and Rewards

The managers preferred monetary awards such as fixed and variable bonuses, salaries and promotion increases, fixed based salaries over the non-monetary reward. In the non-monetary award, recognition is most favoured by the managers.

4.8 Changes to the Performance Measures and Rewards

From the findings of the qualitative analysis, there were changes made to the performance measures. Five out of the nine managers reported that there were changes made to the performance measures used in their organisations. It was found that the average satisfaction score of the five line managers who were measured with performance measures that were changed to adapt to the change in the operating environment, were more satisfied with higher average satisfaction score of 3.40 compared to 3.25 for the other four line managers where no changes were made.

All managers interviewed felt that there should be changes to the reward system. They recommended change in the frequency of awards – to shorten the period of the reward, job rotation, team reward, flexible work hours, dining benefits, better work-life balance, more annual leave days, profit sharing and free health workouts, get-togethers for staff bonding.

4.9 Satisfaction Level of Line Managers with the Performance Measurement and Reward System

The line managers were asked to rate their satisfaction level on the performance measurement and reward system from a score of 1 - Very dissatisfied to a score of 5 - Very satisfied. There was only one out of the nine line managers interviewed, who was very satisfied. Three managers were satisfied, another three were neither satisfied nor dissatisfied and two managers were dissatisfied. None of the managers were very dissatisfied with the performance measurement and reward system in their organisations.

Overall, the results revealed that the level of satisfaction were mostly between satisfied and neither satisfied nor dissatisfied for the majority of six out of nine managers.

4.10 Bell Curve Forced Ranking of Managers

All managers interviewed except for two, agreed that the ranking the individual employees according to the scores attained from a set of performance measures based on the Bell curve forced ranking, is not a fair system of evaluating and rewarding employees.

They felt that the measures were subjective and there was biasness in the appraisal of their performances by their superiors. Some managers' performances were ranked with managers from the other departments, and they voiced their dissatisfaction that it was not a fair comparison. One manager dismissed the whole ranking of performance with their peers as not conclusive as there was no objective measure.

4.10.1 Qualitative Interviews Comments on Bell Curve Forced Ranking

The comments by the interviewees with slight corrections for grammar and expression are as follows:

Interviewee 1: Ranking is not very fair as the review was being conducted by the manager supervising them and may be biased.

Interviewee 2: It appeared to be very unfair, because some managers who they worked with and know them well, worked hard, are easy to work with, good team worker, however, the management did not recognize these good characteristics as it is not in their list of performance measures, so the manager was not ranked at the top end. It depends a lot on the judgement of the appraiser, and it is not fair.

Interviewee 3: It was not fair because the amount of effort that is put in doing the work is not recognized. There is a lot of background work but only the final outcome is evaluated. Much effort that went into doing the work was not recognised. The performance is also not comparable between the managers as some managers handle only one project, while others have to work on two or three projects.

Interviewee 4: Self-appraisal is first made and submitted to the superior who reviews, and it is ranked against the other managers. The superior is influenced by what is submitted in the self-appraisals by the managers and made a judgment, awarding more credit to managers who may have an impressive self-appraisal compared to the honest manager who does not, even though he had worked hard. It is not fair.

Interviewee 5: It is not fair due to the subjective judgement of the superior. When the manager is based off-site, that is, at the customers place, the customers have a better knowledge on how hard the managers had worked but the immediate manager who did the performance appraisal may not be aware and grades the manager down. It is not very fair because it is based only on the opinion of the manager who conduct the appraisal and does not get feedback from the customer.

Interviewee 6: It is not fair. It seems that ranking is a form of cost control. By ranking the line managers, the organisation can prevent the managers who are ranked lower from being rewarded with increased salaries. It is one of the management tactics to control costs.

Interviewee 7: It is not fair as it will be difficult to compare line managers of different departments. Every department manager is measured on different performance measures that are relevant in each individual departments and there the performance measurement cannot be compared with the other managers in the other departments. It is really hard to make a comparison and to do it fairly.

Interviewee 8: The evaluation by the superior may be biased (skewed), because they are actually very much dependent on the manager who is doing the ranking and it is very subjective and will not give a fair performance evaluation. It may only be partially fair, however, there should be other aspects besides the performance ranking.

Interviewee 9: It may be fair, although they may be a certain amount of biasness but having some form of performance evaluation is better than not having it. It will never be 100% satisfactory. There will be a certain amount of bias. However, it still better than not having any form of performance measurement. There will always be some shortcomings. Overall, it works in the organisation I worked for.

In summary, 7 out of 9 managers felt that it was not a fair system and that it was subjective and there was some degree of biasness on the part of the appraiser.

4.10.2 Solutions Recommended by Interviewee

Interviewee 1 recommended that a third party counter review by the human resource personnel as well as another senior manager would result in a fairer performance evaluation.

4.11 Budget as a Performance Measure

Five out of the nine interview participants were evaluated on their performances based on the budget and four out of the five participants agreed that the budget helped them to manage better. Three out of the five participants were motivated to perform to meet the budgets but felt that the budget as a performance measure hindered them from taking up new opportunities that were not planned for in the budget.

4.12 Recommendations to Improve the Performance Measurement and Reward System

The recommendations and views from the respondents are sorted by themes and source of information are as follows:

4.12.1 Recommendations on the Performance Measures

The recommendations and views of the line managers interviewed on the performance measures are :

- The managers recommended that the top management should take steps to improve the performance evaluation of the lower-level line managers. They felt that the top management placed more importance on the performance of the managers above their ranks and felt that their ideas were largely ignored. They perceived that the higher level managers' performance matters more than them.
- One of the line managers felt that the management were not concerned about whether the line managers were happy with their jobs, nor were they even concerned about whether they really contributed to the company's performance. They felt that they are at a disadvantage as a lower ranked line manager, and even if they performed well, it is the higher ranked management staff who may take the credit.
- On the meeting of targets & self-satisfaction, one of the interviewees mentioned that it is the satisfaction of getting things done rather than meeting the performance targets.

4.13 Rewards

The recommendations from qualitative interviews are:

- On the non-monetary long-term rewards, one participant recommended that organisations should move away from monetary rewards to non-monetary rewards such as recognition with titles given for a job well done. Especially for managers who consistently do well and receive very good awards for being very innovative and a lot of good things doing for the company, he should be rewarded for that. It shows that this person is continuously aspiring to become better and should be even further motivated, if the manager is given an award.
- One of the managers was unhappy that fixed bonuses was not given.
- One manager recommended that the company should find alternative ways of investing their retirement funds with better returns rather than placing them on the government-managed retirement fund (the Singapore CPF Board).

4.14 Improvement of the Performance Measurement System and Change

The recommendations from qualitative interviews are:

- Change - the performance measurement system must be constantly reviewed to ensure that it continues to stay relevant.
- Participation – The evaluation should be done both ways and not only by the higher ranked or senior management. The line manager should also evaluate the senior management (360 feedback).
- The management must take the performance system seriously and top management involvement must be made for it to work.
- The reward must be made such as the position (title) given when they work beyond their job description.
- The transparency or openness of the performance measurement and reward system should be improved and not just based on one way approach.
- The opportunity for learning to improve performances.
- One interviewee felt that the performance measurement and reward system is working fine.

4.15 Quantitative Research Data Analysis and Findings

In the quantitative research, 'a plan to provide a descriptive analysis of data for all independent and dependent variables in the study' (Creswell 2009, p. 152) was made. Statistical analysis indicating the means, difference in means, standard deviations, and the use of logistic regression, multivariate regression analysis, Chi-square tests were used to test the hypotheses and relationships.

‘The statistics and statistical computer program for testing the major inferential research questions or hypotheses in the study.’ (Creswell 2009, p. 152) was made. The ‘STATA’ and the ‘Microsoft Excel’ were used in the analyses of the data into namely the computation of the Chi-square Test, logistic regression, multivariate regression analysis and for the drawing up of graphs and charts to present the results of the survey. These were used to provide the results to the research questions and to test the hypotheses of the study.

Creswell (2009) suggested that the final step in data analysis is the presentation of the results in tables or figures and the interpretation of the results from the statistical tests. The analysis involves writing of reports and drawing conclusions from the results for the research questions and hypotheses and ultimately includes the findings in the final report and organizing of the final report structure.

The questionnaire survey data were sorted out and coded into the different types of performance measures, rewards and incentives and the effectiveness of each of these measures. The other processes from the assembling of data material belonging to each category of performance measures follow the same procedure as in the in-depth interviews.

Statistical tests were made to test the significance of the results. The results supporting or not supporting the hypotheses were reported. The results were tabulated and interpreted, and graphs were presented to enable a better understanding and presentation of the results.

The final report presents the results on whether the hypotheses are supported or contradicted. They also explained the reasons for the positive or negative results including the reference to the theory in the literature review and any logical reasoning.

Finally, the report on the implications of the results that add to knowledge and the benefits to organisations, the recommendation and limitations to the research and recommendations to future research on the research topic are made.

4.16 Quantitative Data Collection and Response Rate from the Questionnaire Survey

The scope of this study was on line managers working in organisations in Singapore. There were 141 responses from the online questionnaire survey. All responses were checked for completeness. It involved checking the data from the questionnaire returns of each respondent and removing the responses that were not usable as some of the key questions that were not answered, rendering the response to be inadequate for the study. This is to ensure that the data was cleaned up, removing any errors before the data analysis of the descriptive statistics. It was found that eight (8) of the responses were incomplete and not usable, leaving a total of 133 completed and usable responses from the questionnaire survey that were used in the research analysis.

4.17 Quantitative Research Participants Profile

The demographic information collected from the quantitative survey consisted of the respondents' age, gender, company size, and type of industry. All respondents were line managers who were at the time of the survey, working in organisations in Singapore and have the experience of being evaluated for their performance. The profile data was collected from the online questionnaire survey. It provides the descriptive statistics of their demographic characteristics.

4.17.1 Age Distribution - Quantitative Participants

The age distribution of the participants is presented in Table 4.8. The age distribution of the participants showed a high concentration in the age group of less than 30 years which is 62.4% of the total participants, followed by 23.3% from the ‘30 to 39’ group and 14.3% from the ‘40 to 59’ age group. The high proportion of participants from the less than 30 years group is not unusual as line managers are generally first-time managers in the younger age group. This was supported by Hedges (2013) who quoted Zenger (2012) from the Harvard Business Review’s December 2012 article that the ‘average age of first-time managers is 30 years old’.

Table 4.8: Age Distribution - Quantitative Participants

Age Group	Frequency	Per cent (%)
Less than 30	83	62.4
30 to 39	31	23.3
40 to 59	19	14.3
Total	133	100

4.17.2 Gender Distribution- Quantitative Participants

The gender distribution comprises 55.6% respondents who were female compared to 44.4% males of total respondents of the quantitative survey. Refer to Table 4.9: Gender distribution. There were more female respondents, however, this proportion was the same as the e-survey on ‘Linking strategic HRM, performance management and organisational effectiveness: perceptions of managers in Singapore’ conducted by Stanton and Nankervis (2011, p. 73) and relatively close to the overall Singapore population of 50.9% females to 49.1% in 2016 (Department of Statistics Singapore, 2016). Therefore, the findings of this study were not unduly biased from any over-representation of any particular gender.

Table 4.9: Gender Distribution- Quantitative Participants

Gender	Frequency	Per cent (%)
Female	74	55.6
Male	59	44.4
Total	133	100

4.17.3 Organisation Size Distribution- Quantitative Participants

The size of the organisations in which the participants worked, were varied with 40.6% of the participants from the largest company size of more than 1,000 employees. The other group sizes are: 25.6% from companies with 100 or less employees, and 33.8% with 101 to 1,000 employees. Refer to Table 4.10: Organisation size distribution.

Table 4.10: Organisation Size Distribution- Quantitative Participants

Size (No of Employees)	Frequency	Percent (%)
1 - 100	34	25.6
101 - 1,000	45	33.8
More than 1,000	54	40.6
Total	133	100

4.17.4 Industry Representation- Quantitative Participants

In the quantitative survey, there was a good representation of respondents across the industry as presented in Table 4.11 that presents the industry distribution. The grouping of the industry was according to the Singapore Human Resources Institute performance management publication by Mills (2002, p. 237).

The top five industries were Finance and related 15%, followed by IT and related 11.3%, Government, Training and Education 10.5%, Management Services & Facilities Management 9.0% and Retail and Trading also 9.0%. The other categories and the percentage responses are Hotel and Leisure at 8.3%, Manufacturing 6.8%, Engineering 6.0%, Food and Beverage 3.8%, Aviation, Shipping and Logistics 3.0%, Media and related 2.3%, Healthcare 2.3%, and others 12.8%.

Table 4.11: Industry Distribution- Quantitative Participants

Industry Group:	**Response Percent (%)**	**Frequency**
Finance and related	15.0%	20
IT and related	11.3%	15
Government, Training and Education	10.5%	14
Management Services & Facilities Management	9.0%	12
Retail and Trading	9.0%	12
Hotel and Leisure	8.3%	11
Manufacturing	6.8%	9
Engineering	6.0%	8
Food and Beverage	3.8%	5
Aviation, Shipping and Logistics	3.0%	4
Media and related	2.3%	3
Healthcare	2.3%	3
Others	12.8%	17
	100.0%	**133**

4.18 Performance Management Appraisal System Classification

Table 4.12 shows the classification on types of performance management / appraisal system used in Singapore from the questionnaire survey results of this research. The classification of each type of performance management or appraisal system and the definition of each group follows the classification made Singapore Human Resources Institute performance management publication by Mills (2002, p. 78).

The survey results found that 26.5% of the participants identified the ‘Management by Objectives’ (MBO) approach of performance management system as being adopted by the organisation in which they worked. This category relates to business plans and goals based on the management by objectives approach. The next most common type is the ‘Team Performance Management’ approach that is on team-based objectives, that forms 18.2% of the participants surveyed. Of the participants, 15.9% indicated that the 'Performance Management' approach, which is based on measures linked to the organisation's strategic direction and measured by a combination of management by objectives and competencies linked to support the achievement of objectives using tools such as the Balanced scorecard, were applied. Another 15.9% of the participants indicated that their organisation used the 'Trait-Based' approach that was based on behavioural scales such as attitude, skills and sense of responsibility and 12.3% indicated 'No formal system' while 11.2% of the participants indicated that the organisations they worked for, used the 'Hybrid System' which is a mixed of management by objectives and trait-based performance measures.

Table 4.12: Types of Performance Management / Appraisal System

Types of Performance Management / Appraisal System	**Response Percent (%)**
Management by Objectives (MBO based on business plans and goals)	26.5%
Team Performance Management (team based objectives)	18.2%
Performance Management (Balanced scorecard - measures linked to the organisation's strategic direction in combination with MBO)	15.9%
Trait-Based (Behavioural scales eg attitude, skills, sense of responsibility)	15.9%
No formal system	12.3%
Hybrid System (MBO and trait-based in combination)	11.2%
Total:	100%

4.19 Variable Definitions

The independent variables are the performance measures, rewards, and the changes to the performance measures. The dependent variables are motivation and satisfaction.

4.20 Quantitative Data Analysis on the Performance Measurement and Reward System

The main purpose of the analysis of the data from this research is to obtain the results on the performance measurement and reward system and whether it is effective to motivate the line managers in Singapore. The data was collected from line managers who worked in organisations in Singapore was analysed to obtain the results to address the research questions that are listed in para. 1.6 and 4.4.1.

4.21 Results to Research Question 1: Performance Measures

The results of the questionnaire survey to the first research question: 'What are the performance measures that are effective in motivating managers?' are as follows:

The findings of the questionnaire research on the types of performance measures used to measure the performance of line managers and the reward system in Singapore are from the analysis of Question 1 of the survey: 'List the performance measures used to gauge your performance in your organisation' and Question 5: 'Name any other performance measures that you know are used to measure the performances of the other managers in your organisation'.

The findings from the research found that there were many performance measures used to measure the managers performance in the various Singapore organisations surveyed and from the detailed analyses in paras. 4.22 to 4.22.3, it was found that the performance measures that are more likely to be effective to motivate the managers are: profit, process improvements, projects on time and on budget, ROI / EVA and revenue, while the performance measures:

efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs are less likely to be effective to motivate the managers.

4.22 Performance Measures that are Effective to Motivate Managers

4.22.1 Quantitative Results of Research Question 1

The analysis was carried to obtain the findings to research question 1. The central research question is: ‘What are the challenges and changes to the performance measurement and reward system used in organisations to effectively motivate line managers?’ and the sub-question is: ‘What are the performance measures that motivate the managers?’ The survey questionnaire was designed to find the answers to these questions. Question 1 of the questionnaire asked for the types of performance measures used. Question 2 asked the participants whether those measures were effective or otherwise, to motivate them.

The participants in the questionnaire survey responded to the questions providing answers on what are the performance measures that is used in their organisations to evaluate their performance and which of these performance measures are effective to motivate them. Hence the dependent variable was dichotomous.

The Logistic Regression Model was applied to estimate the probability the individual performance measure is ‘effective’ or ‘not effective’ to motivate the manager. It is used instead of the Linear Regression Model as the response outcome was binary (Hosmer, Lemeshow & Sturdivant 2013). According to Lee and Lings (2010, p. 355), the logistic regression technique can be used ‘to examine the influence of variables on categorical outcome variables and it allows the prediction of the outcomes from the categorical predictors’. It allows the transformation of the independent variable, the individual performance measures that has a non-linear relationship with the dependent variable, ‘effective’ or ‘not effective’ to motivate the managers. The dependent variable is the dummy variable 1 for ‘effective’ and 0 otherwise. The model estimates the probability that the performance measure is ‘effective’ or ‘not effective’ to motivate the managers. The data set was processed through ‘STATA’ to generate the logistic regression to determine the maximum likelihood and the relevant betas and the statistical significance on each of the performance measures used.

The following are the findings of each of the performance measures:

4.22.1.1 Profit as a Performance Measure:

Table 4.13: Logistic Regression Model Output on Effectiveness of Profit as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	22.91
Prob > chi2	=	0.000
Pseudo R2	=	0.013

Log likelihood = - 846.71

Effective	Coef.	Std. Err.	z	p>|z|	[95% Conf. Interval]	
Profit	0.929	0.188	4.95	0.000	0.561	1.297
_cons	-1.309	0.064	-20.49	0.000	-1.435	-1.184

Source: STATA Output

The likelihood ratio Chi-square of 22.91 with a p-value of 0.000 tells us that the model as a whole fits significantly better than an empty model (i.e., a model with no predictors). The coefficient for the profit measure is 0.929. This coefficient is statistically significant, with a Wald test value (z) of 0.

The equation is: ln (p / 1 – p) = β 0 + β 1 profit

ln (p / 1 – p) = -1.309 + 0.929 profit

The positive coefficient on the use of profit as a performance measure indicates that it is an effective measure to increase the motivation of managers, namely, managers are more likely to self-report being motivated in organisations that use profit in measuring performance.

Based on the marginal effect analysis, Profit as a motivator is more likely to be an effective motivator by 12.6%.

4.22.1.2 Performance Measure: Process Improvement

Table 4.14 : Logistic Regression Model Output on Effectiveness of Process Improvement as a Performance Measure

Number of observations = 1,596
LR chi2(1) = 7.93
Prob > chi2 = 0.005
Log likelihood = - 854.20 Pseudo R2 = 0.005

Effective	Coef.	Std. Err.	z	p>|z|	[95% Conf. Interval]	
Process Improvement	0.565	0.195	2.90	0.004	0.183	0.946
_cons	-1.269	0.063	-20.09	0.000	-1.393	-1.145

Source: STATA Output

The likelihood ratio Chi-square of 7.93 with a p-value of 0.005 tells us that the model as a whole fits significantly better than an empty model (i.e., a model with no predictors). The coefficient for the Process Improvement measure is 0.565. This coefficient is statistically significant, with a Wald test value (z) of 0.004.

The equation is: $\ln (p / 1 - p) = \beta\ 0 + \beta\ 1$ Process Improvement

$\ln (p / 1 - p) = -1.269 + 0.565$ Process Improvement

The positive coefficient on the use of Process Improvement as a performance measure indicates it is an effective measure to increase the motivation of managers, namely, managers are more likely to self-report being motivated in organisations that use process improvement in measuring performance.

Based on the marginal effects analysis, Process Improvement as a motivator is more likely to be an effective motivator by 7.3%.

4.22.1.3 Performance Measure: ROI/EVA

Table 4.15: Logistic Regression Model Output on Effectiveness of ROI/EVA as a Performance Measure

Number of observations = 1,596
LR chi2(1) = 0.58
Prob > chi2 = 0.445
Log likelihood = - 857.87 Pseudo R2 = 0.000

Effective	Coef.	Std. Err.	z	p>|z|	[95% Conf. Interval]	
ROI/EVA	0.161	0.208	0.77	0.440	-0.248	0.569
_cons	-1.230	0.063	-19.68	0.000	-1.352	-1.107

Source: STATA Output

The likelihood ratio Chi-square of 0.58 with a p-value of 0.445 tells us that our model is not significantly better than an empty model.

In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for ROI/EVA as a performance measure. Its p-value is not significant.

The fact that the coefficient is not statistically significant implies that ROI/EVA is not an efficient measure to motivate managers, however, based on marginal effects analysis, ROI/EVA as a motivator is more likely to be an effective motivator by 1.3%.

4.22.1.4 Performance Measure: Revenue

Table 4.16: Logistic Regression Model Output on Effectiveness of Revenue as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	6.84
Prob > chi2	=	0.009
Pseudo R2	=	0.004

Log likelihood = - 854.75

Effective	Coef.	Std. Err.	z	p>|z|	[95% Conf. Interval]	
Revenue	0.526	0.196	2.69	0.007	0.143	0.910
_cons	-1.265	0.063	-20.05	0.000	-1.389	-1.141

Source: STATA Output

The likelihood ratio Chi-square of 6.84 with a p-value of 0.009 tells us that the model as a whole, fits significantly better than an empty model (i.e., a model with no predictors). The coefficient for the Revenue measure is 0.526. This coefficient is statistically significant, with a Wald test value (z) of 0.007.

The equation is: $\ln (p / 1 - p) = \beta\ 0 + \beta\ 1$ Revenue

$\ln (p / 1 - p) = -1.265 + 0.526$ Revenue

The positive coefficient on the use of Revenue as a performance measure indicates that it is an effective measure to increase the motivation of managers, namely, managers are more likely to self-report being motivated in organisations that use revenue in measuring performance.

Based on marginal effects analysis, Revenue as a motivator is more likely to be an effective motivator by 6.7%.

4.22.1.5 Performance Measure: Meeting Budgets

Table 4.17 : Logistic Regression Model Output on Effectiveness of Meeting Budgets as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	2.01
Prob > chi2	=	0.156
Pseudo R2	=	0.001

Log likelihood = - 857.16

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Meeting Budgets	-0.322	0.234	-1.38	0.168	-0.781	0.136
_cons	-1.191	0.062	-19.26	0.000	-1.312	-1.070

Source: STATA Output

The likelihood ratio Chi-square of 2.01 with a p-value of 0.156 tells us that our model is not significantly better than an empty model. In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for Meeting Budgets as a performance measure. Its p-value is not significant.

The fact that the coefficient is not statistically significant implies that meeting budgets is not an efficient measure to motivate managers. Based on marginal effects analysis, Meeting Budget as a performance measure is less likely to be an effective motivator by -6%.

This was supported by the participants response to Question 19 of the questionnaire survey, where 70.2% of the participants responded that budget as a performance measure hindered them from taking up new opportunities that were not planned for in the budget.

4.22.1.6 Performance Measure: Work Output

Table 4.18: Logistic Regression Model Output on Effectiveness of Work Output as a Performance Measure

	Number of observations	=	1,596
	LR chi2(1)	=	0.12
	Prob > chi2	=	0.734
Log likelihood = - 858.11	Pseudo R2	=	0.000

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Work Output	0.072	0.212	0.34	0.733	-0.344	0.488
_cons	-1.221	0.062	-19.60	0.000	-1.344	-1.100

Source: STATA Output

The likelihood ratio Chi-square of 0.12 with a p-value of 0.734 tells us that our model is not significantly better than an empty model. In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for Work Output as a performance measure. Its p-value is not significant.

The fact that the coefficient is not statistically significant implies that work output is not an effective measure to motivate managers.

4.22.1.7 Performance Measure: Projects on time and on budget

Table 4.19: Logistic Regression Model Output on Effectiveness of Projects on time and on budget as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	1.93
Prob > chi2	=	0.165
Pseudo R2	=	0.001

Log likelihood = - 857.2

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Projects on time and on budget	0.288	0.203	1.42	0.157	-0.111	0.687
_cons	-1.241	0.063	-19.80	0.000	-1.364	-1.119

Source: STATA Output

The likelihood ratio Chi-square of 1.93 with a p-value of 0.165 tells us that our model is not significantly better than an empty model. In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for Projects on time and on budget as a performance measure. Its p-value is not significant.

The fact that the coefficient is not statistically significant implies that projects on time and on budget is not an effective measure to motivate managers.

Based on marginal effects analysis, Projects on Time and On Budget as a performance measure is more likely to be an effective motivator by 3.2%.

4.22.1.8 Performance Measure: New Customer Acquired

Table 4.20: Logistic Regression Model Output on Effectiveness of New Customer Acquired as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	0.56
Prob > chi2	=	0.456
Pseudo R2	=	0.000

Log likelihood = - 857.89

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
New Customer Acquired	-0.165	0.224	-0.74	0.462	-0.605	0.275
_cons	-1.202	0.062	-19.39	0.000	-1.324	-1.081

Source: STATA Output

The likelihood ratio Chi-square of 0.56 with a p-value of 0.456 tells us that our model is not significantly better than an empty model. In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for New Customer Acquired as a performance measure. Its p-value is not significant.

The fact that the coefficient is not statistically significant implies that new customers acquired is not an effective measure to motivate managers. This is in line with the results based on marginal effects analysis, whereby this performance measure is less likely to be an effective motivator by -3.6%.

Organisations do benefit from the acquisition of new customers and it is an important performance measure in the Balanced Scorecard, however, managers behaviour are influenced by the rewards. Managers should normally be receptive to this measure; however, the results show otherwise. It is contrary to the Revenue as a performance measure as explained in paragraph 4.22.1.4 where managers responded that Revenue are effective to motivate them. It is likely that the rewards for revenue generated are more linked to the rewards than acquisition of new customers.

The result is quite surprising, however, the manager who is being measured on the acquisition of new customers may have preferred Revenue as the performance measure (with a coefficient of 0.526) and found to be a significant motivating factor rather than acquisition of new customers that they brought in to the company. However, it is the organisation who would benefit from the acquisition of new customers and felt that it is an important measure to measure the performance of the managers.

4.22.1.9 Performance Measure: Market Share

Table 4.21: Logistic Regression Model Output on Effectiveness of Market Share as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	12.75
Prob > chi2	=	0.000
Pseudo R2	=	0.007

Log likelihood = - 851.79

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Market Share	-0.906	0.281	-3.22	0.001	-1.456	-0.355
_cons	-1.157	0.061	-18.88	0.000	-1.277	-1.037

Source: STATA Output

The likelihood ratio Chi-square of 12.75 with a p-value of 0.000 tells us that the model as a whole fits significantly better than an empty model (i.e., a model with no predictors). The coefficient for the Market Share measure is -0.906. This coefficient is statistically significant, with a Wald test value (z) of 0.001.

The equation is: ln (p / 1 – p) = β 0 + β 1 Market Share

ln (p / 1 – p) = -1.157 - 0.906 Market Share

The negative coefficient on the use of Market Share as a performance measure is found to be an ineffective measure to increase the motivation of managers, namely, managers are less likely to self-report being motivated in companies that use market share in measuring performance.

Based on marginal effects analysis, Market Share as a motivator is less likely to be an effective motivator by -15%.

This is again another performance measure that is affected by the conflicting interests of the managers' interest versus the organisation's interest. The market share of the products or services are mostly not within the control of the managers, and in addition, market share statistics may be historical and may not be accurate as the source of data from competitors are likely to be obtained much later than their current performances.

4.22.1.10 Performance Measure: Efficiency

Table 4.22: Logistic Regression Model Output on Effectiveness of Efficiency as a Performance Measure

Number of observations = 1,596
LR chi2(1) = 41.07
Prob > chi2 = 0.000
Log likelihood = - 837.63 Pseudo R2 = 0.024

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Efficiency	-2.123	0.460	-4.62	0.000	-3.024	-1.222
_cons	-1.120	0.061	-18.45	0.000	-1.239	-1.001

Source: STATA Output

The likelihood ratio Chi-square of 41.07 with a p-value of 0.000 tells us that the model as a whole fits significantly better than an empty model (i.e., a model with no predictors). The coefficient for the Efficiency measure is -2.123. This coefficient is statistically significant, with a Wald test value (z) of 0.001.

The equation is: $\ln (p / 1 - p) = \beta 0 + \beta 1$ Efficiency

$\ln (p / 1 - p) = -1.12 - 2.123$ Efficiency

The negative coefficient on the use of Efficiency as a performance measure is found to be an ineffective measure to increase the motivation of managers, namely, managers are less likely to self-report being motivated in companies that use efficiency in measuring performance. Neely, Gregory & Platts (2005, p. 1228) defines efficiency as ‘a measure of how economically the firm’s resources are utilized when providing a given level of customer satisfaction’ Managers are less likely to be motivated by this measure as they must have perceived that this measure may not be objective as it depends on the judgement of their superiors who evaluated them.

This is in line with marginal effects analysis, Efficiency as a motivator is less likely to be an effective motivator by -34.3%.

4.22.1.11 Performance Measure: New ideas/products

Table 4.23 : Logistic Regression Model Output on Effectiveness of New ideas/products as a Performance Measure

Number of observations	=	1,596
LR chi2(1)	=	0.09
Prob > chi2	=	0.759
Pseudo R2	=	0.000

Log likelihood = - 858.12

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
New ideas/products	-0.067	0.219	-0.31	0.760	-0.496	0.362
_cons	-1.210	0.062	-19.47	0.000	-1.332	-1.088

Source: STATA Output

The likelihood ratio Chi-square of 0.09 with a p-value of 0.759 tells us that our model is not significantly better than an empty model. In the table we see the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for New ideas/products as a performance measure. Its p-value is not significant.

The likely reasons for this measure not being a significant motivator is that they are not sufficiently recognised or rewarded for innovation.

This result is in line with the marginal effects analysis, the performance measure: New Ideas/New Products as a motivator is less likely to be an effective motivator by -2.1%.

4.22.1.12 Performance Measure: Costs

Table 4.24: Logistic Regression Model Output on Effectiveness of Costs as a Performance Measure

	Number of observations	=	1,596
	LR chi2(1)	=	4.45
	Prob > chi2	=	0.035
Log likelihood = - 855.94	Pseudo R2	=	0.003

Effective	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Costs	-0.494	0.246	-2.01	0.044	-0.976	-0.129
_cons	-1.180	0.062	-19.13	0.000	-1.300	-1.059

Source: STATA Output

The likelihood ratio Chi-square of 4.45 with a p-value of 0.035 tells us that the model as a whole, fits significantly better than an empty model (i.e., a model with no predictors).

In the table, the coefficient, standard error, the z-statistic, associated p-value, and the 95% confidence interval of the coefficient for Costs motivator. Its p-value is significant.

This coefficient is also statistically significant, with a Wald test value (z) of 0.044.

The coefficient for the Costs measure is -0.494. This coefficient is statistically significant, with a Wald test value (z) of 0.044.

The equation is: $\ln (p / 1 - p) = \beta\ 0 + \beta\ 1$ Costs

$\ln (p / 1 - p) = - 1.18 - 0.494$ Costs

The negative coefficient on the use of Costs as a performance measure means it is less likely to be an effective measure to increase the motivation of managers, namely, managers are less likely to self-report being motivated in companies that use costs in measuring performance. The reasons are cost management are often the focus of management and managers may have felt the pressure to continuously control rising costs in the challenging environment.

This is in line Marginal Effects analysis, the performance measure: Costs as a motivator is less likely to be an effective motivator by -8.6%.

4.22.2 Summary of Effectiveness of Performance Measures to Motivate the Managers

Table 4.25: Binary Outcome Model Coefficient on Effectiveness of Performance Measures to Motivate the Managers

Logistic regression

Number of observations	=	1,596
LR chi2(11)	=	93.55
Prob > chi2	=	0.000
Pseudo R2	=	0.055

Performance Measure is Effective	Coef.	z	P>|z|
Profits	0.769	2.86	0.004
Process improvements	0.445	1.62	0.104
Efficiency	-2.093	-4.20	0.000
Market share	-0.913	-2.68	0.007
Meeting budgets	-0.364	-1.20	0.230
New customers acquired	-0.218	-0.74	0.461
New ideas & products	-0.128	-0.44	0.662
Projects on time and on budget	0.196	0.70	0.485
ROI / EVA	0.081	0.28	0.777
Revenue	0.411	1.49	0.135
Costs	-0.525	-1.68	0.093
Work Output*	0		

Source: STATA Output

Table 4.26 Summary of the Coefficient on Effectiveness of Performance Measures to Motivate the Managers

Performance Measure is Effective	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Profits	0.769 (0.269)											0.769 (0.269)
Process improvements		0.445 (0.274)										0.445 (0.274)
Efficiency			-2.093 (0.499)									-2.093 0.499
Market share				-0.913 (0.341)								-0.913 (0.341)
Meeting budgets					-0.364 (0.303)							-0.364 (0.303)
New customers acquired						-0.218 (0.296)						-0.218 (0.296)
New ideas & products							-0.128 (0.292)					-0.128 (0.292)
Projects on time and on budget								0.196 (0.280)				0.196 (0.280)
ROI / EVA									0.081 (0.284)			0.081 (0.284)
Revenue										0.411 (0.275)		0.411 (0.275)
Costs											-0.525 (0.313)	-0.525 (0.313)
Log likelihood	-811.39											
Number of observations	133											

The standard error is in brackets. Source: STATA Output

Table 4.27 Comparison of Individual and Group Regressions of the Effectiveness of the Performance Measures to Motivate the Managers

Performance Measures	Individual Regression	Group Regression	Individual Regression	Group Regression	Individual Regression	Group Regression
	Coefficients	Coefficients	Odds Ratio	Odds Ratio	Statistical Significance	Statistical Significance
Profits	0.929	0.769	2.532	2.157	Significant	Significant
Process improvement	0.565	0.445	1.759	1.560	Significant	Not Significant
Efficiency	-2.123	-2.093	0.120	0.123	Significant	Significant
Market share	-0.906	-0.913	2.474	0.401	Significant	Significant
Meet budgets	-0.322	-0.364	1.380	0.695	Not Significant	Not Significant
New customers acquired	-0.165	-0.218	0.848	0.804	Not Significant	Not Significant
New ideas / products	-0.067	-0.128	0.935	0.880	Not Significant	Not Significant
Projects on time on budget	0.288	0.196	1.333	1.216	Not Significant	Not Significant
ROI / EVA	0.161	0.081	1.175	1.084	Not Significant	Not Significant
Revenue	0.526	0.411	1.693	1.508	Not Significant	Not Significant
Costs	-0.494	-0.525	0.610	0.592	Significant	Significant
Work output	0.072	Omitted	1.075	Omitted	Not Significant	Omitted

Source: STATA Output

In comparing the individual regression to the Group Regression that includes all the performance measures except work output (a STATA default setting) which was used as a base due to collinearity, the overall results remained almost unchanged, although the coefficients of the performance measures in the group regression decreased slightly and the performance improvement measure has now a higher p-value and is now insignificant at 95% confidence level. The Group Regression indicates that the Group model is better than the empty model and is statistically significant.

The results from the individual regressions compared to the group regressions found that the performance measures that are more likely to be effective to motivate the managers and is significant is Profits and Process Improvements, while the performance measures: efficiency, market share, and costs are less likely to be effective to motivate the managers. The other performance measures are not significant.

4.22.3 Marginal Effects on the Effectiveness of Performance Measures to Motivate the Managers

The marginal effects on the effectiveness of the performance measures to motivate the managers are presented in Table 4.28: Logistic regression model output on effectiveness of work output as a performance measure. The findings indicate that companies that used the performance measures: Profits, Process Improvements, Projects on time and on budget, ROI / EVA, Revenue, are more likely to be effective in motivating managers by 12.6%, 7.3%, 3.2%, 1.3% and 6.7% respectively. However, the performance measures: Efficiency, Market

Share, Meeting Budgets, New Customers Acquired, New Ideas / Products, Costs are less likely to be effective to motivate the managers by – 34.3%, -15%, -6%, -3.6%, -2.1% and -8.6% respectively.

Table 4.28: Binary Outcome Model - Marginal Effects on the Effectiveness of Performance Measures to Motivate the Managers

Logistic regression

Number of observations	=	1,596
LR chi2(11)	=	93.55
Prob > chi2	=	0.000
Pseudo R2	=	0.055

Performance Measure is Effective	Logit Marginal Effect at the mean (dy/dx)	z	p>|z|
Profits	0.126	2.85	0.004
Process improvements	0.073	1.62	0.105
Efficiency	-0.343	-4.44	0.000
Market share	-0.150	-2.70	0.007
Meeting budgets	-0.060	-1.20	0.230
New customers acquired	-0.036	-0.74	0.461
New ideas / products	-0.021	-0.44	0.662
Projects on time and on budget	0.032	0.70	0.485
ROI / EVA	0.013	0.28	0.777
Revenue	0.067	1.49	0.135
Costs	-0.086	-1.68	0.093
Work Output*	0		
Cons	-1.149	-5.67	0.000

Source: STATA Output

The overall results found that companies that use the performance measures: profit, process improvements, projects on time and on budget, ROI / EVA and revenue are more likely to be effective to motivate the managers, while the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs are less likely to be effective to motivate the managers.

4.23 Further Quantitative Analysis of Research Question 1:

4.23.1 Financial and Non-Financial Performance Measures

Further analysis of the performance measures was made by classifying the performance measures into financial and non-financial performance measures.

Table 4.29: Financial and Non-Financial Performance Measures used in the Organisations Surveyed

Type of Measure: Financial / Non-Financial	Performance Measures	Percentage over total responses
Financial	Profit / profit margin	59.4%
	Turnover/revenues or revenue growth	41.4%
	Meeting budgets (budget variances)	36.1%
	Costs related	31.6%
	Return on investment (ROI)	25.6%
	Economic value added (EVA) / Residual Income(RI)	8.3%
Non-financial	Work output (units produced, hours taken, etc)	36.8%
	Process improvements	34.6%
	Number of new ideas / products / processes	33.8%
	New customers added	30.1%
	Market share	14.3%
	Number of errors / Quality	4.5%
	Customer satisfaction	3.0%
	Leadership	1.5%
	Others *	3.0%
Hybrid (Both financial and non-financial)	Projects on time and on budget	39.1%

*'Others' category includes employee feedback, compliance, organisation's core values and communication skills.

4.23.2 Financial Performance Measures

The top performance measure used by the organisations of the quantitative survey participants, is the financial measure: profit / profit margin which comprises 59.4% of the total responses. This is followed by turnover, revenues and revenue growth which was the second most common financial performance measure with 41.4% of the respondents being measured by it, third was budgets (36.1%), followed by costs (31.6%), ROI (25.6%) and EVA / RI (8.3%). Refer to Table 4.29: Financial and Non-Financial Performance Measures used in the Organisations Surveyed.

4.23.3 Non-Financial Performance Measures

The results from the quantitative survey revealed that there were a significant non-financial performance measures used in evaluating the line managers. The most frequent non-financial measure used is work output in units produced, hours taken and related at 36.8% and this is ranked fourth overall among the total financial and non-financial performance measures. The other non-financial performance measures are the number of customers (30.1%), market share (14.3%), number of errors / quality (4.5%), customer satisfaction (3%), leadership (1.5%) and the those classified under 'others' include employee feedback, compliance, organisation's core values and communication skills (3%). Refer to Table 4.29: Financial and Non-Financial Performance Measures used in the Organisations Surveyed.

The quantitative survey participants also reveal the other non-financial performance mesures that were used to measure the other managers in their organisation were: calibration, skills, training hours, customer retention rate, ethical behaviour, new business, employee satisfaction, subordinate employee turnover rate, innovation, people management, absenteeism, productivity, time management and number of successful bids, manager-subordinate relationship, employee turnover rate and team-work measures.

4.23.4 Hybrid Performance Measures

There was an usual finding of a hybrid performance measure found in the research. It consists of both financial and non-financial measure and it is: ‘Projects on time and on budget’. 39.1% of the respondents used this measure and it is ranked third of all the performance measures found in the quantitative research.

4.24 Overall Comparison of Financial and Non-Financial Performance Measures from the Quantitative Survey

Overall, the quantitative research found more financial performance measures being used in the organisations surveyed than non-financial measures, with one measure, ‘Projects on time and on budget’ found to be a hybrid, with both financial and non-financial measures in a single measure. The effectiveness of the financial and non-financial performance measures to motivate managers is discussed in the next para. 4.25.

4.25 Effectiveness of Financial Performance Measures and Non-Financial Measures

The findings on the effectiveness of the financial as compared to the non-financial performance measures to motivate the line managers were tested and analysed. This was to find out whether the financial performance measures motivate the line managers more than the non-financial performance measures. This was tested in Hypothesis 1.

Hypothesis 1: Financial performance measures are more effective to motivate the line managers than non-financial measures.

The Chi-square tests were performed, and the results were:

The overall mean was 0.23, of which, the financial performance measures is 0.26 compared to 0.20 for the non-financial performance measures. The findings indicate that the financial performance measures were more effective to motivate the line managers than the non-financial measures. This result was in line with the Chi-Square test value of 8.36, with DF =1. p-value < 0.05 (Table 4.30: Financial and Non-financial Performance Measures) and it was statistically significant.

Conclusion: The financial performance measures were more effective to motivate the line managers than non-financial performance measures.

Table 4.30: Financial and Non-financial Performance Measures

	Summary of Effective		
Category	Mean	Standard Deviation	Frequency
Financial	0.265	0.441	665
Non-Financial	0.203	0.402	931
Total	0.229	0.420	1,596
. Tabulate category effective, chi2 exact			
	Effective		
Category	0	1	Total
Financial	489	176	665
Non-Financial	742	189	931
Total	1,231	365	1,596

Pearson chi2(1) = 8.36 Pr = 0.004

Fisher's exact =	0.004
1-sided Fisher's exact =	0.002

Source: STATA Output

4.26 Level of Satisfaction of Managers on the Performance Measurement and Reward System

The findings to Research Question 2: ‘How satisfied are managers with the performance measurement and reward system?’ are discussed in the following paragraphs.

The respondents of the questionnaire survey were asked to rate their satisfaction level of their current system of performance measurement and reward in their organisations they worked in, on a 5-point Likert scale with the lowest satisfaction score of 1 and the highest score of 5.

The results from the questionnaire survey found that half of the respondents were ‘Neither Satisfied nor Dissatisfied’ (satisfaction score 3) with the current performance measurement and reward system in the organisations they worked for in Singapore. This is the highest category in the survey comprising 50.4%, with 67 out of the total 133 participants surveyed. The next highest was 36.1% (48 respondents) were ‘Satisfied’ (satisfaction score 4), followed by 9.8% (13 respondents) were ‘Dissatisfied (satisfaction score 2), 3% (4 respondents) were ‘Very Satisfied’(satisfaction score 5) and 0.8% (only one respondent) was ‘Very Dissatisfied’(satisfaction score 1) with the system.

In total, there were 10.6% of the respondents who were not satisfied with the performance measurement and reward system.

Table 4.31: Satisfaction level of managers, presents the statistics on the satisfaction level of the respondents on the performance measurement and reward system.

The overall mean level of satisfaction of the line managers surveyed was 3.31 with a standard deviation of 0.72. The median was 3 which is ‘Neither Satisfied nor Dissatisfied’. The results show that the line managers in Singapore were mostly ‘Neither Satisfied nor Dissatisfied’ with the performance measurement and reward system and there were only around 10% who were not satisfied with the system.

Table 4.31: Satisfaction Level of Managers

Code	Level of Satisfaction		Percent (%)	Frequency
(1)	Very dissatisfied		0.8%	1
(2)	Dissatisfied		9.8%	13
(3)	Neither satisfied nor dissatisfied		50.4%	67
(4)	Satisfied		36.1%	48
(5)	Very satisfied		3.0%	4
Total:			100.0%	133
Basic Statistics:				
Minimum	Maximum	Median	Mean	SD
1	5	3	3.31	0.72

4.26.1 Correlation between the Different Variables to the Satisfaction Scores

The variables are the financial performance measures (KPI_fin_ratio2), KPIs that encourages innovation, budget KPI, too many KPIs,_clawback, long-term KPIs, adaptive KPIs, managers consideration of stakeholders in their quest to meet the performance targets, external benchmarking, reward linked to KPIs, monetary rewards, informal reviews, more frequent performance evaluation, MBO appraisal, balanced scorecard appraisal, trait-based appraisal, team-based appraisal, managers go extra mile, fair KPIs, motivating KPIs, company size, gender and age group and satisfaction score.

The summary statistics and correlation between the variables are presented in Table 4.33 and Table 4.34. There was a total of 133 observations. The figures in bold are statistically significant.

4.26.1.1 Correlation between each of the Variables to the Satisfaction Scores

The Pearson product moment correlation coefficient or Pearson *r* is used to test the strength of the relationship between the various variables and the satisfaction scores. It ranges between the Pearson *r* of -1 and +1, when a variable is compared with another. A correlation of +1 means a perfect positive association which means that when one variable increases, the other increases in tandem while a correlation of -1 means a perfect negative relationship, that means when one variable increases, the other decreases at the same rate. When the correlation is 0, it indicates no association, which means that there is no relationship between the variables in the sample. (Lee and Lings 2010, p. 350). According to Cohen (1988), the correlation values for the variable relationships of r = 0.10 to 0.29 is small, r = 0.30 to 0.49 for medium and r = 0.50 to 1.0. for large relationships.

The results of the relationship between the satisfaction scores and each of the independent variables presented in Table 4.34, Column (1) show that adaptive KPI, monetary rewards, and the presence of MBO appraisal were positively correlated, ranging from 0.169 to 0.282 and were statistically significant.

4.26.1.2 Relationship of Adaptive KPI - Changes to Performance Measures to Satisfaction Score

The results in Table 4.34, column (1), show that the relationship between the adaptive KPI and satisfaction scores, that is, when there were changes made to the performance measures that adapt to the business environment which is termed adaptive KPI, they were positively correlated at 0.23 and is statistically significant.

When compared to the pair of independent variables: Adaptive KPI to each of the variables, the correlation to rewards linked to KPI is 0.175 and Financial KPIs that motivate is 0.173, while it is negatively correlated at -0.205 to the number of stakeholders the KPI affects, and these are statistically significant. (Table 4.34, Column 8)

When compared to respondents with adaptive KPI to those without, the satisfaction score was 3.42 compared to 3.07 for those without adaptive KPI. The difference in the means is 0.35 (Table 4.35) and is significant at 1% which means the respondents in organisations where changes were made to the performance measures, which is adaptive KPI are 10.5% more satisfied with the performance measurement system than their peers who are measured with performance measures that were not changed to adapt to the changes in environment.

The 10.5% is derived from: the difference between means 0.35 from Table 4.35 divided by the mean satisfaction score of 3.31 from Table 4.31).

The findings indicate that managers were more satisfied when changes were made to the performance measures they are evaluated on, that are more relevant as it was updated to adapt to the changes in environment.

4.26.1.3 Relationship of Monetary Rewards to the Satisfaction Score

The monetary reward ratio which is the proportion of monetary reward over the total of monetary and non-monetary reward and satisfaction showed a positive correlation of 0.282, were statistically significant. Refer to Table 4.34, Column (1).

When there is a higher monetary reward ratio, the respondents' satisfaction level increased. The difference in the mean of the satisfaction score of those whose monetary rewards ratio are higher is 3.47 while those with higher non-monetary reward ratio is 3.18, the difference in the means is 0.3 and is significant at 5% (Table 4.35). It indicates that the respondents in organisations where there are higher monetary rewards over those who have a higher non-monetary reward (monetary reward ratio2), are 9.1% more satisfied than those whose rewards had a higher proportion of non-monetary reward. This finding indicates that the respondents prefer monetary to non-monetary reward.

4.26.1.4 Relationship of Respondents with MBO Appraisal System to the Satisfaction Score

The respondents who worked in organisations that applied the Management by Objective (MBO) appraisal system in the organisation, were positively correlated to the satisfaction score at 0.169 and statistically significant at 5%.

The findings revealed that the respondents whose organisations use the MBO performance appraisal system, had the mean of 3.43 compared to 3.18 to respondents who used the other systems of performance appraisal such as the Trait-based system, Performance Management - Balance scorecard system, Hybrid system, Team-based or other appraisal system. The mean difference is 0.25, which is statistically significant. The respondents who are on the MBO appraisal system in their organisations are 7.25% more satisfied than the respondents whose organisations use the other forms of performance appraisal systems.

4.26.1.5 Relationship of those with Too Many Performance Measures and Satisfaction Score.

When compared to the pair of variables: too many performance measures and satisfaction scores of respondents, the correlation was -0.064, and with a p value 0.47, it is not statistically significant.

When respondents with too many measures are compared with the other variables, the correlation to monetary rewards is 0.205, with MBO appraisal system 0.222, those with motivating financial measures 0.179 and company size group 0.185 are all positively correlated and statistically significant (Table 4.34, Column 5)

4.26.1.6. Relationship of Rewards linked to KPI to Satisfaction Score and Other Variables

When comparing those respondents with rewards linked to KPI and the satisfaction score, the correlation was 0.144, significant at 10%. (Table 4.34, Column 1).

When the other variables are compared to respondents whose rewards are linked to KPI, the correlation to fair financial measures was negatively correlated at -0.173 and statistically significant. (Table 4.34, Column 11)

4.26.1.7 Correlation between the Financial Performance Ratios to Satisfaction Score and Other Variables

The correlation between financial performance ratios and satisfaction score is 0.126, p value 0.15, was not statistically significant.

The correlation between financial performance ratios with the budget KPI is 0.283, too many KPIs 0.269, consider stakeholder the KPI affects is 0.279, external benchmark used 0.193, monetary reward ratio 0.326, balanced scorecard performance management appraisal system 0.204, team-based appraisal system 0.171, fair KPI financial ratio 0.49 and motivating KPI financial ratio 0.636, all positively correlated and statistically significant. Refer to Table 4.34, Column (2).

4.26.1.8 Relationship of the KPI that Encourages Innovation to Satisfaction Score and Other Variables

The correlation between respondents with KPI that encourages innovation and satisfaction score is 0.129, p value 0.14, was not statistically significant.

When compared to the pair of independent variables: KPI that encourages innovation to each of the other variables: the budget KPI, long term KPI and company size are positively correlated ranging from 0.18 to 0.287 and statistically significant, but negatively correlated to financial KPI -0.259 and statistically significant. (Table 4.34, Column 3)

4.26.1.9 Relationship of Budget KPI to Satisfaction Score and Other Variables

The correlation between respondents with budget KPI and satisfaction score is 0.039, p value 0.66, was not statistically significant.

When the Budget KPI is compared to the independent variables, the correlation of respondents who consider how their actions affects other stakeholders despite the KPI is 0.218, benchmarked externally 0.175, with MBO appraisal system 0.193, fair financial KPI 0.215, and motivating financial measures 0.284 and high age group 0.198 are all positively correlated and statistically significant (Table 4.34, Column 4)

4.27 Multicollinearity

Multicollinearity occurs when the independent or 'predictor variables are correlated with each other' (Lee and Lings 2010, p. 353). When there is high multicollinearity, there may be major problems because it would be very difficult to separate the influences of each individual variable on the outcome or dependent variable (Lee and Lings 2010).

After examining the Pearson correlations between all the predictor variables on Table 4.34, it was found that there were no cases of multicollinearity, as the correlation of all the pairs of predictor variables were not higher than 0.8, the threshold recommended by Lee and Lings (2010).

4.28 Summary Statistics

The summary statistics and correlation matrix of the variables of the research from the 133 responses obtained from the questionnaire survey are presented in Table 4.33: Summary Statistics and Table 4.34: Correlation Matrix of the Variables.

Table 4.32 provides the key to the variables on Tables 4.33 to 4.35.

Table 4.32: Key to the Variables

Variables	Descriptions
KPI_fin_ratio2	The ratio of financial KPIs to both financial and non-financial KPIs.
has_KPI_encourages_innovation	Indicator variable equals one when a firm has KPI that encourages innovation; zero, otherwise.
is_budget_KPI	Indicator variable equals one when a firm adopts the budget as a KPI; zero, otherwise.
has_too_many_KPI	Indicator variable equals one when a firm has too many KPIs; zero, otherwise.
has_clawback	Indicator variable equals one when clawback provisions are present in a firm; zero, otherwise.
has_LT_KPI	Indicator variable equals one when a firm has KPIs that measures long-term performance; zero, otherwise.
adaptive_KPI	Indicator variable equals one when a firm's current KPIs are in line with the changes in operating environment; zero, otherwise.
num_stakeholder_KPI_affects	The number of stakeholders that a firm's KPIs affect.
ext_benchmark_used	Indicator variable equals one when a firm benchmarks KPI externally; zero, otherwise.
is_reward_linked_to_KPI	Indicator variable equals one when a firm's reward system is linked to its KPIs; zero, otherwise.
monetary_reward_ratio2	The ratio of monetary rewards or incentives to both monetary and non-monetary rewards or incentives.
regular_informal_review	
perf_eval_more_frequent_than_1yr	Indicator variable equals one when a firm has formal performance evaluation held more than once a year; zero, otherwise.
has_MBO_appraisal	Indicator variable equals one when a firm has management by objective appraisal system; zero, otherwise.
has_BSC_appraisal	Indicator variable equals one when a firm has balanced scorecard appraisal system; zero, otherwise.
has_trait_based_appraisal	Indicator variable equals one when a firm has trait-based appraisal system; zero, otherwise.
has_team_based_appraisal	Indicator variable equals one when a firm has team-based appraisal system; zero, otherwise.
go_extra_mile	Indicator variable equals one if a respondent spends time performing tasks that are neither measured nor rewarded; zero, otherwise.
fair_KPI_fin_ratio2	The ratio of financial KPIs to both financial and non-financial KPIs, which respondents consider fair.
motivating_KPI_fin_ratio2	The ratio of financial KPIs to both financial and non-financial KPIs, which respondents consider motivating.
is_Male	Indicator variable equals one when a respondent is a male; zero, otherwise.

Table 4.33: Summary Statistics

	Observations	Mean	Std. Dev.	Minimum	Maximum
satisfaction_score	133	3.31	0.72	1	5
kpi_fin_ratio2	133	0.11	0.08	0	0.32
has_kpi_encourages_innovation	133	0.22	0.41	0	1
is_budget_kpi	133	0.32	0.47	0	1
has_too_many_kpi	133	0.34	0.48	0	1
has_clawback	133	0.29	0.46	0	1
has_long-term_kpi	133	0.15	0.36	0	1
adaptive_kpi	133	0.68	0.47	0	1
num_stakeholder_kpi_affects	133	3.16	1.20	0	6
ext_benchmark_used	133	0.09	0.29	0	1
is_reward_linked_to_kpi	133	0.76	0.43	0	1
monetary_reward_ratio2	133	0.16	0.09	0	0.48
regular_informal_review	133	0.43	0.50	0	1
perf_eval_more_frequent_than_1yr	133	0.50	0.50	0	1
has_mbo_appraisal	133	0.51	0.50	0	1
has_bsc_appraisal	133	0.20	0.40	0	1
has_trait_based_appraisal	133	0.33	0.47	0	1
has_team_based_appraisal	133	0.23	0.42	0	1
go_extra_mile	133	0.14	0.34	0	1
fair_kpi_fin_ratio2	133	0.06	0.06	0	0.32
motivating_kpi_fin_ratio2	133	0.07	0.06	0	0.32
company_size_group	133	3.23	1.68	1	5
is_male	133	0.44	0.50	0	1
age_group	133	1.54	0.79	1	4

Table 4.34: Correlation Matrix of the Variables

The table presents the correlation matrix of the variables used. Figures in brackets are the p-values. The correlations of variable pairs in bold are significant.

Table 4.34: Correlation Matrix of the Variables

Figures in brackets are the p-values. The correlations of variable pairs in bold are significant.

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
(1) satisfaction_score	3.31	0.72	1																							
(2) kpi_fin_ratio2	0.11	0.08	0.126	1																						
			(0.15)																							
(3) has_kpi_encourages_innovation	0.22	0.41	0.129	-0.065	1																					
			(0.14)	(0.46)																						
(4) is_budget_kpi	0.32	0.47	0.039	**0.283**	**0.18**	1																				
			(0.66)	**(0.00)**	**(0.04)**																					
(5) has_too_many_kpi	0.34	0.47	-0.064	**0.269**	-0.031	0.049	1																			
			(0.47)	**(0.00)**	(0.72)	(0.57)																				
(6) has_clawback	0.29	0.46	0.023	0.074	-0.02	0.049	0.028	1																		
			(0.80)	(0.40)	(0.82)	(0.58)	(0.75)																			
(7) has_long-term_kpi	0.15	0.36	0.054	-0.138	**0.287**	0.159	-0.079	-0.086	1																	
			(0.54)	(0.11)	**(0.00)**	(0.07)	(0.37)	(0.32)																		
(8) adaptive_kpi	0.68	0.47	**0.23**	0.02	-0.024	0.031	-0.083	-0.014	0.066	1																
			(0.01)	(0.82)	(0.78)	(0.72)	(0.34)	(0.88)	(0.45)																	
(9) num_stakeholder_kpi_affects	3.16	1.2	0.013	**0.279**	0.113	**0.218**	0.118	0.108	0.015	**-0.205**	1															
			(0.88)	**(0.00)**	(0.20)	**(0.01)**	(0.18)	(0.21)	(0.87)	**(0.02)**																
(10) ext_benchmark_used	0.09	0.29	-0.026	**0.193**	0.088	**0.175**	0.052	**-0.203**	0.088	0.049	0.002	1														
			(0.77)	**(0.03)**	(0.31)	**(0.04)**	(0.55)	**(0.02)**	(0.32)	(0.57)	(0.98)															
(11) is_reward_linked_to_kpi	0.76	0.43	0.144	-0.114	0.042	-0.025	-0.081	0.053	0.138	**0.175**	-0.043	0.116	1													
			(0.10)	(0.19)	(0.63)	(0.78)	(0.36)	(0.54)	(0.11)	**(0.04)**	(0.62)	(0.18)														
(12) monetary_reward_ratio2	0.16	0.09	**0.282**	**0.326**	-0.029	0.161	**0.205**	0.123	-0.047	0.002	-0.032	0.13	-0.001	1												
			(0.00)	**(0.00)**	(0.74)	(0.06)	**(0.02)**	(0.16)	(0.59)	(0.98)	(0.72)	(0.14)	(0.99)													
(13) regular_informal_review	0.43	0.5	0.051	-0.06	0.131	0.019	-0.009	0.076	**0.316**	0.144	-0.025	**0.258**	0.096	-0.037	1											
			(0.56)	(0.49)	(0.13)	(0.83)	(0.92)	(0.38)	**(0.00)**	(0.10)	(0.77)	**(0.00)**	(0.27)	(0.67)												
(14) perf_eval_more_frequent_than_1yr	0.5	0.5	0.049	0.137	0.014	0.043	0.011	0.111	-0.003	-0.043	**0.182**	-0.002	0.145	**0.212**	0.009	1										
			(0.57)	(0.12)	(0.87)	(0.62)	(0.90)	(0.20)	(0.97)	(0.62)	**(0.04)**	(0.98)	(0.10)	**(0.01)**	(0.92)											
(15) has_mbo_appraisal	0.51	0.5	**0.169**	0.014	0.006	**0.193**	**0.222**	-0.031	-0.009	-0.065	0.142	-0.112	-0.058	**0.169**	-0.004	0.052	1									
			(0.05)	(0.87)	(0.94)	**(0.03)**	**(0.01)**	(0.72)	(0.91)	(0.46)	(0.10)	(0.20)	(0.51)	**(0.05)**	(0.96)	(0.55)										
(16) has_bsc_appraisal	0.2	0.4	0.044	**0.204**	-0.131	0.131	0.034	-0.038	-0.108	-0.011	0.074	**0.167**	0.022	0.047	0.016	-0.06	**-0.254**	1								
			(0.62)	**(0.02)**	(0.13)	(0.13)	(0.70)	(0.67)	(0.22)	(0.90)	(0.40)	**(0.05)**	(0.80)	(0.59)	(0.85)	(0.49)	**(0.00)**									
(17) has_trait_based_appraisal	0.33	0.47	0.054	0.151	0.093	0.095	0.105	-0.032	0.017	-0.026	0.121	0.057	-0.053	0.132	-0.157	0.091	**0.176**	-0.116	1							
			(0.54)	(0.08)	(0.29)	(0.28)	(0.23)	(0.72)	(0.85)	(0.76)	(0.17)	(0.51)	(0.55)	(0.13)	(0.07)	(0.30)	**(0.04)**	(0.18)								
(18) has_team_based_appraisal	0.23	0.42	0.085	**0.171**	0.096	0.075	-0.094	-0.121	0.116	0.077	0.046	0.137	0.019	0.128	0.062	0.049	**-0.208**	0.031	**0.179**	1						
			(0.33)	**(0.05)**	(0.27)	(0.39)	(0.28)	(0.17)	(0.18)	(0.38)	(0.60)	(0.12)	(0.83)	(0.14)	(0.48)	(0.57)	**(0.02)**	(0.72)	**(0.04)**							
(19) go_extra_mile	0.14	0.34	0.075	0.105	0.11	0.102	-0.004	0.131	0.08	0.086	0.113	-0.048	-0.086	**0.181**	0.057	**0.173**	-0.009	0.019	0.002	0.094	1					
			(0.39)	(0.23)	(0.21)	(0.24)	(0.96)	(0.13)	(0.36)	(0.33)	(0.19)	(0.58)	(0.33)	**(0.04)**	(0.51)	**(0.05)**	(0.92)	(0.83)	(0.98)	(0.28)						
(20) fair_kpi_fin_ratio2	0.06	0.06	0.134	**0.49**	-0.058	**0.215**	0.114	0.063	-0.165	0.042	**0.188**	0.066	**-0.173**	**0.318**	-0.146	0.062	0.085	0.056	0.063	0.088	0.093	1				
			(0.12)	**(0.00)**	(0.51)	**(0.01)**	(0.19)	(0.47)	(0.06)	(0.63)	**(0.03)**	(0.45)	**(0.05)**	**(0.00)**	(0.09)	(0.48)	(0.33)	(0.53)	(0.47)	(0.32)	(0.29)					
(21) motivating_kpi_fin_ratio2	0.07	0.06	0.007	**0.636**	**-0.259**	**0.284**	**0.179**	0.007	**-0.192**	**0.173**	**0.183**	**0.172**	-0.043	**0.228**	-0.073	0.098	-0.007	0.135	**0.211**	0.153	-0.004	**0.504**	1			
			(0.94)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.04)**	(0.94)	**(0.03)**	**(0.05)**	**(0.04)**	**(0.05)**	(0.62)	**(0.01)**	(0.41)	(0.26)	(0.94)	(0.12)	**(0.02)**	(0.08)	(0.96)	**(0.00)**				
(22) company_size_group	3.23	1.68	-0.085	-0.025	**0.188**	0.067	**0.185**	0.009	0.092	-0.154	-0.075	0.113	0.11	0.08	0.052	0.048	0.028	0.109	-0.022	0.008	-0.055	-0.099	-0.123	1		
			(0.33)	(0.78)	**(0.03)**	(0.44)	**(0.03)**	(0.92)	(0.29)	(0.08)	(0.39)	(0.20)	(0.21)	(0.36)	(0.55)	(0.58)	(0.75)	(0.21)	(0.81)	(0.93)	(0.53)	(0.26)	(0.16)			
(23) is_male	0.44	0.5	0.165	0.006	-0.068	0.03	-0.031	0.156	0.09	0.067	0.085	-0.017	0.149	0.071	-0.039	0.129	0.056	0.038	0.048	0.08	0.089	0.028	0.02	-0.052	1	
			(0.06)	(0.94)	(0.43)	(0.73)	(0.73)	(0.07)	(0.30)	(0.44)	(0.33)	(0.85)	(0.09)	(0.42)	(0.65)	(0.14)	(0.53)	(0.66)	(0.59)	(0.36)	(0.31)	(0.75)	(0.82)	(0.55)		
(24) age_group	1.54	0.79	0.13	0.068	0.007	**0.198**	0.113	0.019	-0.102	-0.015	0.085	-0.016	0.007	0.151	-0.036	-0.1	**0.232**	-0.015	-0.138	-0.04	**0.174**	0.081	-0.063	0.018	0.059	1
			(0.14)	(0.44)	(0.94)	**(0.02)**	(0.19)	(0.83)	(0.24)	(0.87)	(0.33)	(0.85)	(0.93)	(0.08)	(0.68)	(0.25)	**(0.01)**	(0.87)	(0.11)	(0.65)	**(0.05)**	(0.36)	(0.47)	(0.83)	(0.50)	

Source: STATA

4.29 Test of the Difference in Mean Satisfaction Scores

The test of difference in mean satisfaction scores between sub-samples of respondents with and without the presence of a factor, or with above- and below-median value of a factor is presented in Table 4.35. The column 'Difference' shows the difference in mean satisfaction scores between the two subsamples and column 'p-value' presents the p-value of the difference in the mean satisfaction scores.

The results show that the Adaptive KPI: that is, the respondents who are measured with performance measures that were changed to adapt to the changes in environment had a mean satisfaction score of 3.42 compared to those without who have a lower satisfaction score of 3.28, so the difference in mean is 0.35. The p-value is 0.01 (Table 4.35: Test of the Difference in Mean Satisfaction Scores) so it is statistically significant. The overall mean satisfaction score for all respondents was 3.31. It indicates that respondents with adaptive KPI are 10.5% (0.35 / 3.31) more satisfied than their peers who do not.

Respondents who are rewarded with a higher ratio of monetary reward have a mean satisfaction score of 3.47 compared to respondents with higher non-monetary reward ratio and respondents whose mean satisfaction score is much lower at 3.18, the difference in mean is 0.29. The p-value is 0.02. It is statistically significant. It indicates that respondents with higher ratio of monetary reward would be 8.76% more satisfied than those that were rewarded with non-monetary reward.

Respondents who worked in organisations with the MBO Appraisal system had a mean satisfaction score of 3.43 compared to those with other appraisal systems who scored a mean of 3.18. difference in mean is 0.25. The p-value is 0.05 (Table 4.35). It is statistically significant. It concludes that the respondents with the MBO Appraisal system are 7.55% more satisfied than their peers whose organisations adopted other forms for appraisal system.

Table 4.35: Test of the Difference in Mean Satisfaction Scores

Variables	Yes/High	No/Low	Difference	p-value
KPI_fin_ratio2	3.35	3.28	0.06	0.63
has_KPI_encourages_innovation	3.48	3.26	0.22	0.14
has_budget_KPI	3.35	3.29	0.06	0.65
has_too_many_KPI	3.24	3.34	-0.1	0.47
has_clawback	3.33	3.30	0.04	0.80
has_LT_KPI	3.40	3.29	0.11	0.54
adaptive_KPI	3.42	3.07	0.35	0.01
num_stakeholder_KPI_affects_high	3.38	3.23	0.14	0.26
ext_benchmark_used	3.25	3.31	-0.06	0.77
is_reward_linked_to_KPI	3.37	3.13	0.24	0.10
monetary_reward_ratio2_high	3.47	3.18	0.29	0.02
regular_informal_review	3.35	3.28	0.07	0.56
perf_eval_more_frequent_than_1yr	3.34	3.27	0.07	0.57
has_MBO_appraisal	3.43	3.18	0.25	0.05
has_BSC_appraisal	3.37	3.29	0.08	0.62
has_Trait_based_appraisal	3.36	3.28	0.08	0.53
has_Team_based_appraisal	3.42	3.27	0.14	0.33
go_extra_mile	3.44	3.29	0.16	0.39
fair_KPI_fin_ratio2_high	3.41	3.26	0.15	0.26
motivating_KPI_fin_ratio2_high	3.33	3.29	0.04	0.75
company_size_group_high	3.27	3.37	-0.09	0.47
age_group_high	3.46	3.22	0.24	0.06
is_male	3.44	3.20	0.24	0.06

Source: STATA Output

The key to the variables is on Table 4.32.

Table 4.36: Variables and Questionnaire Question Number

Variables	Linked to Questions from the Questionnaire
KPI_fin_ratio2	Q1: List the performance measures used to gauge your performance in your organisation.
Has_KPI_Encourages_Innovation	Q20: Are there performance measures that encourage creativity and innovation in your organisation?
Is_Budget_KPI	Q16: Does your organisation adopt the budget as one of the performance measures to measure your performances?
Has_Too_Many_KPI	Q21: Are there too many performance measures in the performance measurement system of your organisation?
Has_Clawback	Q29: Are there any clawback provisions (eg recovery of bonuses or incentives paid) for any rewards or incentives paid out in the event of fraud or irregularities?
Has_LT_KPI	Q15: Are there any performance measures used to evaluate your long term performances, that is, your performances of more than a year?
Adaptive_KPI	Q14: Do you think the current performance measures in your organisation in line with the changes in the operating environment?
Num_Stakeholder_KPI_Affects	Q9: In meeting the performance measures in the course of your work, have you considered how it affects stakeholders.
Ext_Benchmark_Used	Q6: Are external benchmarks made to the performance measures used to measure your performances (eg. to competitors and other best practice organisations)?
Is_Reward_Linked_To_KPI	Q23: Are the rewards/incentives linked to the performance measures?
Monetary_Reward_Ratio	Q22: What are the various rewards/incentives whether monetary or non-monetary, offered by your organisation. For those not listed below, fill them under 'Others':

Variables	**Linked to Questions from the Questionnaire**
Regular_Informal_Review	Q12: Does your manager review informally on a more regular basis? If yes, how often?
Perf_Eval_More_Frequent_Than_1yr	Q10: What is the frequency of your formal performance evaluation?
Has_MBO_Appraisal	Q31: What performance management /appraisal system does your organisation use?
Has_BSC_Appraisal	Q31:
Has_Trait_Based_Appraisal	Q31:
Has_Team_Based_Appraisal	Q31:
Go_Extra_Mile	Q30: Would you spend time doing something that benefits your organisation but is not in the list of criteria you are measured and rewarded by in your organisation?
Fair_KPI_Fin_Ratio	Q3 Which of the performance measures used in your organisation do you think fairly reflect your own performances?
Motivating_KPI_Fin_Ratio	Q2: Based on each of the performance measures you have listed in Question 1, which do you think is/are effective to motivate you to work towards the goals or targets set?
Company_Size_Group	Q34: Company size (based on number of employees)
Age_Group	Q37: Age group
Is_Male	Q36: Gender

The key to the variables is on Table 4.32.

4.30 Performance Measures on Team Work

The results from the analysis of Question 11 of the questionnaire: 'Would you like to have additional performance measures that may encourage managers to be more cooperative, work as a team, to minimise unproductive conflicts with one another?' revealed that the majority of the respondents (72.2%) did not see the need for additional measures, however, there were 27.1% of the managers who would like to have additional performance measures that may encourage managers to be more cooperative, work as a team and to minimise unproductive conflicts with one another.

The managers who would like to have additional measures recommended such as peer to peer evaluation, team bonding activities, conflict resolution and management, effective communications and employee engagement surveys to consider that they will work towards improving work harmony. Refer to Table 4.37: Performance Measures on Teamwork.

Table 4.37: Performance Measures on Teamwork

	% over Total Responses	Responses
Yes	27.1%	36
No	72.2%	96
Neither	0.7%	1
Total	100.0%	133

4.31 Long Term Performance Measures

The results of the respondents' answers to Question 15: 'Are there any performance measures used to evaluate your long-term performances of employees, that is, your performances of more than a year?' showed a significant number of 96 out of 133 responses or 85% of the respondents who stated that their organisations do not have any performance measures that evaluate long-term performances, that is, performances measures that measure their performances of more than a year. There were only a minority of 15% of the respondents in the organisations surveyed indicated that they have long term performance measures. Refer to Figure 4.1: Long Term Performance Measures.

The mean satisfaction score of those with long term KPI was 3.33 compared to 3.30 for those without. The difference in mean is 0.04, Standard deviation 0.36, p value 0.8. It is not statistically significant (Table 4.35: Test of the Difference in Mean Satisfaction Scores).

Long Term Performance Measures

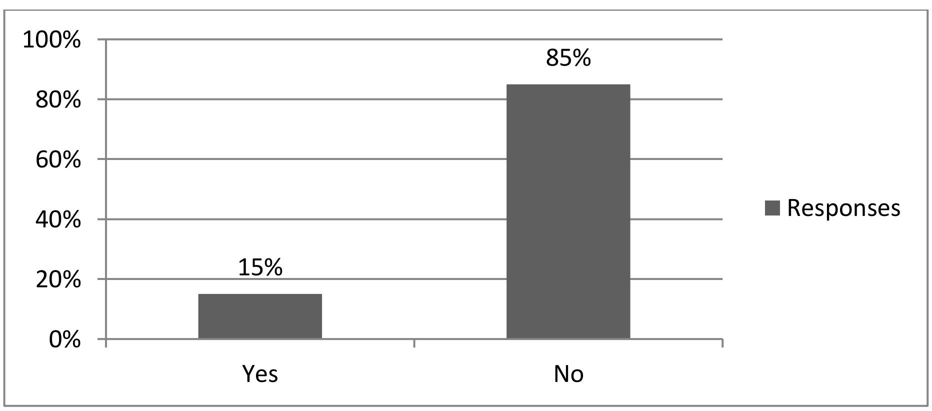

Figure 4.1: Long Term Performance Measures

4.32 Managers' Recommendations to Improve the Performance Measurement

The response to the questionnaire Question 4: **'**Can you suggest any other performance measures not listed in Question 1, that you feel will be a better and more equitable measure of your performance?'

From the questionnaire survey results, managers recommended the following measures that were equitable in measuring their performances: flexibility, accomplishments, attitude, adaptability, willingness to take on additional responsibilities, commitment, discipline, innovation, productivity, quality, resilience, punctuality, reliability, respect, risk management, role model, service levels, skills, teamwork, good values and behavior, continuous learning and training and rapport with customers/client. The respondents also suggested that the 360 feedback, peer evaluation and self-assessment would be a better system to a more equitable performance measurement.

It should be noted that all these performance measures were mostly non-financial performance measures.

4.33 Changes to Performance Measures to Adapt to the Changes in the Operating Environment

The results of the findings obtained from Question 13 of the questionnaire: ‘Were there changes to the performance measures in your organisation that reflect the changing landscape or other changes in the operating environment?’ show that about 50% of the managers responded that there were adaptive KPI, that is, changes to their performance measures in the organisations they worked for, that reflect the changing landscape or other changes in the operating environment. The other 50%, 66 respondents out of 133 respondents stated that there were no changes to the performance measures despite the changes to the operating environment.

In addition to the results on changes to performance measures to adapt to the changes in environment, to Question 14 of the questionnaire: ‘Do you think the current performance measures in your organisation in line with the changes in the operating environment?’ 32.3% of respondents felt that the current performance measures in their organisations were not in line with the changes in the operating environment.

The mean satisfaction score for managers whose performance measures was in line with changes in the operating environment to the performance measures was 3.42 compared to 3.07 for those respondents whose performance measures were not adaptive to the changes in the operating environment. The difference between the means is 0.35. Standard deviation 0.47. As the p value is 0.01, it is statistically significant. The managers whose performance measures are changed to adapt to changes in environment are 10.5% (i.e. 0.35/3.31 mean) more satisfied than their peers without any changes to the performance measures. Refer to Table 4.35 on the Test of the Difference in Mean Satisfaction Scores.

4.34 Reward / Incentives

4.34.1 Types of Rewards

Question 22: What are the various rewards/incentives whether monetary or non-monetary, offered by your organisation?

From the data collected from the participants of the questionnaire survey, the rewards/incentives awarded to the respondents were:

Monetary rewards: variable bonuses, salary increases, promotions, fixed base salary, cash incentives, variable salary, fixed bonus, group or team bonuses, stock and company shares, employee stock options, transport allowance, meal allowance, phone allowance, flexi benefits, shopping vouchers, overtime allowance, long service award.

The non-monetary rewards are: recognition, praise, time off, job security, free training courses/seminars, vacation/holiday trips, autonomy, merchandise prizes, power, premium class travel, club memberships, medical benefits, flexible work schedule, lunch on the company and more leave days (Table 4.39: Types of Rewards/Incentives)

Table 4.39: Types of Rewards/Incentives

Monetary (M) / Non-Monetary (NM)	Types of Rewards/Incentives	% over total respondents
M	Variable bonuses	66.2%
M	Salary increases	64.7%
M	Promotions	54.9%
M	Fixed base salary	50.4%
NM	Recognition	42.9%
M	Cash incentives	28.6%
NM	Praise	28.6%
NM	Time off	23.3%
NM	Job security	22.6%
NM	Free training courses/seminars	22.6%
NM	Vacation/holiday trips	18.1%
M	Variable salary	17.3%
M	Fixed bonus	15.8%
M	Group or team bonuses	14.3%
M	Stock and company shares	9.8%
M	Employee stock options	9.0%
NM	Autonomy	8.3%
NM	Merchandise prizes	7.5%
NM	Power	7.5%
M	Transport allowance	4.5%
NM	Premium class travel	6.0%
NM	Club memberships	3.8%
NM	Medical benefits	3.8%
M	Meal allowance	3.0%
M	Phone allowance	2.3%
NM	Flexible work schedule	1.5%
M	Flexi benefits	1.5%
M	Shopping vouchers	0.7%
M	Overtime allowance	0.7%
M	Long service award	0.7%
NM	Lunch on the company	0.7%
NM	More leave days	0.7%

4.34.2 Rewards for Risk Taking

Question 25: Does your organisation reward you for risk taking?

The results show that 91.7%, that is, 122 respondents out of the 133 surveyed were not rewarded for taking risks for their organisations. Only 8.3% or 11 respondents stated that they were rewarded for risk taking and most of the rewards were monetary in nature. Some of the rewards are: bonuses, money incentives, promotions, however, one manager was rewarded with praise and recognition which is non-monetary. From the qualitative interviewees, they were rewarded with money and certificate awarded for quality improvement project.

4.34.3 Rewards that Motivate Managers

From the questionnaire survey, it was found that line managers were more motivated by monetary than non-monetary rewards. This was obtained from the responses to question 26: "Which of the rewards/incentives currently used in your organisation, motivate you to work harder?"

The findings revealed the top five rewards that motivates the line managers were: variable bonuses (55.6%), salary increases (53.4%), promotions (50.4%), recognition (41.4%), and cash incentives (31.6%) and all of these are monetary rewards with the except of recognition which is non-monetary.

The other rewards are: time off, praise, job security, vacation/holiday trips, titles, fixed base salary, group or team bonuses, stock and company shares, variable salary, fixed bonus, power, free training courses/seminars, employee stock options, club memberships, premium class travel, merchandise prizes, autonomy, job assignments, deferred bonuses, flexi work schedule and points rewards system. Refer to Table 4.40.

Table 4.40: Rewards/Incentives that Motivates Managers

Monetary (M) / Non-Monetary (NM)	Rewards that will Motivate Managers	% over total managers surveyed
M	1. Variable bonuses	55.6%
M	2. Salary increases (increments)	53.4%
M	3. Promotions	50.4%
NM	4. Recognition	41.4%
M	5. Cash incentives	31.6%
NM	6. Time off	24.8%
NM	7. Praise	22.6%
NM	8. Job security	21.8%
NM	9. Vacation/holiday trips	17.3%
NM	10. Titles	16.5%
M	11. Fixed base salary	13.5%
M	12. Group or team bonuses	13.5%
M	13. Stock and company shares	13.5%
M	14. Variable salary	12.0%
M	15. Fixed bonus	11.3%
NM	16. Power	10.5%
NM	17. Free training courses/seminars	9.8%
M	18. Employee stock options	9.0%
NM	19. Club memberships	8.3%
NM	20. Premium class travel	8.3%
NM	21. Merchandise prizes	6.8%
M	22. Autonomy	6.8%
NM	23. Job assignments	6.8%
M	24. Deferred bonuses	2.3%
NM	25. Flexi work schedule	0.8%
NM	26. Points rewards system	0.8%

4.34.4 Changes to the Reward System

Question 27 of the questionnaire: "In your opinion, are there any rewards/incentives in your organisation that need to be changed to keep up with the changes in the operating environment?" and Question 28: "Can you propose other/new rewards and incentives (not used by your organisation currently) that will motivate you to work harder for your organisation?" provides data from the participants on the need for change to the reward system".

The results from the questionnaire survey question 27 show that 76.7% of the respondents felt that the rewards and incentive do not need changes, while the remaining 23.3% felt that there is a need for change. They recommended the following measures:

Individual monetary incentives, commission scheme, cash incentives for working on weekends, promotions, performance bonus, recognition, flexible work arrangement, fixed bonuses, variable bonuses, team rewards, healthcare benefits, better transport allowances, higher fixed based salaries, more interactive activities such as end-of-year dinner, competitive salaries, business class air travel, zero sick leave reward, deferred bonus or similar compensation plan and birthday leave.

In addition, the managers recommended the following rewards and incentives in answer to question 28:

Incentive travel opportunities, flexible work arrangement, that is, flexibility to work from home, monthly and quarterly cash incentives, performance bonuses, recognition, family health benefits, dental care, getaway, staycation, lunch and dinning treats, incentives that will give a work balance between work and family, commissions, respect for staff, appreciation for the hard work performed, time off work for targets met, more off days, tickets for recreational activities or family outing packages, scholarship for the further education(e.g. full time master courses or advanced certification courses), surprise gift in appreciation for employees, birthday leave, vacations, increase in annual leave or leisure time, job enhancement, travel incentives / paid overseas vacation (individual and for the department), free training courses, stock options, quarterly team bonding activities, employee of the month award, flexible working hours, shopping vouchers, variable bonus and salary increment to be based on individual performance instead of fixed for all as this does not fairly reward those who performed better, company car, higher allowances, encash unconsumed leave, transport allowance, gifts, better medical coverage, lesser working hours, Restricted stock units (RSUs), zero sick leave reward (based on percentage of total money saved by company from employee not taking sick leave), more frequent dialogue session (talk about the work freely with all members officially), job security, career progression, and project bonus for new projects undertaken that were not planned.

The results from the qualitative interviews added the following: flexible working hours for better work/life balance, recognition for effort made, job rotation, health /exercise workouts courses to bond with co workers, appreciation, free coffee in the morning, more leave, percentage of company's profits and team rewards.

4.35 Challenges of the Performance Measurement and Reward System - Bell-curve Forced Ranking Practice

Question 24 is relevant to research question 4 on “What challenges do line managers faced in the performance measurement and reward system??”

The question “In your opinion, does ranking the individual employees according to the scores attained from a set of performance measures, that is: Bell curve/forced ranking of performances among managers, a fair system of evaluating and rewarding employees? Please comment”. This question was classified under the challenges of the performance measurement and reward system after the results from the responses were analysed. It was found that the line managers had expressed that this Bell-curve/forced ranking of the manager’s performance was unfair and deficient.

The question aims to find out from the line managers their experience and opinion on the Bell curve forced ranking system. The results showed that a high number of the respondents comprising 45.1% of the respondents, expressed that the Bell curve forced ranking system was not a fair system of evaluating and rewarding employees. However, 31.6% of the respondents felt that it was fair if the performance measures used were objective, consistent and a good indicator of performance such as revenue or project-based. They expressed that it was fulfilling when they met the targets and get rewarded for the effort that they have put in, and such ranking is fair as each manager ‘has an equal chance to perform well’ according to one respondent. Another manager mentioned that he is motivated to work hard to meet the targets set in the performance measures to be ranked higher than the other managers and to get rewarded.

Summarising the comments of the managers of those who are for the Bell curve/ fixed ranking systems, it conclusion that it works for those whose performance can be objectively measured, for example by the revenue or other verifiable measurement.

There were 23.3% of the respondents who were indifferent.

The majority of the respondents comprising 45.1% of the total respondents were against the system. The respondents felt that Bell curve/forced ranking of performances was not a fair system as they felt that the system worked against them, is biased as it is based on their superior's judgement and most respondents felt that they have worked hard, but their superiors were not be aware of how hard they worked and ranked them unfairly. A number of respondents felt that ranking line managers who are responsible for different portfolios and responsibilities cannot be assessed together and ranked. A common comment among the respondents is that it led to a loss of morale for managers who worked hard but are ranked at the bottom of the league.

One respondent added: 'Managers should not be graded like the school's common examination system'. Another respondent comment that it "should not be ranked mechanically, the organisation should have a transparent system that spells out clearly the performance measurement criteria on how the managers are assessed'.

'Forced ranking approach do not truly reflect the staff worth and contribution because, in the event when everyone in the team performed well, force ranking does not give credit to those who just happened to be at the end of the ranking but may have contributed much to the organisation'. Most line managers have different job scope and responsibilities, and they serve different customers, so it is not equitable to be ranked together.

A respondent commented that, as managers, they are responsible employees and will do their best to achieve their targets, so being ranked at the bottom is demoralising.

In some organisations, the performance measurement system requires that the evaluator to rate at least one manager with the lowest score, regardless of that manager's performance, so it is not an entirely fair system. Evaluators are forced to skew the evaluations.

The respondents recommended that the nature of the business needs to be considered in the evaluation, and the line managers holding sales related portfolios should not be ranked on a Bell curve as some have achieved the stated targets or may even exceed the performance targets.

The other respondents commented: 'It should be more of an art than science if it is applied. Some department may have more talented people than the other so exceptions should be made', 'It is not a fair system, it is a tool for lazy management to rank and fit everybody in the organisation in to the Bell curve'

4.35.1 Respondents' recommendations on the Bell-curve Forced Ranking Practice

The respondents' recommendations are:

Apply the use of the 'Absolute Appraisal method' to reward those with objective measures such as sales revenue, however, if it is not objective, for example the person belongs to a cost centre, the organisation may use another method called the "Relative Appraisal method" which depended very much on the judgement or opinion of the evaluators.

One of the qualitative interviewees recommended: 'have a third party counter review by 'human resource and also the director'.

Table 4.41: Fairness of the Bell Curve Forced Ranking System in Evaluating and Rewarding Employees

	% over Total Responses	Frequency
Yes	31.6%	42
No	45.1%	60
Neither	23.3%	31
Total:	100.0%	133

4.36 Performance Measurement & Reward for Taking on Risks

Question 8: Do you think the performance measures you are evaluated on, consider the factor of risk taking?

The response from the majority of the respondents (85.6%) was that the factor of risk taking is not included in the performance measures they are evaluated on, but there were 14.4% of the respondents who acknowledged that risk factors were included in the performance measures and they listed the following measures: return on investment, profits, revenue together with market risks, process improvements, investment risks and credit risks.

4.37 Performance Measures to Encourage Innovation

Question 20: Are there performance measures that encourage creativity and innovation in your organisation?

78.2% of the managers acknowledged that there were no performance measures that encourage creativity and innovation in their organisation and only 21.8% do have these measures. Some of the measures that are used to measure innovation are: new processes created, process improvements, number of new products, new services created, time saved and number of new ideas.

Respondents whose organisation had performance measures that encourages innovation have a higher mean satisfaction score of 3.48 compared to 3.26 for those who do not. The difference in mean is 0.22, Standard deviation 0.41, p value 0.14, however, it is not statistically significant (Table 4.34: Test of the Difference in Mean Satisfaction Scores).

4.38 Comments and Recommendations from Respondents on the Performance Measurement and Reward System

Question 33: If you have any comments to make about the performance measurement and reward system in your workplace or industry, or on the performance management practices at the workplace, please feel free to comment on them in the space below.

The comments and recommendations of the respondents sorted by themes and source of information are in paras 4.38.1 to 4.38.6:

4.38.1 Manager's Recommendations on the Performance Measures

The manager's recommendations from the quantitative survey were:

- Absenteeism - 'Employee's performance should not be judged on how many medical leave they have taken as the employee can be efficient, but weak at health'.

The recommendations from the qualitative interviews were:

- Meeting targets & Self-satisfaction: 'So I heard things and then I was like, they measure by your performance, whether or not you can hit that target. It's like, actually it is also the same, but I suppose sometimes it's not a matter of hitting, but whether you get the satisfaction and whether you get the things done'

4.38.2 Manager's Recommendations on Rewards

The recommendations from quantitative survey were:

- Recognition : 'Appreciation of staff'
- Review rewards : 'Review the commission scheme and reward system'
- Monetary rewards : 'Performance usually monetary is the final and ultimate goal'.

4.38.3 Improvement of the System / Change

The managers' recommendations from quantitative survey are:

- Transparency - 'Organisation should set a clearer guideline on criteria to get a promotion and the pay rise to motivate staffs to strive for better performance'.
- Bottom-up approach / participation to improve performance measurement- 'Performance measurement and reward system type should be implemented from bottom up, not top down where executives think their systems are right, but it may not work on the ground. The person on the ground have to be satisfied in the system they choose to be in, not be implemented'.

The managers' recommendations from qualitative interviews are:

- Change - 'it has to constantly be reviewed to make sure that it continues to stay in relevance'.
- Participation / views of line managers to be taken into consideration - 'bosses are looking into the performance of higher rank management, but they didn't go into lower hierarchy to understand the lower-level staff concerns, such as: are whether they are happy with their job, whether they have really contributed to the company's performance. So will be a disadvantage in a way that those lower rank, even if they perform well, but some of the higher rank management staff may be taking the, you know, the the so call the ideas of their own staff' The higher rank referred to is the' Senior management'. '… if you want to reward your staff fairly, it'll be good is go into one by one to evaluate, even to

the lower rank instead of going to the higher management. Let the senior management review their staff. The subordinate ... both way of evaluation'.

- Take the performance system seriously - 'for the current SME, they have to practice all this, it's because they want to apply for the grant. So, after they get the grant, the system will just ignore'. 'They will have the measurement system only for the grant purposes', 'If the performance measure system really practically goes to the whole organisation. It's actually a benefit to all the employees, whereas it is not functioning'.
- Top Management involvement to make it work: 'It's only the top management push it from the top' for 'a proper practice to the system, according to the system. But it not, it also depends on the top management whether they want to practice the system or not. If they just want the system in place but they don't practice the system that is ridiculous'.
- Dissatisfaction over job scope - 'there are still people doing things that is not in their job description and they are not given the place, the position. So it kind of hangs people there'.
- Transparency / Openness - 'Singapore's reward system and performance measurement is too one way approach. They only do this kind of performance measurement on the individual that will be judged on like manager in interviewing or doing a appraisal for his employee, not a two-way whereby the employee do appraisal on the boss'.' No, no 360 feedback. My previous company, yes we do. So, we can just openly tell a feedback and we will not be penalized'.

4.38.4 Provide Opportunity to Improve through Coaching and Learning

The respondents' recommendations from the quantitative survey were:

- Learning / nurture- 'Would be good if they do not only reward the best but seek to motivate and encourage the learners'
- Learning/nurture/coach and frequent communications/feedback - 'I always believe this system can work for the people who have not really realized what they really want to achieve in this life. And also if the managers know how to communicate and coach own people. If the person knows one's goal in career life, there is no need to be given the target, one is really willing to do a good job at their best. Our organisation is moving towards this direction and we value more frequent communication among people to nurture to find out their actual ability'.

4.38.5 Fairness and Equity

The respondents' recommendations from quantitative survey are:

'Equity and proper appraisal should be a factor' according to one respondent, another recommended that those who appraise the performance of the managers should be impartial and rate the performance fairly with good judgment and without bias.

4.38.6 Teamwork

According to Hofstede Insights (2021), Singapore is a collectivistic society and not individualist with a low score of 20 out of 100 for individualism, which means that people belong to in-groups such as organisations and so the line managers are more likely to be team workers. Every line manager have a role to play in contributing to the results of the organisation, so they have to work together to be more effective to meet the organisation's goal, however, the respondents' mentioned that their organisations they worked in do not reward based on group performance.

Table 4.42: Research Questions, Variables and Questions

Variables	Questions from the Questionnaire
Research Question 1: What are the performance measures that are effective in motivating managers?	
Performance Measures Financial/Non-Financial Measures	Q1: List the performance measures used to gauge your performance in your organisation. (1. Financial, 2. Non-financial measures)
Motivation	Q2: Based on each of the performance measures you have listed in Question 1, which do you think is/are effective to motivate you to work towards the goals or targets set? (1. Financial, 2. Non-financial measures)
Fair performance measures	Q3 Which of the performance measures used in your organisation do you think fairly reflect your own performances? (1. Financial, 2. Non-financial measures)
Other Performance Measures	Q4 Can you suggest any other performance measures not listed in Question 1, that you feel will be a better and more equitable measure of your performance? Q5 Name any other performance measures that you know are used to measure the performances of the other managers in your organisation.
Benchmarking	Q6: Are external benchmarks made to the performance measures used to measure your performances (eg. to competitors and other best practice organisations)?

Performance Measures Values	Q7 What values do you think all these performance measures indicate to you?
Consider Stakeholders	Q9: In meeting the performance measures in the course of your work, have you considered how it affects:
Formal Review	Q10: What is the frequency of your formal performance evaluation?
Team work	Q11: Would you like to have additional performance measures that may encourage managers to be more cooperative, work as a team, to minimise unproductive conflicts with one another?
Informal Review	Q12: Does your manager review informally on a more regular basis? If yes, how often?
Long term performance measures	Q15: Are there any performance measures used to evaluate your long term performances, that is, your performances of more than a year?
Budgets	Q16: Does your organisation adopt the budget as one of the performance measures to measure your performances?
Budgets	Q17: Does the budget motivate you to meet the standards/targets set?
Budgets	Q18: Does the budget benefit you in managing your department, unit or division better?
Budgets	Q19: Does the budget as a performance measure hinder you in taking up new opportunities that were not planned for in the budget?
Too Many Performance Measures	Q21: Are there too many performance measures in the performance measurement system of your organisation?
Go_Extra_Mile	Q30: Would you spend time doing something that benefits your organisation but is not in the list of criteria

	you are measured and rewarded by in your organisation?
MBO_Appraisal	Q31: What performance management /appraisal system does your organisation use?
Performance Management/BSC_Appraisal	Q31:
Trait_Based_Appraisal	Q31:
Team_Based_Appraisal	Q31:
Informal Appraisal	Q31:
Adaptive_KPI	Q14: Do you think the current performance measures in your organisation in line with the changes in the operating environment?
Change Rewards	Q27: In your opinion, are there any rewards/incentives in your organisation that need to be changed to keep up with the changes in the operating environment?
Innovation	Q20: Are there performance measures that encourage creativity and innovation in your organisation?
Risk_Taking	Q8: Do you think the performance measures you are evaluated on, consider the factor of risk taking?
Reward_Risk_Taking	Q25: Does your organisation reward you for risk taking?
Monetary Rewards	Q22: What are the various rewards/incentives whether monetary or non-monetary, offered by your organisation. For those not listed below, fill them under 'Others':
Non- Monetary Rewards	(1. Monetary, 2. Non-monetary reward/incentives)
Motivating Monetary Reward	Q26: Which of the rewards/incentives currently used in your organisation, motivate you to work harder?
Motivating Non-Monetary Reward	Q26:

Rewards	Q28: Can you propose other/new rewards and incentives (not used by your organisation currently) that will motivate you to work harder for your organisation?
Rewards Linked to KPI	Q23: Are the rewards/incentives linked to the performance measures?
Clawbacks	Q29: Are there any clawback provisions (eg recovery of bonuses or incentives paid) for any rewards or incentives paid out in the event of fraud or irregularities?

Research Question 2: How satisfied are the managers with the performance measurement and reward system?

Satisfaction	Q32: Overall, are you satisfied with the performance evaluation and reward system in your organisation?

Research Question 3: What changes were made to the performance measurement and reward system?

Changes	Q13: Were there changes to the performance measures in your organisation that reflect the changing landscape or other changes in the operating environment?

Research Question 4: What challenges do line managers faced in the performance measurement and reward system?

Bell Curve/Forced Ranking	Q24: In your opinion, does ranking the individual employees according to the scores attained from a set of performance measures, that is: Bell curve/forced ranking of performances among managers, a fair system of evaluating and rewarding employees? Please comment.

4.39 Summary

The results from the research found that the performance measures: profit, process improvements, projects on time and on budget, ROI / EVA and revenue are more likely to be effective to motivate the line managers, while the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs are less likely to be effective to motivate them.

The findings also indicated that the respondents were mostly neither satisfied nor dissatisfied with the performance measurement and reward system. Most of the line managers who participated in this research stated that the performance measures in their organisation were not changed to reflect the changing landscape and other changes in the operating environment. There were very few performance measures and reward to motivate managers to innovate or to take on risks by the managers.

The line managers who were evaluated for their performance on budget as the performance measure, agreed that they were motivated by the targets set as it helped them in managing their units better, however, more than half of the managers surveyed felt that budget as a performance measure do hinder them from taking up new opportunities that were not planned in the budget. This was in line with Hope and Fraser (2003) Beyond Budgeting model that 'the rigidity of the budget serves only to stifle innovation and responsiveness to change. The need to comply to a fixed plan, and to manage with resources which may have been allocated more than one year earlier, act as impediments that prevent managers from responding quickly to changes in today's business environment' (Coombs and Johnson 2015). The managers have made recommendations for more flexibility instead of strictly sticking to the budgets, that is for an adaptive budget.

It was found that the majority (73%) of the line managers would do what will benefit their organisations even though they were not in the list of performance criteria that are measured and rewarded by their organisations. They stated that they have a sense of responsibility towards the organisation and will do what is right, regardless the performance measures or the rewards.

The line managers were dissatisfied with the Bell curve forced ranking system whereby the individual managers were ranked according to the scores attained from a set of performance measures and their performances compared with the other managers. They felt it was not a fair system of evaluating and rewarding employees, as the ranking requires subjective judgements and evaluations by their evaluators and some of the good or average performers are forced down to a lower performance rating even though these manager's performance were good but were ranked lower than the other line managers. This resulted in some performing employees being unfortunately relegated last in rankings and it caused dissatisfaction and lower morale and lead to lower motivation. However, the affected managers are resigned to this fact, as they mentioned that organisations could not find a better system to resolve this, so, the organisations continued to adopt the Bell curve forced ranking system to rank the performance of the staff and reward them.

Chapter 5 Discussion

5.1 Introduction

This chapter presents the discussion of the qualitative and quantitative findings from the mixed method approach that expands the analysis and interpretation from chapter 4 together, with the related literature.

The significance of the research is to explore, understand and improve the performance measurement and reward system. The main objective is to learn from the experienced line managers on the performance measures, reward and incentives that are effective to motivate them, their satisfaction level, any changes and the challenges in the system. It examines the performance measurement and reward system from the experiences of the line managers.

In today's challenging and changing environment - the volatile, uncertain, complex and ambiguous environment (VUCA) environment (Lawrence 2013), organisations must adapt to the VUCA environment and apply relevant performance measures to evaluate and reward the managers, to motivate them to perform amidst the challenges in the 'crazy world out there' (Bennet & Lemoine 2014). Outdated measures are an impediment to any organisation (Bourne 2021). There is a need to keep the performance measurement system up to date to adapt to an everchanging VUCA environment. The volatile and complex evolving environment makes it difficult to measure the performance of the managers and motivate them. Managers must be able to act more freely than what the traditional systems allow, to adapt and respond to the changes in the VUCA environment.

5.2 Discussion on the Findings

The following paragraphs presents the discussion of the findings from results of the analysis presented in Chapter 4.

5.3 Performance Measures and Measures that Motivate Managers

5.3.1 What are the performance measures?

The results of the findings from the organisations surveyed found that the performance measures used to measure the line managers' performance are : profit / profit margin, turnover / revenues or revenue growth, projects on time and on budget, work output (units produced, hours taken, etc), meeting budgets (budget variances), process improvements, number of new ideas /products / processes, costs related, new customers added, return on investment (ROI), market share, economic value added (EVA) / Residual Income(RI), number of errors / quality, customer satisfaction, leadership, employee feedback, compliance and organisation's core values.

The results from the qualitative research interviews found that similar measures as in the quantitative research with additional measures: productivity, innovation, manager-subordinate relationship, employee turnover rate, teamwork, calibration and business transformation measures.

Compared to the research conducted by Stanton and Nankervis (2011) on Singapore managers, the performance measures were almost similar with performance measures such as profitability, return on investment, cost, market share, efficiency, quality of goods and services, the quality of the workforce, and innovative capacity.

However, it was found that there were very few performance measures that are changed to adapt to the changes in the VUCA environment, to enhance the performance measurement system to be relevant and effective to motivate the managers. There was a need for adaptive key performance indicators (AKPI).

5.3.2 Effectiveness of the Performance Measures

The effectiveness of the performance measures to motivate the managers was examined. The results from the quantitative study using the logistic regression model (refer to para. 4.22) found the performance measures: profit, process improvements, projects on time and on budget, ROI / EVA and revenue were more likely to be effective to motivate the managers, while the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs are less likely to be effective to motivate the managers.

The results from both the quantitative and qualitative research found that profit or profit margins and revenue to be effective performance measures that motivate the managers. This was supported by Kenny (2015) who claimed that ‘managers and boards are often pushed by investors, fund managers, and analysts to focus intently on a single measure of success which is profit or shareholder value’. Similarly, the performance measures EVA was also effective to motivate managers. However, the qualitative research found that ROI was not effective to motivate the managers. Both the qualitative and quantitative research found that cost related measures were less effective to motivate the managers. The other results from the qualitative interviews supported the results from the quantitative survey.

The findings revealed conflicting interests between the managers and the organisations on the performance measures. From the results of the logistic regression, managers whose performance were measured on Revenue were found to be more likely to be effective in motivating the managers, however, the performance measures: new customer acquisition and market share which were related to the revenue measure, were found to be less likely to be an effective motivator of the managers. The acquisition of new customers and increased market share are important to the organisation, however, it is the measure of revenue (by way of commissions) that is often used to reward the managers, so managers obviously find it more effective to motivate them than the number of new customers acquired or market share. In the managers' perspective and not the organisation's perspective. Moreover, market share as a performance measure may not likely to be effective to motivate the managers even though it is strategically important to the organisations, as managers do not have control over the market share size, and besides, the market share statistics are historical and the source of data from competitors may not be reliable. It is workings of the Principal-Agent Theory and the Positive Accounting Theory by Jensen and Meckling (1976).

5.3.3 Effectiveness of the Financial Performance Measures and Non-Financial Performance Measures

The results of the tests on Hypothesis 1: ‘Financial performance measures are more effective to motivate the line managers than non-financial measures’, found that financial performance measures were statistically significant and were more effective in motivating the managers than non-financial performance measures. This was in line with Broderick (2011, p. 127) who stated that financial metrics were important as they were used ‘to track, measure, and also to manage the financial health of the business’ and Langfield-Smith (2007, p. 667)’s view supports it, that profitability, which is a financial performance measure, is ‘a critical measure of success’ as it is often used metric for performance measurement. The overall the results from the quantitative survey revealed that there was a higher ratio of financial measures than non-financial measures applied to measure and motivate the managers.

The results from the qualitative interviews supported what was found from the quantitative research that the managers felt that the financial performance measures were effective to motivate them.

Overall, the findings did not show a very large difference between the effectiveness of the financial and non-financial measures as the quantitative analysis indicated only a slightly higher level of effectiveness of the financial measures while the qualitative results showed that both financial and non-financial measures were effective. So the overall difference in the effectiveness of both the financial and non-financial measures can be considered as inconclusive.

5.4 Manager's Level of Satisfaction on the Performance Measurement and Reward System

The findings to Research Questions 2: 'How satisfied are managers with the performance measurement and reward system?' are discussed in this section.

5.4.1 Overall Satisfaction Level of Managers

The overall satisfaction level of the managers to the performance measurement and the reward system is an indicator to whether the overall performance measurement system is accepted and perceived to be effective to evaluate the managers' performance and reward them. The system must be seen as fair and reliable to be effective for the managers to be receptive to those performance measures and rewards and motivate them.

From the results of quantitative survey to Research Question 2: "How satisfied are the managers with the performance measurement and reward system?" The findings revealed that in terms of the managers' satisfaction with the performance measures and reward system, the majority, making up of 50% of the managers surveyed were neither satisfied nor dissatisfied with the performance measurement and reward system in their organisations. 40% were satisfied while 10% were dissatisfied.

The overall mean satisfaction score was 3.31 out of 5, with a median of 3 and the standard deviation of 0.72. The minimum satisfaction score being 1 while the maximum satisfaction score is 5 measured on a 5-point Likert scale. (Table 4.31).

The satisfaction of the managers of the qualitative interviews were almost the same as the quantitative results with an average mean score of 3.33 compared to 3.31 out of a total score of 5.

Based on both the quantitative and qualitative results, the conclusion is that managers were neither satisfied nor dissatisfied with the performance measurement and reward system.

In comparison to the research by Stanton and Nankervis (2011) who found that 52.5% of the Singapore managers surveyed rated the individual performance appraisals as ‘very’ or ‘mostly’ effective, the current survey results showed that the level of satisfaction had dropped. It was worse when compared to a much earlier survey by Christopher Mills in 2002 on the performance management and appraisal system when it was then rated at 65% ‘effective and more than effective’ which is equivalent to satisfaction score. It appeared that Singapore managers are getting more and more dissatisfied with how they are evaluated on their performance and also the reward system.

When compared to the results of a survey of HR Professionals in UK by the Chartered Institute of Personnel and Development (CIPD) in 2014 on the satisfaction level of the managers in UK, on how their performance is managed: ‘39% felt either satisfied or very satisfied’ (CIPD 2014, p. 12) which is rather close to the current survey of managers in Singapore of 40%.

The Motivation-Hygiene theory by Hertzberg (1966, 1976) is applicable as it addresses how far job satisfaction affects motivation.

5.4.2 Budgets as a Performance Measure

The quantitative results of managers who were evaluated on the budget as a performance measure, indicated that they were motivated by the performance targets set and that the budget as a performance measure does benefit them in managing their units better, however, 70.2% of these managers felt that the budgets hindered them in taking up new opportunities that were not planned for, and these were in line with the findings in the Hope and Fraser (2003) Beyond Budgeting model.

The Beyond Budgeting model highlighted that the major problem of using budgets as a measure, is the rigidity of the budget that 'stifles innovation and responsiveness to change'. Coombs and Johnson (2015) added that when budgets are used as a measure of performance, there is a 'need to comply to a fixed plan, and to manage with resources which may have been allocated more than one year earlier, act as impediments that prevent managers from responding quickly to changes in today's business environment'

The quantitative findings from this research, however found that the majority of the line managers who were evaluated based on budgets as a performance measure, indicated that they were motivated to meet the targets set, and these managers felt that the budget benefits them in managing their units better, so not all that were found in the Beyond Budgeting model were true, however, the managers did admit that it did hinder them from taking up opportunities that were not planned for, that is not in the budget, so the Hope and Fraser (2003) Beyond Budgeting recommendation for more flexibility and leeway to managers for them to be motivated to take the best action to advance the interest of the organisation can be applied.

The results from the research did indicate the need for flexibility in the budgets, as it does prevent the managers from taking up opportunities that were not budgeted or planned, however, it must be noted that the managers in Singapore, do still accept that the budget benefits them in managing their units better, so the elimination of budgets entirely as a performance measure is not recommended.

The results from Hypothesis 2: Managers are more satisfied when budgets are used as a performance measure, found the mean satisfaction scores of respondents who were evaluated on the budget as a performance measure was 3.35 compared to 3.29 for those who were not. The difference in mean is 0.06, standard deviation 0.47, however, the p value 0.65 so it is not statistically significant.

Compared to the qualitative results on budget as a performance measure, it was found that five out of the nine in-depth interview participants were evaluated on their performances based on the budget. Four out of the five participants agreed that the budget helped them to manage better. Three out of the five participants were motivated to perform to meet the budgets but felt that the budget as a performance measure hindered them from taking up new opportunities that were not planned for in the budget.

These qualitative findings were in line with the quantitative results.

5.5 Adaptive Changes to Performance Measurement

The results of the research question 3 on the changes made to the performance measurement and reward system are discussed in the following paragraphs.

5.5.1 Changes to the Performance Measures

67.7% of the respondents in the questionnaire survey felt that their current performance measures in their organisations were in line with the changes in the operating environment and 32.3% of the managers surveyed felt otherwise.

The quantitative analysis results showed that the satisfaction level of the line managers in the survey, who worked in organisations where the performance measures were adapted to changes in operating environment were of a high mean satisfaction score of 3.42 compared to quite a low score of 3.07 for those without change, the standard deviation was 0.47. The difference between the means was 0.35, p-value 0.01, which is statistically significant. (Table 4.34: Test of the Difference in Mean Satisfaction Scores).
When compared to the overall mean satisfaction score of 3.31, the managers who worked in organisations where changes were made to the performance measurement show a much higher satisfaction level of 3.42, while those whose performance measurement were not changed to adapt to the changed environment, had satisfaction level much lower than the overall mean. The results of the survey show that managers in organisations that were in line with the changes in environment, that is with adaptive KPIs or performance measures, were 10.5% more satisfied with the performance measurement system than those who do not.

From the findings of the qualitative analysis, it was found that line managers who were measured with performance measures that were changed to adapt to the change in the operating environment were more satisfied with higher average satisfaction score of 3.40 compared to those without changes, whose average satisfaction score is 3.25.

In today's challenging and changing environment, that Lawrence (2013) termed it - the VUCA (volatile, uncertain, complex and ambiguous environment) environment, organisations have to adapt and apply appropriate performance measures to evaluate and motivate the managers to meet the challenges in the 'crazy world out there' (Bennet & Lemoine 2014). Organisations should not stick to a rigid performance measurement and reward system, in a state of inertia, the organisation may not be able to adapt to the VUCA environment and may lose out to competitors and in the worst case scenario may not be able to survive in the foreseeable future.

5.5.2 Changes to Rewards to Adapt to Changes in Environment

The quantitative research results to Question 27 : 'In your opinion, are there any rewards/incentives in your organisation that need to be changed to keep up with the changes in the operating environment?' show that 23.3% of the managers felt a need for change and recommended the following measures, comprising mainly monetary rewards : Individual monetary incentives, commission scheme, cash incentives for working on weekends, promotions, performance bonus, recognition, fixed bonuses, variable bonuses, team rewards, better transport allowances, higher fixed based salaries and competitive salaries, zero sick leave reward, deferred bonus or similar compensation plan and non-monetary rewards:

flexible work arrangement, healthcare benefits, more interactive activities such as end-of-year dinner, business class air travel and birthday leave.

From the qualitative interviews, respondents recommended changes such as timelier reward for example quarterly rewards, small tokens of appreciation, organising of get-togethers, appreciation and job assignments.

In the findings from the qualitative research, all managers interviewed felt that there should be changes to the reward system. They recommended changes in the frequency of awards – to shorten the period of the reward, job rotation, team reward, flexible work hours, dining benefits, better work-life balance, more annual leave days, profit sharing and free health workouts, get-togethers for staff bonding.

5.6. Challenges of the Performance Measurement and Reward System

From the results of the quantitative and qualitative research, the bell curve forced ranking system was found to be deficient. Almost half of the line managers surveyed expressed their opinion that the system of ranking their performance against their peers, some of whom are from the other departments, were biased and unfair. The details of the results are as follows.

5.6.1 Bell Curve/Forced Ranking System

The results to the question of the managers' opinion on the bell-curve forced ranking system, revealed that 45% of the managers surveyed expressed that the ranking of the individual employees according to the scores attained from a set of performance measures, that is: the Bell curve/forced ranking is not a fair system for evaluating and rewarding employees. Another 23% were neither for nor against this ranking system. In the qualitative interviews, six out of nine managers (67%) felt that it is not a fair system.

Most of the line managers felt that it was not a fair system as it lowers the morale of the managers and encourage unnecessary and unhealthy competition and conflicts among them. Some of the managers felt that they were unfairly ranked with the other managers who were in different areas of management which they felt was not comparable and it was an unfair ranking of their performances. They felt that it may cause more harm than good for the organisation.

The Bell- curve forced ranking practice evokes a lot of emotion from the participants of the research. The line managers felt strongly that the system is unfair and were not satisfied with this system. The system is considered deficient as managers are dissatisfied with it system and are demotivated and this is not good for the organisation.

Florentine (2015) stated that the bell curve way of ranking employees is outdated and ineffective as it does not paint an accurate picture of a worker's true value and contribution to their workplace. She recommended frequent, consistent coaching and conversations to change the habits of the entire workforce across the entire organisational ecosystem.

In addition to Florentine's recommendations, it is recommended that the managers be measured by a set of adaptive key performance indicators that leads to more clarity and accuracy of the performance of the managers. It works on a merit-based system where managers who are pro-active and who contributes to the betterment of the organisation are to be rewarded. It identifies the better performing managers with measures on innovation, skills and adaptability.

However, the Bell-curve system is not all bad, as a good adaptive key performance indicators may help an organisation to identify the performing and non-performing managers. It may spur the non-performing managers to work harder to improve and move further up the ranking.

On the other hand, organisations may be using it as a tool to identify and remove non-performing managers. These non-performing managers are likely to be pressured to leave the organisation on their own, as being at the bottom of the ranking can be rather demoralizing, affecting their self-esteem, moreover, most managers do not want to have the stigma of being classified as a failure and worse still with a record of being dismissed from their job, as it may affect their future job prospects.

5.6.2 Performance Measures Overload

Both the qualitative and quantitative survey results found about a third (33%) of the managers surveyed felt that there were too many performance measures in the performance measurement system of their organisations. These managers who were measured by too many performance measures scored a lower mean satisfaction score of 3.24 compared to 3.34

of those who were not measured with too many measures. The difference between the means is - 0.10 and the p value is 0.47 (Table 4.34: Test of the Difference in Mean Satisfaction Scores), so it is not statistically significant.

Ryan (2015) felt that organisations were obsessed with measuring too many things, in the belief that they are controlling their organisations well' and an increase in measurement is an issue as the management may 'micro-manage their organisations and lose sight of the strategic side of management'. Besides it is costly and time consuming, with questionable benefits that the measurement brings'. Turban et al (2011) mention that 'the overload of performance measures causes managers, who are mere human beings, great difficulty in keeping track of all of them and so he envisaged that it is highly likely that managers may leave some of them out' (Turban et al 2009, p. 119).

5.6.3 Clawbacks

70.7% of the managers surveyed in the questionnaire survey and more than half of those in the qualitative interviews indicated that their organisation do not have clawback provisions in the event of fraud or other irregularities.

Horngren, Sundem et al (2011, p. 409) stated that 'People generally avoid risk, so a company must pay managers more if it expects them to bear more risk.' However, the performance measures and reward system must be tweaked to prevent reckless risk taking and a claw back of the bonuses would likely be one of the solutions to prevent reckless risk taking. It was noted that reckless risks were the cause of the sub-prime crisis of 2007-2010, Those involved must have been motivated to take on these risks because of the way they are evaluated for their performances, as well as the rewards they get, which are to the detriment of their organisations. So it would be wise to introduce clawback measures so that bonuses can be reclaimed in the event of any wrongdoing.

5.7 Rewards for Innovation and Taking Risks

The majority (91.7%) of the managers surveyed were not rewarded for taking risks for their organisations. Only 8.3% or 11 respondents stated that they were rewarded for risk taking and most of the rewards were monetary in nature. The rewards are: bonuses, money incentives, promotions, however, one manager was rewarded with praise and recognition which is non-monetary. The qualitative interviewees were rewarded with money and certificate awarded for quality improvement project.

5.7.1 KPI that Encourages Innovation and Risks Taking

The findings revealed that 85.6% of the managers were not evaluated on any performance measures that measures taking on risks (Question 8), so it was not surprising that 91.7% of the respondents disclosed that they were not rewarded for taking risks. Only 8.3% of the respondents revealed that they were rewarded for risk taking and most of the rewards for their success in taking risks are mainly monetary rewards: bonuses, money incentives, promotions, but there was one manager who was rewarded with praise and recognition which is non-monetary. From the qualitative interviewees, they were rewarded with money and certificate awarded for quality improvement project.

The results found a large majority of 78.2% of the line managers surveyed do not have performance measures that measure and encourage creativity and innovation.

The findings showed managers who worked in organisations where there were performance measures that encouraged creativity and innovation scored a high mean satisfaction score of 3.48 compared to 3.26 for those who were not, the standard deviation was 0.41. The difference between the means was 0.22, however, the high p-value of 0.14 meant, it was not significant (Table 4.34: Test of the Difference in Mean Satisfaction Scores).

This finding led to the need to develop adaptive key performance indicators (AKPI), for example the adaptive budget (AB) to motivate managers to innovate, create value, think out of the box, and take on new opportunities to improve and overcome the challenges in the VUCA environment.

5.8 Managers Go Beyond the Measures and Rewards - Go the Extra Mile

The findings on whether the managers go beyond the measures and rewards found 73% of the line managers surveyed declared that they would go the extra mile, by going beyond the performance measures and rewards and will be motivated to do what benefits their organisation even though they were not measured nor rewarded for their effort. This finding indicates that the line managers are responsible and are not driven merely by self-interest or being opportunistic to maximize their own benefits. This does not go with the Positive Accounting Theory by Jensen and Meckling (1976) and Watts and Zimmerman (1978) who assumed that managers are self-interested and are opportunists who are out to maximize their own wealth. In other words, they assumed that generally, managers are morally bankrupt.

5.9 Rewards

The findings on the incentives and rewards used to reward the line managers are:

5.9.1 Types of Rewards

The types of rewards/incentives awarded to the respondents are:

Monetary rewards: variable bonuses, salary increases, promotions, fixed base salary, cash incentives, variable salary, fixed bonus, group or team bonuses, stock and company shares, employee stock options, transport allowance, meal allowance, phone allowance, flexi benefits, shopping vouchers, overtime allowance, long service award.

The non-monetary rewards are recognition, praise, time off, job security, free training courses/seminars, vacation/holiday trips, autonomy, merchandise prizes, power, premium class travel, club memberships, medical benefits, flexible work schedule, lunch on the company and more leave days, core value award, award commendation certificates plus publicity from announcement via email on the award so that everyone in the organisation knows about it. (Table 4.39)

Based on the question on 'Which of the rewards/incentives currently used in your organisation, motivate you to work harder?' from question 26 of the questionnaire survey. The findings found that the top five rewards that motivates the line managers were: variable bonuses (55.6%), salary increases (53.4%), promotions (50.4%), recognition (41.4%), and cash incentives (31.6%) and all of these are monetary rewards with the exception of recognition which is non-monetary.

The other rewards were time off, praise, job security, vacation/holiday trips, titles, fixed base salary, group or team bonuses, stock and company shares, variable salary, fixed bonus, power, free training courses/seminars, employee stock options, club memberships, premium class travel, merchandise prizes, autonomy, job assignments, deferred bonuses, flexi work schedule and points rewards system.

The Hierarchy of Needs Theory developed developed by Maslow (1943, 1954) on the hierarchy, where different levels of needs influence the behavior of people is seen here. Some of the managers have lower level of needs and are motivated by monetary rewards such as cash incentives, salary increases, bonuses, other have higher level of needs such as recognition, praise, autonomy, and power. It was supported by Pink (2009) that autonomy was one of the true motivators.

5.10 Are the Rewards/Incentives Linked to the Performance Measures?

The results showed that 75.9% of the managers surveyed felt that the rewards/incentives were linked to the performance measures. These managers score a mean satisfaction score of 3.37 compared to a lower satisfaction score of 3.13 for the 23.5% who reported that the rewards were not linked to the performance measure. The standard deviation was 0.43. The difference between the means was 0.24, significant at 10%. (Table 4.34: Test of the Difference in Mean Satisfaction Scores).

For the qualitative research participants, 6 out of 9 (66.7%) of the managers interviewed felt that the reward were linked to the performance measures. They had a mean satisfaction score of 3.50. The other three interviewees who felt the reward was not linked to performance measures had a mean satisfaction score of 3.

Comparing both qualitative and quantitative results, it was found that the reward were mostly linked to the performance measures.

The results were in line with the Porter and Lawler (1968) model that explained that the extrinsic and intrinsic reward for achievements by the manager may lead to an increase or decrease in satisfaction level of the manager. However, the satisfaction level depends on each of the managers as they compare and value the actual rewards with the perceived rewards. Should the actual rewards meet or exceed what they perceived to be equitable rewards, the manager is likely to be satisfied but if the manager feels that the rewards are less than the equitable, they are likely to be dissatisfied and this may affect their motivation and effort.

5.11 Discussion on Bell Curve Forced Ranking

Another finding was that 45.1% of the Singapore managers surveyed felt that the Bell curve forced ranking system, where the individual managers' performances were ranked with other managers based on the scores attained from a set of performance measures, was not a fair system of evaluating and rewarding employees, another 23.3% were indifferent to it while only 31.6% supported it. The managers felt it was not a fair system, due to the subjective judgement of different performance appraisers and they felt it was also unfair to be compared to the other line managers who may be handling different portfolios.

Managers felt that some above average or even good performers were being ranked down to a lower performance category and this resulted in some of the good and performing managers being unfortunately relegated to the lower or even the lowest rung of the rankings. It was detrimental to the morale and demotivates the affected managers. They felt that the ranking system was unequitable and biased and were very unhappy and full of resentment. They voiced that it caused unnecessary competition and disharmony among managers, distress, unhappiness, insecurity and low morale that some of the affected managers were harboring thoughts of leaving their organisations. Those who could not leave the organisation, were not motivated at work, they do the barest minimum, and so long as their employment is not terminated. Their productivity is low, they do not add value, nor contribute much and the organisation suffers.

According to Deshmukh & Patel (2019), the Bell curve forced ranking method caused more problems than benefits. Vedantam (2012) suggested to put away the Bell curve as not everyone is an average performer and this was supported by Walia (2016) who commented that many organisations have moved away from the bell curve distribution of performance ratings as it breeds unhealthy competition and promotes political behaviours like schmoozing, and does not add value to the overall performance process.

5.12 The Adaptive Key Performance Measurement Model

The findings from research led to the design of the Adaptive Key Performance Measurement Model (AKPM) which was to improve the performance measurement to meet the challenges in the VUCA environment. The model includes adaptive key performance indicators (AKPI) including the adaptability budget (AB) and measures to encourage creativity and innovation such as new products, business, patents, ideas and others, business transformation measures, process and other improvements/changes, risk taking and other changes to adapt to the changing environment. Each organisation determines their own set of AKPI that is suitable and unique to their own operations and industry.

5.13 The Adaptive Budget (AB)

The adaptive budget is one of the performance measures in the AKPM model. It is an improvement to the traditional budget measure. It is a supplementary budget set aside specially for the purpose of promoting creativity, innovation and risk taking and to take up any new opportunities that was not in the original budget. The AKPM model allows flexibility in the budgets to enable managers to take on new opportunities, creativity and innovation, risk taking and other improvements/changes in the VUCA environment without having to go through the lengthy approval process for any new or innovative opportunities that were not in the original plan that demotivates managers. The delay and may lead to lost opportunities. In the traditional budget measures, when managers deviate from the original budget, it affects their performance. The findings confirms this problem as the results found that budgets are not likely to be effective to motivate the managers. This means that it stifles the managers' creativity and innovation, dissuades them from take on any risks and or new opportunities due to the limited budget resources or are saddle with red tape to get approval for the budget funding before embarking on any new ventures. However, the adaptive budget requires regular management reports and audits must be made to measure the performance, as well as for audit and control purposes. This model is intended to overcome managers from being hindered by the budget to innovate, take risks on new ventures and opportunities. The manager must be accountable, and the reward must be promptly awarded to motivate the manager to take on these risks.

These new proposed Adaptive Performance Measurement model together with the Adaptive performance indicators and the Adaptive budget were supported by the research that shows that managers were more satisfied when they felt that the performance measures are in line with the changes in environment and when there are measures for innovation and risk taking. The findings also show that budgets hinder the managers from taking up new opportunities that were not planned for in the budget.

It is also supported in the literature review. Drucker (2007) advised that the innovation strategy requires different measurements and also different use of budgets and budgetary controls from those appropriate to an ongoing business and to impose on innovating efforts. He advised that budgets for ongoing businesses and budgets for innovative efforts be kept separate and treated differently. A separate measurement system for innovative effort makes it possible to appraise the three factors that determine innovative strategy, the ultimate opportunity, the risk of failure, and the effort and expenditure needed.

5.14 Line Manager's Recommendations to Improve the Performance Measures and Reward System

The recommendations from the line managers were:

- Non-monetary long-term rewards: recognition with position/titles for top performers.
- Reward managers with fixed bonuses
- Invest retirement funds for better returns instead of with the Singapore government-managed retirement fund (CPF Board).
- Change - review the performance measurement system regularly.
- Participation in the performance evaluation for example 360 feedback.
- Top management involvement to make it work.
- The transparency or openness of the performance measurement and reward system should be improved.
- Opportunity for training / learning to improve performances.
- Regular feedback/communications on the performance of the managers.
- Performance evaluation should be impartial, fair and equitable.

5.15 Summary

These key findings added to knowledge and provide significant practical implications not only for managers within Singapore companies, but may be useful to all decision-makers that are involved in the performance evaluation process and the related rewards.

The findings from the research helps organisations to adopt better performance measurements and reward that motivates managers, remove practices such as the Bell Curve Forced Ranking practice that may be detrimental to the organisations and make changes to the performance measurement and reward system to go with the flow in the VUCA environment. ‘Given our ever-changing environment, we must learn to look forward rather than backward’ (Dacul 2017)

Overall the research concluded that the line managers were quite indifferent to the performance measurement and reward system as most managers indicated that they were ‘neither satisfied nor dissatisfied’ with the system.

Chapter 6 Conclusion and Limitations

6.1 Introduction

The objective of this research is to study the performance measurement and reward system of line managers in Singapore, and its challenges and changes. This chapter concludes the findings from the data gathered and evidence obtained from the line managers. It derived from their lived experience, the performance measures that were used to evaluate and reward the line managers' performances, the effectiveness of these measures to motivate them, their satisfaction with the system and the changes to adapt to the VUCA environment and the challenges. Recommendations were made to improve the system.

The VUCA environment contributed to the challenges in keeping the performance measures and the reward system up to date, relevant and effective to motivate the managers. Line managers must be 'equipped with not just competencies and skills but also the agility, dynamism and responsiveness they need to navigate through the VUCA landscape' (SIM Global Education 2018, p. 1) and organisations need a good and adaptable performance measurement and reward system to motivate these line managers to do their best.

This chapter consists of the conclusion of the research including a summary of the results, the limitations of the research, recommendations and also recommendations for future research.

6.2 Research Questions and Justification

The research questions to this research were reproduced as follows:

The central research question is:

What are the challenges and changes to the performance measurement and reward system used in organisations to effectively motivate line managers?

The sub- questions that arise on these issues are:

1) What are the performance measures that are effective in motivating managers?
2) How satisfied are managers with the performance measurement and reward system?
3) What changes were made to the performance measurement and reward system?
4) What are the challenges in the performance measurement and reward system?

The research explored the performance measures and reward used to evaluate the performance and reward the managers, and find out the performance measures are effective to motivate them, the challenges and changes. Data was collected from a cross section of line managers from companies in various industries in Singapore. It is from the perspective of the line managers.

The research findings provided evidence on the performance measures that were more likely to be effective to motivate the line managers and also those that were less likely to be effective in motivating them, and the challenges and changes. The 'Adaptive Key Performance Measurement' Model. The findings also highlighted the relationship of the different variables in the performance measurement and reward system to the satisfaction of the system by the line managers, the challenges in the system and the changes required to adapt to the VUCA environment.

The research contributes to existing knowledge on improving the performance measurement and reward system and made recommendations to improve the system to enable organisations to adopt better performance measures to evaluate and reward the line managers.

The mixed method was adopted in this research. The qualitative research was carried out first with a small sample and followed by the quantitative research with a much larger sample. The purpose is to validate and triangulate the data and to obtain more detailed and the different perspectives from the line managers from the qualitative interviews and also to improve the questions of the cross-sectional quantitative questionnaire survey. The details are addressed in the methodology Chapter 3.

The analysis and interpretation of the data collected were presented in Chapter 4. Detailed analysis of the data obtained from both the qualitative and quantitative methods using the different statistical methods were analysed and the results obtained. Chapter 5

This final chapter presents the conclusion and recommendations of the key findings and also addresses the limitations of the research.

6.3 Overview of the Findings

The results of the research found using the logistic regression model found that performance measures that were effective to positively motivate the line managers were profit, process improvements, projects on time and on budget, return on investment (ROI) / economic value added (EVA) and revenue, while the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs were less likely to be effective to motivate the line managers.

There were more financial performances measures that motivate the line managers than non-financial performance measures. It was found that there was a hybrid performance measure: projects on time and on budget as this measure consists of both financial with the budget, a financial measure and the non-financial measure, the projects completed on time was found to be effective to motivate the line managers.

However, there is also the budget alone as a performance measure, and it was one of the performance measures used in measuring the performance of the managers. The managers surveyed agreed that the budgets as a performance measure, do drive them to meet the standards and targets set and helped them to manage their departments, units or divisions better. However, it was found from the results in the logistic regression model that the budget used as a performance measure is less likely to be effective to motivate them. The reasons were; the budget hindered them from taking up new opportunities that were not planned in the budget. This contributed to the recommendation of the 'Adaptive budget' (AB).

The research found that most of the line managers (50%) surveyed were neither satisfied nor dissatisfied with the performance measurement and reward system in their organisations, 40% were satisfied and 10% dissatisfied.

The findings also indicated that the satisfaction of the managers was positively motivated when there were changes made to the performance measures, with the results showing that managers were 10.6% more satisfied when changes were made that were adapted to changes in the operating environment.

It was found that there were no changes to the performance measures in the organisations of half of the participants despite the changes to the operating environment. The results show that the mean satisfaction score for managers whose current performance measures were in line with changes in the operating environment to the performance measures was 3.42 compared to 3.07 out of a maximum satisfaction score of 5, for respondents whose performance measures were not adaptable to the changes in the operating environment. The difference between the means is 0.35, standard deviation 0.47. As the p value is 0.01 (less than 0.05), it was statistically significant. Overall, the managers whose performance measures were changed to adapt to changes in environment were 10.5% more satisfied than their peers without any changes to the performance measures. This led to the important contribution from the research that the performance measurement and reward system managers must be changed to adapt to the VUCA environment as it was found that the performance measures and reward system were not updated to keep up with the changes in the operating environment. The line managers felt that the system remained unchanged due to a lack of expertise on how to adapt the performance measures and reward to keep up with the challenges in the VUCA environment, to make it effective to motive the managers. It was recommended that a set of adaptive performance measures would improve the system in the VUCA environment. Each organisation needs to adopt their own unique performance measures that are suitable for them to adapt to the changes in the environment they are in. There is no one size fit all performance measurement system.

The research also found that the line managers were dissatisfied with the ‘Bell Curve Forced Ranking’ system of ranking the managers’ performance with the other managers in the organisation. The findings indicate that the line managers were demotivated by this system as they felt that it was not fair to evaluate and reward them by ranking all line managers who worked in the same organisation, with some of them from different departments or hold different responsibilities together. According to the line managers surveyed, they felt the system was unfair and biased. They felt the ranking did not reflect their true performances especially when compared to the other managers, as it was subjective and depended on the personal judgement of their appraisers. A few of the managers surveyed shared their experience that they encountered appraisers who rate their own line managers much higher than the managers in the other departments, to get their managers ranked near the top of the league, so that they and the departments they control are seen as performing better than all the others.

The result from these findings led to the recommendation for the Bell curve forced ranking system to be replaced by a more transparent merit-based system, with the criterion of the performance measurement and reward more specific. In this new model, recommendations were made for adaptive key performance indicators to be included. For example, additional performance rating points for new ideas, process improvements, other creative and innovative measures that benefits the organisation are proposed to be in the criterion. This way, the managers who contributed positively will be recognized and rewarded. However, those who do not meet the standards should be given opportunities to improve their performance through training and development, or even mentoring or coaching. Timely feedback needs to be provided. These recommendations were made by the respondents from the interviews and questionnaire survey.

These findings contributed to the theories and added to the knowledge on the performance measures that are effective in measuring and rewarding managers and that are likely to help organisations improve the performance measurement and reward system.

6.4 Findings to Research Question 1: Performance Measures that are Effective to Motivate the Managers

The findings to question 1: “What are the performance measures that are effective in motivating managers?” found that the current performance measures that positively motivated managers were profit, process improvements, projects on time and on budget, return on investment (ROI) / economic value added (EVA) and revenue. These performance measures were more likely to be effective to motivate the managers, however, the performance measures: efficiency, market share, meeting budgets, new customers acquired, new ideas / products and costs were less likely to be effective to motivate the managers.

The quantitative survey found that more financial measures than non-financial measures were used in the organisations surveyed, however, the qualitative research found that the managers' performance was measured more on non-financial measures than financial measures. It is supported by Atkinson et al (2004) that the common financial performance measures used are financial measures operating income (profit), return on investment (ROI) / economic value added (EVA) and revenue. Broderick (2011), (Kenny 2015), Langfield-Smith et al (2018), Burney and Swanson (2010, p. 167) all agreed that ultimately, most organisations measure their performance in financial terms, as profitability and other yardsticks related to profit, or shareholder value are often used as a single measure of success. However, Langfield-Smith et al (2018) recommended that non-financial performance measures should be used in conjunction with financial measure and the reason for including these non-financial measures is that they are more actionable, easier to relate to and can reflect the drivers of future financial performance. This was affirmed by Otley (2008, p. 234) who also recommended that 'line managers should be measured and controlled using a set of generally non-financial performance measures, a kind of balanced scorecard, although using flexible rather than fixed targets'.

The research found a hybrid performance measure which consisted of both the financial and non-financial element, the performance measure termed 'projects on time and on budget' used as one of the performance measures. The results applying the logistic regression model, found this measure to be more likely to be effective to motivate the managers. However, some of the organisations surveyed do use 'meeting budgets' as a separate performance measure, however, after the logistic regression analysis, it was found to less likely to be effective to motivate the managers. The findings showed it was due to the changes in the operating environment and whenever, there are opportunities that were not budgeted for, the managers will not meet the targeted performance measure: the budget.

6.4.1 Budget as a Performance Measure

From the results, line managers do agree that budget used as a performance measure do drive them towards meeting the targets and helped the managers to manage their units better, however, it hindered them from taking up new opportunities that were not originally planned in the budget. The line managers were discouraged from breaching the limits in the budgets that were used to measure their performances, when they take up these opportunities that were not planned in the budget. It affects their performance ranking and the consequence of overspending the budgets will lead to lots of explanations, justifications for not spending within the budget. In most cases they were not permitted to take them up unless approvals were given from the higher level of management. Even if approvals were given, it takes up a lot of time and effort going through the whole convolution of red tape.

Hope and Fraser (2003) recommended that companies should move away from traditional budgets as financial performance measures and should instead be set at agreed, market-led benchmarks. They recommended that managers to go ‘Beyond Budgeting’ to free them from the budget trap and adopt an alternative coherent management model specifically tailored to today’s volatile marketplace.

The results of the research found that budgets as a performance measure were useful to the line managers, however, it hindered them from taking up new opportunities that were not originally planned in the budget. The ‘Adaptive Budget’ as a performance measure that allows some flexibility. The adaptive budget is a supplementary budget that enables managers to take on new opportunities, have room for creativity and innovation, risk taking and other improvements without having to go through the red tape of having to go through the long and tedious process. and or changes in the VUCA environment. It is part of the o take up new projects as it was not within the budget.

6.5 Research Question 2: How satisfied are managers with the performance measurement and reward system?

The satisfaction level of the managers on the performance measures and reward system were mostly ‘Neither Satisfied nor Dissatisfied’ (50.4%), 36.1% ‘Satisfied’, 9.8% ‘Dissatisfied’, 3% ‘Very Satisfied’ and 0.8% ‘Very Dissatisfied’ (Table 4.31).

The level of satisfaction on the performance measurement and reward system in this research was lower compared to the previous surveys conducted in Singapore by Stanton and Nankervis (2011) who found that 52.5% of the Singapore managers surveyed rated the individual performance appraisals as ‘very’ or ‘mostly’ effective, which is equivalent to ‘Very Satisfied, Satisfied and Neither Satisfied nor Dissatisfied, and Mills (2002), where 65% were found the performance measures and reward system to be ‘Effective’ and ‘More than effective' equivalent to a combination of 'Very Satisfied', 'Satisfied' and 'Neither Satisfied nor Dissatisfied', (Mills, p. 113).

However, compared to the results of a survey of HR Professionals in UK by the Chartered Institute of Personnel and Development (CIPD) in 2014 on the satisfaction level of the managers in UK, 39% felt either satisfied or very satisfied' (CIPD 2014, p. 12) it is close to the current survey of managers in Singapore of 40%.

6.6 Research Question 3: What changes were made to the performance measurement and reward system?

6.6.1 Changes to the Performance Measurement System to Adapt to the Operating Environment

The results of the research found that 50% of the managers worked in organisations that do not make changes to the performance measurement to adapt to changes in the operating environment. This result indicated that changes to the performance measurement system were required.

The results also found that the satisfaction of the managers was significantly and positively influenced when changes were made to the performance measures (adaptive KPI) to adapt to the changes in the operating environment. The results were significant at 1% and managers who were measured with adaptive KPI are 10.6% more satisfied than managers who indicated that their performance measures were not in line with the changes in operating environment.

The results show that the presence of performance measures that are changed to adapt to the changes in the operating environment, the ‘adaptive key performance indicator’ is statistically significant and the managers with these measures have a 12.7% increase in satisfaction score that those who do not have adaptive KPI.

From the results, there was evidence that not enough was done to the performance measurement and reward system to adapt to the changes in the operating environment. Changes are required to adapt to the changing operational landscape to be effective to motivate the managers. This will motivate the managers to adapt to the challenges and changes of the environment, counter the volatility, uncertainties, complexities and ambiguity (VUCA) of the environment and meet the performance targets. Bourne (2021, p. 7314) advised that the performance measurement system must also be improved to enable managers ‘to seize opportunities and react quickly’ in the VUCA environment. These led to the creation of the ‘Adaptive Key Performance Measurement model’ (AKPM). The details of this model are explained in paragraph 6.7.

6.6.2 Performance Measures that Encourage Creativity Innovation and Risk Taking

The findings revealed there were very few performance measures that measure and reward creativity, innovation and for taking on risks. The majority of the respondents stated that they were not evaluated on performance measures that encourage creativity and innovation and it was not a surprise that 92% of the respondents replied that the organisations they work for do not reward them for risk taking. From the results of the research, there were very few performance measures that measure and reward creativity, innovation and for taking risks which are factors that are required to succeed in the VUCA environment, so it was concluded that there was a need for such measures to encourage the managers to be creative, innovate, take on risks and continuously improve to add value and bring their organisations to the forefront.

Roe (2019) recommended performance measures that promotes innovation, which is one of the factors that contributes to successful outcomes. This research led to the creation of the adaptive key performance measures that includes measures to reward creativity, innovation and for taking risks that is part of the 'Adaptive Key Performance Measurement model' (AKPM) that will drive managers to improved performances in the challenging and changing VUCA environment.

6.6.3 Managers Go the Extra Mile

The findings revealed that 73% of the managers surveyed declared that they would go the extra mile, by going beyond the performance measures and rewards and be motivated to do what benefits their organisation but were not measured nor rewarded for their effort. This revelation indicates that the line managers are responsible and were not driven merely by self-interest or being opportunistic to maximize their own benefits. This does not support the Positive Accounting Theory by Jensen and Meckling (1976) and Watts and Zimmerman

(1978) that assumes that managers are generally self-interested and are opportunists who are out to maximize their own wealth.

6.6.4 Conclusions on the Reward

75.9% of the managers surveyed felt that the rewards/incentives were linked to the performance measures.

The findings on the main types of reward that were effective to motivate the line managers are: variable bonuses, salary increases and promotions, recognition and cash incentives. The other rewards were: time off, praise, job security, vacation/holiday trips, titles, fixed base salary, group or team bonuses, stock and company shares, variable salary, fixed bonus, power, free training courses/seminars, employee stock options, club memberships, premium class travel, merchandise prizes, autonomy, job assignments, deferred bonuses, flexi work schedule and points rewards system.

Monetary rewards were more effective to motivate the managers to better performances than non-monetary reward, with the exception of recognition, a non-monetary measure.

6.7 Contribution to the Measurement of Performance

The main contribution from this research is the Adaptive Key Performance Measurement Model (AKPM) which is for organisations to introduce new adaptive performance measures to improve the performance measurement and reward system. The performance measures must be relevant to the individual organisations and are adaptable to the changes to measure the performances of the managers in the volatile, uncertain, complex and ambiguous (VUCA) environment. The AKPM consists of individual performance measures to measure creativity, innovation, to take on risks and other measures to adapt to the changes in the VUCA environment. These performance measures termed the 'Adaptive Key Performance Indicators' (Adaptive KPI) must be tailored to each unit or department and or organisations, as one size does not fit all. The different organisations have their own characteristics and moreover, the line managers may hold different portfolios so the adaptive KPIs' must be carefully tailored to suit each manager in each of the organisations.

The 'Adaptive Budget'

6.7.1 Adaptive KPI - Regular Review and Flexibility

The adaptive KPI measures must be reviewed regularly to keep them relevant and up to date to changes in the environment. One of the factors to make this model work is flexibility to enable the performance measurement system to meet the changes and challenges of the VUCA environment and to make it conducive for managers to accept them so that it is effective to motivate them to work towards the performance targets set.

6.7.2 Adaptive budget

The findings from the survey revealed that managers were hindered from taking up new opportunities that were not planned for in the budget. The AKPM model consists of the supplementary budget called the adaptive budget, that is a separate budget to be set aside outside the main budget. It is available to managers when they need to make the changes at short notice, to adapt to the VUCA environment, so that they can create and innovate, take on calculated risks on any new opportunities that were not in the original plan and add value to the organisation.

Flexibility is the key to this Adaptive budget. Managers will then be motivated to take on new opportunities that were not in the original plan, to create, innovate, take on risks and make changes in the interests of the organisation without being hindered by a lack of budget resources or saddled with having to justify and the tedious approval process to obtain funds and go ahead with the project. However, for control purposes, the managers must be made accountable through the performance measurement system. They must also be appropriately rewarded when the objectives are met so the reward system must be included as well. These are likely to lead to a win-win situation for both the managers and their organisations.

These recommendations are made to motivate managers to adapt to changes, to create and innovate, take on risks, take up opportunities and is likely to encourage the entrepreneurship of the managers. These will counter the challenges and changes in this VUCA environment.

6.8 Contribution to Improve the Performance Measurement System

6.8.1 The Bell Curve Forced Ranking Practice

The research found that most of the managers surveyed felt that the Bell curve forced ranking practice of evaluating and rewarding managers was not a fair system of evaluating and rewarding employees. Most of the managers felt they have done their best but was unfairly penalized by this system, as they feel the system 'do not truly reflect staff worth and contribution' and being unfairly ranked with other managers holding different portfolios. There are other managers who felt they were discriminated against by the subjective performance evaluation of their evaluators. Most voiced their dissatisfaction with this practice and as it affected their morale, lowers their motivation and cause too much competition among managers. They also commented that they saw no solutions to resolve this practice as they felt that their organisation could not find a better system currently.

Vedantam (2012), Walia (2016) and Deshmukh & Patel (2019) have unanimously agreed that the Bell curve forced ranking method caused more problems than benefits and should be removed. Some of the reasons are: it is biased, breeds unhealthy competition and promotes political behaviours like schmoozing, and does not add value to the overall performance process. (Walia 2016).

As a result of these findings and support by the literature, it is recommended that the Bell curve forced ranking system should be revised and replaced by a more transparent system where is merit-based where performances of the better managers can stand out, and one such recommendation would be the use of the adaptive key performance indicators in the AKPM model. The merit of each of the managers that deserve to be in the top league can be identified applying the new AKPM model and rewarded, however, managers who do not meet the mark should be given a chance to improve through mentoring and training.

6.8.2 Teamwork

Most of the line managers surveyed would like to have group or team reward. From this finding, it was recommended that a bonus pool to be designed and included in the reward system to foster teamwork.

6.9 AKPM Model

From the research findings, the AKPM Model is developed to improve the performance measurement and reward system. It includes the following:

(1) The use of Adaptive Key Performance Indicators (AKPI) which are performance measures to promote creativity, innovation, and risk taking by the line managers.
(2) Adaptive budget
(3) Revamp the Bell curve forced ranking system.
(4) Bonus Pool

The purpose of the Adaptive key performance measurement model is to motivate line managers to adapt to the challenging and changing VUCA environment. Recommendations were also made to improve the reward system by introducing a new bonus pool to encourage teamwork and cohesion, to motivate managers to work as a team and contribute to the success of the new performance measurement system.

6.10 Conclusions to the Research Problem

The research found that the line managers would like to have changes made to the performance measures and rewards to adapt to the changes in the operating environment. The Adaptive Key Performance Measurement model is recommended with the Adaptive Key Performance Indicators including the Adaptive Budget are designed adapt to the changes. The new AKPM model is likely to be a proactive model to motivate managers to take on risks, innovate and adapt to the VUCA environment. This system is recommended to be named the 'Strategic Adaptive Performance Measurement System' (SAPMS), is likely to increase the satisfaction level of the managers to effectively motivate them to better performance.

The major findings were as follows:

1. The results found that the performance measures and rewards that are likely to be effective to motivate the managers are profit, process improvements, projects on time and on budget, return on investment (ROI) / economic value added (EVA) and revenue
2. The rewards: variable bonuses, salary increases and promotions, recognition and cash incentives. The financial performance measures were more effective to motivate the

managers than non-financial measures. For the reward, monetary rewards are more effective to motivate the managers to better performances than non-monetary reward, with the exception of recognition a non-monetary measure.

3. The other rewards were: time off, praise, job security, vacation/holiday trips, titles, fixed base salary, group or team bonuses, stock and company shares, variable salary, fixed bonus, power, free training courses/seminars, employee stock options, club memberships, premium class travel, merchandise prizes, autonomy, job assignments, deferred bonuses, flexi work schedule and points rewards system.
4. The performance measurement and reward system should be changed to adapt to the changes in the environment.
5. Managers are more satisfied when the performance measures were in line with changes in the operating environment
6. The relationship between adaptive key performance measures and satisfaction scores are positive and statistically significant.
7. Managers with performance measures that encourages innovation are more satisfied.
8. The Bell curve/forced ranking was not a fair system for performance evaluation and rewarding the employees.
9. Managers are motivated more by financial performance measures than non-financial measures.
10. Rewards are linked to the performance measurement.
11. Managers are more satisfied when the monetary reward ratio is higher than the non-monetary reward ratio.

12. The managers in Singapore were generally lukewarm to the performance measurement and reward system in their organisations as the majority (slightly more than half of the managers) have indicated that they were ‘neither satisfied nor dissatisfied’ with the system. The current results were not very far from the results of the research by Stanton and Nankervis (2011) who found that only 52.5% of the Singapore line managers and senior managers surveyed felt that the individual performance appraisals were ‘very’ or ‘mostly’ effective.

In addition, although these were not statistically significant, 91% of the respondents state that their performances were not compared with external benchmarks such as competitors and other best practice organisations. There were also hardly any performance measures applied to evaluate long term performances of more than a year as 86% of the respondents indicated that their organisations do not have long term performance measures.

73% of the line managers surveyed mentioned that they would go the extra mile, by doing something that benefits their organisation even though is not in the list of performance evaluation criteria that they are measured and rewarded for that effort. It indicates that they are responsible and are not driven merely by self-interest or being opportunistic as to maximize their own benefits. This goes against the Positive Accounting Theory by Jensen and Meckling (1976) and Watts and Zimmerman (1978) that managers are generally self-interested and are opportunists who are out to maximize their own wealth.

These key findings add to knowledge and provide significant practical implications not only for managers within Singapore companies but may be useful to all decision-makers that are involved in the performance evaluation process and the related rewards.

The advice from PricewaterhouseCoopers International Limited (PWC 2012) is to keep the system simple. ‘Complex plans are a motivation killer. The idea that we can manage by incentives has led to evermore complex metrics frameworks and formulae. These have many consequences, most of them unintended. But a key one is the further reduction in value they cause in the eye of the executive’ (PWC 2012, p. 30)

6.11 Original Contributions

The study contributed to the original theoretical contributions on the following :

1. The theoretical model ‘Adaptive Key Performance Measurement Model’ to the performance measures and rewards system that are necessary to meet the challenges and changes that are necessary to adapt to the VUCA environment. The proposition were empirically tested with data collected in Singapore and generally found to be supported as the managers with adaptive KPIs are more satisfied and motivated than the other managers who are measured by performance measures that do not adapt to the operating environment. It includes the ‘Adaptive Key Performance Indicators’ that are suitable to measure the performance of the individual managers, to be tailored

to suit the individual managers and the organisations, dependent on the changes required to keep the system up to date.

2. In conjunction with the proposed ‘Adaptive Key Performance Measurement Model’, the Adaptive budget is proposed to be included to enable and support the proposed model so that it does not hinder the managers from taking up the opportunities which were not originally planned in the VUCA environment. This was derived from the findings that revealed that managers were hindered from taking up new opportunities that were not planned for in the budget.
3. Improve the performance measurement system by replacing the Bell Curve Forced Ranking practice as the data collected showed that most managers felt it was unfair. The adaptive key performance measurement model with the relevant adaptive key performance indicators is likely to be able to identify the managers with better performance who are creative, innovative and who are willing to take on risks for the benefit of the organisation. These managers stand out and merit can be accorded without the need to rank the managers.

6.12 Research Contribution to Theories

The research makes contribution to theory on what are the current performance measures and rewards that motivates managers in Singapore. The findings from the research identify the current performance measures that are effective to motivate managers in Singapore and are statistically significant and they are: profits, process improvement, revenue, project on time and on budget, ROI & EVA and market share. It also found that the managers were motivated by financial performance measures than non-financial measures (Table 4.30).

The budget was used as a performance measure and most managers agree that it motivates them to meet the standards/targets that were set by their organisations, and they also declared that the budgets did benefit them in managing their department, unit or division better, however, the managers felt that it hindered them from taking up new opportunities that were not planned for in the budget.

Changes to the performance measurement and reward system are required to adapt to the VUCA environment.

The Bell Curve Forced Ranking practice to assess the performance is not working well as most managers felt it was not fair system and does not reflect their true performance.

These theories provide an update to the knowledge on what are the current performance measures that are effective to motivate managers in Singapore.

6.13 Research Contribution to Practice

The main contribution of the research is the proposed ‘Adaptive Key Performance Measurement Model’ (AKPM) that is to be applied to measure the performance of managers to adapt to the changes in the operating environment. It is intended to promote creativity, innovation and risk taking of the managers. Organisations do need managers who are able to add value in these areas for the advancement of the organisation and these additional group of measures would aid in promoting these important characteristics that will be beneficial to organisations to adapt to the VUCA environment. Therefore, adaptive performance, which is defined as the manager’s ‘ability to adapt to rapidly changing work situations’ (Towler 2020) is required with the ‘Adaptive Key Performance Indicators’ (AKPI) to measure the performance.

The AKPI in the AKPM model, is expected to improve the performance measurement system, to keep up with the changes and challenges of the VUCA environment. One of AKPI is the ‘Adaptive Budget’ which is for managers to take on new opportunities that were not in the original budget. The flexibility of this model allows managers to be more willing to take on new opportunities unencumbered, to advance the interests of the organisation without being hindered by the lack of the budget.

Managers will then be motivated to be creative and innovative, take on risks, make changes, take up opportunities and it may also encourage entrepreneurship of the managers and get rewarded if the goals are met. This model is to counter any challenges and changes in this VUCA environment.

The managers are accountable to the decisions and will be rewarded if the new innovative ventures take off and advanced the interests of the organisation or penalized if the initiatives failed, as they must be responsible and take calculated but not reckless risks, to prevent losses to the organisation.

The Bell curve forced ranking system of evaluating and rewarding managers is recommended to be replaced in the AKPM model. A merit-based system where managers are recognized and rewarded for their creativity, innovation and risk taking identified in the AKPM Model. Those who do not meet the standards should be given a chance to improve on their performance through timely feedbacks, training and even coaching as recommended by one of the respondents.

It is important to note that the performance measurement system should also 'measure what you value instead of valuing only what you can measure' Hargreaves (cited in Koh 2019, p. A14)

The AKPM model is likely to be a proactive model to motivate managers to take on risks, innovate and adapt to the VUCA environment. This system is recommended to be named the 'Strategic Adaptive Performance Measurement System' (SAPMS).

6.14 Limitations of the Research

The research has some limitations and they are as follows:

(i) The research is in the perspective of the individual line managers in the Singapore and may not be the same from the organisation's perspective.

(ii) The performance measures and rewards that are used to evaluate the performance and reward of the line managers surveyed may not all be similar across different organisations and industries, and not all the individual managers have the same job scope and responsibilities.

(iii) The survey targeted only line managers on the performance measures and rewards in Singapore, based on their experiences and perceptions. The results may be different if their appraisers or senior managers views on the performance and rewards are considered.

(iv) The limited time to do the research due to work, family and personal issues. The research took a much longer time than was originally planned to complete.

(v) The empirical evidence was based on data collected from the experience and perceptions of 133 managers in the questionnaire survey and face-to-face interviews of nine managers on a purposive – convenience sampling method. There was difficulty in obtaining participants who are willing to take part in the questionnaire survey and face-to-face interviews.

(vi) According to Kenny (2015): 'Even if a metric is classed as objective, someone ultimately has to apply the "good enough" test, which is subjective'.

(vii) There is no fixed set of performance measures for any organisation, different organisations used different performance measures to suit its purpose.

6.15 Recommendations for Further Research

Further research is recommended to examine the performance measurement of the other employees: the senior managers and the other non-management employees to provide a better understanding of the overall performance measurement system.

6.16 Summary

This chapter concludes the key findings of the research. It provided the theoretical, and practical implications for those who are interested in understanding and improving the performance measurement and reward system. The limitations of the research were acknowledged along with the recommendation for further research.

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APPENDICES

APPENDIX 1: Questionnaire Survey Questions

SURVEY ON PERFORMANCE MEASURES AND THE REWARD SYSTEM IN SINGAPORE

I am conducting a survey on the performance measurement and reward system in Singapore. This survey is an essential part of my research towards the degree of Doctor of Philosophy in Management (PhD) from the University of Canberra (Australia). I would most appreciate if you can take some of your time to fill in the survey form. It should take about twenty minutes to complete.

The objective of this survey is to understand the current practices and improve the performance measurement and reward system. The project has the approval of the University's Human Research Ethics Committee (Project number 15-29).

The survey is independent and anonymous. Please note that you are under no obligation to participate in this study and you are free to withdraw at any stage without prejudice. Your responses are strictly confidential and at all times, the data will be presented in such a way that your identity cannot be connected with the specific published data.

If you have any questions about the survey or wish to discuss further any aspect of this research, please feel free to contact me at +65 97724928, or send an e-mail to me at u3067005@uni.canberra.edu.au or to my supervisor, Professor Doug Davies, who may be contacted at +61 437275325 or at the email address: doug.davies@canberra.edu.au

If you would like to receive a summary of the research findings please contact me via email at u3067005@uni.canberra.edu.au

Thank you very much for your participation.

Yours sincerely

Joanna Chia Soon Lan

PhD Candidate

University of Canberra,

Australia.

Performance Measurement and Rewards System in Singapore

Questionnaire

Part 1

Questions

1. List the performance measures used to gauge your performance in your organisation. (you may tick more than one box)

☐ Profits or profit margin
☐ Return on investment (ROI)
☐ Economic value added (EVA) or Residual Income
☐ Turnover/Revenues or revenue growth
☐ Costs related
☐ Meeting budgets (budget variances)
☐ Work output (Number of units produced, hours taken, etc)
☐ Number of new ideas / products / processes
☐ Projects on time and on budget
☐ Process improvements (on existing processes)
☐ New customers added
☐ Market share
☐ Other (please specify):____

____

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2. Based on each of the performance measures you have listed in Question 1, which do you think is/are effective to motivate you to work towards the goals or targets set?

(You may tick more than one box)

☐ Profits or profit margin
☐ Return on investment (ROI)
☐ Economic value added (EVA) or Residual Income
☐ Turnover/Revenues or revenue growth
☐ Costs related
☐ Meeting budgets (budget variances)
☐ Work output (Number of units produced, hours taken, etc)
☐ Number of new ideas / products / processes
☐ Projects on time and on budget
☐ Process improvements (on existing processes)
☐ New customers added
☐ Market share
☐ Other (please specify):____

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3. Which of the performance measures used in your organisation do you think fairly reflect your own performances?

(you may tick more than one box)

☐ Profits or profit margin
☐ Return on investment (ROI)
☐ Economic value added (EVA) or Residual Income
☐ Turnover/Revenues or revenue growth
☐ Costs related
☐ Meeting budgets (budget variances)
☐ Work output (Number of units produced, hours taken, etc)
☐ Number of new ideas / products / processes
☐ Projects on time and on budget
☐ Process improvements (on existing processes)
☐ New customers added
☐ Market share
☐ Other (please specify):____

4. Can you suggest any other performance measures not listed in Question 1, that you feel will be a better and more equitable measure of your performance?

5. Name any other performance measures that you know are used to measure the performances of the other managers in your organisation (not included in Question 1.)

6. Are external benchmarks made to the performance measures used to measure your performances (eg. to competitors and other best practice organisations)?

☐ Yes. Benchmarked to ____

☐ No.

7. What values do you think these performance measures indicate to you? (You may tick more than one box).

☐ Is making profits the most significant issue?

☐ Is the manager expected to focus most effort on worker productivity?

☐ Is the manager expected to market the organisation and its products as a primary task?

☐ Other (please specify):____

____

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____

8. Do you think the performance measures you are evaluated on, consider the factor of risk taking?

☐ Yes. Please specify the risks and the related performance measures:

____

____

____

____

____

____

☐ No.

9. In meeting the performance measures in the course of your work, have you considered how it affects:

i) Colleagues or other individuals in the organisation ☐ Yes. ☐ No.

ii) Other departments, units, divisions ☐ Yes. ☐ No.

iii) Shareholders / owners ☐ Yes. ☐ No.

iv) Customers ☐ Yes. ☐ No.

v) Others (please specify):
For example: (1) suppliers: Yes or No
(2) General public: Yes or No

________________________ ☐ Yes. ☐ No.

________________________ ☐ Yes. ☐ No.

10. What is the frequency of your **formal** performance evaluation?
☐ Yearly
☐ Biennially (twice a year)
☐ Three times a year
☐ Quarterly
☐ Monthly
☐ Weekly
☐ Daily
☐ Other frequencies, please specify:______________________________________

11. Would you like to have additional performance measures that may encourage managers to be more cooperative, work as a team, to minimise unproductive conflicts with one another?

☐ Yes. Please propose the performance measures:______________________

____

____

☐ No.

12. Does your manager review **informally** on a more regular basis? If yes, how often?
☐ Yes. Please specify the frequency:________________________________
☐ No.

13. Were there any changes to the performance measures in your organisation that reflect the changing landscape or other changes in the operating environment?
☐ Yes.
☐ No.

14. Do you think the current performance measures in your organisation is in line with the changes in the operating environment?

☐ Yes.
☐ No.

15. Are there any performance measures used to evaluate your long term performances, that is, your performances of more than a year?
☐ Yes. Please specify the performance measures:______________________________

____

____
☐ No.

16. Does your organisation adopt the budget as one of the performance measures to measure your performances?
☐ Yes.
☐ No. Go to Question 20.

17. Does the budget motivate you to meet the standards/targets set?
☐ Yes.
☐ No.

18. Does the budget benefit you in managing your department, unit or division better?
☐ Yes.
☐ No.

19. Does the budget as a performance measure hinder you in taking up new opportunities that were not planned for in the budget?
☐ Yes.
☐ No.

20. Are there performance measures that encourage creativity and innovation in your organisation?
    - ☐ Yes. Please specify the measures:____

      ____

      ____
    - ☐ No.

21. Are there too many performance measures in the performance measurement system of your organisation?
    - ☐ Yes.
    - ☐ No.

22. What are the various rewards/incentives whether monetary or non-monetary, offered by your organisation? For those not listed below fill them under 'Others':

    ☐ Fixed base salary

    ☐ Variable salary

    ☐ Fixed bonus

    ☐ Variable bonuses

    ☐ Salary increases

    ☐ Promotions

    ☐ Group or team bonuses

    ☐ Stock and company shares

    ☐ Employee stock options

    ☐ Cash incentives

    ☐ Merchandise prizes

    ☐ Vacation/holiday trips

    ☐ Club memberships

    ☐ Autonomy

☐ Power

☐ Praise

☐ Recognition

☐ Job security

☐ Free training courses/seminars

☐ Time off

☐ Premium class travel

☐ Others: (Please specify):
For example: (1) Meal allowance (2) Transport allowance

23. Are the rewards/incentives linked to the performance measures?
☐ Yes.
☐ No.

24. In your opinion, does ranking the individual employees according to the scores attained from a set of performance measures, that is: Bell curve/forced ranking of performances among managers, a fair system of evaluating and rewarding employees? Please comment.

☐ Yes. Comment____

☐ No. Comment____

☐ Neither. Comment____

25. Does your organisation reward you for risk taking?
   ☐ Yes. Please list the rewards:

   ☐ No.

26. Which of the rewards/incentives currently used in your organisation, motivate you to work harder? (You may tick more than one box)
- ☐ Fixed base salary
- ☐ Variable salary
- ☐ Fixed bonus
- ☐ Variable bonuses
- ☐ Salary increases (increments)
- ☐ Promotions
- ☐ Group or team bonuses
- ☐ Deferred bonuses
- ☐ Stock and company shares
- ☐ Employee stock options
- ☐ Cash incentives
- ☐ Merchandise prizes
- ☐ Vacation/holiday trips
- ☐ Club memberships
- ☐ Autonomy
- ☐ Power
- ☐ Praise
- ☐ Recognition
- ☐ Titles
- ☐ Job assignments
- ☐ Job security
- ☐ Free training courses/seminars
- ☐ Time off
- ☐ Premium class travel
- ☐ Other: please specify:____

____

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____

27. In your opinion, are there any rewards/incentives in your organisation that need to be changed to keep up with the changes in the operating environment?

☐ Yes. Please comment:

____

____

____

____

☐ No.

28. Can you propose other new rewards and incentives(not used by your organisation currently) that will motivate you to work harder for your organisation? Please list each proposed item below:

____

____

____

____

29. Are there any clawback provisions (eg recovery of bonuses or incentives paid) for any rewards or incentives paid out in the event of fraud or irregularities?
    - ☐ Yes.
    - ☐ No.

30. Would you spend time doing something that benefits your organisation but is not in the list of criteria you are measured and rewarded by in your organisation?
    - ☐ Highly likely
    - ☐ Likely
    - ☐ Not likely

31. What performance management /appraisal system does your organisation use?
    - ☐ Management by Objectives (MBO based on business plans and goals)
    - ☐ Performance Management (measures linked to your organisation's strategic direction)
    - ☐ Trait-Based (Behavioural scales eg attitude, sense of responsibility)
    - ☐ Hybrid System (MBO and trait-based in combination)
    - ☐ Team Performance Management (team based objectives)
    - ☐ No formal system
    - ☐ Other: ____

32. Overall, are you satisfied with the performance evaluation and reward system in your organisation?
    - ☐ Very dissatisfied
    - ☐ Dissatisfied
    - ☐ Neither satisfied nor dissatisfied
    - ☐ Satisfied
    - ☐ Very satisfied

    Please comment:

____

____

____

____

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____

33. If you have any comments to make about the performance measurement and reward system in your workplace or industry, or on how to improve the performance measurement and reward system, please feel free to comment on them in the space below.

Part 2

Demographic Data

1. Company size (Number of employees)

☐ 1 - 100
☐ 101 – 200
☐ 201 - 500
☐ 501 – 1,000
☐ More than 1,000

2. Industry:

☐ Manufacturing
☐ Engineering
☐ Chemicals and Pharmaceutical
☐ Shipping and Logistics
☐ Management Services
☐ IT and related
☐ Finance and related
☐ Food and Beverage
☐ Hotel and Leisure
☐ Media and related
☐ Property and related
☐ Retail
☐ Trading
☐ Others: (please specify): ____

3. Gender:

☐ Male
☐ Female

4. Age group:

☐ Less than 30
☐ 30 - 39
☐ 40 - 49
☐ 50 - 59
☐ 60 and above

Thank you very much for your participation.

APPENDIX 2

Participant Information Form – Participants of Questionnaire Survey

Project Title

Performance Measurement and Reward System in Singapore Organisations: Challenges and Changes

Researcher

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Project Aim

The aim of this research is to study the current performance measures used to measure and reward managers in Singapore and its effectiveness. The research aims to discover new and innovative performance measures and reward schemes that are more practical and effective and suitable to be applied in the current environment and in the future.

Benefits of the Project

The information gained from the research will be used to improve the performance measurement and reward systems in organisations.

General Outline of the Project

This research examines the challenges and changes in the performance measures and incentives used to evaluate and reward managers in Singapore. This research will investigate the managers' experience and will research into the existing performance measures and rewards to discover any new and innovative financial and non-financial performance measures and the related rewards. It will also research into the performance measures and rewards that can be applied to keep up with the changing landscape. The effectiveness of those performance measures and rewards as motivators will be analysed.

Participant Involvement

Participants who agree to participate in the research will be asked to complete a questionnaire on the performance measures and incentives in their organisation. This questionnaire will be provided to the participant online. The questionnaire is quite lengthy, but participants are able to fill it in at their leisure in their own time.

Participation in the research is completely voluntary and participants may choose not to participate and may withdraw your consent to participate at any time. Although participation is valued and encouraged, the rights of participants to choose not to participate in research will be respected. Participants will not be disadvantaged in any way should they decline to participate. Participants can withdraw from the research at any time without penalty and the data will be destroyed.

There are no known risks in participating in this survey. Please be assured that all the data collected from clients will be stored securely and only accessed by the researcher. Great care will be taken to ensure that any reports of the data do not identify any individual or their circumstances.

Confidentiality

All data collected will be kept confidential. Only the researcher and the research supervisor will have access to the individual information provided by participants. Privacy and confidentiality will be assured at all times. The research outcomes will be provided in a report to the University of Canberra and may be presented at conferences and written up for publication. However, in all these reports, the privacy and confidentiality of individuals will be protected.

Anonymity

The survey is independent and anonymous. Your email address will not be collected in relation to your data and there will be no connection possible that identifies your identity. Participants may provide their names and contact information in this consent form without being identified in the main part of the questionnaire, if they would like to obtain a summary of the findings of this research.

All reports of the research will contain no information that can identify any individual and all information will be kept in the strictest confidence.

Data Storage

The information collected will be stored securely on password protected files throughout the project and then stored at the University of Canberra for the required five year period after which it will be destroyed according to university protocols.

Ethics Committee Clearance

The project has been approved by the Human Research Ethics Committee of the University (HREC 15-29).

Queries and Concerns

Queries or concerns regarding the research can be directed to the researcher and/or supervisor. Their contact details are at the top of this form. You can also contact the University of Canberra's Human Research Ethics Officer, Mr Hendryk Flaegel, via phone 02 6201 5220 or email hendryk.flaegel@canberra.edu.au.

If you would like some guidance on the questions you could ask about your participation please refer to the Participants' Guide located at http://www.canberra.edu.au/ucresearch/attachments/pdf/a-m/Agreeing-to-participate-in-research.pdf

Consent Form - Participants

Project Title

Performance Measurement and Reward System in Singapore Organisations: Challenges and Changes

Consent Statement

I have read and understood the information about the research. I am not aware of any condition that would prevent my participation, and I agree to participate in this project. I have had the opportunity to ask questions about my participation in the research. All questions I have asked have been answered to my satisfaction. I am aware that I can withdraw from the research at any time without penalty and any data collected from me will be destroyed.

Name……………………………………………….………....……….

Signature…………...……………………

Date ………………………………….

A summary of the research report can be forwarded to you when published. If you would like to receive a copy of the report, please include your mailing (or email) address below.

Name……………………………………………………………………….……

Address…………………………………..……………………………………..

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APPENDIX 3

Face-to-face Interview Questions

1. Can you tell me what are the performance measures used to measure your performance in your organisation?

2. Which of these measures motivate you to meet the goals or targets set?

3. What are the performance measures(KPIs) used to measure the performances of the other managers in your organisation (not included in your earlier answers)

4. Can you suggest any other performance measures not already provided in your earlier answers that you feel will be a better and more equitable measure of your performance?

5. Was meeting the budget one of the performance measures? If so:

-Does the budget motivate you to meet those standards/targets set?
-Does the budget benefit you in managing your department, unit or division better
-Does it hinder you from taking up new opportunities that were not planned for in the budget?

6. Is budgetary control used in measuring the performances of the managers of the other departments or divisions? (If not, go to question 8)

7. Do you think the budgets are effective in measuring the performance of the managers of the other departments? Do they take the budget seriously? Do the managers manipulate the budget measures in order to meet them? Any functional or dysfunctional behaviour of the managers that you have noted in the budgetary control process?

8. Are there performance measures that encourage creativity and innovation eg new ideas, processes, etc in your organisation? If there is, what are they?

9. Is your performance being ranked, compared or benchmarked to other departments, external organisations such as competitors and other best practice organisations? If there are, what are they?

10. What do you think are the main focus of the performance measures used in your organisation? Are they market/profit-orientated? Productivity related? Competitiveness? Encouraging cohesiveness, teamwork? Any others?

11. Do the performance measures encourage you to innovate or take risks in taking on new responsibilities; encourage new ways of working better and other better ways of working? If there is, what are these risks and the performance measures involved?

12. In meeting the performance measures do you consider how it affects others for example: colleagues or other individuals, other departments, units, divisions, shareholders / owners, Customers, any others? If it affects others, what will you do?

13. In meeting the performance measures, does it create conflicts with colleagues, other departments, customers, etc? Can you suggest more suitable performance measures to overcome this?

14. What is the frequency of your formal performance evaluation?

15. Does your manager review your performance informally? If yes, how often and how is it done?

16. Were there any changes to the performance measures over the past three years? Due to changes in operations, products, services, political, social, economic, technology, etc? If there are, what are the performance measures that were added or changed over the last three years?

17. Are there too many performance measures?

18. How do you feel about the performance measurement system in your organisation? Do you think these measures are working? Do you know of any performance measures that cause more harm than good to your organisation?

19. Are the rewards/incentives are linked to the performance measures?

20. What are the rewards/incentives (monetary/non-monetary) and how often are they awarded?

21. Which of the rewards/incentives motivate you to work harder?

22. Are there any negative rewards (punishments) such as demotion, reduced authority, humiliation, zero salary increase? What are they?

23. Do you think that monetary rewards such as pay, bonuses, etc are the main motivating factor today? How about non-monetary rewards?

24. What is your opinion on the performance ranking of individuals based on the performance measurement scores attained? Do you think it is a fair system for rewarding employees? Why?

25. Does your organisation reward you for your initiative in improving the work process or have better ways that benefit the company but is outside those that are measured? If there are, what are the rewards/incentives awarded?

26. Do you think there is a need for the rewards/incentives in your organisation to be changed in view of the changes in the operating environment, employees' economic social standing, etc?

27. Can you suggest any better rewards/incentives and the frequency, that will motivate you to work harder for your organisation.

28. Are there any clawback provisions (eg recovery of bonuses or incentives paid) for any rewards or incentives paid out in the event of fraud or irregularities?

29. Will you spend time doing something that will benefit your organisation but is not in the list of criteria you are measured and rewarded by in your organisation?

30. May I know what performance management /appraisal system does your organisation use?

For example: (i)Trait Based System – a system that measures performance according to a list of behaviours or skills, attitude and aptitude.

(ii) Management by Objectives (MBO) – a system where staff set individual goals in line with the organisation's business plan, linking targets to organisations goals

(iii) Hybrid System – a progressive system that focus on key achievements in detail but only rate competencies eg commitment to company's goals, service and results focus, teamwork, self management and problem solving.

(iv) Performance Management/ Balanced Scorecard - a system that set goals that is clearly linked to the organisational strategic direction.

(v) Team Performance Management – a system where team objectives are set once the organisation's expectations are made known.

(vii) No formal system.

31. Overall, are you satisfied with the performance measurement and reward system in your organisation? (Very dissatisfied, Dissatisfied, Neither satisfied nor dissatisfied, Satisfied, Very satisfied)

32. Do you have anything else to comment on the performance measurement and reward system in Singapore?

- End of the Interview Questions -

APPENDIX 4

Participant Information Form – Participants of Face-to-face Interview

Project Title

Performance Measurement and Reward System in Singapore Organisations: Challenges and Changes

Researcher

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Name : Dr Doug Davies
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Project Aim

The aim of this research is to study the current performance measures used to measure and reward managers in Singapore and its effectiveness. The research aims to discover new and innovative performance measures and reward schemes that are more practical and effective and suitable to be applied in the current environment and in the future.

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Participant Involvement

Participants who agree to participate in the research will be asked to participate in a face-to-face interview with the researcher at a time and place that is convenient. The interview will take about forty-five minutes and be audio-taped with the participant's permission. The interview will ask the participant on what performance measures and rewards/incentives are used to evaluate and reward them in the organisations they work in and their views on how it affects their performance. A transcript of the interview may be requested for checking.

Participation in the research is completely voluntary and participants may, without any penalty, decline to take part or withdraw at any time without providing an explanation, or refuse to answer a question. Participants choose to participate at their own free will and whether a participant agrees to participate in the research or not, it will have no effect on their service provided at any time. Although participation is valued and encouraged, the rights of participants to choose not to participate in research will be respected. They can withdraw from the research at any time without penalty and the data that was recorded will be destroyed.

The only potential risks to participation relate to privacy and confidentiality. Please be assured that all the data collected from the participant will be stored securely and will only be accessed by the researcher. Great care will be taken to ensure that any reports of the data do not identify any individual.

Confidentiality

All data collected will be kept confidential. Only the researcher will have access to the individual information provided by participants. Privacy and confidentiality will be assured at all times. The research outcomes will be provided in a report to the University of Canberra and may be presented at conferences and written up for publication. However, in all these reports, the privacy and confidentiality of individuals will be protected.

Anonymity

The survey is independent and anonymous please be assured that what has been recorded will be kept private and with utmost confidentiality. All reports of the research will contain no information that can identify any individual and all information will be kept in the strictest confidence.

Data Storage

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Informed Consent Form - Participants

Project Title

Performance Measurement and Reward System in Singapore Organisations: Challenges and Changes

Consent Statement

I have read and understood the information about the research. I am not aware of any condition that would prevent my participation, and I agree to participate in an interview with the researcher for this project. I have had the opportunity to ask questions about my participation in the research. All questions I have asked have been answered to my satisfaction.

Name……………………………………………………………………….………………

Signature…………..……………………

Date ………………………………….

A summary of the research report can be forwarded to you when published. If you would like to receive a copy of the report, please include your mailing (or email) address below.

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