CHAPTER I

1 INTRODUCTION

1.1 Background to the research

The challenges facing firms today are heightened by the rapidly changing and increasingly competitive global business environment. As organizations seek to obtain and maintain a competitive edge on their rivals, they look to their management information systems to assess their internal performance, the performance of their competitors, and the conditions prevailing in their markets and the wider economy. To be successful, firms must have a sound understanding of all their operations and the factors which impact upon them, combined with a performance measurement system which allows them to assess their progress towards achieving the organisation’s objectives.

Traditionally, performance had been measured in financial terms for the benefit of shareholders and creditors, and was embodied in standardized reports such as the Balance Sheet and Profit and Loss Statement. The spread of the quality movement into the wider business community, and a change in focus from shareholders and creditors to customers, created a need to shift the emphasis of the performance measurement system away from mainly monetary concerns. Customers tend to be concerned not only with price, but also with such attributes as product quality, reliability and delivery time. Performance measures which address these issues must necessarily concern themselves with the underlying processes which create value. As Maskell (1989, p.33) noted, “day-to-day control of the manufacturing and distribution operations are better handled with non-financial measures”. ‘Traditional’, financially oriented, performance measurement systems failed to provide the necessary information for effective day-to-day control.
The recent literature on this subject has examined the need for performance measurement systems to have a strategic focus. As well, the literature has reported on the technical aspects of performance measurement systems, covering such issues as the identification of what to measure and how to create an ‘integrated’ performance measurement system. Performance measurement systems provide the link between organizational strategies and outcomes, yet even for our largest and most stable firms we see reports of sharply fluctuating profits. If stability and sustainable levels of growth are viewed as desirable business outcomes, could it be that performance measurement systems have inherent problems which inhibit the organizations ability to achieve such outcomes? Certainly financial outcomes can be affected by long-term strategic decisions which can have adverse impacts on short-term pre-tax profits. Thus internal decisions can have apparently adverse impacts on the organizations stability as measured in financial terms. Yet it would be quite unfair to blame all adverse outcomes on deficiencies in the performance measurement system because many external factors (e.g., demand, unemployment, interest rates, costs of inputs, competition) impact on a firm’s performance as well. Nevertheless, an inadequate performance measurements system which does not evaluate those external and internal factors that might impact on a firm’s performance, will seriously weaken the stability and long-term survival prospects of the organization. One of the issues explored in this research is whether there are firm-specific factors which would contribute to inefficient performance measurement systems.

1.2 Research problem and propositions

Modern business units vary greatly in size and complexity yet basically all exist for a common reason, that being to provide a product or service at a profit. In theory, the size and structure of the organization represents the most efficient collection of resources to achieve that objective. Over time, and in response to changing conditions, organizations will adopt different strategic foci in order to maximize the economic value of the organization. The choice of a particular strategy will be made
on the basis of information available to the firm. This information comes externally from the firm’s management information system, and internally from its performance measurement system, which is itself a subset of the firm’s management information system.

In the strategic benchmarking literature it is argued that an organization’s strategic direction should be set by comparing the firm’s performance against competitors and/or firms which exhibit world-best practice in a particular area which has been identified for improvement (Miller et al., 1992; Biesada 1992; Patrovi 1994). Implicit in this method of setting strategic direction is the need to measure the performance of the organization. In the strategic management literature it is argued that an appropriate performance measurement system is a requirement for strategic success (Kaplan & Atkinson, 1989; Nanni et al., 1992). ‘Appropriate’ in this instance refers to a performance measurement system which is integrated with the organization’s strategic objectives.

Given the importance of connecting performance measures to strategic objectives, the research problem addressed in this thesis is how to strengthen the link between the two. The business strategy literature gives precedence to strategic planning in this relationship and emphasizes the role played by human resources (Smith 1994; Meekings et al., 1994), asserting that performance measurement systems should provide the information for management to exert control over operations in pursuit of strategic objectives. Management literature has placed importance on the development of a strategy through a consistent pattern of decisions and actions (Mintzberg 1978). In the operations literature greater emphasis is placed on the importance of the performance measurement system in providing the information on which strategic decisions can be made (Neely et al., 1994; Nemetz, 1990). There is also support in the strategic benchmarking literature for the proposition that performance measurement is essential in identifying shortcomings within organizations, which should then become the focus of strategic planning (Miller et al., 1992; Vaziri 1992).
The interrelationship between organizational strategy and an effective performance measurement system is the focus for this thesis. The early literature on this relationship placed greater emphasis on linking specific performance measures to particular actions in order to evaluate whether they had been achieved. Such measurement systems have a control bias (Hiromoto, 1988; Simons, 1991; Kaplan and Norton 1992). Later, the literature began to place emphasis on linking performance measures to strategic goals. Presumably such measures would encourage people to "adopt whatever behaviors and take whatever actions are necessary to arrive at those goals" (Kaplan and Norton 1992, p.79). Next, the literature began to place emphasis on the value of the performance measurement system in providing inputs for strategic decisions (Fitzgerald et al, 1992; Kaplan and Norton, 1996). The way in which managers of organizations handle this relationship will influence the effectiveness of their performance measurement system. For instance, it has been observed that performance measures can inhibit the behaviour of managers and impact adversely on strategic goals (Kaplan, 1984b).

The literature is explicit in describing methodologies for selecting appropriate performance measures, creating effective performance measurement systems and linking them to strategic goals (Neely, Gregory and Platts, 1995). Considerable research has been done on ways to align strategies and performance measures (Dixon, Nanni and Vollmann, 1990). Yet, anecdotal evidence in the form of business failures, suggests that a great many firms are unsuccessful in achieving their goals. Why this appears the case will be examined in this research. Where performance measures are not linked to strategic goals, organizations will fail to realize the benefits of improved performance that the literature suggest will flow from a proper integration of the two.

The propositions to be examined in this thesis are:

Proposition One
That managers are unaware of the need to link performance measures to strategic goals and that, as a consequence, performance measures do not change to reflect a change in strategic direction.
Proposition Two
That the link between the performance measurement system and organizational goals is weak because the organization’s structure inhibits a coordinated approach towards achieving strategic objectives through the use of performance measures.

Proposition Three
That the dynamic environment in which firms operate serves to disassociate strategic objectives from the performance measurement system, and the lack of managerial attention to the link between the two will result, over time, in a set of performance measures which provide insufficient, late or wrong information on which to base decisions.

1.3 Justification for the research
In the literature, performance measurement systems are viewed as a tool with which organizations can integrate their activities (Kaplan and Norton, 1996; Bhargava et al., 1994; Nanni, Dixon, and Vollmann, 1992). Research has tended to identify situations where mismatched performance measures and strategies lead to poor performance. The literature which reports on such situations suggests ways to go about designing a performance measurement system to overcome such deficiencies (Neely et al., 1995; Neely et al., 1994; Schmenner and Vollmann 1994; Dixon et al., 1990). Yet there has been little research done on what leads to a performance measurement system which is poorly integrated with organizational strategy. This thesis seeks to identify and explore some possible causes.

In order to provide timely information to management, an efficient performance measurement system must be attuned to the strategic plans of the organization. As strategies unfold the emphasis on specific performance measures should change. This research extends the work done on the relationship between strategy and measurement systems by viewing the relationship in a dynamic context. This research also
examines the impact of the structure of an organization on its performance measurement system. Since an organisation's structure will change over time it is important that any structural effects on the performance measurement system be recognized and suitable adjustments made. Otherwise the performance measurement system will rapidly become outdated and fail to provide the information necessary for management to effectively run the organization.

At the basic level, the goal of firms must be survival, and then growth with sustainable levels of profitability for stakeholders. It is evident from the high number of business bankruptcies that many organizations do not achieve these objectives. Whilst this is particularly true of smaller firms, even larger organizations with substantial backing can be caught out by changing conditions, which would lead to eventual decline or takeover. Most business failures are assigned to the failure of management. Management in turn relies heavily on its information systems in order to make rational and informed decisions (Harper, 1984). When such systems fail to provide timely, relevant and accurate information to management then inappropriate decisions and actions could be taken (Dixon, Nanni & Vollmann, 1990). It is essential therefore that they have reliable information and performance measurement systems.

In a highly competitive environment a failure to take action could produce a worse outcome than taking no action. Where the information which forms the basis for decisions is incomplete, a well designed performance measurement system should provide early warning of potential problems, arising from implementing an inappropriate course of action. Thus a sound system of measurement will encourage decision making in the face of uncertainty.

This research is justified on the basis that it extends prior research on the underlying causes of the lack of integration between performance measurement systems and organizational goals. In particular it seeks to identify those factors which might
enhance or inhibit changes in performance measurement. In shedding further light on this relationship it provides practical suggestions for managers on how to keep their performance measurement systems abreast of changing conditions.

1.4 Methodology

In examining the shortcomings in performance measurement systems as they relate to strategic plans, a three pronged approach was taken. Firstly, a literature review was carried out in order to identify those areas where performance measurement systems were perceived to be inadequate. This literature review also explored a broader range of literature on performance measurement, including such areas as integrated performance measurement systems, identification of appropriate performance measures, and performance measurement system design. Secondly, a quantitative survey was undertaken to gather data on relevant issues. In particular, the quantitative survey explored the link between the organisation’s strategy and its performance measurement at the departmental level, the organisation’s attitude to performance measures, and the way in which the organisation’s strategic goals and its performance measurement system interact. Finally, two firms were selected from the organizations which responded to the quantitative survey for more detailed case study examination. The aim here was to explore the response of the firms’ performance measurement systems to changes in the firms’ strategies.

Appropriate research methodologies in the areas of organizational strategy are discussed in chapter 3, as are practical considerations which impacted upon the design of the survey instrument and structured case study interviews. Much of the research relating to performance measurement systems tends to involve case studies of a small number of firms. In the operations management literature there has been a growth in the use of case study research because the methodology allows researchers “to gather better information about the realities of operations systems and to develop better, more complete theories about them” (McCutcheon and Meredith, 1993, p.239).
A few large surveys have looked at the extent to which performance measurement systems aid or impede strategy (Dixon, Nanni & Vollmann, 1990; Neely et al, 1994). These surveys, whilst providing valuable data, fail to capture the pressures placed on performance measurement systems by the dynamic environment within which firms operate. The case study methodology was used specifically to examine the way the performance measurement system responded to changes within the firm as reflected in strategic changes.

1.5 Outline of this thesis

This thesis is presented in five chapters, following the recommendations of Perry (1994). The Table of Contents provides section headings for the material covered in the thesis. This section provides a brief description of the contents of each chapter.

The chapter titled ‘Introduction’ sets the background for the research, established the connection between strategy and performance measurement, and looks at some of the issues which impact on this relationship. The research problem is discussed and the research propositions which will be addressed in Chapter 4, ‘Data analysis’, are developed. The justification for the research, methodology employed and outline of thesis are then presented. The latter sections of the introductory chapter cover definitions, delimitations and key assumptions. Each chapter has a concluding section which summarizes the main points of that chapter. Chapter 2 covers the literature review and provides the theoretical foundation for the research. The research problem and propositions are developed from the literature review. In Chapter 3 the research methodology and the justification for its selection are provided. Chapter 4 presents the data collected from the research so that conclusions can be made which are relevant to the research propositions. The conclusions and their implications are presented in Chapter 5.
1.6 Definitions

This research focuses on performance measurement systems. These are viewed as a subset of an organization’s management information system which gathers information, both internal and external, for use by senior executives is setting strategic objectives. Within the context of this thesis, the performance measurement system, is viewed as the tracking mechanism which measures the extent to which the actions of managers and subordinates are successful in attaining those strategic objectives. Thus the performance measurement system is seen as having an internal focus.

A performance measure can be defined as “a metric used to quantify the efficiency and/or effectiveness of an action”. Performance measurement on the other hand, “can be defined as the process of quantifying the efficiency and effectiveness of action”. (Neely, Gregory and Platts, 1995).

Traditional performance measures are those which focus on financial, aggregative types of performance measures. These would include such things as sales, gross profit, net profit, return on investment, earnings per share, earnings per employee, and the like.

Determinants-based performance measures are those which provide indications of expected outcomes so that actions may be modified to achieve desired outcomes. Fitzgerald et al. (1992, p.7) describe these as the measures which attempt to quantify those factors which “determine competitive success”.

They equate with key performance drivers (KPDs) (Walsh & Sinclair, December 1995, p.36) which focus on the separate stages of, and are “important contributors to the outcomes of processes”. Performance measures which focus on KPDs provide the information needed to fine tune a process in order to improve (strategic) outcomes.

Key performance indicators are described by Walsh (November 1995, p.29) as “those critical measures which ultimately determine profitability and shareholder value”. In
the main they are measures of outcome which provide insufficient information with which to select appropriate actions which might lead to process improvement.

Goal congruent behaviour is any behaviour or action which is taken to promote the strategic plans (goals) of the organization.

Organization structure in the context of this thesis is a function of size. In this sense structure adopts a more generic meaning and should not be confused with industry structure. The larger an organization is in terms of number of employees, the more managers it will tend to have. These managers have responsibilities within specific functional areas which may give rise to inefficiencies. In the economics literature this would be referred to as a diseconomy of scale. Proposition two of this thesis looks at whether an organizations’ structure, as measured by the diversity of its management structure, might weaken the link between strategic goals and the performance measures which are in place facilitate the achievement of those goals.

1.7 Delimitations of scope

The performance measurement system is not discussed in the context of how well or poorly it is used to evaluate the performance of individuals. Rather it is reviewed on its success or failure as an information provider to managers for the purpose of allowing them to effectively manage the organization. As such it is being assessed on its ability to provide accurate, timely and relevant information to managers so that appropriate decisions and actions might be undertaken to align the organization’s activities with its strategic objectives.

A quantitative survey was conducted in the initial stages of the research. It was designed to evaluate the ‘state of play’ in a selection of firms on the propositions which developed from the literature review. The selection criteria and rationale for the sample size is detailed in chapter 3. The responses to quantitative survey were provided in the main by high level executives, with 47% at CEO level, but a broader case study approach was needed in order to evaluate the way that performance
measures would be linked to strategy throughout the organization. From the respondents to the quantitative survey two organizations were chosen for more detailed analysis, and five management level employees were interviewed at each organization. The organizations were chosen from the lower and upper end of the sample on the basis of size. Both were manufacturers. The scope of the sample excludes any generalisability for the findings.

1.8 Key assumptions

One of the issues raised in the literature was the extent to which performance measures are used to control the actions of employees, including managers. Simply putting measures in place would not guarantee appropriate actions by employees. At a higher level, superiors would need to review the data to ensure that their subordinates were, in fact, behaving appropriately and delivering the expected outcomes. The frequency with which various managers within an organization review performance measures has important impacts on the relationship between organizational strategy and performance measurement. These will be discussed within the context of Proposition Two which deals with structural influences on the relationship. Some of the data presented for this proposition comes from the quantitative survey and relates to the relative use and frequency of performance measures. The responses may be used firstly as indicators of managerial control and secondly as indicators of the alignment of departmental activity to corporate strategy. The rationale behind these assumptions is provided below.

Firstly, at the level of the individual, if we allow the assumption that the ability of performance measures to act as a control mechanism is inversely related to the frequency with which they are reviewed, then it necessarily follows that the greater the review period, the less likely it is that performance measures will be effective in encouraging and maintaining goal-congruent behaviour.

Secondly, in order to measure the contributions of various departments within an organization to the achievement of strategic goals, the assumption will be made that the relative use and review of performance measures by departments can be taken as a
proxy for the effectiveness with which managers align departmental activity with corporate strategy. This may seem a much weaker assumption than the first because, not all departments need have the same relative number of performance measures. For instance, we would expect the number of performance measures for manufacturing to be relatively high. However, such a situation might result in performance measurements systems which are poorly correlated with strategic plans. As Dixon, Nanni and Vollmann (1990, p.2) noted: “A major failing of existing measurement systems is their inability to focus managerial attention on overhead cost and the deployment of overhead personnel ... improvement actions need to focus more on overhead activities than on the other components of manufacturing cost”.

The problem of the varying use of performance measures by departments is amplified by the review cycle. As an example, if the Research and Development Department has very few performance measures relative to other departments, and these measures are reviewed even less often than those in other departments, it is reasonable to assume that that Department’s contribution to the achievement of strategic goals would be less apparent, less easy to quantify and therefore less easy to manage for improvement. Evaluating an organizations investment in Research and Development is receiving increasing attention in the literature but is not within the scope of this thesis.

1.9 Conclusion

In this introductory chapter the background to the research has been established. The research problem, being the link between organizational strategy and the performance measurement system was identified from the literature review, and several research propositions that will be addressed in this thesis were developed. The justification for the research was explained and a brief outline of the research methodology provided. The outline of the thesis indicated where and how the details of the research would be presented. The latter parts of this introductory chapter provided definitions of key terms, the limitations of the research and lastly, provided a rationale for the assumptions made in interpreting some of the data.
CHAPTER II

2 LITERATURE REVIEW

2.1 Introduction

From the outset the focus of the literature review was on publication sources that dealt with performance measurement systems. In the broad sense, performance measurement systems provide data on the whole range of business activities. They are used as a management tool, not only to monitor and control those business activities, but also to encourage appropriate actions by managers in pursuit of strategic objectives. Much has been written about the technical aspects of developing a performance measurement system, how to identify appropriate performance measures, and how to collect and analyze data so that managers respond appropriately to such data. But perhaps the overriding concern in the literature is the need to relate performance measures to strategic objectives. Where this is not done, a ‘business as usual’ approach will take precedence over the achievement of specific strategic objectives through the use of clearly targeted measures of performance.

The place of performance measurement within the management literature and its relationship with various disciplines is discussed in section 2.2 and is shown graphically in Figure 1. The attention given to the link between strategy and measurement stems from identified problems which occur where this link is not sound. Frequent instances of this will be brought out in the literature review.

The divergence of strategy and appropriate measurement systems may be due to historical reasons. The twentieth century has seen the evolution of corporations as efficient structures to increase investor wealth. These corporations have grown both in terms of organizational diversity and complexity. Their structures can be viewed as a strategic, competitive response to such factors as globalization of markets, economies of scale, and specialization of labor and management. Thus the factors
which gave rise to a particular corporate structure were largely external. On the other hand, those factors which dictated the measures of performance remained largely internal and financially oriented.

Whilst diversity at an industry level can be viewed as a consequence of market complexity, medium and large organizations also exhibit internal diversity. This internal diversity manifests itself in departmentalization along functional lines, multi-site locations, which in the case of larger organizations may extend beyond national borders, and diversification of markets. This market diversification, where it occurs vertically gives the organization market power through control of all stages of the process which leads to the generation of their saleable products. Where it occurs horizontally, it gives rise to organizations referred to as conglomerates which gain market power by being able to influence prices in commodity and supplier markets.

Such diversification within organizations adds to those pressures which weaken the link between organizational strategy and performance measures. The various subsidiaries and departments, with their own management structures, often have their own agendas and performance criteria which may be at odds with the broad strategic objectives of the total organization (Shapiro, 1977; Harper, 1984; Kaplan & Atkinson, 1989; Starcher, 1992; Scholtes, 1993). The impact of organizational structure on the strategy-performance measurement relationship is one of the central issues of this thesis. Research proposition two puts forward the premise that the link between performance measurement systems and organisational strategy is weak because the organization’s structure inhibits a coordinated approach towards achieving strategic objectives.

2.2 Parent discipline and classification model

The literature review on performance measures encroached upon a wide range of management areas. Most of the articles referenced could be classified into three disciplines of the management literature, these being strategic management,
management accounting, and operations management. Neely et al., (1995) conducted an extensive literature review into performance measurement system design which incorporated 143 articles in its reference list. In Table 1, one hundred and twenty of these articles have been classified into their different disciplines and sub-disciplines. Twenty-three could not be categorized from the information contained in the article. None of the articles came from the human resource discipline, perhaps because the focus of the literature review by Neely et al., (1995) was on the design aspect of performance measurement systems rather than the personnel involved.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Sub-discipline</th>
<th>Number of Articles</th>
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<tbody>
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<td>Benchmarking</td>
<td>26</td>
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<tr>
<td>Management accounting</td>
<td>Cost accounting</td>
<td>20</td>
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<tr>
<td>Operations/Production Management</td>
<td>Productivity</td>
<td>9</td>
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<td>Quality</td>
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This thesis, in examining weaknesses in the link between performance measurement and organizational strategy, looks at the impact of both structure and time on the relationship between strategy and the performance measurement system. Structural aspects are relevant to research proposition two, whilst the time element is relevant to research proposition three. It necessarily addresses the human resource issue from the perspective of the organization’s structure. It is after all, people who implement strategies, perform processes and measure outcomes. But, as was stated in Section 1.7 on delimitations, this thesis looks at performance measurement from a systemic perspective, rather than what is commonly referred to in the area of human resource management as a performance appraisal perspective.

The classification of articles was made on the basis of information contained in the title and journal in which the article was published. Articles listed under strategic
management include corporate strategy and manufacturing strategy. Not all articles were discretely classifiable on this basis. Where the title or journal related to two disciplines, precedence was given to the parent discipline. For instance, an article by Wisner and Fawcett (1991) entitled *Link Firm Strategy to Operating Decisions through Performance Measurement*, in the *Production and Inventory Management Journal* was listed under strategic management rather than operations management or performance measurement systems. The relationship between the disciplines is shown in Figure 1.

![Literature Review Classification Model](image)

As was mentioned at the beginning of this section, the management literature articles which addressed performance measurement can be grouped into three broad disciplines, namely strategic management, management accounting, and operations.
management. More specialized areas of the literature have been identified within these disciplines. Benchmarking was categorized under strategic management because it was generally discussed in the strategic context but has nevertheless become an important topic in its own right. Benchmarking also impacts in the other disciplines of management accounting and operations management. Since benchmarking necessarily involves measurement, it overlaps the literature on performance measurement. The same can be said for cost accounting which has been categorized within the management accounting literature. By far the largest number of articles dealing with performance measures were found in the operations literature. Whilst these were predominantly in the manufacturing field, there were several which dealt with operations in service industries. Important sub-sets of the operations management literature include continuous improvement, productivity and quality issues, all of which involve data collection using performance measurement systems. At the centre of Figure 1 is the performance measurement system (PMS), and performance measurement is central to all management systems because it provides the data on which decisions can be made.

In the introduction to the literature review it was suggested that corporate strategy evolved in response to external factors, whereas performance measures, which focused largely on internal factors such as the cost of outputs and ratio analysis remained largely unchanged. This perspective was to shift with the rise to prominence of the quality movement and the emergence of externally focused measures through the benchmarking process. The quality movement placed emphasis on non-monetary measures such as product quality, time to delivery and customer satisfaction (Zairi & Letza, 1994). Quality concerns, which initially focused on manufacturing, gradually shifted emphasis to all areas of business activity, and culminated in an external customer-oriented focus.

Perhaps one of the most important drivers of change to traditional performance measurement systems was increasing competition from foreign producers in the face of market deregulation. Gordon and Narayan (1984) had noted that traditional accounting measures were more appropriate where the competitive environment was
less uncertain. As well, Dixon, Nanni and Vollmann (1990, p.130) observed “both the literature and the data analysis indicate that if market stability is changing, the relative use of financial-based measures needs to change accordingly”. Further, the emergence of management approaches such as Total Quality Management and Continuous Improvement has resulted in an increasingly more widespread and critical use of performance measures.

The 1990’s has seen a heavy emphasis on the design of performance measurement systems. Although many approaches have been described (e.g. Nanni, Dixon & Vollmann, 1992; Kaplan & Norton, 1992; Neely et al, 1994) a common requirement is the need to integrate measurement activities throughout the organization, and to link these with strategic objectives. The basic expression of this ideal can be seen in Dixon, Nanni, and Vollmann’s (1990) strategy, action and measures triangle. Placed within the manufacturing environment, its emphasizes the need to link each strategic objective to a measure or group of measures, and implement the strategy with a course of action or actions such as JIT, TQC, MRP or others (Dixon, Nanni, and Vollmann 1990, 5-6).

The integrated approach to the use of performance measures has been well represented by Kaplan and Norton’s (1992) Balanced Scorecard Model. Here performance measures are linked to goals from four perspectives:

- Financial;
- Customer;
- Internal Business; and
- Innovation and Learning.

A focus on the external, competitive environment is not specified in a separate category but is incorporated in the customer perspective - “How do customers see us?” and to some extent in the internal business perspective - “What must we excel at?” This interpretation is made on the basis that the organization is comparing itself to an external benchmark. The value of the balanced scorecard approach is that it provides management with a variety of perspectives from which to view performance
without suffering from an information overload. The necessity for a performance measurement system to be thorough yet avoid complexity was also raised by Dixon, Nanni and Vollmann (1990, 27).

Nanni, Dixon and Vollmann (1992, 2), in addressing the shortcomings of traditional management accounting systems, talk of the need to redesign them for strategic management and the “emerging practices of what we call integrated performance measurement”. The dual thrusts of this article are:

- performance measurement systems should continually evolve to meet the needs of a changing manufacturing environment; and
- the performance measurement system will influence how managers behave.

The first point reflects the dynamic business environment in which firms operate. It incorporates a continuous improvement philosophy into the integrated performance measurement system “through the constant addition and deletion of performance measures” (1992, 13). There is a recognition of the necessity to actively manage the performance measurement system to optimise strategic outcomes. This issue will be examined in Proposition Three.

The second point implies, at first glance, that an effective performance measurement system should place greater emphasis on controlling the actions of managers rather than giving greater flexibility to managers to control the activities of the firm. This is only true insofar as it encourages actions congruent with changing strategic goals. An advantage of such an integrated management system for managers is that it facilitates the design of performance measures which assist in controlling activities directed towards specific goals. Therefore, flexibility in the performance measurement system is an important attribute.

Complementing the work done on integrated performance measurement systems in the manufacturing sector is that or Fitzgerald et al., (1992) in the service sector. They see the performance measurement system as providing the control which ensures that
the “organisation is pursuing actions and strategies which will enable it to achieve its goals” (Fitzgerald et al., 1992, 4). They make explicit the impact that performance measures can have on strategy through their Feedforward:feedback control model. Feedback control is achieved through plans, budgets and the like. Feedback control is achieved by analysis of variances and the use of a range of performance measures. Their control model implies an active management of performance measures. To be effective, feedback control must stimulate appropriate action throughout the organization, and “the information supplied should vary according to the level of management and the stage of the decision making process”. The articles previously discussed in the literature review implied that strategy should determine the types of performance measures to be employed. Fitzgerald et al., (1992) specify that the measured outcomes should impact on strategy formulation, goals, plans and budgets, standards and targets. Instead of a top-down relationship, the strategy-measurement relationship should be seen as a circular one where each function leads to a fine tuning of the other.

Fitzgerald et al., (1992) expand the balanced scorecard of Kaplan and Norton to cover six categories:

- competitive performance;
- financial performance;
- quality of service;
- flexibility;
- resource utilisation; and
- innovation.

Their important contribution to the multi-dimensional aspect of a performance measurement system lies in the distinction between those measures which reflect outcomes and those which determine competitive success. They include performance measures falling into the latter four categories listed above as providing useful precursors to successful outcomes (refer Table 2). Such measures would be particularly useful when one considers the extended time frame for the realization of long term strategies.
Table 2  Performance measures across six dimensions

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<tr>
<th>Dimensions of Performance</th>
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<td></td>
<td>Performance of individual innovators</td>
</tr>
</tbody>
</table>


2.3 Analytical framework for the Strategy - Performance Measurement Link

The analytical model which will be used to study the relationship between strategy and performance measurement is shown diagramatically in Figure 2. It embodies Dixon, Nanni & Vollmann’s (1990) emphasis on the need to link each strategic objective to a measure or group of measures by developing a strategic focus for departmental performance measures. It incorporates Fitzgerald’s et al., (1992) notion that measured outcomes should impact on strategy formulation and goals by indicating a desired strategic direction for the organisation. Their results-based measures would be listed under group performance measures. These would be the traditional, financial, aggregative types of performance measures. The overall
corporate results which are assessed by these measures will impact on the future strategic direction of the organization. Their determinants-based performance measures would be used at the departmental level to drive and guide the process(es) and activities that generate the organization’s output, be it goods or services. An extensive range of such measures should allow an organization to focus on those issues which would best enable it to achieve a given strategy or group of strategies.

Figure 2  Analytical Model of Relationship Between Organizational Strategy and Performance Measures

The diagram also accommodates Kaplan and Norton’s (1992) balanced scorecard model where performance measures are linked to goals from four perspectives. The financial perspective is captured in group performance measures. The customer perspective is embodied in the quality, timing and cost of output. The internal business perspective is represented in the departmental measures and how they relate to the organization’s strategic focus. The innovation and learning perspective is embraced in measures which focus on processes and activities and ways of improving them.
In a follow up to their ‘Balanced Scorecard’ article, Kaplan and Norton (1996, p. 75) explicitly recognized the value of a balanced set of performance measures in overcoming a “serious deficiency in traditional management systems: their inability to link a company’s long-term strategy with its short-term actions.” In this regard, they support the earlier work of Banks & Wheelwright (1979) who found that concentration on financial measures encouraged managers to adopt a short-term perspective. Further, Kaplan and Norton see performance measurement, as embodied in their balanced scorecard as being central to the strategic process. Organizations which adopted their earlier model to improve performance achieved narrow results. However, when their balanced scorecard was used “as the foundation of an integrated and iterative strategic management system” (Kaplan and Norton, 1996, p. 85) it became a powerful management tool and not just an information system. They thus incorporate a circular model linking performance measures and strategy. This circular aspect is evident in the analytical model represented in Figure 2.

Whilst there seems to be almost universal agreement amongst researchers and writers about the need to link performance measures with organizational strategy in a broad-based manner, this may not necessarily be what is practiced by organizations. In a study of over 800 United Kingdom based manufacturing firms, Neely et al., (1994) examined the extent to which managers sought to use their performance measurement systems to influence the realization of their manufacturing strategies. They found that the types of performance measures used in connection with specific competitive strategies were often inappropriate indicators of the effectiveness of those strategies. One possible reason, which is explored later in this thesis, is the inflexibility in performance measurement systems in comparison with the dynamic shifts that must necessarily occur in competitive strategies in response to market forces.

A second possible reason for the use of inappropriate performance measures could be the difficulty in determining what measures are appropriate. Patrovi (1994) explains a detailed methodology for determining what to benchmark in a manufacturing environment, using the same set of competitive stances listed by Neely et al., (1994),
namely, quality, price, time and flexibility. The cost of implementing such a system to identify appropriate performance measures would be restrictive in the small- to medium-size firm range. Perhaps the time and effort involved in actively managing the performance measurement system is a third reason for using existing, and at times inappropriate or sub-optimal measures, to track progress towards strategic objectives.

A solid review of the literature relating to performance measurement system design was undertaken by Neely, et al., (1995). It not only provides a valuable reference work for the field of performance measurement but poses many as yet unanswered questions. One of the findings of Neely et al., (1995, 93) was that “managers find it relatively easy to decide what they should be measuring”. In fact, many found it too easy to list a great many measures. The types of measures that organizations might employ would include many which could signal false alarms (Dixon et al., 1990). A false alarm occurs where the wrong performance measure is used to motivate a manager. This could result in unnecessary and/or inappropriate action on the part of the manager. Still others would initiate conflicting responses from department managers when not aligned with the organisation’s strategic objectives (Starcher, 1992). Finally, there would be an overlap in information conveyed by a multiplicity of performance measures, many of which are redundant and serve only to add to the managerial workload. Research addressing this problem has led to the development of key performance indicators and key performance drivers.

The rationale underlying the literature review by Neely et al., (1995, 83) is that “performance measures need to be positioned in a strategic context, as they influence what people do”. This top-down approach to performance measurement system design fails to place sufficient emphasis on the process itself. It is essential in performance measurement system design that one does not lose sight of the business process. Peters (1994, p. 30), in linking performance measures with quality improvements stated that this “always involves some way of addressing the business in terms of its key business processes”. Walsh (1995c, p. 24) also asserts that “the only way to improve business as usual is to intervene in and change the underlying business process.” When the process is changed, an appropriate measure or set of
measures should be put in place to monitor the effectiveness of the change. Clearly there is an argument for performance measurement system design based on the bottom-up view which recognizes the key role of the underlying business process.

The analytical framework represented diagrammatically in Figure 2 recognizes the interaction between an organization’s strategy and its performance measurement system, not as being unidirectional, but as a circular relationship. Strategic decisions should impact on performance measures which in turn feed back into the decision process when strategic plans are being made. This latter aspect provided the thrust for Kaplan and Norton’s 1996 article which revisited their earlier ‘Balanced Scorecard’ approach to the formulation of an effective performance measurement system.

One of the more efficient and straightforward methods of identifying appropriate areas for the implementation of performance measures is described by Dixon, Nanni and Vollmann (1990). They developed a performance measurement questionnaire which provides a method of identifying, at an organization-wide level, those areas which are more relevant to the organisation’s strategic success, and those areas where the organisation’s performance measurement system is perceived to hinder or support those strategies. The areas of greatest disparity then receive a priority for strategic focus and performance measurement. The usefulness of their approach in aligning an organization’s performance measurement system with its long-term strategic vision was borne out in work with a major multinational corporation. The generalisability of their method was confirmed by Schmenner and Vollmann (1993) when it was applied in a study of 92 large manufacturing firms, based largely in Europe, but including eight from Asia, four from Africa, five from South America and three from North America. The “inescapable” conclusion they reached is that “All manufacturing companies need seriously to consider changing their performance measurements” (Schmenner and Vollmann, 1993, p. 69). Research proposition three looks at this issue. It also examines some of the promoters and inhibitors of changes to the performance measurement system.
During the course of the literature review, the main cause which was identified for the inability of performance measurement systems to provide managers with the information needed to effectively guide an organization along the most efficient path to its strategic objectives, was the difficulties experienced in aligning measures with strategy. This required the design of a performance measurement system to capture all relevant data. An integrated performance measurement system will necessarily capture a great deal of information, not all of which is relevant to strategic outcomes. Managers then must be capable of selecting key performance measures to focus on corporate objectives (Walsh, 1994; Kaplan and Norton, 1992).

When it comes to fine tuning the performance measurement system, one area that does not appear to have received a great deal of attention is the time element. This time element is relevant in the context of the organization’s life span, the product life cycle and the strategic time-frame. Perhaps the major challenge in constructing the ideal performance measurement system stems from the fact that firms’ internal structures alter as they grow. At the same time, their external environment is undergoing rapid change. Jones, et al., (1993) had observed that performance could be affected by external “environmental” changes and that this in turn would impact upon the importance of a measure. Ideally, the performance measurement system should mirror the growth of the organization. Thus whilst Nanni, Dixon and Vollmann (1992, 13) see a continuous improvement philosophy giving rise to changes in performance measures, the evolution of the organization will also necessitate the need for modifications to performance measures.

When the performance measurement system is considered within the context of the industry life cycle, it becomes apparent that at various stages, management will need to change emphasis on different parts of its performance measurement system as its strategic focus shifts. In the chapter on Data Analysis, Table 10 (p. 76) lists strategic foci which would be relevant to an organization’s position in its life cycle and presents a few types of performance measures that would be relevant to those strategies.
If an organization wishes to respond to a change in the market of one of its major products then it would do well to have measures which focus on the product life cycle. It would then be able to respond either to improved conditions, say by increasing capacity to satisfy an increase in demand before competitors gain a foothold; or to unfavorable conditions by such actions as scaling down, increasing research and development into new product lines, and diversifying its product range before cash constraints make it impossible to do so. Richardson and Gordon (1980) examined whether performance measures change as products move through their life cycle. A summary of their findings by Neely, Gregory and Platts (1995, 103) stated that:

- "the performance measures used did not change as products moved through their life cycle;

- the measures did not become better defined later in the products' life cycle, primarily because the performance measures used tended to focus on the plant as a whole, rather than individual products;

- inappropriate measures did introduce dysfunctionality;

- traditional measures did inhibit innovation;

- managers did respond to their perceived measures of performance."

It may be inappropriate to change certain performance measures during the product life cycle. In the case of a measure such as ‘sales volume’, it would be a case of ‘moving the goal posts’ during the game, and would make it difficult to determine when a change in strategic focus might be warranted. One would expect however, that performance measures should become better defined as an organization and its products evolve. The fact that Richardson and Gordon (1980) found this not to be the case is indicative that performance measurement systems were not actively managed at that time, and little consideration was given to modifying measures over time. Whilst the industry and product life cycles will undergo change, in most instances such changes are gradual relative to changes in strategic direction, which can be more frequent and sudden. Where indications are that a change in strategy is called for, then the organisation’s use of performance measures should undergo a similar shift. It may be that some new performance measures need to be devised. For a firm with a mature performance measurement system however, it may be the case that there is
only a shift of emphasis in key performance indicators and drivers. All these issues will be explored in Proposition 3.

2.4 Conclusion

It was evident in the literature review, as discussed within the analytical framework, that strategy and performance measurement have come to be viewed as interrelated. Many writers (Kaplan and Atkinson, 1989; Dixon et al., 1990; and Fitzgerald et al., 1992; Schmenner & Vollmann, 1994), commented on the fact that the modern firm has outgrown the traditional forms of performance measurement systems. This is an ongoing process. If, as the organisation continues to evolve and adopt new strategies, the performance measurement system remains unchanged, it will gradually become less relevant to the organisation’s needs. The extent to which firms keep their performance measurement system abreast of organisational change is explored in research proposition three.

Whilst firms are becoming increasingly aware of the need to connect performance measures with strategic objectives there are many organizations which fail to put this perception into practice. In research proposition two this thesis explores organizational structure as a contributing factor in the failure of organizations to develop more appropriate performance measurement systems.

Where an organization has developed a performance measurement system to meet its needs a complacency may develop regarding it. Managers may accept the performance measurement system as a fait accompli without understanding the links between such measures and the organisations strategic objectives. This may be especially so where new managers are promoted within the organisation or are appointed from outside. Whether managers are aware of the need to link performance measures with strategic objectives is examined in research proposition one.
Identified in the literature review were several articles which emphasized the need for updating performance measurement systems to accommodate the changing needs of industry (Nanni, Dixon & Vollmann, 1992; Kaplan & Atkinson, 1989). This raises the question of whether performance measurement systems are actively managed by organisations or whether changes are a reaction to a perceived weakness in existing performance measures, rather than a proactive change resulting from a shift in strategic focus. Research proposition three looks at the management of performance measurement systems.
CHAPTER III

3 METHODOLOGY

3.1 Introduction

The literature review identified several works which pointed out the need to effectively communicate strategy throughout the organization so that the various departments and functional areas could align their activities with the corporation’s goals. The literature also asserted that strategy should guide the selection of performance measures. When departments and functional areas go about integrating their activities with the corporation’s strategic objectives they should monitor their contribution to these overall objectives by concentrating on performance measures which facilitate the achievement of those goals.

A quantitative survey questionnaire (Appendix I) was designed to examine the possible impact of organizational structure on achieving strategic outcomes by looking at the extent to which performance measures were used throughout the organization. The quantitative survey also sought responses in other areas, in particular on whether changes in strategy would lead to changes in performance measures.

It was apparent from the literature that the performance measurement system should be responsive to strategic changes. The quantitative survey confirmed that organizations were generally aware of the need to link measurement to strategy but the extent to which such links were influenced by the organizations structure, and the responsiveness of the performance measurement system to strategic changes needed further investigation. To explore these issues two organizations were selected from the firms which responded to the quantitative survey for more detailed study.
In the following sections of this chapter, a justification for the sample size, selection of case study subjects, procedures and the methodology employed will be provided.

3.2 Justification for the paradigm and methodology

The literature review in Chapter 2 identified many things that an effective performance measurement system should be. In so doing, many deficiencies in performance measurement systems were raised. This thesis examines the organisation’s structure and the changing environment within which it operates as being two possible areas which might give rise to a performance measurement system which is deficient.

The structural issue was explored initially by faxing a survey instrument to organizations in the selected population until a minimum of thirty responses were received. Roscoe (1975) proposes that sample sizes larger than 30 and less than 500 are appropriate for most research. The three main reasons why a small sample size was selected for this research were a) cost and time constraints, b) the small size of the population from which the sample was drawn and c) the decision to use in depth case studies for a more detailed analysis. The population was identified from the Dunn & Bradstreet Business List Computer File. The selection criteria were geographic and financial. A population sample of 334 firms located in the south-west Sydney region with annual sales which exceeded $10 million were identified. The $10 million sales figure was chosen to ensure that only medium to large organizations responded. These firms were targeted because it is generally only at this size and above that organizations begin to exhibit the required complexity. In Table 3 the number of separate functional departments within the responding organizations is listed. The South-west Sydney region was chosen for convenience in contacting the subjects.
Table 3  Structural Diversity of Responding Firms

<table>
<thead>
<tr>
<th>Number of Departments</th>
<th>Number of firms</th>
</tr>
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<tbody>
<tr>
<td>5 or less</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
</tr>
</tbody>
</table>

The first part of the data for this study was collected using a self-administered survey instrument. The questionnaire was faxed to senior managers of sixty-seven firms after an initial telephone contact. Generally, the first point of contact was the senior executive’s secretary, who often needed to be convinced of the relevance and importance of the work. Doing research for a reputable institution (the University) helped, and the offer of a copy of the survey results and analysis usually led to an offer to get their boss to look at the questionnaire. The small size of the questionnaire was also stressed. Of the sixty firms initially contacted, forty-nine agreed to look at the survey (82%). With prior phone contact, and a tightly constructed questionnaire, the faxed survey instrument was often returned the same day. Forty-nine questionnaires were sent and thirty-four returned, giving a response rate of 69%. Appendix XVI contains the data from the quantitative survey.

It was during the pilot testing stage of the quantitative survey that a decision was made to fax the quantitative survey to the target organisations. The survey instrument was of a size which made it convenient to transmit by fax. When pilot testing the survey, attempts were made to obtain responses over the phone, but these proved confusing, and time consuming. Interviewees were asked if they would review a mailed copy of the survey, or a faxed copy. Of the five people who pilot tested the survey, all sought and commented on a faxed version. This was a case of get it out of the way for them, and rapid feedback for the researcher.

Under normal conditions, a mail survey would be sent to an identified population, with follow up contact to achieve the desired number of responses. This involves a significant lag in receipt of information when compared to the method chosen in this research for collecting the required number of responses. By first obtaining the assent
of a sample unit to complete the survey, and immediately sending the survey instrument, a very rapid collection of data was achieved. The necessary information was collected in two weeks, including piloting the quantitative survey instrument.

Senior managers were targeted in the belief that they would have a good overview of departmental activity relevant to performance measures. The copy of the survey instrument (Appendix I) which was eventually faxed went through three revisions as a result of earlier testing. The principal questions for establishing whether the organisation's structure had an impact on performance measurement were questions 10 and 11. From these it was possible to establish, in general terms, the extent to which various departments use performance measures. This is gauged from the relative number of measures employed in various departments and the frequency with which they are reviewed.

The data obtained from the quantitative survey was analysed using two software programs. The numerical responses were first recorded in Microsoft Excel spreadsheets, and mean scores obtained. Subsets of the thirty-four responses were calculated based on ownership of the responding organisations. Additional analysis was made on the basis of managerial seniority. The means of the different subsets were subjected to statistical analysis of variance using Minitab for Windows v.10.

One way analysis of variance (ANOVA) is an appropriate statistical treatment for evaluating the total variation present in a set of data which can be broken down into smaller sets. In the current analysis, using data obtained from responses to thirty-four quantitative surveys, these subsets dealt with ownership (Table 6, page 47), and management seniority (Table 7, page 52). ANOVA makes it possible to determine the magnitude of the contribution of each of these sources of variance to the total observed variation. It is most frequently used to test hypotheses about the equality of three or more population means, which was the case here (Daniel and Terrell, 1995). The subset sample sizes used in Table 6 were thirty four, with each respondent supplying data on input of personnel into strategic decisions for each managerial group. For evaluating the impact of management seniority on changes to performance
measures the subsets were of size sixteen, eight, and ten respectively for CEOs, financial managers and other managers.

In a general survey instrument of this type it is not possible to get detailed information from a single respondent on the exact number of performance measures used by departments and how often they are reviewed, from a single individual, albeit that the respondents were principally at the senior executive level. Since the study is concerned with relative use of performance measures between departments, the phrasing of the questions in their more general terms was considered adequate.

It was acknowledged that the relative use of performance measures need not imply that departments are not contributing to the achievement of the overall corporate goals. For instance, the research and development (R&D) department would not be expected to have in place as many performance measures as the manufacturing department. However, if the organisation's strategy is, say, new product development and performance measures in R&D are minimal then one might conclude that its activities are not well monitored with respect to achieving the stated objective.

The justification for this approach was provided in Chapter 1, Section 8. However it is perhaps relevant at this juncture to point out that the quantitative survey instrument was intended for use as a tool to assess the general use and development of performance measurement systems in the region. From the information obtained through this survey, and the literature review, the case studies were then used for a more in-depth analysis of the research propositions. In averaging out the relative use of performance measures by department we form a clearer picture of which departments use performance measures to monitor their activities, and through the link with the organisation's strategy, contribute to, and are accountable for, the achievement of strategic objectives. Whether the specific measures firms' employ are appropriate to the selected strategies, as was examined by Dixon, Nanni and Vollmann (1990) and Neely et al, (1995) is not the subject of this research.
Demographic data were collected on the size, age and ownership of the company employing the respondent. This information was used to identify suitable candidates for the second stage, follow up case study. The sample was somewhat small to draw general conclusions based on subsets of the data but inferences are made on the impact of ownership and industry classification which it is felt will be worthy of further research.

In order to answer the research propositions, a more in-depth case study approach was taken. McCutcheon and Meredith (1993, 239) had noted that “The gap between what academics were assuming and the real conditions of operations led to growing disparities between OM [Operations Management] research’s prescriptive advice and workable solutions for managers”. Field based research was viewed as a prime method of “gathering better information about the realities of operations systems and to develop better, more complete theories about them”. In a review of performance measurement practices in the United Kingdom, Dr. Bhimani (1993 and 1994) applied a two stage study, beginning with a survey questionnaire of 92 firms, followed by case studies of two firms “to provide a relevant perspective for the findings of the basic questionnaire survey” (Bhimani, 1994, p. 34). In choosing two firms for case study investigation, both the question of structure and evolution could be examined. This was done by selecting two manufacturing firms of different size and with different levels of development. The firms chosen were from opposite ends of the sample based on sales volumes. Of the manufacturing firms which responded (22 of 34), Firm A was the smallest, whilst firm B was the second largest.

The representative ‘small’ firm, designated ‘A’ is a public listed company on the Australian Stock Exchange. Annual sales and number of employees put it at the low end of our sample range. The firm employed forty-eight people and turnover for the past year was $10.5M. The firm was a metal fabricator and the bulk of its sales were for export. The firm had won an Australian export award and in 1995 received quality certification to ISO9001. The firm designed most of its own products and was committed to new product development as a method of expanding its markets.
The representative 'large' firm, designated 'B' is the Australian subsidiary of a British based multi-national corporation. Annual sales in New South Wales exceed $350M and the organization employees 1080 people. The organization manufactures power cables, largely for domestic use, though foreign orders are actively pursued. The organization operates multi-site facilities in New South Wales and Victoria, has well developed performance measurement systems, and was undergoing a restructuring process, initiated by a change at the executive management level.

Five personnel were interviewed from each of the two case study firms. The interviews lasted between sixty and ninety minutes. All interviewees were asked the same questions. Generally, the more senior the person being interviewed, the more detailed the response, and the longer the interview. It took two visits to each firm to complete the interviews, with either two or three interviews being completed at each visit.

The case study methodology involved structured interviews (Appendix II) of various levels of management within the organization. The interviews were recorded on tape and later transcribed. After transcription the respondents reviewed their answers and where they thought appropriate, provided clarifications and amendments. The data was then coded and transferred to a software package called Non-numerical Unstructured Data Indexing Searching and Theorizing software (QSR NUD.IST). This software has been specifically designed for the analysis of qualitative data through the identification and collection of comments and opinions on related subjects.

In appendix II the questions are listed in the order in which they were asked, as opposed to the sequential numbering from the initial design of the structured questionnaire. This was done to improve the depth of the responses following a trial of the initial survey at a company not involved in the population sample. (Its sales were less than $10M). The qualitative structured questionnaire, as used in the case studies employed a cascading technique to extract the desired information. Often, the respondents provided information which excluded the need to specifically ask
subsequent questions from the survey. During the course of the interviews special care was given to avoid leading questions. Despite changing the order in which the questions were asked, the numbering was retained because it formed part of the coding which was used by the software, QSR NUD.IST, to categorise the responses.

The advantage of combining a qualitative case study approach with a quantitative survey instrument are supported in the literature (Stone 1978, p.138). Whilst firm-specific qualitative data may be lacking in generalisability, when linked to a broader quantitative survey, it allows for a more in-depth analysis of specific issues. The more common approach in research would be to undertake a specific case study, identify problems, and then try to generalise the findings through a quantitative study. In this research the aim was to examine why a relationship was not as strong as prior research would indicate that it should be. As a first step, a quantitative survey was conducted to determine whether the relationship existed. Having done this, the more detailed case studies were conducted in an effort to determine whether some proposed reasons for the weakness of the relationship were in fact present. This attempt to identify important variables in the strategy-measurement relationship using a sample survey followed by case study interviews is appropriate for exploratory research of this type (Davis and Cozenza 1988, p.110).

3.3 Conclusion

In this chapter the choice of a two stage study using a quantitative survey instrument and more detailed case study interviews was justified by citing relevant authorities on research methodologies. Further, reference was made to a similar methodology employed by Bhimani. Detailed descriptions were provided of the procedures by which the survey instruments were administered and the data collected.

The data collected from the case studies, and which is relevant to the three research propositions, has been summarised in Appendices III through V inclusive. This was done to provide easier access to the information specific to those propositions. The data collected from the quantitative survey is contained in Appendix XVI. Transcripts
of the ten case study interviews are presented in Appendices VI through XV inclusive. Analysis of this data will be presented in the following chapter.
CHAPTER IV

4 ANALYSIS OF DATA

4.1 Introduction

In this chapter the data collected during the course of the research is analysed, interpreted and presented so as to address the research propositions which were identified from the literature review. The research was conducted to determine whether industry practice was keeping up with the advice coming from academic research, and if not, to identify possible reasons for the disparity. McCutcheon and Meredith (1993, 239) had suggested that one reason for this was that there are “growing disparities between ... research’s prescriptive advice and workable solutions for managers”. From the literature review, several possible reasons for the failure of practitioners to bridge the gap to the ‘prescriptive advice’ were identified. The three which will be examined here were identified in Chapter 1, section 2.

Since much of the literature is concerned with the way organizations linked their performance measures to strategic objectives, the logical starting point for an explanation as to why their managers fail to do so would be that they were unaware of the need to forge such links. Proposition one, that managers are unaware of the need to link performance measures to strategic goals and that, as a consequence, performance measures do not change to reflect a change in strategic direction follows from this. The data presented to address this proposition is provided in Section 4.3.1.

Several highly regarded researchers (Kaplan and Norton, 1992; Nanni, Dixon and Vollmann, 1990; Fitzgerald et al., 1992; Neely, Gregory and Platts, 1995) have discussed the need to develop integrated performance measurement systems so that managers might obtain information from all parts of their organizations. Such information would be used at the senior level to make better strategic decisions, at the managerial level to encourage goal congruent actions by managers, and at the
operations level to identify areas for improvement. Proposition two looks at whether an organization's structure might be a factor which weakens the link between the performance measurement system and organizational goals by inhibiting a coordinated approach to the achievement of strategic objectives. The data presented to address this proposition is provided in Section 4.3.2.

Several authors have commented on the unsuitability of performance measurement systems for the organization's existing requirements (Schmenner and Vollmann, 1994; Kaplan and Atkinson, 1989; Dixon, Nanni and Vollmann, 1990). As both the structures of organizations, and the environments in which they operate change, performance measurements systems have failed to adapt because they were not actively maintained by management. It may be that management assumes that a performance measurement system which provided adequate information for a given set of conditions will do so for all conditions. This observation led to the development of proposition three, namely, that the dynamic environment in which firms operate serves to disassociate strategic objectives from the performance measurement system. Further, the lack of managerial attention to the link between the two will result, over time, in a set of performance measures which provide insufficient, late or inappropriate information on which to base decisions. The data presented to address this proposition is provided in Section 4.3.3.

In section 4.2 a summary of the subjects involved in the case study is provided. As well, Figure 3 provides a schematic of the relationship of the interviewees to each other within their respective organizations.

Data collected with the quantitative survey instrument is used to establish the 'state of play' amongst the sample firms with respect to the issues examined in this thesis. The data collected from the case study interviews provides for a more in-depth analysis of the issues. The content of this chapter has been restricted to the presentation, analysis and interpretation of collected data. The conclusions and implications flowing from this data will be discussed in chapter five.
In order to avoid confusion in presenting the data from the quantitative survey, which consisted of fifteen questions, and the qualitative survey, which had forty questions, where reference is being made to questions in the quantitative survey, the question number being referenced will be preceded by a lower case ‘q’. Questions which are referenced from the qualitative case study interviews will be preceded by an upper case ‘Q’.

4.2 Quantitative Survey Respondents

The sample population from which the respondents to the quantitative questionnaire were drawn was described in the methodology chapter. Specific demographic data for each of the responding firms is contained on the first page of Appendix XVI (page 183). The criteria for inclusion in the sample population was annual sales of more than ten million dollars for firms located in the south west Sydney region. The actual sales figures for the completed financial year before the date that the questionnaire was administered ranged from $10.5 million to $617.48 million. Employee numbers ranged from 25 to 1500. Twenty of the organisations were Australian owned whilst fourteen were foreign owned. Twenty-two firms were manufacturers and twelve were service organisations or retailers.

A breakup of the number of departments within the responding firms was presented in Table 3 on page 33. Information on the authority level of the respondents to the quantitative survey is provided in Table 5 on page 46. This data was used principally in analysing proposition two.

4.3 Case Study Subjects

Information on the case study firms was provided in the methodology but is presented below in a summarised format in Table 4. In addition, the status of the interviewees is provided. This information is provided for ease of reference when reviewing the data.
in the following sections. Where quotations are used, respondents will be referred to by position and company. The relationship of interviewees is shown in stem-and-leaf format in Figure 3.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Subject Profiles of Case Study Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Company A</td>
</tr>
<tr>
<td>Sales $Millions</td>
<td>10.5</td>
</tr>
<tr>
<td>Employees</td>
<td>48</td>
</tr>
<tr>
<td>Divisions</td>
<td>N/A</td>
</tr>
<tr>
<td>Departments</td>
<td>6</td>
</tr>
<tr>
<td>Ownership</td>
<td>Listed on Aust. Stock Exchange</td>
</tr>
<tr>
<td>Sector</td>
<td>Manufacturing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Status of Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executive Director</td>
</tr>
<tr>
<td>2</td>
<td>Financial Controller</td>
</tr>
<tr>
<td>3</td>
<td>Operations Manager</td>
</tr>
<tr>
<td>4</td>
<td>General Manager</td>
</tr>
<tr>
<td>5</td>
<td>Company Secretary</td>
</tr>
</tbody>
</table>

Figure 3  Relational Diagram of Respondents
4.4 Patterns of data for the research propositions

4.4.1 Proposition One

That managers are unaware of the need to link performance measures to strategic goals and that, as a consequence, performance measures do not change to reflect a change in strategic direction.

4.4.1.1 Quantitative data analysis for Proposition One

In the quantitative survey, two questions were asked to obtain information relevant to this proposition. The first of these (Appendix I, q 15) asked whether performance measures were modified when there were changes in the organization’s strategic objectives. The 34 responses are summarised in Figure 4. Respondents strongly indicated that performance measures will change when there is a change in strategy. Thirteen firms (38.2%) reported that this was usual, eight (23.5%) said performance measures were often changed when strategies changed, and nine (26.5%) said that performance measures were always changed when there was a change in strategy. Overall, 30 firms (88.2%) reported a strong influence on performance measures brought about by changes in strategy.

Figure 4 Responsiveness of Performance Measures to Strategy Shifts
The second question (q 16) which examined the relationship from the perspective of performance measures, asked whether the organizations used performance measures to identify areas that require a strategic focus. Their responses are shown in Figure 5. One firm said that it never used performance measures to identify areas for strategic focus, two said rarely, eight sometimes, fourteen frequently, and nine as a matter of policy. Thirty-one firms (91.2%) admitted to some use of performance measures in determining strategy, and twenty-three (67.6%) reported a strong association, i.e., either frequently or as a matter of policy.

In the literature review, the need to have a performance measurement system which provided the data for strategic decisions was discussed (Vaziri, 1992; Fitzgerald et al., 1991; Kaplan & Norton, 1996). The necessity to link performance measures to strategic goals was also clearly identified (Dixon, Nanni & Vollmann, 1990; Kaplan and Norton, 1992; Neely, Gregory & Platts, 1995). The responses shown in Figures 4 and 5 indicate that firms use performance measurement systems to influence strategy and these systems are, in turn, influenced by strategic change. In this respect it would seem that managers are aware of the need to link performance measures to strategic goals.
As was mentioned in the chapter on methodology, this quantitative survey was addressed to senior executives because of the information sought on organizational strategy and the broad view needed to respond to certain questions, such as the relative use of performance measures in different departments. Table 5 lists the authority level of the various respondents to the quantitative survey.

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO/General Manager/Mng. Director</td>
<td>16</td>
</tr>
<tr>
<td>Group Manager</td>
<td>1</td>
</tr>
<tr>
<td>Divisional/State Manager</td>
<td>1</td>
</tr>
<tr>
<td>Operations Manager</td>
<td>1</td>
</tr>
<tr>
<td>Financial Mgr./Chief Accountant</td>
<td>8</td>
</tr>
<tr>
<td>Sales/Marketing Manager</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
</tbody>
</table>

If the stratification of management along vertical lines resulted in a separation of responsibilities when it came to setting strategic goals and performance measures, then the opportunity for performance measures to be divorced from strategic goals would be present. To determine whether there was such a separation of responsibilities when it came to setting strategies and setting performance measures, two questions were included in the quantitative survey. The first of these (q 9) asked what degree of involvement different levels of management had in determining the organization’s strategic objectives, the second (q 12) asked the same question with respect to performance measures. The choice of responses for both questions and the weightings given to each were None (0), Minimal (1), Some (2), Most (3), or All (4). The responses were then averaged to generate Figure 6.

Whilst there is a greater input into strategic decisions at the more senior levels of management (Figure 6 and Table 6), there is no clear cascade effect down from the highest level of management, the owners, when it comes to strategic decisions. Further analysis of the data will be used to offer explanations for this. A few firms (5) reported the involvement of ‘others’, albeit at a low level, in the strategic decision making process. This may be because the question on strategy did not offer the choices of Junior Management/Supervisor or Operational Personnel. It could also mean that external parties (such as creditors) had an influence on strategy. The
response is weak, indicating involvement at a minimal level, and unlikely to be a factor in considering why performance measures might not be aligned to strategy.

Figure 6  

**Decision Makers for Performance Measures and Strategic Objectives**

With regard to performance measurement, Figure 6 shows that there is a greater involvement of lower levels of management and personnel in non-management positions relative to their involvement in strategy. If these lower levels of management put performance measures in place without an awareness of their impact on strategic plans then they may lead personnel to follow a course of action which is inappropriate for the chosen strategy (Starcher, 1992). Again, the owner category has less impact on performance measures than that of senior management.

**Table 6  Input of Personnel into Strategic Decisions**

<table>
<thead>
<tr>
<th>Group</th>
<th>Owners</th>
<th>Senior Managers</th>
<th>Dept. Managers</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.382</td>
<td>2.676</td>
<td>1.824</td>
<td>0.545</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.101</td>
<td>0.976</td>
<td>1.086</td>
<td>0.833</td>
</tr>
<tr>
<td>F - ratio = 29.31,  p = 0.000,  d.f. = 2, 129</td>
<td></td>
<td></td>
<td></td>
<td>46</td>
</tr>
</tbody>
</table>
Table 6 presents data from the quantitative survey concerning the input of various levels of management into strategic decisions. A one way analysis of variance of data of this analysis shows that the variable ‘Management seniority’ is statistically significant at the 99.9% confidence level. Whilst not unexpected, what is less clear is why owners would have less input into such decisions than senior managers. A closer examination of the data was made to determine why this might be so. Two possible explanations were considered. First, for foreign-owned companies there is generally a separation of ownership and management. Thus for foreign-owned firms, a higher strategic input by local management would account for such a result. Second, the size of the company, as measured by employee numbers, will have an impact on the management structure and possibly lead to a dilution of the owners’ contributions to strategic decisions. Figures 7 and 8 present data relevant to the first issue and Figure 9 presents data relevant to the second.

Figure 7 Decision Makers for Performance Measures and Strategic Policy in Australian-owned Firms
Figure 7 revisits the data contained in Figure 6 after eliminating those firms which reported majority foreign ownership, in order to determine whether it was influencing the level of ownership input into strategic decisions. Foreign ownership represents a separation of ownership from the management structure of the Australian subsidiary. As well, distance may be a factor in the degree of owner involvement in strategic decisions. Figure 7 presents data for the 20 Australian-owned firms. It shows a higher level of involvement by owners in strategic decisions. Figure 7 also clearly revealed an hierarchical top-down approach to strategic decision making, with lower levels of management having less input.

**Figure 8** Decision Makers for Performance Measures and Strategic Policy for Foreign-owned Firms

![Bar Chart](image)

Figure 8 shows a substantially lower level of involvement by foreign owners in the setting of strategic objectives, perhaps for those reasons mentioned above (separation of management and ownership/distance). However, it would be inappropriate to read too much into data derived from a sample of 14 foreign-owned firms. Further, what is more relevant to the issue of aligning performance measures with strategic goals in the
context of proposition one is the relative input into both strategy and performance measures that the various levels of management have. As Figure 7 shows, for Australian firms, at the three senior management levels, these functions are closely related. Figure 8 shows that the same association holds for foreign firms, though not as strongly. The input into the selection of performance measures by junior managers and operating personnel is minimal for both domestic and foreign firms.

The second issue to be examined was the impact of company size, as measured by employee numbers, on the strategic input of owners. The data presented in Figure 9 comes from cross-tabulating responses to question 9 of the quantitative survey with employee numbers provided in the Dun & Bradstreet database. The foreign-owned firms were excluded in order to remove the impact of that variable on the results.

Figure 9  Impact of Size on Strategic Input of Owners in Australian Firms

In question 9 the choice of responses for strategic input of owners were None (0), Minimal (1), Some (2), Most (3) and All (4). No clear pattern emerges from Figure 9 on the impact of firm size on the level of owners’ input into the strategic decision making process (Regression equation: Owner input = 3.12855 - 0.000973 * Number of employees; R² = 0.158). The expected inverse relationship between the number of
employees and the degree of owner involvement in strategic decisions is weak. This may be due to the size of the sample (20), the fact that only one respondent from each company was surveyed, the nature of the responding units (the three largest were franchise operations), or a combination of these or other factors. Similar regression analyses for different levels of management showed no significant link between company size and the degree of input into strategic decisions. In fact, at the senior management level, involvement on strategic decisions was independent of company size ($R^2 = 0.000$).

Since the input into strategy and measurement is similar at the three higher categories of management, the data presented in these figures does not support the argument that the involvement of owners and a stratified management structure will result in performance measures which are unrelated to strategic objectives. What is not clear is the importance and impact of the decisions made at the various levels of management. For instance, at the highest level, group strategy would be determined and appropriate group measures established. At the next level, say divisional management, strategies and related measures would be set which may not be well aligned with the group strategy. Finally, at the operational level, more focused strategies and measures exist. These too may be unrelated to group strategy, especially where the departmental managers are reacting to performance measures which have been linked to their personal remuneration or promotional prospects (Neely, et. al. 1995; Starcher, 1992).

At the respondents’ level of management, one would expect an awareness of the importance of linking strategies and performance measures. However organizations are controlled by groups of individuals and the link may break down where there exist different levels of managerial responsibility. To examine whether this might be the case a one way analysis of variance was done which compared the responses given at question 15 to the authority level of the respondent, given in question 4. Three groups were identified. The most senior group included CEOs, General Managers and Managing Directors and had 16 respondents. The second group included Financial Controllers, Financial Managers and Chief Accountants and had 8 respondents. The
third group included all other managers and had 10 respondents. The data is presented in Table 7.

<table>
<thead>
<tr>
<th>Group</th>
<th>CEOs</th>
<th>Financial Managers</th>
<th>Other Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.94</td>
<td>4.00</td>
<td>2.90</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.1236</td>
<td>0.7559</td>
<td>0.5677</td>
</tr>
</tbody>
</table>

F-ratio = 4.76, \( p = 0.016 \), d.f. = 2, 31

The interpretation from Figure 4 and Table 7 is that, whilst in the aggregate managers are aware that performance measures should change in response to changes in strategic direction, this response is not uniform for different levels of management. The strength of the response is statistically significant at the 95% confidence level. At the most senior level, and in the finance area, managers will be more likely to modify their measures of performance when there are changes in strategy. This analysis of managerial input into strategic decisions is made on vertical lines. The impact of dividing managers’ responsibilities along functional (horizontal) lines will be discussed under proposition two. Whether the strategic input of different levels of management and the performance measures that they use are integrated, in order to enhance group strategic outcomes, will be discussed when the qualitative data relevant to proposition one is presented.

4.4.1.2 Summary of Quantitative analysis for Proposition One

When examining an hierarchical structure, one would expect that, irrespective of which level of management were to respond to a survey instrument of the type shown in Appendix I, the data collected would show a close correlation between the degree of involvement of various levels of management in the setting of strategy and performance measures. This is because the information is being provided by one individual. Whilst this information is useful in determining whether managers are aware of the need to link performance measures to strategic goals, what is even more relevant is whether such measures and strategies interact with each other.
The data presented so far supports the view that managers are aware of the need to link performance measures and strategic goals, but that the level of awareness diminishes with managerial seniority. With several layers of management having an input into strategic decisions and the selection of performance measures, the strength of the link between the two will be influenced by how well managers communicate within an organization. This would be especially true with regard to strategic decisions which impact throughout an organization. Such strategies would need to be effectively communicated so that parties in a position to influence strategic outcomes could ensure that they were using an appropriate set of performance measures to guide their actions (Dixon, Nanni & Vollmann, 1990). The interaction of various levels of management is examined in the following section.

4.4.1.3 Qualitative data analysis for Proposition One

In order to evaluate how well firms integrate performance measures with strategies, a more in-depth case study approach was taken which involved two firms from the quantitative survey. In particular these case studies sought to establish whether managers within an organization effectively communicated strategies to their subordinates. Five managers (Table 4 and Figure 3) from each firm were interviewed and asked a series of forty questions (Appendix II). Their responses have been summarised in matrix format in three appendices, numbered III through V, with the information relevant to each of the research propositions included in a separate appendix. The response matrices for proposition one through three are listed in Appendices III through V respectively. When the responses are commented on, the relevant question from the qualitative survey questionnaire (Appendix II) is referenced in brackets, e.g. (Q 2). In this and the following sections the analysis of their responses is presented. On occasion specific responses are quoted to support the conclusions drawn from the data. Full transcripts of all interviews are provided in separate appendices (Numbered VI through XV inclusive) at the end of this thesis.
When the various managers at each organization were asked who was responsible for setting strategic direction (Q 2), managers from the smaller firm 'A' unanimously replied that the Board set strategic direction. Four of the five respondents also advised that the General Manager, who attended all Board meetings, had an input as well. The decision process was very centralised, so no ambiguity as to strategic intent should be present. For the large company 'B', the opposite was the case. Opinions as to responsibility for strategic direction were diverse. Broadly their responses could be interpreted as the General Managers setting overall strategy, whilst the divisional executives set direction at that level. The two junior managers (B4 & B5) thought that the Board was responsible for setting strategy. The most senior manager B1 reported that the General Managers in conjunction with the Managing Director were responsible for strategy at the corporate level. For the larger company there was a greater involvement of senior management in setting strategy. This was not unexpected, but the issue to be addressed is whether a centralised or decentralised strategy setting environment would lead to differences in the way strategies were communicated. If strategies are not communicated effectively then the performance measures used to monitor progress towards strategic goals could be inappropriate.

When the managers were asked what the organization’s main strategic focus was at that time (Q 13), four of the managers at company A agreed that increasing sales was vital, though ways of achieving this varied. Also mentioned were quality, profitability and capacity utilisation. The focus was very much on survival, but the approaches needed to accomplish this were unclear to middle management. The financial controller looked to a sales led recovery with short-term funding built into each bid (e.g., up front deposit for materials). The operations manager saw sales being obtained through low bidding, but believed the strategic focus to be on increasing capacity to cope with the planned increase in sales. The general manager saw product diversification as a way to increase sales profitably, as opposed to the survival mode tactic of bidding for work to simply recover overheads. The company secretary saw increased sales as coming from developing stronger ties with clients. The executive director did not specifically mention sales but saw quality, delivery and a world-competitive product as essential to their survival.
None of the four respondents who reported a strategic focus on increasing sales mentioned the word profitability. Even though profitability was a key concern of company A, the outcomes from successful bids were not known until weeks or months after a job was completed. In other words, the sales strategy could not address their principal concern with profitability because measures were not in place to evaluate the step-by-step actions of the manufacturing process. Also, different managers saw different priorities stemming from the sales push. Because there was no broad based performance measurement system to monitor activities or guide the actions of managers, each focused on their own areas of responsibility without any regard to the impact of their actions on profitability.

At company B four managers also reported a focus on sales and in contrast to company A, three linked sales to profitability. At company B, the strategic focus was generally agreed upon, as it was at company A. The difference was that at company B, strategies had a bottom line focus. Furthermore, company B had a well developed performance measurement system which allowed managers to evaluate the success or otherwise of their actions.

One possible reason why the managers at company B were in a better position than the managers at company A to achieve strategic outcomes could be that they had access to far better information, via their performance measurement system, with which to assess the results of their actions. A second is that they were more focused on the outcomes of their actions through the emphasis on profitability. A third could be the level of motivation of the managers at each company. When asked whether remuneration or promotion was linked to achieving objectives (Q 12) only one manager at company A said yes, whereas at company B only one manager said no.

A fourth possible reason could be that managers at company B had a greater input into the strategic decision making process. These managers should have a greater awareness of their role in achieving the company’s strategic objectives. When asked about management participation at strategy meetings (Q 5) all managers at company A
reported that it was at the Board level, although the Executive Director and General Manager stated that middle managers were involved in the practical aspects of implementing the strategies. (Because of the small number of employees at company A, all management below the General Manager is grouped together as middle management). None of the three middle managers reported any involvement in strategy meetings. At company B there was broad agreement that all levels of management participated in the strategic decision making process, even if they did not actually decide on particular strategies.

In the case studies, in addition to looking at involvement in and responsibility for strategic decisions, the strategic process was examined in some detail. When asked whether there was a procedure for strategy formulation (see Appendix III, Q 1), four managers at company A said no; the financial controller said yes and referred to “numerous committees and meetings at the higher levels”. Interestingly, both the Executive Director and General Manager said there was no procedure for strategy formulation. A similar response was obtained from managers at company B. Three were unaware of a procedure for strategy formulation, one said the process was now under review due to a corporate restructure, and the most senior manager, the Group Technical Manager reported that strategies were developed to meet a five year plan and reviewed on a regular basis. The closest either organisation approached to a formal strategic process appeared to be in connection with the preparation of annual budgets. At company B, managers were able to relate to this process through their awareness of the need to link strategy to profitability. The same could not be said for managers at company A.

Generally, the managers (7 of 10) reported no formal procedure for strategy formulation. Strategy was devised or reviewed at the same time as the annual budget and strategy meetings were held at various times throughout the year (Q 4). Managers at Company B reported less frequent strategy meetings, which could be indicative of better defined goals. At both companies lower level strategy meetings occurred more regularly, though at Company A these were more like progress report meetings where strategic objectives were reviewed (Q 10). At company A, strategy appeared less
clear cut. There the Executive Director equated strategy review with strategy formulation, the Financial Controller reported that strategy was probably not reviewed often enough, the Operations Manager who reported no involvement in strategy, believed production [i.e. output] was his strategic objective [as opposed to improving productivity], the General Manager equated strategy review with monthly talks with all personnel “about where we’re going, how we’ve been performing, areas of improvement et cetera”, and the Company Secretary said “Quite honestly I don’t think that we really know all strategic changes and I don’t think they’re actually reviewed at all”. In no instance were strategies at company A linked to actions and measures as suggested by Dixon, Nanni & Vollmann (1990).

A comparison of company A and B shows that Company B has more sharply focused strategies which are related to bottom line outcomes. This may be due to the degree of involvement of lower levels of management in the process of devising strategies (refer response to Q 5 by B1 in Appendix XI) as well as other factors mentioned earlier (information, focus on profitability, motivation and involvement in strategic decisions). But it could also be due to the way that strategic goals are communicated throughout the organization.

When the process for communicating strategies at both companies was compared they turned out to be fairly similar (Q 6). Strategy was conveyed by word of mouth and passed down through the various tiers of management. As the Group Technical Manager at Company B pointed out, this could lead to subjective interpretation, “down through the line managers where those words tend to be refined, interpreted depending on what the manager believes is the hearing or listening capability of his audience”. At the manufacturing level, the Factory manager at company B advised that for significant strategies they would have “a complete shutdown of the plant” for the duration of the meeting and run three sessions a day to inform the three shifts “so that all of the employees in the factory get the same message in the same 24 hour period”. For the more geographically diverse sales force, the telephone was the initial means of conveying short-term strategic shifts. As the Commercial Manager said “the market is very volatile and you have to react almost instantaneously”. At company A,
strategy was also generally communicated by word of mouth. All managers met monthly to discuss results and progress against budgets. Operating personnel were appraised of the company's progress at monthly barbecues, which were far less formal than procedures followed at company B.

The case studies showed that the strategic focus at both organisations was directed towards increasing sales. This appeared to be communicated in a similar manner throughout both organisations. The difference between the organisations lay in the linking of strategies to outcomes. There was a much more clearly defined linkage at company B. The point emerging from the case studies was that communicating strategy is insufficient to ensure that performance measures are linked to strategic outcomes. A methodology for achieving strategies must also be promulgated. This requires linking actions to strategies and linking performance measures to actions.

On the assumption that such a process was occurring at company B and not at company A, one would expect a different response to the question of whether performance measures change to reflect changes in strategy. This question (Q 29) was put to respondents in the case studies and the expected difference did emerge. At company A there was one yes response from the Financial Controller and it related to financial measures of performance. Unfortunately, any bottom line improvement would have to come from improvements in the underlying processes (Walsh and Sinclair, 1995). A qualified yes came from the Executive Director who was looking for improvement in tracking and achieving strategic goals. The other three managers said that this did not happen. The company's overall position was expressed by the General Manager who responded "I don't think we're well enough organised to do that as yet. It may well happen but I couldn't say that I think about it and do it. ... The performance measures haven't been pushed from an overall strategy or direction of the firm". At company A, the performance measurement system was inadequate for the purposes of monitoring changes in strategic direction.

At company B three managers reported that performance measures changed to reflect changes in strategy. The other two managers responded that performance measures
did not currently change to reflect changes in strategy, though both responses were indicative that the existing performance measurement system could capture the information needed to monitor strategic changes. The IT manager, in responding to Q29 replied “I have done. [But] In this current job I have found no need to change the existing measures”. The factory manager gave a similar response “The measures themselves are fairly well established now. As far as I’m aware, the measures that we have now would cover any change in strategy”. Both responses indicate that strategic change, though not leading to the implementation of new performance measures, will result in a shift in focus on the measures that monitor the effect of a strategic change. Clearly at Company B, strategic goals are monitored through the performance measurement system.

4.4.1.4 Summary of Qualitative analysis for Proposition One

The information gathered in the quantitative survey and the case studies provided some support for the proposition that managers were aware of the need to link performance measures to strategic goals. This being the case, performance measures should change to reflect changes in strategic direction. However, this supposition appeared to break down in the case of company A. The reason for this appeared to be that at company A, strategies were not linked to outcomes through an action plan which could be monitored using appropriate performance measures. This in turn could be attributed to the fact that middle management at Company A had only a minimal input into the strategic decision making process.
4. 4. 2 Proposition Two

That the link between the performance measurement system and organizational goals is weak because the organization’s structure inhibits a coordinated approach towards achieving strategic objectives through the use of performance measures.

In this section, the way in which department managers interact to achieve strategic objectives will be examined. In proposition one, management interaction was examined in a vertical framework with particular attention given to the way that strategic objectives are communicated. Proposition two concentrates on the horizontal interaction of managers, with particular attention given to the way they use performance measures to manage their own areas of responsibility and complement the activities of managers in other parts of the organization. Under proposition one, whether managers ‘integrated’ performance measures with the organization’s strategy was examined.

Under proposition two, the way department managers integrate their actions through the use of performance measures to generate goal congruent behaviour is examined. This is important to the overall success of the organization because independent action at the departmental level may satisfy the performance criteria for that department but be counterproductive at the aggregate level (Starcher, R. 1992; Kaplan and Atkinson, 1989; Nanni, Dixon and Vollmann, 1992; Neely et al., 1995). A good example would be an organization’s strategic goal to reduce delivery time on customer orders. The purchasing department could reduce delivery time on raw materials by seeking alternate suppliers. They reduce ordering time and satisfy their measurement criteria. However, the new supplier’s product, despite being within specification performs differently, leading to production blowouts. The net result may be no improvement or worse, and the production department may be deemed to have performed poorly with higher levels of rework and increased production time. Occurrences such as this resulted in calls for integrated measurement systems which aligned departmental

Proposition two of this thesis looks at whether an organizations' structure, as measured by the diversity of its management structure, might weaken the link between strategic goals and the performance measures which are in place to facilitate the achievement of those goals. In presenting the data relevant to proposition two the perspective will be on the formulation and implementation of performance measures and the expectations managers' have about those measures. Thus this section looks at the strategy -performance measurement link from the bottom up, as opposed to the top-down view adopted in proposition one. Such an approach is consistent with the interactive relationship between performance measures and strategy which was presented in chapter two, Figure 2.

4.4.2.1 Quantitative data analysis for Proposition Two

Data was obtained from the quantitative survey on the relative use of performance measures by different departments within the responding organizations (q 10). This data provides an overview of which departments in the responding firms had the larger number of performance measures in relative terms. Not all firms would have had managers for all the functional areas listed, but the sample population was selected with the expectation that respondents would have a reasonably complete coverage of the departments identified in the question.

A summary of the departments in the responding firms is given in Table 8. In this Table the functional departments are listed along with the number of firms having a discrete department of that type. The figure in the 'Use' column represents an average from the data provided by firms with a department of that type. The person completing the questionnaire was asked to estimate the number of performance measures used in the designated departments. The choice of response classifications and the weightings attached to each were N/A (-), none (0), few (1), several (2) and
many (3). Firms not having a listed department (response = N/A) were not included in the calculation for relative use for that particular department, in order to preserve the comparability between departments.

Table 8  Functional departments in responding firms and relative use of performance measures

<table>
<thead>
<tr>
<th>Department</th>
<th>Number</th>
<th>Use</th>
<th>Department</th>
<th>Number</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>32</td>
<td>2.19</td>
<td>Marketing</td>
<td>27</td>
<td>2.00</td>
</tr>
<tr>
<td>Personnel</td>
<td>28</td>
<td>1.71</td>
<td>Sales</td>
<td>31</td>
<td>2.26</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>19</td>
<td>1.47</td>
<td>Distribution</td>
<td>24</td>
<td>1.50</td>
</tr>
<tr>
<td>Information Technology</td>
<td>24</td>
<td>1.33</td>
<td>Purchasing</td>
<td>30</td>
<td>1.50</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>22</td>
<td>2.23</td>
<td>Quality</td>
<td>28</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Thirty-two firms provided valid responses on departmental use of performance measures, with the greatest relative number of performance measures being reported in the sales (31, 2.26), manufacturing (22, 2.23) and finance (32, 2.19) departments. This information confirms the contention of the literature that there is a tendency to concentrate on financial measures (Banks & Wheelwright, 1979; Kaplan & Atkinson, 1989; Keegan, Eiler & Jones, 1989). The strong response for performance measures in the sales department is in line with the reported strategies of the surveyed and case study firms. As well, it is indicative of the financial imperative underlying performance measures. Only 22 responding firms had manufacturing departments. The strong use of performance measures there may be a function of the relative complexity of manufacturing processes.

The rationale behind the question on the relative use of performance measures was to determine whether there was a departmental bias in the use of performance measures. It has been said that "performance measurement is a key factor in ensuring the successful implementation of a company's strategy" (Berliner & Brimson, 1988), so those departments which show relatively lower usage of performance measures might not be contributing as strongly as they could to strategic goals and outcomes. The data from Table 8 is presented graphically in Figure 10 and clearly shows that there are differences between departments (Analysis of variance: F statistic = 4.14, p = 0.000, d.f. = 9, 255). But these differences do not necessarily mean that departments with relatively few performance measures are not making an adequate contribution to
the strategic objectives of an organization. Three factors which would have a strong bearing would be the relevance of the performance measures to the activities being monitored, the frequency with which performance measures are reviewed, and the way departmental performance measures integrate with those of other areas of an organization.

![Departmental use of performance measures](image)

The relevance of particular performance measures will be affected by the scope and complexity of the activity being measured. For instance, in the manufacturing department complex processes may require a great many measures to monitor activities, and multiple measures of particular activities might be needed to provide reliable information. On the other hand, performance measures for information technology departments might be rudimentary for many organizations, for instance, the number of calls to a service provider for hardware and software maintenance, whereas the provider of such services may require many more measures within its IT department. Whilst variability in the number of performance measures used by departments may not be a strong indicator that an organization’s structure inhibits a coordinated approach towards achieving strategic objectives it does establish that there are departmental differences which may give rise to a weakening of the link between strategy and performance measures.
In an earlier part of this section an example was provided (delivery time) of a situation where poorly integrated departmental performance measures could be counterproductive when it came to strategic objectives. In the qualitative data presented for proposition two, possible causes for this will be explored. In the following paragraphs, the effective use of performance measures is examined by comparing the frequency with which various departments actually review the performance measures that they have in place.

Respondents to the quantitative survey were asked to estimate the frequency with which results of performance measurement were examined for different departments (q11). The information obtained is summarised in Figure 11. The choices available, and the weightings allocated to each were daily (6), weekly (5), fortnightly (4), monthly (3), quarterly (2) and yearly (1). Responses were weighted so that the larger the number, the greater the review frequency. Analysis of variance of the frequency of review between departments was statistically significant at the 99.9% confidence level. (F statistic = 7.85, p = 0.000, d.f. = 9, 259)

![Frequency of review of performance measures](image)

The frequency with which performance measures are reviewed ranges on average from almost weekly (4.71) for sales departments (31) to little better than quarterly (2.15) for the R&D departments (19). The frequency of review of performance measures is indicative of the availability of information provided by the reporting

63
system. Measures of output, in physical and monetary terms, which are easily quantifiable predominate in the Sales, Finance and Manufacturing areas and attract the greatest attention. In departments where fewer measures are reviewed less frequently, such as R&D, IT and Personnel, measurements tend to be more subjective. The longer time between reviews also means that a backward looking perspective would tend to dominate. The three departments which appear to receive the least attention from the performance measurement system would feature prominently when evaluating an organization’s long-term prospects. Again the notion that performance measurement systems have a short-term focus is reinforced.

The information shown in Figures 10 and 11 has been combined in Table 9. Here the figures for average relative use of performance measures by department have been multiplied by the figures for frequency of review of performance measures. By implication, the higher the number, the greater the degree of control being exercised within departments.

<table>
<thead>
<tr>
<th>Department</th>
<th>Degree of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>10.64</td>
</tr>
<tr>
<td>Finance</td>
<td>8.62</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.62</td>
</tr>
<tr>
<td>Marketing</td>
<td>7.56</td>
</tr>
<tr>
<td>Quality</td>
<td>7.56</td>
</tr>
<tr>
<td>Distribution</td>
<td>6.24</td>
</tr>
<tr>
<td>Purchasing</td>
<td>5.07</td>
</tr>
<tr>
<td>Personnel</td>
<td>4.75</td>
</tr>
<tr>
<td>Information Technology/Communication</td>
<td>3.52</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>3.17</td>
</tr>
</tbody>
</table>

The validity of the data presented in Table 9 as to the degree of control evident within various departments is not critical to the proposition under discussion. The figures for ‘degree of control’ provide an ordinal ranking for the various departments without any claims being made for the magnitude of the differences. It does however provide a clear picture of the uneven use of performance measures within organizations. This has implications from the total quality and continuous improvement perspectives
where the four ‘weakest’ departments are significant providers of inputs into the
general business growth and development.

The quantitative research component has established that performance measures
receive unequal treatment within the various departments of organizations. In the
qualitative review that follows, why this is so, and the impact that this might have on
the strategy - performance measurement link is examined.

4. 4. 2. 2 Qualitative data analysis for Proposition Two

During the course of the company interviews managers were asked whether they
discussed ways of achieving strategic objectives with other managers (Q 8). Nine of
the ten interviewees said that this was done. When asked whether their performance
measures tied in with those of other managers (Q 18) a positive but less strong
response was given. Six replied in the affirmative, three were unsure, and one said
that they did not. The ‘no’ response came from the financial controller at Company A
which supports the picture that emerged in proposition one that departmental
managers of that company were not aware of the impact that their actions, as reflected
by their performance measures, would have on profitability. Two weakly positive
responses came from managers at Company B. One stated that the tie in was at a
broad level, with no formal attempt to coordinate performance measures. Rather, the
connection occurred because of a suite of group performance measures which were
required to be reported on for all business units. The second manager stated that “I
wouldn’t know how well they relate to other areas” once you went beyond the group
measures.

Thus far the information being provided by managers would indicate that on the
whole an effort was being made to coordinate their actions in the pursuit of strategic
objectives. Since the effectiveness of such actions would have an important bearing
on the efficiency with which strategic goals were pursued, a number of questions were
directed towards identifying factors which might hinder or promote the formulation and implementation of appropriate performance measures.

Managers were asked whether the corporate culture (explained as the accepted way of doing things within the organisation) inhibited their ability to implement strategic changes (Q 3). Three of the managers at Company A and one at Company B replied that it did. Two other managers at Company B replied that it did not help, and one said that cultural inhibitors were a problem in the past. Only three managers felt that cultural factors were not a problem. One method of implementing strategic change would be through the establishment of appropriate sets of performance measures, but if managers felt that establishing such measures would create an adverse reaction then they might be inclined to carry on with existing measures or gather data on new sets of performance indicators without communicating performance targets to the appropriate operators.

Cultural constraints can be thought of in terms of resistance to change and inertia. In the literature strong leadership and support from senior management are seen as necessary to break through such barriers (Simons, 1991). Still other constraints arise from specific company policies and resource limitations. When questioned on these issues the managers from both companies provided a mixed response (refer Appendix IV, Q 7). Half the managers responded that they did not feel constrained in their efforts to achieve strategic objectives. Two felt that the attitudes of fellow employees could be a constraint at times and four felt that financial resource constraints restricted their ability to implement some changes. The impression gained during the interviews was that such constraints were accepted by the managers and were not perceived as a source of discontent.

4. 4. 2. 3 Ownership of the performance measurement system

When the managers were asked who was responsible for the performance measurement system (Q 16) all of the managers at Company B replied that such
responsibility lay with the department manager. As well, the factory manager at Company B, stated that the General manager was responsible for the “main group measurements”. By contrast, four managers at Company A said that the general manager was responsible for the performance measurement system, whilst only one department manager, the financial controller, claimed any responsibility for performance measurement.

Ownership of the performance measures for a given department appeared to have a significant impact on perceptions of the performance measurement system. When asked about the adequacy of the performance measurement system for controlling business activities (Q 25) four managers at Company B said that it was adequate. The dissenting voice provided the qualified response that to be effective performance measures need to be tied to an incentive system. At Company A, three managers thought that the performance measurement system was inadequate. As well four of the managers at Company A thought that the performance measures were reactive (Q 17) to changes in strategy, whilst only one manager at Company B felt this.

Even though nine of the ten managers responded positively when asked whether they discussed ways of achieving strategic objectives with their colleagues (Q 8), such discussions may not have involved the complementary use of performance measures. The response to the question of performance measure compatibility was less strong (Q 18), particularly in Company A where responsibility for performance measures was vested at the most senior level (Q 16). What compatibility of performance measures there was at Company A could be attributed to the centralised decision-making process but this had an adverse trade-off. There appeared to be a negative relationship between perceptions of the adequacy of the performance measurement system (Q 17 and Q 25). At Company B the integration of performance measures was achieved through its Manufacturing and Business Excellence Plan (MBE) where “there was [a] very specific criteria for those measurements with goals at the end of it” (Factory Manager, Q 17), and the way in which performance measures were developed. In the following paragraphs, the formulation and implementation of performance measures is examined in more detail.
4.4.2.4 Formulation and implementation of performance measures

Firstly, there is the issue of how performance measures are decided upon (Q 19). It may be that whilst responsibility for performance measures does not reside with a manager, he may nevertheless contribute to such decisions. A wide spread of options (7) were offered by the respondents. This is indicative that no formal process was in place for deciding which measures to develop even though there has seen a great deal of academic activity in this area in recent times (Neely et al, 1995; Merrifield, 1994; Nanni, Dixon & Vollmann, 1992).

Whatever the criteria for performance measure selection, once certain measures had been selected, the next issue which might enhance the prospect of integrating them would be the process by which they were developed (Q 20). Responses here provided some prospect of such measures being complementary. For Company A, four managers responded - again - that this was done at a higher level whilst two (one manager suggested dual input), spoke of a consensus by department managers. The responses from Company B managers were more diverse but nevertheless were largely conducive to such measures being complementary among departments.

4.4.2.5 Communication of performance measures

Once the decision on what to measure and the development process are complete it then remains for management to communicate these performance targets throughout the organization. If this is not done effectively then the ability of performance measures to encourage a unified approach to the achievement of strategic goals will be compromised. According to the respondents in the case studies, performance targets are communicated through wider means (Q 21) than are strategic objectives. Recall that in proposition one all respondents reported that strategic objectives were communicated verbally and in an informal way (Q 6 in Appendix III). With performance targets, three managers reported that they were communicated verbally,
two said charts were used, three replied that they were highlighted in monthly reports and one said that they were featured in the annual budget process. Two managers at Company A said that performance targets were not communicated throughout the organisation. Unless such performance targets are conveyed throughout an organization, it is difficult to see how performance measures can be used by managers to develop a coordinated approach towards achieving strategic objectives.

In questions relating to proposition one, the managers were asked what the organisation’s main strategic focus was (Q 13). Eight of the ten mentioned sales, with four managers at Company B also referring to profitability. When asked where the focus of their performance measurement systems was (Q 24), none of the Company A managers referred to sales but they did refer to factors which would have a critical impact on sales. These included delivery times (2), quality (3) and customer satisfaction (2). This could be taken as a positive sign that the company was attempting to achieve its strategic objectives by focusing on performance drivers (Walsh and Sinclair, 1995). Unfortunately, these measures were not tied to measures of profitability. Delivery targets were achieved through additional man hours and overtime which reduced profitability. Improving customer satisfaction often meant doing additional work without charge. Efforts to improve quality, though viewed as a long-term investment were also having an adverse affect on profitability.

At Company B, three managers said their performance measures focused on sales, there was one reference each to safety, profitability and customer satisfaction and two references to their manufacturing and business excellence program which covered a broad range of performance targets. The link between performance measures and strategic objectives was straightforward.

The ten interview respondents provided ten different focal points (including 2 ‘Don’t knows’) for the performance measurement system (Q 24). Since different people have different job functions, the greater the number of personnel interviewed, the broader the range of performance measures that would be suggested. Therefore, the need to effectively integrate performance measures with strategic objectives, and effectively
communicate those performance measures, adopts greater significance as the size of the organisation increases. With the case study firms, the larger organization exhibited a better integration of strategy and performance measures. Both firms had similar strategic goals but their performance measurement systems were at different levels of development. Managers at both firms reported cultural and structural impediments to change strategies. One noticeable source of difference was the attitude of managers to performance measures (discussed under proposition three) which was poorer at Company A, where responsibility for them resided at higher levels.

Another important difference between the firms emerged when the interview data was analysed, namely the direction in which the performance measures should be encouraging managers to look. When managers were asked what they expected of the performance measurement system (Q 23) four managers from Company A and three managers from Company B said that they expected it to provide an accurate reflection of performance. Such expectations should be looked on as a minimum. Measures that reflect performance are, necessarily, backward looking, and are useful in the main for evaluating actions. Performance measures which deliver such outcomes were what Hiromoto (1988) and Simons (1991) would classify as coming from a system which sought to influence the behaviour and decisions of managers and control business activity. The danger would be that such measures could be too restrictive and thus adversely impact on strategic goals (Kaplan 1984).

Two other expectations were listed by managers at Company A namely, as a provider of information for strategic planning (1) and as a motivator for improvement (1). Both indicate a positive and forward looking application of the data provided by a performance measurement system. At Company B, the benefits which might flow from a performance measurement system were more evident. Three managers believed that it should provide data which would allow them to identify areas for improvement, two believed it should provide data for strategic planning, and one saw it as a means to meet objectives.
4.4.2.6 Summary of Qualitative Analysis for Proposition Two

Proposition two suggested that the link between an organisation’s performance measurement system and its strategic goals would be weak because the organisation’s structure inhibits a coordinated approach towards achieving strategic objectives through the use of performance measures. The quantitative survey data showed an uneven application of performance measures across departments. The approach of different department managers to the use of performance measures was examined in the case studies. No strong evidence emerged that an organisation’s structure would adversely impact on the way performance measures were used to pursue strategic goals. Indeed, the smaller of the two organisations, with a more centralised system for setting performance measures seemed to perform poorly by comparison.

Thus whilst structural complexity might increase the likelihood of a weak link between strategy and performance measures, it emerged that internal procedures for formulating and implementing performance measures played a more significant part in how well performance measures complemented strategic goals.

4.4.3 Proposition Three

That the dynamic environment in which firms operate serves to disassociate strategic objectives from the performance measurement system, and the lack of managerial attention to the link between the two will result, over time, in a set of performance measures which provide insufficient, late or wrong information on which to base decisions.

During the 1980’s Kaplan (1983, 1984a, 1984b and 1986) wrote several articles on the lack of relevance of performance measurement systems, with the emphasis on management accounting systems, cost accounting systems and manufacturing performance measurement systems. The relevance of an organisation’s current performance measurement system was also questioned by Keegan et al., (1989). Gordon and Narayan (1984) had observed that traditional accounting measures were
more appropriate where the competitive environment was less uncertain. Since that
time, the degree of competition to which Australian firms have been exposed has
increased substantially as a result of a deliberate government liberalisation policy.
Dixon, Nanni and Vollmann (1990) had commented that the relative use of
performance measures should increase if market stability is changing. Given the
increase in competition and market volatility there should be a correspondingly greater
need for close and effective management of an organisation’s performance
measurement system.

In this section the way that organisation’s manage their performance measurement
systems is examined. Proposition three will be evaluated using data collected
principally from case study interviews. The two previous propositions examined the
interrelationship of strategic objectives and performance measurement systems. For
proposition three, the performance measurement itself and the way changes are made
to it will be explored.

Proposition three implies, firstly that performance measurements systems exhibit a
degree of inertia; secondly, that there is no systematic management of the performance
measurement system; and thirdly, that data provided by performance measurement
systems is accepted at face value, without questioning its relevance. As in the
previous sections of Chapter IV, the data will be presented with brief comments and
observations. The responses obtained in the case studies which are relevant to this
proposition are presented in Appendix V. The conclusions and implications obtained
from the data will be presented in Chapter V.

4.4.3.1 Inertia in the performance measurement system

Some of the data presented in propositions one and two are worth reviewing in the
context of proposition three. Question 15 of the quantitative survey sought to gauge
how responsive performance measurement systems were to changes in strategy.
Thirty (88.2%) respondents reported that changes in strategy usually resulted in
changes to performance measures. In the case study interviews (Q 29), five (50%) of the managers interviewed stated that performance measures changed to reflect strategic change. When asked how often performance measures changed (Q 33, Appendix IV) one manager said never, four replied rarely, one said annually with budget, and four said variably as required. A more conservative response was obtained from the interviews with managers in the case studies. Further data from the case studies will now be presented on this issue.

The respondents were asked whether they had made any changes to performance measure recently (Q 28). At company A four replied yes and one replied no. The opposite was true at Company B. At first glance it would appear that Company B had a performance measurement system which exhibited signs of inertia. However, if an organisation has a well developed performance measurement system there may be no need to introduce new sets of measures. Existing measures may be such that a different group of measures may become the focus of the reporting system. For instance at Company B, the factory manager responded (at Q 29) “The measures themselves are fairly well established now. As far as I’m aware, the measures that we have now would cover any change in strategy”. On the other hand, an organisation with a poorly developed performance measurement system may not be in a position to change the focus on performance measures when there are changes in strategy. On this issue, the Operations Manager at Company A reported “In my time here we have always been reactive to jobs. We have always had the same overall view of things”. Even when new performance measures were introduced at Company A, they were not specifically a response to changes in strategy. As the General Manager at Company A reported “I don't think we're well enough organised to do that as yet.... The performance measures haven’t been pushed from an overall strategy or direction of the firm”.

In analysing the responses from the managers at the two companies, it appeared that the better developed the performance measurement system was, the better it was used to monitor strategic goals. At Company B, despite few reported changes to performance measurements, a within-system dynamism was exhibited by regular
shifts in the attention given to different measures, to address specific short-term strategic goals.

At Company A, the dynamism portrayed by the recent changes to performance measures could more correctly be described as chaos. This conclusion is captured by that company’s General Manager’s detailed response to question 28 “It [the performance measurement system] is continually upgraded because initially we got some measurements out and we said ‘Oh, this is good’, two weeks later we discovered they were abysmal. And we then quickly discovered that there is a degree of interpretation that you’ve got to go with your performance system, and also quite a large degree of investigation into the background behind what the results are and what they really mean”.

At Company A there was evidence of a lack of awareness of the information that particular measures of performance were conveying. This confusion arose because the company’s managers were trying to use aggregative measures, in an attempt to evaluate process performance, in the absence of performance measures which targeted specific activities. The need to have performance measures which were good indicators of outcomes, that is those which measure inputs, actions and processes, was not clearly appreciated. Only two of the five managers felt there was a need for more measures of this type (Q 27). At Company B, which had a more comprehensive set of measures, three managers were favorably disposed to more ‘indicative’ measures.

Apart from changes to performance measures themselves, another measure of inertia within the system is the timing of those changes with respect to changes in strategic goals. When asked whether changes in performance measures were decided upon concurrently with changes in strategy (Q 32), three managers at Company A replied that they did not know and one gave a qualified yes. At Company B, one manager replied that he did not know and four gave a positive response. These answers reflect those given at question 16 (responsibility for performance measures), where for Company A, four managers replied that the General Manager was responsible for the performance measurement system, whereas at Company B, all respondents reported
that responsibility for performance measures was vested in the department managers. These responses provide support for the conclusion that, where responsibility for performance measures is delegated to lower levels of management, the performance measurement system will be more responsive to changes in strategy. The proviso is that the organisation’s strategic goals are effectively communicated to all parts of the organisation.

As well as adjusting measures of performance to complement changes in strategy, there is the perhaps more challenging task of refocusing performance measures as strategies unfold. This is particularly true for long-term strategies involving sub-goals and wide ranging actions across an organisation. Six (60%) of the managers who were interviewed for the case studies reported that the strategic time frame affected the choice of performance measures (Q 31). The level of awareness of this important aspect of the link between strategy and performance measures was evenly spread across the two organisations.

When asked whether the types of performance measures used would change as the strategy developed (Q 30), only one manager said no, three were unsure, whilst six (60%) reported that a different set of performance measures would be used to monitor progress towards strategic goals. The ‘No’ response came from the Factory Manager at Company B who believed that the existing performance measures already captures such shifts, so he saw no need for change. He did however report “a change of focus on performance measures a couple of times” to accommodate “short-term problems within the company. For instance working capital problems might mean a focus on the value of product tied up in work in progress and finished goods, rather than on scrap or productivity” (Q 32). The responses to questions 29 through 32 support the view that managers are aware of the need to manage performance measures. This aspect of performance management will be examined in the following section.
4.4.3.2 Management of the performance measurement system

In proposition two, the issue of responsibility for the performance measurement system was put to the respondents (Q 16). At Company A, four (80%) managers advised that this responsibility lay with a more senior manager (the General Manager). At Company B, all five department managers reported responsibility for the performance measurement system. When asked how performance measures are decided upon (Q 19) the responses largely mirrored those for question 16. At Company A, one manager replied that this task lay with the manager who was responsible for the activity to be measured. Three managers at Company B gave a similar response. Three managers at Company A said decisions on what measures to use were made by a more senior manager, whilst only one manager at Company B gave this response. At Company A, not only was control of the performance measurement system more centralised, but decisions on the measures to be used were withheld from junior managers. The opposite situation prevailed in Company B. The implications of these two approaches to management of a performance measurement system are now discussed.

In order to have control of any aspect of a business, managers must have the freedom to implement changes. If an organisation had a rigid performance measurement system in place, its criteria would control the actions of managers, rather than permitting managers to control the processes of the organisation and the actions of subordinates. The control aspect of a performance measurement system can be beneficial (Hiromoto, 1988; Simons, 1991) provided the right performance measures are being used. The performance measurement system can also be detrimental where performance measures are not integrated with strategic goals (Dixon, Nanni & Vollmann, 1990; Kaplan & Norton, 1996; Fitzgerald et al, 1992).

With this background, effective management of a performance measurement system would require a degree of flexibility in the system. In the case studies, the managers were asked whether their performance measurement systems were standardised or flexible (Q 35). There was unanimous agreement amongst the managers interviewed
that there was some degree of flexibility in their measurement systems. Even though the manufacturing managers at each company classified the systems as “standardised/formal”, the Operations Manager at Company A said that “it is fairly flexible in the way it has been standardised”, whilst the Factory Manager at Company B said “We have a standard outline. ... Within that standard outline, one-off measures can be set up and there is a degree of flexibility”. Given this set of responses, for the two case study firms, the performance measurement system itself did not appear to present an impediment to aligning performance measures with strategic objectives.

Changes in strategic objectives are not likely to be the only trigger to changes in performance measures. When asked what generally initiates a change in performance measures (Q 34), the ten managers provided nine different examples, with some managers providing multiple examples. For instance, one manager from each company cited the Board of Directors, and two managers from each company cited strategic decisions, as initiators of change to performance measures. Other initiators related to conditions prevailing within each organisation. At Company A, where ISO9000 certification had recently been obtained, quality was seen as an initiator of change in performance measures, whilst market activity was influencing performance measures at Company B. One manager at each company cited new personnel as a reason for changing performance measures. With initiators of change to performance measures coming from a variety of sources, a delegation of responsibility for performance measurement selection and management is more likely to reduce the response time for changes to performance measures.

Most of the responses were not surprising given the nature of each business and the questions that had been asked previously. A response bias based on previous questions is not considered significant. Rather, previous questions had provided a better focus on relevant issues and generated more valid responses.

During the course of the case studies it became evident that the performance measurement system at Company B was superior to that at Company A. The bases for this conclusion are the bottom line focus for strategic objectives at company B, the
involvement of company B managers in the strategy formulation process, the more formal method for communicating objectives to personnel (refer to Appendix XII, Q 6), and the placement of authority for setting performance measures with lower levels of management. For instance, two managers at Company B stated that inadequate or inappropriate performance measures were responsible for a change in performance measures (Q 34). Where performance measures are being changed on the basis of their relevance to current needs it provides good evidence that the performance measurement system is being actively managed. On the other hand, at Company A, only the most senior managers could nominate which performance measures could be used.

When the types of responses at Q 34 and Q 35 are related to those of Q 17 a clearer picture emerges of the difference between the two case study companies on the issue of management of their performance measurement systems. In Q 17, which was also discussed in section 4.3.3.2, four managers at Company A felt their performance measurement system was reactive, whilst at Company B, four managers believed their system to be proactive to varying degrees. What the case study data seems to be saying is that for managers to effectively manage the performance measurement system, or at least the part which covers activities for which they are responsible, those managers must have the authority to initiate changes to the performance measurement system.

One other initiator of change is worth special consideration because it concerns a gap in the literature on the subject of performance measurement which has only recently received some attention. The change initiator referred to is the business life cycle. A manager from each company had mentioned the evolution of the business as an initiator of change. Some broad measures of performance which might be associated with different stages of the business life cycle are presented in Table 10.
Table 10  Performance measurement - life cycle relationship

<table>
<thead>
<tr>
<th>Development Stage</th>
<th>Strategic Focus</th>
<th>Measurement Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startup</td>
<td>External - Advertising</td>
<td>Sales</td>
</tr>
<tr>
<td></td>
<td>Internal - Systems development</td>
<td>Training</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure</td>
<td>Supplier reliability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overheads</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customer satisfaction</td>
</tr>
<tr>
<td>Growth</td>
<td>External - Market demand</td>
<td>Capacity utilization</td>
</tr>
<tr>
<td></td>
<td>- Competition</td>
<td>Distribution network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market share</td>
</tr>
<tr>
<td>Maturity</td>
<td>Internal - Cost minimization</td>
<td>Process efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit cost</td>
</tr>
<tr>
<td>Decline</td>
<td>External - Market conditions</td>
<td>Market research</td>
</tr>
<tr>
<td></td>
<td>Internal - New product</td>
<td>Product diversification</td>
</tr>
<tr>
<td></td>
<td>development</td>
<td>Research and development</td>
</tr>
</tbody>
</table>

O'Mara and Chapman (1996) had noted that “When the performance measurement system is considered within the context of the industry life cycle, it becomes apparent that at various stages, management will need to place a strategic focus on different parts of its performance measurement system”. The difficulty in determining strategy, and the associated performance measures within the context of the industry life cycle lies in recognizing what stage of its life cycle the firm is in. For instance, is a downturn in sales due to a sustained fall-off in consumer demand, or the continued success of competitors in a growing market? Relying solely on sales figures as a basis for action could result in wrong choices being made. As well as its own sales figures, information on total demand, the level of competition, and the firm’s own internal productive efficiency would be essential to choosing the most appropriate course of action.

In order to be able to recognise industry or product life cycle changes a broad range of measures need to be looked at. Such measures may be little more than indicators of life cycle changes, but given the far reaching impact of life cycle changes on a business, the effort involved in identifying a good basket of such indicators would be worthwhile. Typically such measures would include many which would normally be considered external to the key processes of the organisation. The incidence of such
measures would provide good evidence of a comprehensively managed performance measurement system.

4.4.3.3 Managers' evaluation of their performance measurement system

The data presented in this section was gathered in an effort to gauge how well attuned managers are to the effectiveness of their performance measurement systems. Information was collected on their perceptions of the performance measurement system's ability to monitor progress in achieving specific objectives. In addition, managers were asked to comment on the value and timing of data provided, the strengths and weaknesses of the performance measurement system, and specific areas where they felt improvements could be made.

A manager's evaluation of the performance measurement system will be related to their expectations of it. In the literature review several features of performance measurement were identified, one being that measurement is used to evaluate performance against strategic goals. By providing feedback on progress against plans it encourages goal congruent actions. This is an aspect of its control function. A second feature was that performance measurement can be used to identify areas for improvement. The performance measurement system then becomes a tool for planning, and an essential part of strategic decision making. Not unexpectedly, the ten managers who were interviewed in the case studies provided a range of responses when asked about their expectation of the performance measurement system (Q 23). These can be broadly categorised into planning or controlling functions. A number of questions drew responses on the managers' perceptions of those two aspects the performance measurement system.

When asked whether the performance measurement system allowed them to control business activities for which they were responsible (Q 25) 30% said yes, a further 30% gave a qualified yes, and 40% said no. On a company comparative basis, three of the five managers at Company A felt that their performance measurement system
was inadequate for control purposes. At Company B, only the Quality Manager felt that performance measures by themselves would not ensure an adequate level of control, but would need to be linked to some sort of reward system. These responses point out the dual aspect of the control function; firstly, to encourage goal congruent actions by personnel, and secondly, to minimise process variability. The response from Company B managers was evidence that performance measures provided the data with which to evaluate and control process variability, without perhaps, in the opinion of one manager, promoting goal congruent behaviour. At Company A however, even data on process variability seemed to be lacking, perhaps due in no small part due to the concentration of performance measures on outcomes.

In order for a performance measurement system to be an effective means of control, the information it delivers must be accurate and timely. A problem with traditional financial performance measures is that they presented summarised data of past events, often with a considerable lag. For control purposes, such information is generally inadequate, providing the opportunity to close the stable door only after the horse has bolted. When the respondents were asked whether their performance measurement system provided information based on outcomes or provided indications of expected outcomes nine (90%) said that it provided both types of information (Q 26). Only one, the most senior manager at company B, said that the performance measurement system provided him with ‘historical’ data. This was not unexpected given his principal preoccupation with planning and strategy rather than the day to day aspects of managing operations. Because managers will be evaluated on results (outcome measures, or key performance indicators) they need to be in a position to influence those outcomes by using performance measures which provide advance warning of those outcomes (key performance drivers).

When the managers were asked whether the performance measurement system gave them adequate feedback to optimise the way they managed (Q 11), two replied yes, six responded that it was ‘good in some areas, poor in others’, and two said that it did not. Taken critically, 80% of the managers interviewed saw room for improvement in regard to the adequacy of information provided by the performance measurement
system. Looked at individually, it appeared that the more narrowly defined the managers role, the more definite the response to this question. Further the six managers who had a ‘bit each way’ were often required to use measures of performance which involved subjective decisions on such things as overhead allocation or customer evaluation. For example, the Commercial manager at company B was ambivalent “...because a lot of the strategies that we are implementing are just dollars or numbers strategies. It doesn’t tell you whether you have got a better relationship today with your customer than you had twelve months ago. It’s generally a perception by the client’s manager as to whether he feels that relationship is growing. Straight sales figures can be compared to budget and there is plenty of information on sales, expenses, margins”.

The Factory Manager at company B provided an example of an overhead allocation problem “The cost of saleable production is apportioned to the factories according to budget groups. But these allocations are made on the basis of an educated guess”. What was worse, the ‘educated guess’ was based on budget group sales which were known only after the event. Clearly, managers felt more comfortable with objective measures of performance, but since many objective measures provide data on outcomes, they may not be the best indicators of outcomes. When linked to longer term strategic goals, performance measures can be used as indicators but they may be very rough approximations when it comes, for instance, to the subjective allocation of overheads to predict the performance of different parts of the organisation.

The importance of having performance measures which are sound indicators of longer term outcomes is evident when the strategic time frame is taken into account. In Q 13, which was discussed in section 4.3.3.1, managers were asked about the strategic focus of their organisation. The time frame for these strategies is shown in Table 11.
Table 11  Strategic time frame of current strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Company</th>
<th>Time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Sales</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Capacity utilisation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Restructuring</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

This table combines the responses from questions 13 and 14 of the case studies. The ten managers provided fifteen responses for their companies’ strategic focus, which could be grouped into five strategies. Some managers nominated more than one strategy in responding to question 13, so that for company A, seven strategies were mentioned, whereas at company B, eight were mentioned. Question 14 asked the managers to classify those strategies as long or short term. Some offered the alternative answers of both long and short term, or gave the middle of the road answer of medium term. The answers are cross referenced above. For instance, four managers from each company nominated sales as an important strategy. Of those eight, two believed that the company’s strategy for sales was a short term one, four thought it a long term strategy, whilst two thought the sales strategy was both short and long term. Twelve (80%) of the fifteen responses to the strategic time frame question believed the nominated strategy to be long-term. It is not surprising, in the light of so many long term strategies, that half the managers reported a desire to see more performance measures which provided advance warning of end results (Q 27).

The final group of questions (Q 36 - Q 40) which were used in the case studies to evaluate the managers’ attitudes to their performance measurement system progress from the general to the specific. Firstly they were asked whether they were happy with the performance measurement system (Q 36). All respondents felt that there was scope for improvement and only four rated the system as acceptable. The managers were asked to apply a numerical rating for their performance measures on a scale of one to ten (Q 37). A low value would indicate a very poor rating, whilst a high value would indicate a good rating. A surprisingly uniform response emerged from the
managers at company A, with four rating them a ‘6’ and one rating them at ‘5’ - little better than adequate. At company B, three managers rated the performance measures at ‘7 - 8’. The Quality Manager who was new to the organisation rated them a ‘4’ commenting ‘..they are pretty poor in terms of what I do but I don’t know if that can be improved. ... I think customer perceptions are the things to look for’. Finally the Factory Manager gave a split rating: “The global...ones are not really very good if you want to do a comparison with other factories ... Out of 10 probably only a three or four. ... Our own factory measures ... which we are judged on, are a lot more focused and a lot more accurate than those global figures. I hold them in very high regard”.

The comments of the Factory Manager clearly indicate that performance measures which are closely related to the managers area of responsibility will be more highly regarded. Further, ownership of the measures would appear to add to the value placed on them. This is evident from the Quality Manager’s poor opinion of the measures he inherited, and the middle of the road response from the managers of company A, where most performance measures are, as previously noted, imposed from above.

4. 4. 3. 4 Summary of Qualitative Analysis for Proposition Three

The arguments presented under proposition three rely heavily on data collected during case study interviews. The principal issue was the extent to which environmental factors would weaken the relationship between organisational strategy and performance measures. The literature review showed that many performance measurement systems had become obsolete due to changes brought about by factors such as the quality movement, increasing competition and technological change. In the case studies information was sought on how well organisations managed their performance measurement systems in order to better respond to changing conditions.

An analysis of the responses provided useful information on issues important in selection of performance measures. Implications of this analysis of responses will be presented in Chapter V.
4.4 Conclusion

Following a review of the literature on the link between strategy and performance measures, three issues which might impact of the relationship were identified and three research propositions were developed to provide the framework for further study. The first of these looked at whether managerial ignorance about the relationship might adversely impact on strategic objectives. The second looked at whether organisational structure might be a factor contributing to performance measurement systems which were poorly designed to monitor strategic goals. The third issue was the extent to which environmental factors might affect the relationship between performance measures and strategic objectives.

In this chapter, data collected from a survey of thirty four companies was subjected to quantitative analysis. Evidence was obtained that different levels of management viewed the relationship between strategy and performance measurement differently. Additionally, departments within organisations had an inconsistent approach to performance measurement.

An examination of the issues underlying these differences was made through a case study of two manufacturing firms from the original sample of thirty-four firms. The qualitative data obtained from interviews of five managers at each of those two firms has been analysed in this chapter. In the following chapter these results will be interpreted and some conclusions about the research propositions will be made.
CHAPTER V

5 CONCLUSIONS AND IMPLICATIONS

5.1 Introduction

In this section all earlier parts of the thesis will be summarised prior to drawing conclusions from the research. In the introductory chapter a full description of the research to be carried out was given. In section 1.1 the background to the research was presented. In broad terms, the issue to be examined was the way in which a performance measurement system could be used to facilitate the attainment of strategic objectives. During the course of the literature review, the failure to link performance measures to strategic objectives was identified as a significant reason for those objectives not being fully realised. This issue became the focus of the research problem (section 1.2). The literature offers many proposed solutions to the problem, but very little work appears to have been done on examining the causes of the problem. Such solutions include a theoretical background for linking performance measures to strategic objectives and methodologies for developing appropriate performance measurement systems.

Anecdotal evidence in the form of business failures indicated that firms might not have appropriate strategies, or else they were not monitoring their progress towards strategic goals adequately because their performance measurement systems were deficient. This research was justified in section 1.3 on the basis that it extended prior research on the underlying causes for the lack of integration between performance measurement systems and organisational strategies. Previously reported research tended to focus on deficiencies in performance measures and looked at ways of developing a complete set of measures in order to effectively manage the organisation. The research was undertaken to evaluate three propositions which emerged from the literature review.
The remainder of the first chapter was broken up into sections which outlined the research methodology, the format of the thesis, the definitions for important concepts, delimitations and key assumptions.

The literature review was presented in chapter 2. Table 1 (p. 16) summarised an extensive literature review on performance measurement systems to support the argument that performance measurement is important across a wide range of management disciplines. Figure 1 (p. 17) graphically reinforced this point. Management literature with a particular focus on human resources was specifically excluded in section 1.7. Evaluation of the performance of personnel would be just one function of a performance measurement system. The aim of this research was to examine the way that strategy and performance measurement interact at the organisational level.

In the course of the literature review an analytical model was developed and presented in Figure 2 (p. 23). This diagram shows the interrelationship between strategy and performance measurement from which the research propositions emerged. The first proposition takes a strategy-measurement approach, the second takes a measurement-strategy approach, whilst the third proposition examines the relationship in a changing environment, with a particular emphasis on conditions which might impact on changes to performance measures. A rather uniform picture emerged from the literature of the need to broaden performance measurement systems and use the information they provided to enhance the outcomes of strategic decisions.

Chapter 3 provided the justification for the two-stage study which was undertaken, and provided a detailed description of the methodology employed in each stage. Observations as to the appropriateness on the research methodology will be discussed in section 5.3.

The introduction to chapter 4 linked the literature review to the three research propositions which took up the bulk of the chapter on data analysis. Each research proposition was discussed in its own section. For the first two propositions the
analysis was broken up into a discussion of the quantitative data followed by presentation of the qualitative data. Proposition 3 dealt almost exclusively with data from the case studies and was handled in three subsections. Observations were made about the significance of responses to specific questions but a synthesis of the data for each research proposal in the context of the literature review will be presented in section 5.2. Subsequently, implications will be drawn from the conclusions. In the final two sections, limitations which emerged during the course of the study will be discussed, followed by some implications for further research in this area.

5.2 Conclusions about the research propositions

In the literature review many authors commented on the need for organisations to link strategic objectives with performance measures in order to achieve their strategic goals. Yet the diversity in both growth and profitability outcomes, across a wide range of businesses, was indicative of varying degrees of success in doing so. Since the management literature relevant to this thesis focused on the importance of performance measurement systems in achieving strategic outcomes, research was carried out to explore why the link between the two might not be as robust as it should be. Accordingly, three propositions were developed and the conclusions relevant to each are now presented.

5.2.1 Proposition One

That managers are unaware of the need to link performance measures to strategic objectives and that, as a consequence, performance measures do not change to reflect a change in strategic direction.

The responses of thirty-four managers which were obtained from a quantitative survey indicated that performance measures were modified when an organisations strategic objectives were changed (Figure 4, p. 44). Further, the degree of involvement in setting strategy and determining performance measures appeared to be closely aligned
at different levels of managerial responsibility (Figure 6, p. 47, Figure 7, p. 48 and Figure 8, p. 49). However an analysis of variance (Table 7, p. 52) of the responses shown in Figure 4, as a function of the level of management seniority, showed a statistically significant difference in managers perceptions of changes to performance measures due to changes in strategy.

At lower levels of management, it becomes less likely that performance measures will initiate change to monitor strategic changes. Therefore some managers may continue to pursue a course of action which may not be directed towards achieving the organisation’s new strategic goals.

Company size did not appear to be a factor when it came to managerial involvement in strategic decision’s. This conclusion could have been clouded by the fact that responses were provided by a single company representative, because a different picture emerged from the detailed case studies of a large and a small firm. Logically, the seniority of the manager, was an important factor when it came to evaluating the level of input in setting strategy (Table 6, p. 47).

With the potential for different levels of management to respond differently to changes in strategy, the way in which strategy is communicated might be responsible for a weak association between performance measures and strategy. The two case study firms showed marked differences in their performance measurement systems and the way they responded to strategic changes, yet the methods for communicating strategy throughout their respective organisations were almost identical (Q 6). In the main, such communication was verbal, and open to subjective interpretation, which again could result in a poor link between strategy and performance measures.

Two significant factors emerged from the case studies which help to explain how lower levels of management at Company B were better able to relate performance measures to strategic change. The first is that Company B managers had greater input into the strategic decision making process (Q 5). This would reduce the likelihood that strategic objectives would be misinterpreted when it came to implementing them.
The second is that at Company B, remuneration was linked to achieving strategic outcomes, and therefore its managers were more focused on strategic goals and the outcomes of their actions, as monitored by the performance measurement system.

Two conclusions emerge for proposition one. First, the awareness of the need to link performance measures with strategy rises with managerial seniority. Second, lower levels of management will be more aware of this link when they have an input into the strategic decision making process and where they have a vested interest in achieving strategic outcomes.

5.2.2 Proposition Two

That the link between the performance measurement system and organisational goals is weak because the organisation’s structure inhibits a coordinated approach towards achieving strategic objectives through the use of performance measures.

Statistical analysis of the quantitative survey data showed a weak correlation (Pearson coefficient: 0.18) between the organisational structure, as represented by the number of functional departments (Q 10), and the responsiveness of performance measures to changes in strategy (Q 15). When the number of departments was regressed as a predictor of the likelihood that performance measures would change when there were changes in strategy, a very weak positive response emerged (Regression equation: Change = 2.95 + 0.0946 No. of departments; R^2 = 0.033). One would expect larger organisations to have a greater number of performance measures; which is probably why there is a greater likelihood that the focus on performance measures will change when strategies change.

Rather than organisational structure being the cause of a weak link between strategic goals and performance measures, it emerged that factors internal to an organisation offered an explanation for this proposal. Analysis of the quantitative survey data
showed that within the organisations there were significant disparities between departments when it came to the relative use of performance measures and the frequency with which they were reviewed (Figure 10, p. 63, Figure 11, p. 64 and Table 9, p. 65). Subsequently, data collected from the case studies provided some insight into why these difference might arise.

Firstly, whilst there was general agreement among the managers of both firms as to the strategic objectives of the organisation, the methods for achieving those objectives varied according to the function and capacity of each department. The unifying factor at Company B was an organisational focus by managers on the outcomes of their actions. This organisational focus was profitability. In other words, their actions were geared towards the organisation’s goals. Rather than achieving their department’s goals at the expense of the organisation, they would be achieved with those goals specifically in mind. At Company A, managers were accountable for their actions against specific departmental goals, rather than being assessed for their contributions to the organisation’s goals.

Secondly, ownership of the performance measurement system appeared to be a factor in the development of performance measures, and how such measures might be linked to strategic goals. At Company A the process for determining performance measures was highly centralised whereas at Company B the process was decentralised (Q 16). As a consequence, managers at Company A believed the performance measurement system to be reactive (Q 17) and they used the measures passively, i.e. to review results rather than control outcomes (Q 23 and Q 25). Greater use was made of performance measures at Company B (based on data provided in the quantitative survey) where the department managers claimed responsibility for the performance measures. Managers are more likely to select performance measures which are useful to them. By the same token, where performance measures are determined for managers they are more likely to be of use to the manager who selects them rather than the manager who is accountable to them. In such cases performance measures become a control mechanism instead of being used to creatively identify and solve problems.
Thirdly, there appeared to be no formal process for the development of performance measures at either organisation, despite a great deal of literature being available on performance measurement system design. In addition to linking performance measures to strategic objectives, they should be developed by the managers who will be using them. Further, this process could benefit from a cross-functional team-based approach which would do much to integrate departmental activities.

Fourthly, communication of performance measures could contribute to sub-optimal performance. Middle managers are the intermediaries between those who set strategy and the operators who carry out the revenue producing processes of the organisation. To build stronger links between strategic goals and performance measures these middle managers need to communicate performance targets to subordinates. By communicating performance measures and results to subordinates managers can better coordinate activities. At Company A, where the communication process was weaker (Q 21) managers were less confident about the adequacy of the performance measurement as a control mechanism (Q 25).

Finally, the wider the scope of the performance measurement system, the better it will be at accommodating and monitoring changes in strategic objectives. Where the performance measurement system covers a broad range of activities it is better able to be used by managers to coordinate and integrate those activities. The evaluation of the performance measurement system from managers at Company B, which had a significantly more comprehensive set of performance measures, was more positive than that of the managers at Company A.
5.2.3 Proposition Three

That the dynamic environment in which firms operate serves to disassociate strategic objectives from the performance measurement system, and the lack of managerial attention to the link between the two will result, over time, in a set of performance measures which provide insufficient, late or wrong information on which to base decisions.

The conclusions presented in this section are based principally on information provided by case study interviewees about their perceptions of the performance measurement system. Five managers (50%) had reported that their performance measures were reactive, and an additional three reported a degree of reactivity in their performance measurement systems (Q 17). The literature would attribute this to the obsolescence of traditional measures. This in turn would inhibit managers in their efforts to achieve strategic objectives. Proposition three acknowledges that, over time, performance measures may not be able to properly monitor the actions necessary to achieve strategic objectives. The conclusions from the research presented in this section offers some reasons for this divergence.

Of the five managers who believed their performance measurement systems to be reactive, four were from Company A where there was centralised control of performance measures. Centralised control may be a contributory factor for the lack of managerial attention to the link between performance measures and strategic objectives. Delegating authority for the selection or creation and implementation of performance measures could reduce the lag in aligning them to strategic goals.

For longer term strategies, most managers agreed (60%) that the strategic time frame would affect the choice of performance measures. Appropriate measures for long term strategies were described as determinants or key performance drivers in the
literature. A more responsive performance measurement system will contain proportionately more of these measures which focus on actions and processes.

Managers will use performance measurement systems to make decisions on future plans and also to control current actions. The response of managers on the usefulness of their performance measurement system as a control mechanism (Q 25) was mixed. Three managers at Company A rated the system as inadequate, citing information lag (2) and questionable data (1) as their reasons. Again, this could be due to a lack of ownership when it came to setting measures. At Company B, where four managers rated the company as adequate for control purposes, two cited tight departmental measures and one cited ownership by people working under the measures as their reasons.

Managers’ perceptions of the reliability, validity and timeliness of the information provided by their performance measurement system were positively related to the level of ownership of the system. Therefore in developing performance measures, the managers who will be judged by them or who will use them to manage their areas of responsibility should be involved.

Most organisations exist in a dynamic business environment. Their ability to react rapidly and appropriately to that environment is determined by available information. The more comprehensive the information provided by the performance measurement system, the less likely it is that the organisation will respond inappropriately to external factors. This is so because a wider range of measures will allow managers to more precisely target potential problem areas, and activities for improvement. Finally a comprehensive set of measures will show up anomalies which might otherwise go undetected where an organisation relies on a few aggregative measures.
5.3 Conclusions about the research problem

The research problem which was investigated in this thesis was the way in which performance measures can better be used to achieve strategic objectives. In particular this research was undertaken to examine the limitations imposed on performance measurement systems by organisational structure, the changing environment within which firms operate and a lack of managerial awareness of the usefulness of performance measures in monitoring strategic objectives.

Research already done in this area by Keegan, Eiler and Jones (1989), Dixon, Nanni and Vollmann (1990), Fitzgerald et al., (1991), and Kaplan and Norton (1992), has been directed towards how organisations might develop performance measurement systems which are integrated, comprehensive and geared towards the organisation’s current needs. More recent work by Jones et al., (1993) and Walsh (1995) examined the use of performance measures to manage and improve production processes. Whilst Walsh focused on performance measures as key performance drivers to improve processes in the manufacturing field, Fitzgerald et al., examined performance measures as ‘determinants’ of successful outcomes in the service industry. Both recognised that performance measures provide data which must be evaluated in a dynamic environment.

One of the concerns explored in this research was the impact of the changing environment on businesses and their performance measurement systems. Both Gordon and Narayan (1984) and Dixon, Nanni and Vollmann (1990), talked about the impact of competition on performance measurement systems. In the qualitative component of this research several managers expressed concerns over the relevance of their performance measurement system, with many commenting that the information it provided only allowed them to react to situations. Whilst comprehensive systems, and those with a focus on processes go a long way to addressing this problem, more performance measures should be of the type which can be used as predictors of outcomes.
Whilst the literature on performance measures has examined the need to have flexible performance measurement systems by making them comprehensive, there has been very little work done on designing a performance measurement system which will respond to developing strategies or strategic change. Nanni, Dixon and Vollmann's (1990) work which linked measures and strategies through a series of actions is the best known example.

To use performance measures which are proactive with strategic goals, a strategic plan must be developed which dictates the goal congruent actions to be undertaken. These in turn will be evaluated by specific measures. As specific actions are completed, managers can shift their attention to the next measure or group of measures which were specified in the strategic plan. Additional research needs to be done on ways to make performance measurement system more reactive to management's needs.

5.4 Implications for theory

There are two matters worth noting in regard to the implications of this research for theory. The analytical model (Figure 2, p. 23) developed in chapter two, presented the relationship between performance measures and strategy as a circular one. In practice this relationship is viewed as top-down when measures are linked to strategies for control purposes, or bottom-up when measures are used as the basis for developing strategic plans. Both approaches look on performance measurement systems as a tool to be used for specific purposes rather than one which should be developed and managed to provide consistent and reliable information. The findings of this thesis are that more attention should be given into researching the management of performance measurement systems, to complement past work on the design of such systems.

A second point which future research should address is the impact of rapid change on performance measurement systems, in an effort to make them proactive, or at least
less reactive, in the delivery of information. Rather than simply linking performance measures to strategy, theory should look at linking comprehensive performance measurement systems to strategic plans, and factoring in seasonal and cyclical changes. The theoretical research on the association of performance measures with strategy has yet to focus on the significance of a changing environment on performance measurement systems.

5.5 Implications for policy and practice

5.5.1 Recommendations for private sector managers

Analysis of the quantitative survey data showed that more senior levels of management had a greater appreciation of the importance of performance measures for achieving strategic objectives. As well, the qualitative data obtained from case study interviews indicated that responsibility for setting performance measures, and monitoring the data obtained, resulted in a better perception of the value of performance measures by managers. Further, where managers were involved in the strategy formulation process they had a better appreciation of the value of performance measures. It seems appropriate, therefore, to involve all levels of management in strategy formulation and performance measurement selection.

At lower levels of management, strategic involvement will be by provision of input into the decision making process. Middle managers can integrate this input at a department or functional level. Senior management will then decide on the most appropriate strategy using the input from management, the firm’s broad-based key performance indicators, plus any external conditions which they consider relevant.

Once the decision has been made on the strategy the organisation is to adopt, senior managers can decide on an appropriate collection of key performance indicators to evaluate the actions undertaken in pursuit of the new objectives. Senior and middle managers should then develop an integrated approach to achieving the company’s
objective, and ensure that different functional areas are not using conflicting measures of performance to encourage goal congruent behavior.

Finally, middle managers should work with junior managers to address specific areas which will improve the organisation's performance. It is at the lowest management level that personnel need to be aware of the appropriate methodologies for developing specific performance measures. This research identified a greater appreciation of their value as a management tool when junior managers were involved in their development and selection. The literature on performance measurement has looked closely at the design aspect of performance measurement system without clearly addressing the need for various levels of management to interact in the process.

5.5.2 Public sector policy analysts and managers

The information gathered from case study interviews is indicative of the need for industry policy initiatives directed at small business to increase its awareness of the value of performance measures. There was clear evidence in the smaller of the two case study firms of a lack of appreciation of their performance measurement system. However, before making a firm recommendation, more research would need to be undertaken on the application and use of performance measures in small business.

5.6 Implications for further research

The issues raised in this section flow naturally from the implications for theory mentioned in section 5.4. Further research into the relationship between performance measures and strategy should look at management of performance measurement systems within a dynamic environment, with particular emphasis on the cyclical nature of most business activities. Whilst a case study methodology would be more revealing for future research, in order to generalise the findings a positivist approach would need to be taken. This could involve a performance measurement questionnaire of the type designed by Dixon, Nanni and Vollmann, and delivered to several managers within an organisation.
Research on this subject could be further expanded by relaxing limitations on the size of firms involved in the research, and by expanding the geographical region from which the sample was taken.

This concludes the thesis.
References


APPENDICES

Appendix I Quantitative Survey Questionnaire

BUSINESS STRATEGY AND
PERFORMANCE MEASUREMENT

IN
MEDIUM TO LARGE COMPANIES
LOCATED IN SOUTH WEST SYDNEY

SURVEY QUESTIONNAIRE

Thank you for participating in this research project. The purpose of this study is to examine the relationship between business strategy and performance measures.

All information obtained from this Questionnaire will be treated in strict confidence. All returned information will be collated with utmost regard to Company privacy and Company or personal names will not be associated with the results of the study.

Participating Companies will receive a full report on the survey results.

Who should complete the questionnaire? Since we require information on organisational strategy as well as across-departmental data we would prefer the survey to be completed at a very senior level.

How to respond. Please complete all sections of the questionnaire below. This will take approximately 5-10 minutes of your time. After completing the questionnaire, please fax results to Edward O’Mara on 046 26 6683.

Answer reliability. In answering each question, please be as objective as possible, remembering that biased answers sometimes cloud the real issues. You should not respond on the basis of how you would like thing to be but rather, provide the answer which, in your opinion, accurately depicts the present situation in the Company and its various departments.

If you have any questions in relation to any part of this questionnaire you may contact Edward O’Mara at the University of Western Sydney, CAMPBELLTOWN on ph 046 203219
Part A  Business Profile

Please provide the following information regarding your organisation

1. Name of the organisation

__________________________________________________________________________

2. If this organisation is a subsidiary company, please provide the country of domicile of the Parent Company.

Country of Domicile ________________________________________________

3. When did the organisation first commence operations in Australia?

Year __________

4. Tick which of the following best describes your area of responsibility or position.
   a) CEO/Gen. Manager/Mng. Director [ ]
   b) Group Manager [ ]
   c) Divisional/State Manager [ ]
   d) Operations Manager [ ]
   e) Financial Mgr/Chief Accountant [ ]
   f) Manufacturing Manager [ ]
   g) Sales/Marketing Manager [ ]
   h) Personnel Manager [ ]
   i) Technical/DP Manager [ ]
   j) Purchasing Manager [ ]
   k) Quality [ ]
   l) Other (specify) ________________ [ ]

5. How long have you been with the Company? Please circle the most appropriate response.

   1. less than 1 yr.  2. 1-2 yrs  3. 2-3 yrs  4. 3-4 yrs  5. more than 5 yrs

Part B  Business Strategy

Your organisation’s strategic objectives may be both internal and external. From the list provided below, indicate the strategies that your organisation currently focuses on, and indicate the priority placed on each strategy by circling the appropriate number.

6. Growth Strategy

   Method                       Priority (1 = Very Low, 7 = Very High)
   Increase domestic market share 1 2 3 4 5 6 7
   Increase foreign market share 1 2 3 4 5 6 7
   Merger/Acquisition 1 2 3 4 5 6 7
   New Business/Product 1 2 3 4 5 6 7
   Vertical integration 1 2 3 4 5 6 7
   Other (specify) 1 2 3 4 5 6 7

107
7. Competitive Strategy

<table>
<thead>
<tr>
<th>Method</th>
<th>Priority</th>
<th>(1 = Very Low, 7 = Very High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce unit cost of output</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Improve product quality</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Reduce delivery lead time</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Implement new technology</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Employee related activities (e.g. training)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

8. Does your organisation use strategic benchmarking when determining strategies or strategic objectives?
   1. Yes       2. No       3. Unsure

9. What input do you believe the following groups have in determining the organisation’s strategic objectives.

<table>
<thead>
<tr>
<th>Category</th>
<th>None</th>
<th>Minimal</th>
<th>Some</th>
<th>Most</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Owners</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Senior Management</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>(non-owners; ignore nominal shareholding)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) Departmental Managers</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) Other</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Part C Performance Measurement

Performance measurement in this questionnaire does not relate to the performance of individuals. It refers to the process of, collecting and analysing data for the purpose of management decision making and measuring progress towards the organisation’s strategic objectives.

10. From the following list of functional departments please estimate the number of performance measures used, by ticking in the appropriate box.

<table>
<thead>
<tr>
<th>Department</th>
<th>N/A</th>
<th>None</th>
<th>Few</th>
<th>Several</th>
<th>Many</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Finance</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Personnel</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) Research &amp; Development</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) Information Technology/Communications</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e) Manufacturing</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>f) Marketing</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>g) Sales</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>h) Distribution</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>i) Purchasing</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>j) Quality</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>k) Other (specify)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tbody>
</table>
11. From the following list of functional departments please estimate the frequency with which the results of performance measurement are examined by ticking in the appropriate box.

<table>
<thead>
<tr>
<th>Department</th>
<th>Daily</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>Quarterly</th>
<th>Yearly</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Research &amp; Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Information Technology/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Manufacturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Marketing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Purchasing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k) Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

12. What input do you believe the following groups have in determining the organisation’s performance measures?

<table>
<thead>
<tr>
<th>Category</th>
<th>None</th>
<th>Minimal</th>
<th>Some</th>
<th>Most</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Owners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Senior Management (non-owners)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Departmental Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Junior Management/Supervisors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Operational personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Over the last five years, how would you describe your organisation’s approach to the use of performance measures? Please circle the most appropriate response.

1. Falling interest  2. Unchanged  3. Increasing interest  4. Heavy emphasis

14. What is your assessment of the value of performance measurement to the organisation? Please circle the most appropriate response.


15. Are performance measures modified when there are changes in the organisation’s strategic objectives? Please circle the most appropriate response.


16. Does your organisation use performance measurement to identify areas that require a strategic focus?


Thank you for completing this survey. Your input is very much appreciated. We will provide you with a copy of the survey results when the data has been analysed.
Appendix II Qualitative Survey Questionnaire

Demographics

Name
Organization
Job Title
Years of Service

Size of the business:  Sales $
Employees
Business environment  Highly competitive
State of organisation  Growth /Reorganization
State of demand  Upswing
State of supply  Market saturation

Organisational Strategy

General

Q13.  What do you think your organisation’s main strategic focus would be at the moment?
Q14.  Is this a short-term or long-term strategy?
Q15.  Is it a proactive or reactive strategy.

Strategy formulation

Q02.  Who or what is responsible for the organisation’s strategic direction?
Q01.  Is there a procedure for strategy formulation?
Q05.  At what level are strategy meetings held?
Q04.  How often do you have strategy meetings?
Q03.  Do you think that the corporate culture inhibits your ability to implement strategic changes?

Implementation

Q06.  How would you communicate strategy throughout the organisation?
Q08.  Do you discuss ways of achieving a strategic objective with other departmental managers?
Q07.  Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?

Feedback

Q09.  How would you monitor progress in achieving a specific strategy?
Q10.  How often are strategic objectives reviewed?
Q11.  Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
Q12.  Is remuneration/promotion linked to achieving objectives?
Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible.
Q40. What performance measures do you use most often?
Q37. On a scale of one to ten, how would you rate your performance measures?
Q36. Are you happy with the performance measurement system?
Q38. What do you perceive to be its strengths & weaknesses?
Q39. What changes would you like to see made?

Formulation

Q16. Who is responsible for the performance measurement system?
Q19. How are performance measures decided upon?
Q20. How are performance measures developed?
Q17. Is the performance measurement system proactive or reactive?
Q18. Do your performance measures tie in with those of other managers?

Implementation

Q21. How are performance targets communicated throughout the organisation?
Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?

Expectations

Q23. What do you expect from your Performance Measurement System?
Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?

Feedback

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?
Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?
Q27. Would you like to see more performance measures that give advance warning of end results?

Change Process

Q34. What generally initiates a change in performance measures?
Q29. Do you change your performance measures in line with changes in strategic objectives?
Q30. Do the types of performance measures used change or shift focus as the strategy develops?
Q31. Does the strategic time frame affect the types of performance measures that are to be used?
Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
Q28. Have you made any changes to performance measurement recently?
Q33. How often do performance measures change?
### Appendix III  Response Matrices for Proposition One

#### Q1  Is there a procedure for strategy formulation?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Q2  Responsibility for Strategic Direction

<table>
<thead>
<tr>
<th></th>
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<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Managing Director</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>General Manager</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Executive Managers</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

#### Q4  Frequency of strategy meetings

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bi-annually</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3 times p.a.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Quarterly</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Regularly</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Unclassifiable answer</td>
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</tbody>
</table>

#### Q5  Management participation at strategy meetings

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Executive Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Middle Management</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Junior Management</td>
<td></td>
<td>1</td>
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</tbody>
</table>

#### Q6  How is strategy communicated throughout the organisation?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal - Formal</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Verbal - Informal</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Written</td>
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<td>1</td>
</tr>
</tbody>
</table>

#### Q10  Frequency of review of strategic objectives

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not often enough</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Regularly</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Monthly</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bi-annually</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Annually</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix III: Response Matrices for Proposition One

#### Q12: Is remuneration/promotion linked to achieving objectives?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Broadly Yes/Not specifically</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>1</td>
</tr>
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</table>

#### Q13: Main strategic focus at present

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sales</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Capacity utilisation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Restructuring</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

#### Q29: Do performance measures change to reflect strategic change?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Generally, yes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Qualified no</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Appendix IV  
Response Matrices for Proposition Two

Q 3  Does corporate culture inhibit your ability to implement strategic change?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>In the past, but not now</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Doesn’t help</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2'</td>
<td>1</td>
</tr>
</tbody>
</table>

Q 7  Are managers constrained in what they can do to achieve strategic objectives?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Constrained by support personnel</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Constrained by resources</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

Q 8  Are ways of achieving strategic objectives discussed with other managers?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Q 16 Who is responsible for the performance measurements system?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental Managers</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>General Manager</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Q 17 Is the performance measurement system proactive or reactive?

<table>
<thead>
<tr>
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<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactive</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Both - increasingly proactive</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Both - depending on user</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Both - time element</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Reactive</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Q 18 Do your performance measures tie in with other managers?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes - Strong</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Yes - Weak</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Unsure</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
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</tbody>
</table>
### Appendix IV  Response Matrices for Proposition Two

#### Q 19  How are performance measures decided upon?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>By department manager</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Group strategy</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Board members</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Identified need</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Customer specification</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Group consensus</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Unsure</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>General management</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Q 20  How are performance measures developed?

<table>
<thead>
<tr>
<th></th>
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<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad hoc</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>As a result of a strategic decision</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Consensus of department mgrs.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Set at a higher level</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Q 21  How are performance targets communicated throughout the organization?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbally</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Performance charts</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Budget process</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Monthly reports</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>They aren’t - no communication</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

#### Q 23  What do you expect from your performance measurement system?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify areas for improvement</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Accurate reflection of performance</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Information for strategic planning</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Motivator for improvement</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A means to meet objectives</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
## Appendix IV  Response Matrices for Proposition Two

### Q 24  What particular areas does your performance measurement system focus upon?

<table>
<thead>
<tr>
<th>Area</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing and Business Excellence Plan</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sales volume</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sales margins</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Meeting delivery times</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Q 25  Adequacy of the performance measurement system in controlling business activities?

<table>
<thead>
<tr>
<th>Adequacy</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Inadequate</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

### Q 33  How often do performance measures change?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Variable - as required</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Annually with budget</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

117
Appendix V  Response Matrices for Proposition Three

Q. 8.  How would you monitor progress in achieving a specific objective?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use financial data</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Operational measures</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Measure progress against an action plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use milestones/goals/benchmark</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Observation (Management by walking around)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Q. 11.  Does the performance measurement system give you adequate feedback to optimise the way you manage?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good in some areas, poor in others</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Q13  Main strategic focus at present

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Capacity utilisation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Restructuring</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Q. 14.  Is this a short-term or long-term strategy?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>Short</th>
<th>Medium</th>
<th>Both</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Profitability</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Capacity utilisation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Restructuring</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Q 17  Is the performance measurement system proactive or reactive?

<table>
<thead>
<tr>
<th></th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactive</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Both - increasingly proactive</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Both - depending on user</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Both - time element</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Reactive</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who makes the decision?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managers who are responsible for the activity to be measured</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Strategic decision</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Higher authority</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Customer</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Consensus</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Appendix V  
**Response Matrices for Proposition Three**

<table>
<thead>
<tr>
<th>Q 23</th>
<th>What do you expect from your performance measurement system?</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify areas for improvement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accurate reflection of performance</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Information for strategic planning</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Motivator for improvement</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A means to meet objectives</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Generally yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 26. Would you say that the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Indicative</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Both</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 27. Would you like to see more performance measures that give advance warning of end results?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 28. Have you made any changes to performance measurement recently?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 30. Do the types of performance measures used change or shift focus as the strategy develops?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Occasionally</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Infrequently</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 31. Does the strategic time frame affect the types of performance measures that are to be used?</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unsure</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
### Appendix V  Response Matrices for Proposition Three

**Q. 32. Are changes in performance measures decided upon concurrently with changes in strategy?**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Qualified yes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Sometimes</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Q. 34. What generally initiates a change in performance measures?**

<table>
<thead>
<tr>
<th>Initiation</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of Directors (owners)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Strategic decisions</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>New business/new job</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Market activity</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Quality system</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Evolution of the business</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Existing measures inadequate/inappropriate</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>New personnel</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mood</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Q. 35. Is the performance measurement system standardised or flexible?**

<table>
<thead>
<tr>
<th>Flexibility</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible/informal</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Flexible/formal</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flexible/Becoming standardised</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Standardised/formal</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Q. 36. Are you happy with the performance measurement system?**

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>In need of improvement</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Scope for formalisation; too subjective</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Poor global measures</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Q. 37. On a scale of one (worst) to ten (best), how would you rate your performance measures?**

<table>
<thead>
<tr>
<th>Rating</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>7 - 8</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>9 - 10</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Appendix V  
Response Matrices for Proposition Three

#### Q. 38. What do you perceive the strengths and weaknesses of the performance measurement system to be?

<table>
<thead>
<tr>
<th>Strengths</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good financial reporting</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ownership by people working under the measures</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Tight departmental measures</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Timely and concise</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Weaknesses

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation of overheads</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Incomplete set of measures</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Information lag</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Interdependence of the various business units</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Loose global measures</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Low involvement of line management</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Questionable data</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Subjective analysis</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>The way information is used</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Too much emphasis on deadlines</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Q. 39. What changes would you like to see made to the performance measurement system?

<table>
<thead>
<tr>
<th>Change</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a more formalised system</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Expand coverage</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Improve the information system</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Involve line managers</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>More accurate quoting</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>More timely and relevant measures</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Reorganise locations as cost centres</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

#### Q. 40. What performance measures do you use most often?

<table>
<thead>
<tr>
<th>Measure</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 key result areas: productivity, w.i.p., scrap &amp; customer satisfaction</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Customer perception of performance level</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Effectiveness in implementing change</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Job costing</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Management of subordinate staff</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Profitability</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sales</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>System availability</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
Demographics

Name Respondent #1
Organization Company A
Job Title Executive Director
Years of Service 3

Size of the business: Sales $10.74M
Employees 48
Business environment Highly competitive
State of organisation Growth / Reorganization
State of demand Upswing
State of supply Market saturation

Organisational Strategy

Strategy formulation

Q01. Is there a procedure for strategy formulation?
Not as such. The Board drives the review of strategy.

Q02. Who or what is responsible for the organisation’s strategic direction?
Primarily the Board. And I guess I have also been in my former role as Chairman, and now, and also because of my background as a strategic planner, but with advice and interaction from the General Manager.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
You’ve got both inertia and a lot of the older, more senior shop people and older hands who can be relatively set in their ways. Also the design area. Here and there some of the older managers tend to be a bit parochial.

Q04. How often do you have strategy meetings?
There is a range of meetings concerned with strategy. At most meetings strategy is an item on the agenda rather than the whole purpose of the meeting. So you could say there are one or two a year specifically devoted to strategy.

Q05. At what level are strategy meetings held?
There are really two levels. One is the General Manager with Directors, not necessarily the full Board, which looks at the overall markets and resources, and objectives planning. And then, at a second level, the management meet, looking at products, customers, market segments, resource allocation.
Implementation

Q06. How would you communicate strategy throughout the organisation?
We have written plans of anything from two to eight pages which tend to be between
the Board and the General Manager. That gets limited circulation to management. At
the other end of the range you’ve got monthly factory barbecues and discussion of
where the company is going and been.

Q07. Once a particular strategy has been set, is it then up to individual managers how
they go about it, or are they constrained in what they can do towards achieving that
objective?
The aim is to empower everybody. The main constraints at the moment are resources.

Q08. Do you discuss ways of achieving a strategic objective with other departmental
managers?
Yes.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
We monitor the costs, margins, P&L and Balance Sheets at one level. Monitor
overheads in relation to margins at a second level. And then the third level is
monitoring the markets themselves and customer feedback information.

Q10. How often are strategic objectives reviewed?
That really relates back to Q4, but one or twice a year.

Q11. Does the Performance Measurement System give you adequate feedback to
optimise the way you manage?
Up until last month, definitely not. We had real problems. We are progressively
bringing new systems on line which appear to be giving us reasonable information.

Q12. Is remuneration/promotion linked to achieving objectives?
It is generally considered for management, but not specifically linked to objectives.

General

Q13. What do you think your organisation’s main strategic focus would be at the
moment?
We focus on three areas. One is on time delivery and quality which is critical to
customers. The second is profitable operation which is critical to our survival - we’ve
come through a pretty tough period. And the third one is ensuring that we have world-
competitive product.

Q14. Is this a short-term or long-term strategy?
They’re long-term strategies but involving tactical goals along the way.
Q15. Is it a proactive or reactive strategy.  
We have been reactive through the last three or four years of struggle, but increasingly, proactive.

Performance Measurement System

Formulation

Q16. Who is responsible for the performance measurement system?  
The inputs are primarily controlled by the production manager. The process is controlled by the financial controller. And the review is, at one level, the general manager, who is also responsible for budget submission. But overall I guess I’m also responsible for review of both budgeting and the process as a whole.

Q17. Is the performance measurement system proactive or reactive?  
Both. Increasingly proactive.

Q18. Do your performance measures tie in with those of other managers?  
I don’t know. My responsibility really is an overall review at one level, but specialist actions at the other, having been in the gas industry for thirty years, from the customers viewpoint.

Q19. How are performance measures decided upon?  
By individual Board members from their specialties.

Q20. How are performance measures developed?  
Management interaction with Board members, and occasionally consultants.

Implementation

Q21. How are performance targets communicated throughout the organisation?  
The budget goes, interactively from myself and the general manager initially, then to the Board for approval, and it is then communicated to managers. In addition you’ve got monthly job costs and accounts, comparison to budget, forging interaction with managers. There is a weekly review of hours done and hours earned, and requirements for space. So it is job control issues. The next stage is to add in a daily list of jobs to be done, and work achieved in the previous day.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?  
We also do hours, percentage complete, defects, safety.

Expectations

Q23. What do you expect from your Performance Measurement System?  
Reliable data on selected indicators. What we need to get out of it is output in a form which both informs and motivates people to improve.
Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?
Hours spent and earned in the workshop, overheads, adherence to the cost and timing in the quote plan and the schedule, flow of work generally, and skills and resources needed, input into the quoting system, isolation of production defects and rework.

Feedback

Q25. Does the performance measurement system adequately allow management to control business activity?
Not really now, but we see it increasingly helping as the changes are coming into effect.

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?
Until recently it was only outcomes but now we are progressively getting more and more projections and opportunities to correct mid-stream.

Q27. Would you like to see more performance measures that give advance warning of end results?
At this stage I think that we either have, in the system, or being built into the system, enough for the moment, but they’re still not working.

Change Process

Q28. Have you made any changes to performance measurement recently?
Yes. The accounting system has been completely restructured. Scheduling is in the process of being restructured. One area which hasn’t been mentioned here is quality assurance. The quality assurance system is also pressuring us to do this. We have action request notices which are feedback points which are helping people how we fix both our procedures and our measurements systems.

Q29. Do you change your performance measures in line with changes in strategic objectives?
Broadly yes, and I guess increasingly so is the aim.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?" Once we get them all in place, probably not a lot, but yes.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
Definitely yes.
Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
Broadly yes.

Q33. How often do performance measures change?
The budgeting process is the important annual review of both what we are trying to
measure and how we are subdividing our focusing. The action request notice
component of the quality system is another initiation point where somebody points out
that things are not operating effectively. We are progressively bringing the financial
side under the QA.

Q34. What generally initiates a change in performance measures?
The Board basically. The budgeting process is the important annual review of both
what we are trying to measure and how we are subdividing our focusing. The action
request notice component of the quality system is another initiation point where
somebody points out that things are not operating effectively. We are progressively
bringing the financial side under the QA.

General

Q35. Is the Performance Measurement System standardised or flexible.
Progressively becoming standardised.

Q36. Are you happy with the performance measurement system?
It’s been shocking, but it now looks as though it’s coming into shape. The accounting
area has been done, scheduling is being redeveloped at the moment, both on a good
basis.

Q37. On a scale of one to ten, how would you rate your performance measures?
Five.

Q38. What do you perceive to be its strengths & weaknesses?
Strengths. The people setting it up have a good understanding and it should become
effective.
Weaknesses. At the moment it is not complete, and we still have resource problems.

Q39. What changes would you like to see made?
At this stage we still need to look at what is coming out of the current changes. As I
said the accounting system is now looking logical, the job cost control system is
looking logical. Project scheduling is coming into line.

Q40. What performance measures do you use most often?
Job costing, which also feeds back into quotation. Cash flow, P&L, Balance Sheet.
from a world competing angle I’m looking at the design process. We don’t really have
performance indicators on design. The only thing you can do really is to look at what
is the cost of building a vessel to this design or that design.
Appendix VII  Company A  Respondent 2

Demographics

Name Respondent #2
Organization Company A
Job Title Financial Controller
Years of Service 1

Size of the business:  Sales $10.74M
Employees  48
Business environment  Highly competitive
State of organisation  Growth / Reorganization
State of demand  Upswing
State of supply  Market saturation

Organisational Strategy

Strategy formulation

Q01. Is there a procedure for strategy formulation?
There are numerous committees and meetings at the higher levels where these things are put in place.

Q02. Who or what is responsible for the organisation’s strategic direction?
The Board and General Manager.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
Yes. Like most businesses this one has its dinosaurs and there are some inhibiting factors here that don’t allow strategies to be put into place as readily as they should be. That problem exists in various management levels and those below.

Q04. How often do you have strategy meetings?
Probably monthly although there are some meetings that discuss strategies which are held on a more regular basis.

Q05. At what level are strategy meetings held?
There are meetings at management and there are meetings at Board level.
Implementation

Q06. How would you communicate strategy throughout the organisation?
Strategies are communicated to those below you on a group basis rather than to one
person and then expecting them to pass that down. Any strategy would be
communicated to your subordinates in a meeting.

Q07. Once a particular strategy has been set, is it then up to individual managers how
they go about it, or are they constrained in what they can do towards achieving that
objective?
It is up to the individual managers how they go about it. There are always some
constraints. Some strategies are constrained by the ability of those people below the
manager to change, some are constrained by the resources available to the company to
implement those changes.

Q08. Do you discuss ways of achieving a strategic objective with other departmental
managers?
Yes. That is discussed at management meetings

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
You put some sort of milestone in place. It may not necessarily be short-term and it
may well be subjective how you monitor or assess success in the short-term. You set
some sort of milestone in place to determine progress.

Q10. How often are strategic objectives reviewed?
Probably not often enough, as is the case with most businesses. They should be
reviewed regularly, at least monthly.

Q11. Does the Performance Measurement System give you adequate feedback to
optimise the way you manage?
In my role yes. The financial manager has reports driven targets each month and
results are quite easy to assess.

Q12. Is remuneration/promotion linked to achieving objectives?
Yes.

General

Q13. What do you think your organisation’s main strategic focus would be at the
moment?
I think at the moment the business is focused upon survival. It’s pretty much in
survival mode. We have a growing business but very poorly capitalized. We are
looking to double turnover in the next couple of years. There is a strategy in place to
win dominance in the Australian market and then take that dominance overseas. There
is a strategy in place on bidding to ensure short-term funding of the work.
Q14. Is this a short-term or long-term strategy?
Really at the moment the business is focused on short-term rather than medium- or long-term.

Q15. Is it a proactive or reactive strategy.
It’s a reactive strategy. Any short-term strategy tends to be more reactive.

Performance Measurement System

Formulation

Q16. Who is responsible for the performance measurement system?
I am responsible for the financial reporting system.

Q17. Is the performance measurement system proactive or reactive?
At the moment it is reactive but as I said, it needs to be proactive. It needs to be changed and to be made more so. In relation to what I do there is very little input from any other people. Typically people take what information is given instead of asking for what they need.

Q18. Do your performance measures tie in with those of other managers?
Not really.

Q19. How are performance measures decided upon?
Some are standard through business and some are decided upon by the Board. Some may be set by the general management.

Q20. How are performance measures developed?
By management or at Board level. The Board sets strategies and these may well determine performance measures.

Implementation

Q21. How are performance targets communicated throughout the organisation?

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?
It tends to be only in dollars.

Expectations

Q23. What do you expect from your Performance Measurement System?
Timely and quality reporting. Feedback on our success in achieving goals in that area.
Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?  
The system focuses on all areas of the business. There is a quality aspect to it. There is a growth aspect to it. There is a profitability aspect. There is a measure of management performance aspect. That is an area that I would like to improve upon. To highlight the individual strengths and weaknesses of managers in achieving these results.

Feedback

Q25. Does the performance measurement system adequately allow management to control business activity?  
No.

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?  
It's a combination of both. There is always, in any type of financial reporting, historical data and speculation.

Q27. Would you like to see more performance measures that give advance warning of end results?  
Yes. So would the Board.

Change Process

Q28. Have you made any changes to performance measurement recently?  
No. Constraints have not allowed that.

Q29. Do you change your performance measures in line with changes in strategic objectives?  
Yes. Strategy will normally determine what the performance measurement will be. As strategy changes from short-term to medium-term to long-term then the performance measurement technique may well change as well.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?  
Obviously they do. If you want short-term profitability as against long-term profitability or short- to medium-term growth then the indicators used, the performance measures, will change.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?  
Yes.
Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
Normally they the result of changes in strategy.

Q33. How often do performance measures change?
Each year the Board will set in place a plan or a budget, but management may well provide the Board with a plan which changes every quarter.

Q34. What generally initiates a change in performance measures?
Normally, the fact that the strategy needs to be changed or that the current performance measures are inadequate. The business has changed so that they are redundant.

General

Q35. Is the Performance Measurement System standardised or flexible.
In my area it is fairly standardized. Overall it is standardized.

Q36. Are you happy with the performance measurement system?
Yes. There aren’t a lot of options when it comes to assessing the financial and reporting aspects.

Q37. On a scale of one to ten, how would you rate your performance measures?
Six.

Q38. What do you perceive to be its strengths & weaknesses?
Well, I think weaknesses are that it’s governed more by time than quality. The work that we do is very much bottom line. We report within a certain time, we have deadlines and there is probably more emphasis on that than quality. One of the weaknesses is that there isn’t a high involvement by line management in what I do and that must change. Its strength lies in the financial reports which are fairly standard for our industry.

Q39. What changes would you like to see made?
One of the weaknesses is that there isn’t a high involvement by line management in what I do and that must change. There must be a higher input from line management in the output of financial management.

Q40. What performance measures do you use most often?
In financial reporting profitability is the key. The assessment of how well we do our work is based on time constraints.
Appendix VIII  Company A  Respondent 3

Demographics

Name Respondent #3
Organization Company A
Job Title Production manager
Years of Service 3.33

<table>
<thead>
<tr>
<th>Size of the business:</th>
<th>Sales $10.74M</th>
</tr>
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<tbody>
<tr>
<td>Employees</td>
<td>48</td>
</tr>
<tr>
<td>Business environment</td>
<td>Highly competitive</td>
</tr>
<tr>
<td>State of organisation:</td>
<td>Growth /Reorganization</td>
</tr>
<tr>
<td>State of demand</td>
<td>Upswing</td>
</tr>
<tr>
<td>State of supply</td>
<td>Market saturation</td>
</tr>
</tbody>
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Organizational Strategy

Strategy formulation

Q01. Is there a procedure for strategy formulation?
If there is such a procedure I am unaware of it. We do have a Board of Directors and they would address strategy.

Q02. Who or what is responsible for the organisation’s strategic direction?
All of us are responsible for pushing the envelope. It ought to be the responsibility of the Board, but I am sure that, as in other organizations, the actual drive comes from the General Manager and the executive officers.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
No. I don’t believe the corporate culture restricts what we approach. All of us are open to change. I am and I expect it of all the others.

Q04. How often do you have strategy meetings?
I am not involved in strategy meetings. I get involved with what to quote. We react to inquiries as to what to quote. Our short-term view is to bring in the jobs.

Q05. At what level are strategy meetings held?
At the highest level in the firm which is with the GM.
Implementation

Q06. How would you communicate strategy throughout the organisation?" That is a hard one for me and an easy one. I react to orders so that by the time it’s onto me and I’m responsible for it the plan is there and in place so I communicate it through drawings and purchase orders. My job is to push the orders through. My role is restricted with regard to strategy.

Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
I get quite free rein as to how jobs are executed within a given time. If it is a complete job for Company A, or whether some of it should be let out, whether we should buy plate ex-stock or whether we should buy indent, all those sorts of things, obviously it isn’t something I do on my own, I talk about it. But on the engineering side of things I have a lot of autonomy.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
Well, the answer to that is in fact yes because the other department that I interact with is the drawing office, and yes we do discuss that to a great extent.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?" Well, again, it is easy as in my role of executing orders it always comes back to two things which are price and program, and you make sure that your hours earned equal your hours spent, and making sure your ordering equals the quote or under, and you make sure the damn thing is on time, or try to. So that is an exercise that I review each week and the Board reviews every four weeks.

Q10. How often are strategic objectives reviewed?
On the basis that production is my strategic objective, that is an exercise that I review each week and the Board reviews every four weeks.

Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
It is adequate but it certainly could be improved and it is being improved. I have employed someone to combine all our programs into an overall program.

Q12. Is remuneration/promotion linked to achieving objectives?
No. Not at a policy level.
General

Q13. What do you think your organisation's main strategic focus would be at the moment?
As a main aim I would say it is a short-term view to get orders in for what we do well. Also because our aim is for growth, we are trying to get more floor space.

Q14. Is this a short-term or long-term strategy?
Obtaining orders is a short-term strategy. Increasing production space is a medium-term strategy.

Q15. Is it a proactive or reactive strategy.
Reactive in terms of being a survival strategy but there is a clear aim to be a stronger player in our industry. On that aspect we are extremely proactive.

Performance Measurement System

Formulation

Q16. Who is responsible for the performance measurement system?
As things are that role is driven by the GM and it is between he and the Company Secretary. This is a new thing. In the past I was the only one who had an interest in it.

Q17. Is the performance measurement system proactive or reactive?
It's reactive, but it also helps you to be proactive because you start to track the job from its inception, so it's a good tool for planning.

Q18. Do your performance measures tie in with those of other managers?
Yes. In the overall aim of things they do.

Q19. How are performance measures decided upon?
That is an issue raised by the quote because we react to an offer to quote. We have to make sure we do as we say. So it is your hours on the job, it is your price for ordering everything, and it is performing to program.

Q20. How are performance measures developed?
My main role on the floor is to make sure that I am able to earn at the hours that have been sold, and that the hours earnt aren't done by spending more hours than have been sold, which we used to do before.
Implementation

Q21. How are performance targets communicated throughout the organisation? Everything is clear up to the stage the job is on me. Then it ends up on the floor and I only drive these things through ordering, making sure that everything is here on the floor so that the job can start, make sure that they have adequate plate, and all other requirements are almost always oral demands.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things? It is also hours, and making sure that the job is on track, and isn’t going to be over time.

Expectations

Q23. What do you expect from your Performance Measurement System? I expect it will help us to plan.

Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement? Obviously, hours on the job.

Feedback

Q25. Does the performance measurement system adequately allow management to control business activity? I think the word adequately is right but it able to be improved as with everything, and I would say it’s on its way.

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes? It performs in both roles. There is the history aspect and it also helps you to plan.

Q27. Would you like to see more performance measures that give advance warning of end results? We track a job from the instant an order is in so I don’t think that is an issue.

Change Process

Q28. Have you made any changes to performance measurement recently? Yes we had some new shareholders and they drove for a cleared way to track things so we have had a review.
Q29. Do you change your performance measures in line with changes in strategic objectives?
In my time here we have always been reactive to jobs. We have always had the same overall view of things.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?”
I can’t answer that.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
I would say they do but I don’t know.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
I can’t answer that.

Q33. How often do performance measures change?
In the time that I have been here they haven’t really changed.

Q34. What generally initiates a change in performance measures?
It would be if we altered our strategy.

General

Q35. Is the Performance Measurement System standardised or flexible.
Its standardised, but I believe it is fairly flexible in the way it has been standardised.

Q36. Are you happy with the performance measurement system?
It’s okay, but it is able to be improved.

Q37. On a scale of one to ten, how would you rate your performance measures?
Six

Q38. What do you perceive to be its strengths & weaknesses?
Weakness. It is only to do with orders and jobs, there are gray areas which we aren’t 100% up to scratch on. For instance we spend a lot in the firm on things being repaired and fixed, on injuries and those sorts of things which aren’t in the front of things being tracked. I believe they should be. The strength is in the tracking of hours, and the matching of orders to quotes. In this respect it is all right.

Q39. What changes would you like to see made?
I’d like to see more accurate quoting.

Q40. What performance measures do you use most often?
Hours earned against hours spent.
Appendix IX  Company A  Respondent 4

Demographics

Name Respondent #4
Organization Company A
Job Title General Manager
Years of Service 6.5

Size of the business: Sales $10.74M
Employees 48
Business environment Highly competitive
State of organisation Growth /Reorganization
State of demand Upswing
State of supply Market saturation

Organisational Strategy

Strategy formulation

Q01. Is there a procedure for strategy formulation?
No... we obviously we have a strategy in terms of where we want to be in the marketplace, what we want to do with our product range, but there are other strategies because the biggest limitation within Company A is the culture that exists there and any changes that have to be implemented have first got to bring about a cultural change. The culture is, as far as I am concerned, more like it is impeding the growth of Company A..... because so many of our production techniques, so many of our products are based upon what we have done in the past, because we have always done it this way, don’t question it, just do it. It’s a ... one of my aims is, not so much from an observable company structure in terms of flattening the structure, but definitely in terms of our information flow, a definite flattening of the structure so that whether the guy is the General Manager or whether the guy is the cleaner they can both have as constructive an input into the development of the company.

Q02. Who or what is responsible for the organisation’s strategic direction?
Essentially responsibility lies with the General Manager, but the strategic direction has got to be by collaboration between the Board and the General Manager because the Board is responsible for the funding that could be necessary, especially with some of the directions in which I am intending to go. With our growth we are severely undercapitalized, we need more equipment, and if I’m going to take the company where I intend we’ll need a lot more equipment to fund that from profit is a catch 22 situation. With a lack of equipment we have jobs dropping behind, that costs us money. Our profitability disappears because, every day we put a percentage less than optimal through the workshop, we’re getting a lower return to our overheads. We need more equipment now.
Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
Definitely... All too often, and I think this is fairly common for a lot of organizations, you get the old school there, an idea put forward, and invariably you get ‘we have tried that before’. With this bloody [name omitted] job, in getting the rings from being external rings to being internal rings - ‘No we can’t do it, we have never done it that way, no we can’t do it’. Well .. why can everyone else do it? Go and do some calcs and prove to me that you can’t do it.

Q04. How often do you have strategy meetings?
Structured as a strategy meeting, never.” They’re quarterly. That’s a quarterly thing. , often times, you know, we will discuss strategies without actually, ... knowingly thinking of them as strategies. You know things will be discussed, .. strategies might be how to reduce lead times, how to reduce costs, how to reduce quality whatever.

Q05. At what level are strategy meetings held?
Definitely at board level. Strategies are discussed at every board meeting I believe. Strategy is discussed at production level. That’s at senior, senior/middle-management level. And, you know, foremen are obviously included also. As I say, this is part of the change that has got to take place ... that everybody ... everybody is generally educated enough to be ah... to have an input which can cause an improvement in Company A and ... you know one of the ... Company A has been built upon people who are able to do a job not people who have got the bits of paper that say they should be able to do the job, and because of that, many of the people who are there are nervous about their position because they see other people come along with qualifications and think, ‘Hell, I’m going to lose my job here because this guy....’ Prime example, you bring somebody in as a weld supervisor, or you get a young guy come in, he’s got all his welding tickets..... Invariably that person is put down as not being a good welder, doesn’t know .. you know ... a coathanger from a welding rod, because they’re scared. So you get that person come in, that person will say ‘Hey here’s a different way of doing it. Why don’t we jig this, why don’t we use a different welding procedure, we should use tig and mig wire” This is examples, but it doesn’t go any further than the foreman, because the foreman doesn’t want that information to be seen as coming from somebody who might be better than him.

Implementation

Q06. How would you communicate strategy throughout the organisation?
We have a scheduled list of meetings that take place. Every week there is a meeting of ... involving all senior management. Once a month there is a meeting which involves both senior management and middle management, and also once a month there is a meeting involving all personnel, to talk about where we’re going, how we’ve been performing, areas of improvement et cetera.
Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
Basically, we convey to the managers what we want to achieve ... their title is the manager and I expect them to manage so therefore it is up to them to get the message across, and their success at explaining the message would be in many ways used as a performance indicator for them in managing the department. I don’t want to run departments. I want to be assistance to managers in doing their job.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
Strategy is discussed at production level. That’s at senior, senior/middle-management level. And, you know, foremen are obviously included also.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
Obviously by looking for a particular ah performance indicator. Now in the case of purchasing for example it was highlighted that our purchasing was out of control, people were just writing purchase orders, not looking at any competitive purchasing advantages they had et cetera. So people were told to get three prices. In some cases we came up with ploys by which we could get a better indication of what a manufacturer was really willing to sell for. You know, going in and asking for a price for a multiple off to start with. We have now kept records of our quotes that we are given, especially in specific areas like heads so that as we get new quotes we can look back at what was given before and that has been quite illuminating. Some manufacturers just pluck numbers out of the air.

Q10. How often are strategic objectives reviewed?
We have a scheduled list of meetings that take place. Every week there is a meeting of ... involving all senior management. Once a month there is a meeting which involves both senior management and middle management, and also once a month there is a meeting involving all personnel, to talk about where we’re going, how we’ve been performing, areas of improvement et cetera.

Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
I think it is a bit loose at the moment to be quite honest. I think we’ve got performance measures there, I think we look at them and we say ‘Yes we’re going OK or No we’re not’ but it needs to be more structured as we’ve done with our costing system. There’s some of the others need to happen also.

Q12. Is remuneration/promotion linked to achieving objectives?
A bonus scheme is under discussion at the present moment with the Board. In principle they’re in agreeance with it, but because of our performance over the last few years, we’re very wary of what we do there because we’ve go to, if we commit to a performance bonus scheme, we’ve got to be able to meet our offer so that’s being looked at.
Q13. What do you think your organisation’s main strategic focus would be at the moment?
Product diversification would be the focus at the moment, and that product diversification is along the lines of some products, which are akin to what we manufacture, in other words they use the same manufacturing process, some of them are actually niche markets within the cryogenics industry. So just to give you an example, we are looking at the manufacture of ISO tanks which are non cryogenic but are obviously metal fabrication ah require quite the design for the integrity of the tank so that it doesn’t fall apart at the seams etc., and within cryogenics we are looking at getting into electro polished tanks because of the margin that they are able to attract and the reduced competition.
Obviously one of our strategies is to find out, being able to find out on a day to day basis where the company is at, and where every job is at, and in the past that hasn’t been known until the job is finished and out the door and gone by three months. We then look at it and find that, ‘Oh hell we’ve made a loss’, or ‘God. You know that was supposed to be out two months ago’. ‘We didn’t realize that.’ Yes we have spent a lot of time up front at developing systems to get our estimating right as in we’ve developed systems so that we can look at our performance against our estimate on an ongoing basis, and that is done on a monthly basis.”

Q14. Is this a short-term or long-term strategy?
It’s long term, it’s an ongoing thing. The market place just keeps changing. We’ve got a good year this year OK, it’s going to be $10.5M. Part of the reason for that is that the cryogenics market worldwide has gone through a growth phase and so they’re on a high at the moment. I’m told that traditionally cryogenics, the cryogenic market follows the rest of the world, that there is a lag of about six months. So that the situation is such that the construction industry is just going into a bit of a hole at the moment - six months down the track the cryogenics industry will catch up and go into the same hole. So we need to get diversified, doing some other things by then.

Q15. Is it a proactive or reactive strategy.
Good question. Ah.. it’s a proactive strategy because it would be reactive if I had an order book of $2M and was wondering what I was going to do. I’ve got an order book which is the second biggest we’ve ever had and I’m looking forward to the future as to how I can maintain that and therefore I feel that we are being proactive in the way that we can maintain that order book and one of those strategies is for product diversification.

Performance Measurement System

Formulation
Q16. Who is responsible for the performance measurement system?
Me. I think one of the things that has to be tightened up on is that, .. a description of it as being a performance measurement system. It would probably be fairly grandiose as to what is actually there. We have performance measurement but I don’t know whether we’ve put enough time or effort to structure it such that it could be called a system.

Q17. Is the performance measurement system proactive or reactive?
I believe the measures that we have are proactive, however, the level of performance measure is, I believe, minimal so that in some cases we get to a reactive situation.

Q18. Do your performance measures tie in with those of other managers?
Yes they do. It is the responsibility of the managers in the different departments to present to the performance meetings. Basically they come from production, design and finance. You’ll find that when we have clashes in management it can be related back to a performance measure where a fall in the performance measure towards the negative has caused the clash.

Q19. How are performance measures decided upon?
To this point the performance measures have been the decision of the manager of the division. The performance measures haven’t been pushed from an overall strategy or direction for the firm, and that’s what we have got to get to.

Q20. How are performance measures developed?
It’s on a needs basis. A lot of it started with the new investors which came in. .. They got quite a shock at the bottom line performance so they went back and they said “Well what about this and what about that?” When they couldn’t get the answers they were saying “Well, how can you run a business without knowing this sort of stuff?” And so then the Board sat down and said “Look we need somebody to guide this organisation for a bit” so they put a taskforce in place which is made up of some of the major investors and these people set a direction as to putting some systems in place to measure performance, but it’s not a performance measurement system, but they’re finance systems, manufacturing systems, et cetera and from that we are able to then judge our performance and improvements that we’re making as we go.

Implementation

Q21. How are performance targets communicated throughout the organisation?
That’s one place where our communication falls down. Generally when our performance isn’t going well we kick the employees and when things are going well we sometimes praise them. Other than that I don’t believe that these performance measures are communicated often enough or well enough.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?
No, no. We look at other things as well .... It’s surprising, it helps .. most of it I suppose comes back to dollars, but we look at hours lost through rework, which reflects on your bottom line. We look at repeat sales based upon earlier jobs et cetera.
Expectations

Q23. What do you expect from your Performance Measurement System?

Improvement.

Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?

Our performance measurement at the moment is really focused upon our bottom line. Our work’s getting a profit at the end of the day and one of the reasons that wasn’t happening is because ... we didn’t spend enough time, or have the tools to do our performance measurement especially in our financing area, which linked back to production, because we never looked at the costs of having a job ... be late out of the workshop. We didn’t look at the inherent cost of having that floor space taken up so you couldn’t put another job through. It was only looked at as a cost if there were liquidated damages, and nothing else was ever looked at. Now we look at what the throughput should be, we have a budget which says how many hours you’ve got to get through in a year and that is linked back to the floor space you should be using and if a job is six weeks overdue well that means that there is six weeks of whatever floor area there is not available to do other jobs.

Feedback

Q25. Does the performance measurement system adequately allow management to control business activity?

Yes. In fact it’s done in such a way that it demands that they control business activity, because the performance measures are such that the activities that they control, .. if they don’t control them the performance measures will be way out.

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?

Ah, the performance indicators that we’ve got at the moment are set in such a way that they are giving information on what has happened. However, because our projects are often in time spans of nine-ten months early on we can extrapolate that information to give us an expected outcome also, so that we don’t get any nasty surprises at ends of jobs now. We know if delivery will be on time, we know if it’ll be a profitable or non-profitable job.

Q27. Would you like to see more performance measures that give advance warning of end results?

Yes, because if you know where things are heading you’ve then got the chance of examining the job or whatever it is to see what modifications can be made to bring it back in line with what the expected outcome was.
Change Process

Q28. Have you made any changes to performance measurement recently? It is continually upgraded because initially we got some measurements out and we said ‘Oh, this is good’, two weeks later we discovered they were abysmal. And we then quickly discovered that there is a degree of interpretation that you’ve got to go with your performance system, and also quite a large degree of investigation into the background behind what the results are and what they really mean. For example, the results came through which looked terrible in one instance. When they were investigated we found that there was a weakness in another area which was reporting numbers into the performance system ... so it is the feeders into the performance system that have to be examined also.

Q29. Do you change your performance measures in line with changes in strategic objectives? I don’t think we’re well enough organized to do that as yet. It may well happen but I couldn’t say that I think about it an do it. It would just happen. To this point the performance measures have been the decision of the manager of the division. The performance measures haven’t been pushed from an overall strategy or direction of the firm.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?” Yes. Those performance measures will change because there a certain goals we need to achieve. Performance measures are in place to help guide our way towards achieving those goals. Once those goals are achieved then we will look for other areas for improvement. To know whether we improve in those other areas we’ll have to have a different performance measure so that it changes as we go along.

Q31. Does the strategic time frame affect the types of performance measures that are to be used? Yes. Those performance measures will change because there a certain goals we need to achieve. Performance measures are in place to help guide our way towards achieving those goals. Once those goals are achieved then we will look for other areas for improvement. To know whether we improve in those other areas we’ll have to have a different performance measure so that it changes as we go along.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy? I don’t think we’re well enough organized to do that as yet. It may well happen but I couldn’t say that I think about it an do it. It would just happen.

Q33. How often do performance measures change? Hardly ever.

Q34. What generally initiates a change in performance measures? Generally our performance measures change with changes in management. Generally, when a new person comes into a position they will see what they are trying to achieve
and they will try to measure whether they are achieving that or not. Once that person is settle in we tend not to see much variation in their performance measures.

General

Q35. Is the Performance Measurement System standardised or flexible. Flexible. It is continually upgraded.

Q36. Are you happy with the performance measurement system?
Well, as I said, it’s not a system, I don’t feel. We have performance measurement. Considering we’ve come from nothing to what we’ve got now, yes I feel we’re learning a lot. I think it is probably the key thing. With our performance measurement, I know that it is a learning tool, we’re learning about our business, we’re learning where we’ve got weaknesses and where we’ve got strengths.

Q37. On a scale of one to ten, how would you rate your performance measures?
I’d say we come in somewhere near a six.

Q38. What do you perceive to be its strengths & weaknesses?
Its weakness at the moment is that in terms of an internal benchmark, a lot of it is based upon a subjective analysis of progress, that’s, lets say in many cases, and that is dependent upon one persons viewpoint. That would be a weakness. The other weakness is that some of the reporting systems which feed into it need an overhaul; they need analysis because there’s wrong information being fed in at certain times. The strengths are, it’s timely, our performance measures are coming out on a regular basis, we know when they’ll be done, they’re clear and concise, you know what you are trying to measure and you know when you get the numbers at the end of the day what it is really trying to tell you.

Q39. What changes would you like to see made?
Yes. I’d like to see the performance measures actually spread a bit and go back to become the ownership of the managers in the different divisions. At the moment it’s a bit authoritative in that they provide information to a central area.

Q40. What performance measures do you use most often?
From my point of view the major performance measure would be the attainment of the budgeted figure for our sales. Because I am responsible for the organization as a whole, the other major performance factors that I look at critically are the amount of rework and on-time delivery. The most often used in Company A would be financial performance measures. We do have one from production called the PF factor which is a measure of how effective our labour has been in any one week. The production manager does an estimate of the hours required to achieve a certain number of tasks. We then look at the actual hours taken to perform those tasks and compare one against the other. If you get a PF less than one then you are doing very well.
Appendix X  Company A  Respondent 5

Demographics

Name Respondent #5
Organization Company A
Job Title Company Secretary
Years of Service 5

Size of the business: Sales $10.74M
Employees 48
Business environment Highly competitive
State of organisation Growth / Reorganization
State of demand Upswing
State of supply Market saturation

Organizational Strategy

Strategy formulation

Q01. Is there a procedure for strategy formulation?
If there is it is not very well established or known.

Q02. Who or what is responsible for the organisation’s strategic direction?
The wise men of the task force - the owners.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
No. But I do have an input.

Q04. How often do you have strategy meetings?
Basically when an idea turns up.

Q05. At what level are strategy meetings held?
They are held by the task force. The task force has complete authority from the Board which rubber stamps the actions of the task force. All major decisions are made by the Chairman, the Executive Director and the principal shareholder.

Implementation

Q06. How would you communicate strategy throughout the organisation?"
When firm decisions are reached it is generally by word of mouth more than anything else.
Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
I think how it works here is that the strategic objective is confirmed by the board and the board then delegates authority to management to implement changes.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
No.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?"
This is a very small company and any changes are fairly easy to observe. I do not think there is any standard by which they’re judged.

Q10. How often are strategic objectives reviewed?
Quite honestly I don’t think that we really know all strategic changes and I don’t think they’re actually reviewed at all.

Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
No.

Q12. Is remuneration/promotion linked to achieving objectives?
I don’t think the organization looks at it that way at all. The desire to have it is there but I don’t think it does in fact happen.

General

Q13. What do you think your organisation’s main strategic focus would be at the moment?
Generating overseas sales and formulating ties that would result in a dependable flow of revenue.

Q14. Is this a short-term or long-term strategy?
Long-term.

Q15. Is it a proactive or reactive strategy.
Proactive.

Performance Measurement System

Formulation
Q16. Who is responsible for the performance measurement system?  
The General Manager.

Q17. Is the performance measurement system proactive or reactive?  
It’s reactive at present.

Q18. Do your performance measures tie in with those of other managers?  
I don’t think that is a question I can answer because I’m not involved.

Q19. How are performance measures decided upon?  
The basis on which performance is now decided is by way of monthly costing report.

Q20. How are performance measures developed?  
They were recently implemented by the task force to monitor the progress of each job  
and the importance of these costings are increasing at present.

Implementation

Q21. How are performance targets communicated throughout the organisation?  
It’s really rather early days to give an answer to that but it is clear how it is going to  
happen. The General Manager and Production Manager will now become aware of  
how things are progressing and will discuss it with the foremen.

Q22. Does your performance measurement system measure things just in dollars, or  
do you look at other things?  
At present its dollars.

Expectations

Q23. What do you expect from your Performance Measurement System?  
The main performance measurement is to make a profit of at least 30% before  
overheads on each job.

Q24. What are the particular areas on which it focuses, in other words where are you  
looking for improvement?  
A number of areas. Firstly, usage of labor. Secondly, gaining greater accuracy in the  
tendering system which has been very deficient in the past. Costs have come through  
that have never been budgeted and have been very hurtful. On occasion design  
changes have resulted in fairly substantial cost increases. It is only through these  
costings which have now been developed that these deficiencies have emerged and  
become clear to everyone.
Feedback

Q25. Does the performance measurement system adequately allow management to control business activity?
The current costing system has only been on the go for about four months. As it is still dealing with distorted historical information it is not as accurate as it should be but when it is bedded down and working correctly it should give some very valuable clues for management to control the business.

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?
It does both.

Q27. Would you like to see more performance measures that give advance warning of end results?
The current costing system is attuned to give advance warning of end results.

Change Process

Q28. Have you made any changes to performance measurement recently?
It is so early in the costing history of this company but changes are being made as patterns emerge, and are being discussed.

Q29. Do you change your performance measures in line with changes in strategic objectives?
I doubt it.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?"
I don’t think there are any formal controls. We’re still in the cowboy days of the past. If it’s a good idea let’s do it, and if there’s a bad outcome, too bad.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
Historically, the company has been very negligent about time frames.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
I don’t think that there really is a structure here where one can recognize the different parts of the strategy.

Q33. How often do performance measures change?
I think there is a culture here that if anything is going wrong you don’t tell anyone, you just go ahead and try and do your best.

Q34. What generally initiates a change in performance measures?
[Laughter] I think it depends on what side of the bed you got up.
General

Q35. Is the Performance Measurement System standardised or flexible.
If it’s based on the costing system it’s standardised but it’s capable of being flexible if good reason emerges.

Q36. Are you happy with the performance measurement system?
I think it’s a great improvement on the past.

Q37. On a scale of one to ten, how would you rate your performance measures?
Six.

Q38. What do you perceive to be its strengths & weaknesses?
The strength is it exists, which it didn’t in the past. The weaknesses are that it is still a manual system.

Q39. What changes would you like to see made?
I think it is too early to be a judge in this area. A picture, for the first time, is appearing, and I am sure that if improvements can be made, they will be made.

Q40. What performance measures do you use most often?
The only one that I can use, is the costing which is dollars and cents.
Appendix XI

Company B

Respondent 1

Demographics

Name Respondent #1
Organization Company B
Job Title Group Technical Manager
Years of Service 12

Size of the business: Sales $350M
Employees 1085
Business environment Highly competitive
State of organisation Reorganization
State of demand Flat/Possible improvement
State of supply Market saturation/Oversupply

Organisational Strategy

General

Q13. What do you think your organisation’s main strategic focus would be at the moment?
Right at this moment it is focusing on what we should be doing to get a return on investment. We have had as strategy of go for volume and keep unit costs down, but in a depressed market that is not a terribly successful strategy. We are now looking at alternate strategies that are meant to grow the business but not by volume but rather by better returns. It would be niche marketing, value added services or a combination of those.

Q14. Is this a short-term or long-term strategy?
I think it has to be a long-term strategy.

Q15. Is it a proactive or reactive strategy?
It’s reactive in as much as we see where we have come from. We now need to change that direction. I think that from here on it will be proactive.

Strategy formulation

Q02. Who or what is responsible for the organisation’s strategic direction?
I think we’ve got two levels we need to look at there. One is the Group corporate level. The General Manager has a cables executive which is the general managers of each of the cables divisions of the group in Australia and New Zealand and they would be looking at the overall direction. And then each of the divisions has its own executive team which sets direction at that level.
Q01. Is there a procedure for strategy formulation?
A couple of years ago we put together a five year plan, where we thought the business was going, what we should be doing, and the strategies were developed to meet that plan, and then they are reviewed on a regular basis, certainly at budget time and as appropriate at other times during the course of the year.

Q05. At what level are strategy meetings held?
Within our organization, at two levels. Certainly the executive team which is the general manager with the business managers, the senior service managers, review it, look at the overall strategies. And then that is communicated down to the next level of managers which comprises marketing managers, business development managers on the marketing side, and factory managers on the manufacturing side to get their input and feedback. It’s an iteration process, you decide what you want to do, then decide whether you have the capacity or capability of doing it. If you haven’t you need to decide what you have to do to provide that capacity, or come up with an alternative strategy.

Q04. How often do you have strategy meetings?
Two to three times a year.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
I don’t think it helps. We have a very strong culture here. This site is 50-55 years old. The attitude that ‘this is the way we do it here’ persists.

Implementation

Q06. How would you communicate strategy throughout the organisation?
This has been done two, possibly three ways. One is the general manager going round the organization, having a series of direct presentations to relatively small groups of people, giving a ‘state of the nation’ type thing. That happens three or four times a year. And then it is also communicated down through the line managers whose job is to communicate what comes in to them down to the lower levels of the organization. That can be done on a fairly informal basis. So you’ve got that combination of formal top-down so that everybody gets the same words. Whether or not they get the same message is another matter. And then down through the line managers where those words tend to be refined, interpreted depending on what the manager believes is the hearing or listening capability of his audience. Occasionally, the general or state managers will use the company newsletter to convey a message.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
Yes. The role I’ve got cuts right across the group so to do my job I’ve got to do that, know where they’re going, and they’ve got to know how I can help them.

Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
I think the senior management's view is that they are encouraged to go ahead and implement the strategy. But there is this question of empowerment. Empowerment is not what the senior management say, it is what people feel. I think you will find that there is a mixture across the organization of people who go ahead so fast that you have to put the reins back on them to some degree, and others where you almost stand with a whip to try and actually get them to start thinking about doing something.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
It is a matter of reviewing at periodic intervals, looking at whatever monitors might be available to us. If the strategy is a sales growth strategy, for instance, then it is fairly easy to monitor your sales figures over the period and see what you have done. If it is a return on investment strategy, again you’ve got financial figures that are available there to see whether or not you are succeeding. The problem with those is that we are talking with relatively short time periods. The variability about the norm during those time periods can produce some fairly significant distortions. If you are not very careful then you start using a reactive strategy to deal with the distortions rather than the underlying numbers.

Q10. How often are strategic objectives reviewed?
Significantly, probably one a year.

Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
Not totally. There are bits of our system which are extremely good, there are bits which are extremely poor. One of our strategies is to replace our current computer system and all the bits which feed into it which are really 1970s architecture with a modern system. We’ve gone through a very lengthy organization wide process, which took about 18 months to finalize, to define the specifications in that system. When you ask people what they would actually like the system to do, their first reaction is “I’d like this bit down in that corner of the screen, or I’d like it to react quicker”, or whatever, rather than saying what they would actually like to achieve with it. Does it actually do what you want it to do at the moment, or do you do what it wants you to do, which is what our current system tends to force a lot of people to do. We have a program in place for putting in a new system which will hopefully be far more responsive to the needs of the business and give a far better indication of the impact of any changes on the business. If you are not measuring what you are doing, the whole business is at risk whilst you change things.

Q12. Is remuneration/promotion linked to achieving objectives?
In a broad sense, yes. We haven’t go a direct points system saying “If you do this you will get this reward. But certainly, in terms of performance, you’re saying to people the high performers are the ones who are going to move up in the organization. Performers are those who actually achieve what they set out to achieve.
Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible.
At the moment, flexible, informal.

Q40. What performance measures do you use most often?
I think the primary one is ensuring that the person is getting the job done that is expected of him. All the areas I’ve got are service areas, so it’s making sure that that level of service is provided to the customers and the customers are happy with the service levels they get. I look at the way that people who are reporting to me look after their own staff in terms of staff management, delegation, development, training... those sorts of things. One that I’m keen on, which is rather subjective, is looking at the effectiveness of people in making things happen, making changes occur. I’ve got people whose jobs rely on a high degree of persuasion. They can only do their job successfully if their customers work with them.

Q37. On a scale of one to ten, how would you rate your performance measures?
Probably seven or eight.

Q36. Are you happy with the performance measurement system?
I think there is scope for it to be somewhat more formalized. Instead of a subjective, very individualistic measurement system, and therefore you’ve got the dangers that if you don’t get on with the person you’re assessing, if he annoys you particularly on the day of his assessment, then the assessment is going to be an unfair assessment. When you look right across an organization and how to divide salary increases, we haven’t got a common system that is going to do that in an equitable manner.

Q38. What do you perceive to be its strengths & weaknesses?
The interdependency of the various business units gives rise to some conflicts, especially on how we measure some of the senior managers. If you are running a business unit which is measured on profit, but you’ve got a whole lot of allocations coming into that profit assessment then the manager’s instructions to his own staff can be to do things, which may be detrimental to other parts of the organization. We’ve certainly got some issues there. That comes back, not to the information, but to the way we use it.

Q39. What changes would you like to see made?
I think there is scope for it to be somewhat more formalized. The interdependency of the various business units gives rise to some conflicts. Some of the changes come back to the replacement of the existing computer system, where some of that information clearly is just not right, therefore people have to make decisions about what to do with wrong information, which is dangerous.
Formulation

Q16. Who is responsible for the performance measurement system? 
If you look at the organization’s systems you’d say that the HR Manager is. But I 
don’t think that she is. It’s still the individual managers at this stage in as much as we 
don’t have a formalized performance measurement system.

Q19. How are performance measures decided upon? 
In the absence of any general guidelines, I think it’s left very much to individual 
managers to look at what is appropriate for their part of the organization.

Q20. How are performance measures developed? 
I think like most things, unless you actually set out to formalize them, they just grow in 
an ad hoc manner to meet the requirements of the business.

Q17. Is the performance measurement system proactive or reactive? 
I think it depends who is using it. Because it is an informal system and very much a 
personal system, there are people who use it in a proactive manner to get the feedback 
to improve the performance, and those who use it in a reactive manner to say that 
“You didn’t perform. Bang”.

Q18. Do your performance measures tie in with those of other managers? 
In a very broad sense they do but there is no formal tie in.

Implementation

Q21. How are performance targets communicated throughout the organisation? 
Very much as the strategy is. Firstly by general manager having meetings with groups 
of individuals throughout the company to give them a very broad overview of what 
those targets are. And obviously the group he is talking to will determine the degree of 
detail that goes in to those and is conveyed down through the line management.

Q22. Does your performance measurement system measure things just in dollars, or 
do you look at other things? 
No. It is certainly looking at non-dollar, direct measures, things that can equate to 
dollars but aren’t dollars per se. You’re actually measuring physical things. We look 
at productivity in terms of physical output per man hour worked; we look at physical 
measures of scrap; we look at customer satisfaction levels, delivery performance. A 
blend of the two.

Expectations

Q23. What do you expect from your Performance Measurement System? 
Basically the ability to get indications of where you need to focus on to improve the 
business.
Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?
There is certainly a high level of focus on our MBE program in the manufacturing side of the business, but on the marketing side of the business the focus has been on getting volume. I think the focus is now looking far more at the dollar margin rather than dollar of sales. We’re looking at the added value and what we can do to improve it; is there a trade off. Should we be reducing volume and directing activities into this area rather than that area. Because whilst the volume goes down, the added value increases.

Feedback

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?
I think it gives us information that actually reflects the outcomes.

Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?
In general terms yes.

Q27. Would you like to see more performance measures that give advance warning of end results?
No answer

Change Process

Q34. What generally initiates a change in performance measures?
It can be an external influence such as BICC coming along and saying “We want to measure everybody against everybody else, to improve the business”. It can come out of strategic decisions taken at the executive level where they’re going to change the direction of the business in some way and therefore we need to see what the impact is from those changes. At a personal level it can be that we’ve got a new person come in to do a new job and we need to see how successful that is going to be.

Q29. Do you change your performance measures in line with changes in strategic objectives?
In general, yes.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?
There have been examples where I could say yes to that.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
Very much so. If you’re looking at a short-term attack, programs, action plans, to give you a very fast result, like ‘we want our work in progress reduced by 50% over the next two months’. Clearly you’ve got to put measures in place, and they are ad hoc
measures that will be created at the time to see whether what you have set out to do has been achieved. Your normal systems aren’t necessarily going to reflect those things fast enough for you.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
If we are thinking clearly, yes.

Q28. Have you made any changes to performance measurement recently?
Yes. We’ve certainly got one area in our drum shop where we haven’t got a good system of measuring what is coming in. We recycle a lot of second-hand drums but we don’t have a good system of valuing those. I’m in the process at the moment of putting in a system which actually measures what comes in and treats it differently from what comes out. We’ve got a black box in the middle that puts some added value into something, changing it from ‘A’ into ‘B’, whereas historically we just looked at ‘A’ being a poor version of ‘A’ and we are going to tart it up, so that ‘A’ comes in ‘A’ and comes out so nothing happens.

Q33. How often do performance measures change?
It varies depending on the requirements of the business. There are times when they are going to change very frequently. At other times a measurement that you’ve got might last you for ever.
Appendix XII  
Company B  
Respondent 2

Demographics

Name Respondent #2
Organization Company B
Job Title Manager - No.3 Factory
Years of Service 9

Size of the business: Sales $65M
Employees 57 shop floor, 7 staff, other support funded by allocation
Business environment Highly competitive
State of organisation Reorganization
State of demand Cyclical, tied to housing market, slight downturn at present
State of supply Market saturation

Organisational Strategy

General

Q13. What do you think your organization’s main strategic focus would be at the moment?
Very much it is a body of strategies based on high recoveries to the factory. It’s no secret that when we go through a quiet spell and have to pull back throughput that we then have problems against standard. We under recover through the factories. So not only are we having problems with total dollar sales, but also the factories start to run at a loss as well. When we are on a high volume strategy, we are pushing the factories hard and we get good recoveries out of the factory to the point where it is probably better to reduce margins and achieve volume, and get profit to the factory as well, and over recover in the factories. That has been our strategy for a while.

Q14. Is this a short-term or long-term strategy?
I’m talking about a portion of a strategy. The Company has a vision to be a significant supplier of cables in the Asia-Pacific market. Within this factory we develop our own strategic plan in line with the Company’s broader aims. We are currently working on short- to medium-term strategies which include optimizing training, transferring maintenance skills to operators..., so the time frame depends upon which set of strategies you are looking at. The factory’s recovery strategies are ongoing and long-term.

Q15. Is it a proactive or reactive strategy?
The Company tries to be proactive. It has been very active in exporting cable. On the other hand, it has to react to various conditions in the market that it can’t control, or opportunities that suddenly become apparent that it has to react to. So there is no hard and fast answer to that. It’s both. We are actively looking to promote the cable in the
market place; to reach the end user - the contractors. There are different strategies depending on the product and the end user

Strategy formulation

Q02. Who or what is responsible for the factory’s strategic direction?
Previously I would have said it was me, simply because we were reporting to a business unit manager with a marketing focus. The strategy for the factory was being developed with input from marketing.

Q01. Is there a procedure for strategy formulation?
The strategy for the factory was being developed with input from marketing. Now that we have our own General manager, Manufacturing, and all of the factories will be reporting to that General Manager, I’m not too sure how strategy is going to be developed, and what role, in the future, the Factory Managers will have in developing that strategy.

Q05. At what level are strategy meetings held?
We had an annual strategy meeting for the business unit which was chaired by the business unit manager. These meetings included State sales managers, distribution managers, operations managers and factory managers. It was a strategic planning session bringing all of the middle and key management personnel of the business unit. And then there were hives of that to get things down to a lower level. We would be then looking to develop a manufacturing strategy based on the business units global strategy, and that would be done with the people in this office.

Q04. How often do you have strategy meetings?
The business unit strategy meeting was an annual event. Lower level strategy meetings, based on the annual strategy would be held more frequently.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
It did in the past, there is no doubt about that. There never seemed to be a need for change, and then when you did want to change things the response was “What do you want to do that for?” For a stage there we were doing things simply for the hell of it. Now the company is forcing the pace. I think our company has been very proactive in negotiations with the union, its employees through enterprise bargaining, and things like that. Where we have had problems in the past, we’ve tried to change the culture of the organization, and a lot of those things have now been largely swept aside. We have been very active in strategic planning which involves cultural.

Implementation

Q06. How would you communicate strategy throughout the organisation?
I wouldn’t personally. I only have to communicate strategy in the factory which is my area of responsibility. From the factory point of view, once we’ve developed strategy, or taken a strategic point that we want to communicate, it will invariably be a session of communications with our employees in the factory. We endeavour to do it in one
24 hour period. We will have a complete shutdown of the plant and we’ll run three sessions in the day. Coming in first thing in the morning at 5 am to get the night shift. At the end of their shift we’ll go on then and communicate to the day shift, and then in mid afternoon we’ll pass the same message over to the afternoon shift, so that all of the employees in the factory get the same message in the same 24 hour period.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
Our previous strategic planning was done independently, but pulled together through the then General Manager so that there was an opportunity to look at common threads and opportunities that could be replicated in other areas. Certainly there was a lot of cross-fertilization and communication over the enterprise bargaining agreements that were being presented to the workforce for cultural change. That had a lot of input across the whole site.

Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
I guess everyone has to work within certain parameters; there’s no such thing as an open slather. If you need to do something involving money, then obviously there is a capital constraint. If you are talking about making changes involving safety then you could be into legislative or legal constraints. There are always constraints.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
A lot of our strategic planning from a manufacturing point of view will be based around employee skill levels, scrap reduction, productivity improvements, those kind of things; and we have indicators and measurements for all of those. The other thing is that you review your strategic plans as well, which we do. So we document our strategy in an action plan, and then we go back periodically and review progress against our action plan. It’s a question of, if you were going to do something, have you done it, have you implemented, and how far down the track have you gone, or did you find that it wasn’t viable when you got to do it and you had to take a change of direction. Some things you can measure if they have a direct impact on what you are doing; others are more intangible, a little less easy to measure.

Q10. How often are strategic objectives reviewed?
The type of strategic plans that involve the factory, the ones that we have been involved in for about three years now, came about because we had a criteria put on us from BICC, our corporate parent. That gave us some long term goals in key strategic areas. We had to develop strategies that would target those key areas for improvement. Every twelve months we review that manufacturing strategy officially, and of course, within that twelve months we also review it informally on a fairly frequent basis.
Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
Yes. We have done pretty well in this company in the last few years. Particularly in the 90's it has been improving each year to the point now where I think we do get some good feedback on how the factory is performing. We have comparisons across all the factories on site, and for the last couple of years we have been able to do comparisons with other group companies around the world as well. We get a monthly feedback on key areas.

Q12. Is remuneration/promotion linked to achieving objectives?
All staff are on an annual review where salaries are performance based. There are no automatic salary increases. If you perform, you have an expectation of doing well at the annual review. If it is perceived that you haven't performed then you may not do so well. You could either be moved sideways or you could lose your job. We don't have a bonus system, or gain sharing, though I would like to see some sort of incentive system involving company shares.

Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible?
Productivity, manufacturing inventory, scrap, and rework are the four key manufacturing measurements that we are interested in. Customer satisfaction, is measured by either on-time delivery or availability. These measures are used in all BICC companies around the world. These provide the focus for what we are doing, and our strategy in the factory. We get good reporting on such things as lost time, overtime, employee hours, hours worked, annual leave hours etc., through the pay office. As well, all of the factories keep their own records and report on the skill levels of their employees against the current career structure.

Q40. What performance measures do you use most often?
Rework is a subset of scrap. From the factory's point of view there are actually four key result areas productivity, work-in-progress, scrap, and customer satisfaction.

Q37. On a scale of one to ten, how would you rate your performance measures?
The global BICC ones are not really very good if you want to do a comparison with other factories around the world. Some of the measurements that we record in there represent input from each of the five factories on site. So some are actually site figures not factory figures and can't be broken down to actual factory level. Also, you can't do a comparison with other factories on site because they are producing different products. You can use the measurements as a guide and to keep you focused, but if you want to really see how you are performing then I don't put all that much faith in those measures. Out of ten probably only a three or four. I don't get a lot of value out of the actual figures that are reported; I get a lot of value out of the method of reporting, and the criteria for reporting. So the goals keep us on track, and I put a lot of credit into that, and use that very much, but the actual figures, displayed on a
monthly basis, are not a great deal of value to me. Our own factory measures that we publish internally, and which we are judged on, are a lot more focused and a lot more accurate than those global figures. I hold them in very high regard.

Q36. Are you happy with the performance measurement system?  
The global BICC ones are not really very good if you want to do a comparison with other factories around the world. The internal measures used within this factory are very good. If you take scrap for instance, everything we that make in the factory that is not saleable, can be identified to the machine that it came off if it is general process scrap. If it was intended for saleable product and then found to be defective then it goes down on a disposition of non-conforming material and we can actually focus on the cause, the operator, when the defect occurred, what the defect was. Scrap figures are reported weekly, monthly and annually against each machine, and that performance is monitored against budget. Such measures apply to all processes in our factory.

Q38. What do you perceive to be its strengths & weaknesses?  
The global measures are a little bit loose, but on the other hand there is great difficulty in trying to be very accurate. One strength of the system is the great detail it provides on activities within the factory. There are a few weaknesses which impact on my area. The cost of saleable production is apportioned to the factories according to budget groups. But these allocations are made on the basis of an educated guess. These estimates are reviewed annually. There is a potential for error. It's not major, something that we live with. The cost of trying to get it exactly right would outweigh the benefits derived from a more accurate figure.

Q39. What changes would you like to see made?  

Formulation

Q16. Who is responsible for the performance measurement system?  
The main group measurements were set by a BICC working party as part of a five year plan. We really started strategic planning in 1993. That's when the Manufacturing and Business Excellence Plan (MBE) measures became a reality. There was very specific criteria for those measurements with goals at the end of it, and we budget against those goals.

Q19. How are performance measures decided upon?  
The main group measurements were set by a BICC working party as part of a five year plan.

Q20. How are performance measures developed?  
They were developed as part of a global strategic plan for the BICC group, which all of the factories around the world subscribe to. A working party in the UK got together and developed the plan and the targets. How they actually did it I'm not privy to. But we budget for those improvements within this factory at a micro level by applying budgets to each machine.
Q17. Is the performance measurement system proactive or reactive?
We’ve been proactive in setting up our measures. What we’ve got now is state of the art. If something better comes along we’ll look at it.

Q18. Do your performance measures tie in with those of other managers?
Yes.

Implementation

Q21. How are performance targets communicated throughout the organisation?
They are displayed on the MBE reports board which is displayed in the factory. We have our measurements of all key criteria on there.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?
No. We measure waste; we measure percentages of availability or delivery on time. We measure things like lead times, cycle times, skill levels. And of course we measure dollar values as well.

Expectations

Q23. What do you expect from your Performance Measurement System?
I expect to get an accurate reflection on how we are performing, something that is meaningful and useable for taking corrective action, or planning strategy if necessary.

Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?
The measures are reasonably broad in the scope, but have a focus on the four MBE criteria - scrap, productivity, work-in-progress and delivery on time. We place great emphasis on safety and have several measures which address it.

Feedback

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes?
The hard information that is reported is of actual outcomes. But we also report against targets as well so we know where we are supposed to be at any given time.

Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?
I believe so.

Q27. Would you like to see more performance measures that give advance warning of end results?
What we are getting is excellent, but if somebody comes up with something better I’d take it on.
Change Process

Q34. What generally initiates a change in performance measures?
Generally speaking, a surge in market activity. For instance productivity might be extremely important to us and we'll focus on productivity, simply because we are looking to get more throughput from the factory. On the other hand, if market activity is slower then we might look to rein in costs as much as we can via a focus on scrap, to take it and waste out of the organization.

Q29. Do you change your performance measures in line with changes in strategic objectives?
The measures themselves are fairly well established now. As far as I'm aware, the measures that we have now would cover any change in strategy.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?
As far as I'm aware, the measures that we have now would cover any change in strategy.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
We don't change our measures of output as our strategies unfold, but the steps used in generating output are monitored. All the other things are just elements of productivity which can be measured for improvement, but in the end they are only steps towards the goal.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
We've had a change of focus on performance measures a couple of times. It just depends on short-term problems within the company. For instance working capital problems might mean a focus on the value of product tied up in work in progress and finished goods, rather than on scrap or productivity. The cyclical nature of the business can see a shift in emphasis, but the MBE criteria maintains a focus on the key issues.

Q28. Have you made any changes to performance measurement recently?
No. The key measures have not changed since they were introduced in 1993, and I don't anticipate they will change until the five year plan has run its course. There have been additions, but not from the manufacturing perspective. It was recognized that all of the focus had been on improvement through the factory at the exclusion of looking at improvements through administrative and non-manufacturing areas. It was recognised that the MBE had such a key impact on the manufacturing areas, that it was appropriate to try to replicate the same sort of program in those areas.

Q33. How often do performance measures change?
The key measures have not changed since they were introduced in 1993, and I don't anticipate they will change until the five year plan has run its course.
Appendix XIII  Company B  Respondent 3

Demographics

Name Respondent #3
Organization Company B
Job Title Commercial manager - Construction Business Unit
Years of Service 6

Size of the business: Sales $176M
Employees 450
Business environment Highly competitive
State of organisation Reorganization
State of demand Flat
State of supply Market saturation

Organisational Strategy

General

Q13. What do you think your organisation’s main strategic focus would be at the moment?
Maintain or grow its market share.

Q14. Is this a short-term or long-term strategy?
Its both. Our current emphasis is on retaining market share; the market is very quiet at the moment. In the long-term we want to maintain where we currently are, around 40%+ market share.

Q15. Is it a proactive or reactive strategy?
Its been proactive in that decisions made a number of years ago allowed us to walk away from market share to allow us to reestablish ourselves in the markets. At the moment we are reacting to what some of the smaller manufacturers are doing in the market to retain our long-term 40% market share objective.

Strategy formulation

Q02. Who or what is responsible for the organisation’s strategic direction?
The Business Unit Manager [Name omitted]. He takes advice, of course from the General Manager, where the total company strategy it built within our market.

Q01. Is there a procedure for strategy formulation?
Not that I am aware of.

Q05. At what level are strategy meetings held?
At middle management, the business unit manager and those who report to him.

Q04. How often do you have strategy meetings?
Regularly.

Q03. Do you think that the corporate culture inhibits your ability to implement strategic changes?
No. We have been supported in our strategic decisions. Hopefully, the organization’s restructure won’t impact adversely on our customer focus.

Implementation

Q06. How would you communicate strategy throughout the organisation?
Our group communicates by phone. Strategies are promulgated at senior management meetings. State managers then advise their management teams. In most cases this is done verbally. The reason for this is that the market is very volatile and you have to react almost instantaneously. If you wait for a memo to be typed and distributed, it will be too late, you lose the initiative.

Q08. Do you discuss ways of achieving a strategic objective with other departmental managers?
The business unit manager does.

Q07. Once a particular strategy has been set, is it then up to individual managers how they go about it, or are they constrained in what they can do towards achieving that objective?
Pretty much they are unconstrained. They have an objective and they are supposed to meet it. There are reviews as to how we are going as a company overall as well as in individual areas.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
It depends on what the strategy is. If the strategy is for example ‘we really must achieve the sales budget this month’ then you monitor sales daily. If it’s a long-term strategy to build particular customer relationships then you will look at how the relationship progresses. Whatever the strategy, we set goals against which to measure our success in achieving it.

Q10. How often are strategic objectives reviewed?
Short-term and intermediate ones are reviewed regularly meetings. At least once a year, probably twice a year all the State managers come in for a conference where we sit down for a week and go over the whole long-term strategy and where we are trying to go, and whether we are achieving our goals, which areas are having problems...

Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
Not really, because a lot of the strategies that we are implementing are just dollars or numbers strategies. It doesn’t tell you whether you have got a better relationship today with your customer than you had twelve months ago. It’s generally a perception by the client’s manager as to whether he feels that relationship is growing. Straight sales
figures can be compared to budget and there is plenty of information on sales, expenses, margins.

Q12. Is remuneration/promotion linked to achieving objectives? Yes and no. If the company performs well it tends to reflect in remuneration. Whilst I feel remuneration has never been unfair given the workload in this section, we have a very flat structure and promotion isn’t necessarily there. However, the roles do change. The job I am doing today is nothing like the job I was doing two years ago, yet I am still sitting in the same chair, still reporting to the same person. There is still plenty of challenge and job satisfaction.

Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible. We have a standard outline. The standard is your sales margin expenses and from that comes our bottom line. Within that standard outline, one-off measures can be set up and there is a degree of flexibility.

Q40. What performance measures do you use most often? Performance against sales budget, which is sales margin and expenses. Production ‘sell’ us a product at a set price, we then have to sell it to our customers to achieve a given level of profit. That profit is our first performance target. The second indicator is the expense budget that different sales areas have. It covers salaries, rent, phones, claims... We have access to these figures on a daily basis.

Q37. On a scale of one to ten, how would you rate your performance measures? Seven or eight

Q36. Are you happy with the performance measurement system? Yes.

Q38. What do you perceive to be its strengths & weaknesses? Within our small group, the measures that we use are good measures. That is sales against margin, sales volume and sales against budget. Its a daily indicator. People everywhere in the country can review their sales figures daily to see where they are going. Expenses can also be reviewed daily. The reason I rated the system at a 7 or 8 is because a lot of the expenses don’t turn up in their areas until after the end of the month because we rely on inputs from other areas like the pay office, vehicle leasing costs from finance, accounts from creditors. As well, various departments carry a lot of allocated charges. How those charges are allocated is a bit arbitrary. In a lot of cases it is on sales and if we perform better we pay more, so it is a disincentive to performance. So assessing performance against budget can’t be determined until that information comes through. The strength of the system is that you have input into the budget process against which you are being assessed.
Q39. What changes would you like to see made?
Personally, I would like to see every single location made a cost centre. Make them accountable to a cost budget.

Formulation

Q16. Who is responsible for the performance measurement system?
Within our group - construction - we can put in place whatever measures we like. Since I'm responsible for this units budgets, I guess to that extent I'm also responsible for the performance measures by which they are assessed. From the company's point of view we have a sales and expense and bottom line budget to achieve.

Q19. How are performance measures decided upon?
If the strategy changes and we decide that we need to measure something we just add it to our package of required reports.

Q20. How are performance measures developed?
Given that our existing data can be reported in many different ways, if information is required in a new format then it could be provided if there was a wider application it could be added to the package of performance measures. Such a process is informal. Internal communication tends to be by phone or fax.

Q17. Is the performance measurement system proactive or reactive?
It's both. With our long-term proactive strategies some long-term measures will be set. For strategies with a short-term focus we'll set up a target measure. It's a reactive measure for the short-term. I guess short- to medium-term strategies have reactive performance measures, whilst our longer-term goals have proactive performance measures.

Q18. Do your performance measures tie in with those of other managers?
Yes and no. The whole company has a package of performance measures which are reported to head office. These are consistent across the three business units. One you step to your own internal reporting, I wouldn't know how well they relate to other areas, because they are used for internal purposes.

Implementation

Q21. How are performance targets communicated throughout the organisation?
An official monthly report goes out to all locations. What goes in there is up to us. That's how it is communicated on a formal basis. Also, short-term targets are communicated by fax to the relevant people, or in the overnight mail bag.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?
From the sales point of view, dollars and percentage of market share are the relevant measures. The guy next to me looks after distribution. They look at tons, on-time delivery, packing slips raised, invoices raised, errors.
Expectations

Q23. What do you expect from your Performance Measurement System? Feedback for ourselves and the people at the coal face. If they know what is going on they are in a position to provide input into strategy meetings to allow us to restructure or modify our strategies, to better achieve the organization’s goals.

Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement? Right at the moment, sales.

Feedback

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes? The majority of feedback we are getting is on past events. The budget for sales and margin reports shows you the budget for the end of that month which of course is a very short-term focus. But that is the way our company works, on monthly cycles.

Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible? Yes.

Q27. Would you like to see more performance measures that give advance warning of end results? If we had a crystal ball, yes.

Change Process

Q34. What generally initiates a change in performance measures? A change in the market or a change in strategy or direction. I’d better qualify that. There are four BICC performance measures which are used for world comparison and they do not change. They work for a site but not on a factory by factory basis, so every factory was asked to produce another indicator which better reflected their factory’s performance. These measures could alter in line with the above changes.

Q29. Do you change your performance measures in line with changes in strategic objectives? Yes.

Q30. Do the types of performance measures used change or shift focus as the strategy develops? Yes. It depends on the type of product and the life cycle of that product. We have products that range from commodity products that can be bought here or from overseas and there is same across manufacturers these days. With new products we would be looking at market penetration and sales margins.
Q31. Does the strategic time frame affect the types of performance measures that are to be used?
Yes. It limits it in some cases. If it is a short-term goal, and we see a need to do something, it will limit how much effort you can put in to building the performance measure.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
They are probably driven by changes in strategy. When a strategy changes, e.g. tomorrow’s strategy may be get rid of stocks, then the people responsible for getting rid of stocks will set up a performance measure.

Q28. Have you made any changes to performance measurement recently?
Last year there was a ‘holy grail’ to get our stock levels down for the company’s year end results. This year we have a new target which is make sales. To get opportunity sales you need to have product in stock, so stock is no longer the focus. This happens regularly.

Q33. How often do performance measures change?
Whenever we need to change them.
Appendix XIV        Company B        Respondent 4

Demographics

Name Respondent #4
Organization Company B
Job Title IT Manager, Energy Products
Years of Service 17

Size of the business: Sales $300M
Employees 1080
Business environment Highly competitive
State of organisation Reorganization
State of demand Flat
State of supply Market saturation

Organisational Strategy

General

Q13. What do you think your organisation’s main strategic focus would be at the moment?
We’re going through a phase of change at the moment, so what I think we really need to be focusing on is where we want the company to be in the next 5 to 10 years. But how do we best restructure the organization to achieve a higher level of customer service at the least cost? At the moment we have gone through this business unit focus and it is probably great in terms of achieving customer service but it is a high cost component in terms of doing it that way. I think we need to look at ourselves, look at the people within the organization, and look at our business processes and try to re-engineer them in order to supply a higher level of customer service at a lower cost.

Q14. Is this a short-term or long-term strategy?
I think there are some things that we can do in the shorter term, but it is in the next two to three years where it will start to show results.

Q15. Is it a proactive or reactive strategy?
Given where we have come from, I think that in our case it is probably a little bit reactive, but I think that we shouldn’t treat it that way. It’s a case of decisions had to be made so let’s look at it as being proactive.

Strategy formulation

Q02. Who or what is responsible for the organisation’s strategic direction?
The persons responsible have got to be the General Manager and the Board. The people who form the Executive must have a fair input into that area as well.
Q01. Is there a procedure for strategy formulation?
If there is a procedure I certainly haven’t seen it.

Q05. At what level are strategy meetings held?
Normally at the executive level.

Q04. How often do you have strategy meetings?
I’ve only been in this position for the last six months, but we try and have meetings in
terms of direction and communication sessions on a fortnightly basis. In terms of
strategy where you are looking at things like budgets, and the direction that we want IT
to go, we don’t have formal monthly sessions. Basically, I get the right players
involved and we start to look at the direction that IT should be heading and then we
then go away and start to examine various aspects of that. It’s very much on an
informal basis, probably done monthly, but not to any fixed timetable.

Q03. Do you think that the corporate culture inhibits your ability to implement
strategic changes?
Yes.

Implementation

Q06. How would you communicate strategy throughout the organisation?
Normally I would need to discuss IT’s strategic goals with the Financial Controller and
General Manager.

Q08. Do you discuss ways of achieving a strategic objective with other departmental
managers?
Yes. From time to time we do. If there is a goal that we need to achieve, I’m very
good at playing the politics of the place, and I’ll find the best way of pushing it
through. If it means going through one of the departmental managers to push a
particular strategy through, I’ll do that.

Q07. Once a particular strategy has been set, is it then up to individual managers how
they go about it, or are they constrained in what they can do towards achieving that
objective?
Normally, once it has been set, and it has been agreed to by the executive, I’ve found
that I normally have a reasonably free rein. I don’t feel constrained in any way.

Feedback

Q09. How would you monitor progress in achieving a specific strategy?
Effectively, what we try and do when we have to monitor progress is to put a peg in the
ground to mark our current position and then we measure ourselves against that
benchmark.

Q10. How often are strategic objectives reviewed?
I’m reviewing them constantly as part of my day-to-day activity.
Q11. Does the Performance Measurement System give you adequate feedback to optimise the way you manage?
In terms of pegging our current position as a yardstick, I'm sure I could do better.

Q12. Is remuneration/promotion linked to achieving objectives?
Remuneration tends to be performance based.

Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible.
It's hard to say whether it is either. There really isn't a standard performance measurement in the place. Performance measurement tends to be very much left to the departmental or divisional managers.

Q40. What performance measures do you use most often?
In the IT area we measure our performance in terms of system availability. We do have problems due to constraints imposed by the technology we are using but we are monitoring system availability and that forms part of our monthly report to the executive. Where we employ analysts and technical people their performance in projects is measured against quoted time for completion.

Q37. On a scale of one to ten, how would you rate your performance measures?
I'd rank them at around 7 or 8.

Q36. Are you happy with the performance measurement system?
I'm reasonably happy with the system I have in place, though there is always room for improvement; I can't comment about others.

Q38. What do you perceive to be its strengths & weaknesses?
One strength is that there is ownership by the people working under those measures. One weakness lies in the need to fine tune our collection of data. Some of the information fed into the system appears to be questionable based on reported results. These problems with data result mainly from delays in receiving data so that often we are reacting to a situation rather than being proactive.

Q39. What changes would you like to see made?
Some of the information fed into the system appears to be questionable based on reported results. These problems with data result mainly from delays in receiving data so that often we are reacting to a situation rather than being proactive.

Formulation

Q16. Who is responsible for the performance measurement system?
In my area - me.
Q19. How are performance measures decided upon?
We set measures by consensus. At our meetings I’ll nominate an area where
performance will be under scrutiny and we’ll jointly agree on an appropriate measure.

Q20. How are performance measures developed?
By consensus of department members.

Q17. Is the performance measurement system proactive or reactive?
Our performance measurement system tends to be a little bit reactive.

Q18. Do your performance measures tie in with those of other managers?
I’m not certain. My performance measures are built around providing a quality service
to my customers, the employees. Whether other managers see it the same way I
couldn’t comment. They certainly don’t conflict with other departments’ performance
measures.

Implementation

Q21. How are performance targets communicated throughout the organisation?
In this area it tends to be by monthly report. In relation to payroll we produce weekly
graphs which are placed on display in the work area. In terms of on-time project
delivery performance is reviewed with service providers.

Q22. Does your performance measurement system measure things just in dollars, or
do you look at other things?
None of my measures are in dollars. I measure number of errors with respect to
payroll. For IT we look at system down time measured against a benchmark which
takes account of the systems limitations. Projects are measures against agreed
completion time.

Expectations

Q23. What do you expect from your Performance Measurement System?
Information. Data on how we are performing. It’s a tool for me to be able to manage
the department and to identify areas where greater effort is required. It is not used to
apportion blame but to identify areas in need of improvement.

Q24. What are the particular areas on which it focuses, in other words where are you
looking for improvement?
At the moment we’re looking at improvement in terms of systems availability.

Feedback

Q26. Would you say the performance measurement system delivers information based
on outcomes or provides indications of expected outcomes?
It delivers information based on outcomes but it also provides indications of expected
outcomes. When looking at new business systems for the company we have a longer
term focus we know that we will be able to achieve a better level of system availability. For the next two years we will be trying to maintain the existing platform.

Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?
I think it does. Again, I’m sure there are areas that can be improved.

Q27. Would you like to see more performance measures that give advance warning of end results?
In terms of more performance measures, I’m a firm believer that you have to have a few good measures, not a large number.

Change Process

Q34. What generally initiates a change in performance measures?
If I’m not receiving the sort of information that I expect out of the performance measure, or if I find the performance measure is there just for the sake of having a measure without getting anything out of it, that it the time to change it.

Q29. Do you change your performance measures in line with changes in strategic objectives?
I have done. In this current job I have found no need to change the existing measures.

Q30. Do the types of performance measures used change or shift focus as the strategy develops?
Yes.

Q31. Does the strategic time frame affect the types of performance measures that are to be used?
I think it does. If you are looking at measuring your day-to-day activities with providing assistance to the customer you can be fairly constant. But if you are looking at a major IT project like a new system implementation you need to look at the measures you would use over a number of years.

Q32. Are changes in performance measures decided upon concurrently with changes in strategy?
Not always, but sometimes they are.

Q28. Have you made any changes to performance measurement recently?
Not recently.

Q33. How often do performance measures change?
The measures I’ve put in place have not changed in quite a while. You only change them if there is a need. For instance, if the strategy changes and the measures you’ve got don’t quite fit then you change them.
Appendix XV  Company B  Respondent 5

Demographics

Name Respondent #5
Organization Company B
Job Title Operations Systems Manager (Quality & Safety)
Years of Service 4 weeks

Size of the business: Sales $350M
Employees 1000
Business environment Highly competitive
State of organisation Mature/Reorganization
State of demand Flat
State of supply Market saturation

Organisational Strategy

General

Q13. What do you think your organisation’s main strategic focus would be at the moment?
At the moment it is hard to say, but previously, before the new General Manager came in, it was to pump out the cable, get production out the door, cost cutting, and trying to increase the sales volumes. I don’t know whether they were profitable volumes or not.

Q14. Is this a short-term or long-term strategy?
It was a short-term strategy.

Q15. Is it a proactive or reactive strategy.
Completely reactive.

Strategy formulation

Q02. Who or what is responsible for the organisation’s strategic direction?
I think the stakeholders in the organization have to be taken into account when planning strategy. Probably the single most important stakeholders would be the shareholders when identifying strategy. But you would have to identify the strategy within constraints of the other stakeholders, the other interest groups within the organization, say for example the employees, suppliers, definitely customers. But that relates back to providing an increase in the value of the share price to the customers so that if you are meeting that objective then you are probably meeting your customers’ requirements.

Q01. Is there a procedure for strategy formulation?
I don’t think there is here.
Q05. At what level are strategy meetings held? 
Unfortunately, I think the majority of them are held at high level.

Q04. How often do you have strategy meetings? 
Probably around budget time.

Q03. Do you think that the corporate culture inhibits your ability to implement 
strategic changes? 
I think where the strategic changes impact on the different parts of the organization, 
the people who are responsible for those parts can implement them. The problem is 
they may not be consulted in the development of the strategy in the first place. Keep in 
mind that what I am saying is based on what has happened before. I don’t think it is 
necessarily going to continue. I think that the new General Manager, [Name deleted], 
is very much concerned with all facets of the organization, what different levels of the 
organization think, and uses that as input into the strategy process, and involve 
those people as much as possible.

Implementation

Q06. How would you communicate strategy throughout the organisation? 
It depends on the nature of the strategy. You’ve got to communicate that strategy in a 
form that suits the audience. To communicate a broad outline of the strategy, you have 
got to keep it simple, through maybe training, or information sessions to all employees. 
Where it becomes more detailed, for example for implementation requirements, then it 
has got to be at a level where it can be, again, understandable, and it can be usable in 
implementing the strategy.

Q08. Do you discuss ways of achieving a strategic objective with other departmental 
managers? I’m involved in developing strategic objectives within the areas of quality 
and safety environment and where I do that I believe that there is a very strong 
interdependence between the departments. For example personnel, factory managers, 
marketing, they’re all so interdependent it’s hard not to formulate strategy without 
consulting with the other functions in the organization.

Q07. Once a particular strategy has been set, is it then up to individual managers how 
they go about it, or are they constrained in what they can do towards achieving that 
objective? 
You’ve always got financial constraints, but in terms of policy constraints we’ve got a 
very definitive system currently in place but I don’t think it’s necessarily enforced. 
The evidence is that there a number of factories out there doing completely different 
things. I’d say that in the past most people have managed things their own way.

Feedback

Q09. How would you monitor progress in achieving a specific strategy? 
The key to monitoring progress is to have measures. They have to be the correct 
measures. You don’t want to be measuring the wrong thing. They have to be related
to your objectives which are formed from your strategy, and you’ve got to measure your
progress in meeting those objectives. The objectives should be definitive.

Q10. How often are strategic objectives reviewed?
I think they should be reviewed on an ongoing basis. I don’t mean that as a
motherhood statement. I think they should be part of the day-to-day process of
managing an organization because conditions and environments change. If you don’t
monitor your strategies and objectives you get left behind.

Q11. Does the Performance Measurement System give you adequate feedback to
optimise the way you manage?
I don’t know if we’ve really got much of a performance measurement system, except
for the safety systems where we’ve got some fairly reactive measures with the number
of incidents, lost time, severity, frequency rates, that sort of thing. There are some
measurements there, but I wouldn’t say that they are necessarily the best measurements
to monitor the performance of our system. Then, also, we have internal and external
auditors on the quality side of things.

Q12. Is remuneration/promotion linked to achieving objectives?
I don’t think so.

Performance Measurement System

General

Q35. Is the Performance Measurement System standardised or flexible.
I don’t think there really is one. At the moment there are ad hoc measurements around
the place but there is nothing really structured across the board that links in to an
overall mission, where we’re headed as an organization. I think it has to be highly
integrated to the way we do business.

Q40. What performance measures do you use most often?
I think the key focus is satisfied customers at the end. Some of the things seem pretty
nebulous, I guess you think they are objective to some degree, but at the end of the
day, having a satisfied customer is the key objective of the quality system, and having
safe and health employees, happy in their work, in not having any incidents. A lot of it
is perception as well. So you are really managing perceptions and it is very difficult to
isolate. I’ve done a lot of work on researching methodologies for analyzing or
measuring improvement based on quality systems and it’s very hard to isolate
variables to form the measures to identify the actual improvement in quality. You can
use scrap or increased efficiency, it just depends on what is important to you. But the
whole purpose behind the quality system is to meet the requirements of the customer.
So if you are doing that then you might use customer complaints.

Q37. On a scale of one to ten, how would you rate your performance measures?
I’d say they are pretty poor in terms of what I do. But I don’t know if that can be
improved. I’d like to think that it could but I don’t know. I’d say it would be four at
the moment. There are measures there but they are very broad measures. I think customer perceptions are the things to look for.

Q36. Are you happy with the performance measurement system? Not really, despite efforts to try and improve it. It just depends. If it is linked with the overall objectives of the company then you can ride on those measurements. But often companies just don’t have the objectives set so it is hard to isolate the variable that cause improvement to the objective anyway. I’ve been wary of using performance measurement systems because if you measure the wrong thing then you get the wrong result. An example would be where we are measuring the severity of accidents and we’re saying the longer somebody is off work, the more severe the accident is. I can do two things. I can get that person back to work in a wheelchair and that satisfies the statistic and I look like a very good manager. But as far as morality and looking after the workforce, I think that would have a negative impact which would probably result in poorer performance across the board. Performance measures can give you tunnel vision if they don’t look at the overall effect.

Q38. What do you perceive to be its strengths & weaknesses? [Unable to comment]

Q39. What changes would you like to see made? I’d like to see more time invested in performance measurement in a company setting. Some types of functions could be managed on a national basis if some types of performance measures could be developed.

Formulation

Q16. Who is responsible for the performance measurement system? If you look at performance measures as being derived from strategy then you have different levels of measurement. You would have an overall measurement and you would set objectives for the next level. They again would have their own measurements. At each level, the people above them would set the objectives in consultation with their subordinates to measure performance.

Q19. How are performance measures decided upon? I’m not certain. People might brainstorm them, or they might be based on historical measurements without a lot of thought as to whether it is a good measure.

Q20. How are performance measures developed? You would have an overall measurement and you would set objectives for the next level. They again would have their own measurements. At each level, the people above them would set the objectives in consultation with their subordinates to measure performance.
Q17. Is the performance measurement system proactive or reactive?
It’s very difficult because I’m answering this survey from a number of points of view. From the company’s perspective, by developing performance measures in general, it is an attempt to be proactive.

Q18. Do your performance measures tie in with those of other managers?
Very often my performance measures are customer focused. A satisfied customer is not only the result of what I do but what other managers do. I form part of that process, so yes our measures are related.

Implementation

Q21. How are performance targets communicated throughout the organisation?
I don’t know for this organization.

Q22. Does your performance measurement system measure things just in dollars, or do you look at other things?
You wouldn’t want to be limiting yourself to dollars because it’s only part of calculation, and short-term in nature.

Expectations

Q23. What do you expect from your Performance Measurement System?
I see it as a means to meeting objectives.

Q24. What are the particular areas on which it focuses, in other words where are you looking for improvement?
Definitely profitability and cost cutting, not always the best measures.

Feedback

Q26. Would you say the performance measurement system delivers information based on outcomes or provides indications of expected outcomes? Unless it is forecasting, it’s based on historical outcomes, a measurement of what has happened.

Q25. Does the performance measurement system adequately allow you to control business activities for which you are responsible?
Not in themselves no. Unless it is tied to remuneration the people that are working for you. You need some sort of way of ensuring that the measures are not just numbers sitting out there that don’t do anything.

Q27. Would you like to see more performance measures that give advance warning of end results?
Yes. It’s an interesting concept. It may have short-term effects but I guess they would be more useful for medium- to long-term objectives.
Change Process

Q34. What generally initiates a change in performance measures?
I think it should be a review process, or an identified change in the environment. Over
time, there would be a need to fine-tune and improve the measures, and continually
check to see that you are measuring the right thing.

Q29. Do you change your performance measures in line with changes in strategic
objectives?
Definitely if I’m putting together performance measures. You’ve got to.

Q30. Do the types of performance measures used change or shift focus as the strategy
develops?
I think they have to, to reflect the strategy.

Q31. Does the strategic time frame affect the types of performance measures that are
to be used?
They should. I would say that there is very little of this going on within this
organization at this stage, but I think it is going to start very soon.

Q32. Are changes in performance measures decided upon concurrently with changes
in strategy?
I think they should be, but it would be pretty ad hoc at the moment. There isn’t a
structured framework to ensure that that happens.

Q28. Have you made any changes to performance measurement recently?
I’m trying all the time but the performance measures in this area are very difficult.
Some of the existing ones, I don’t agree with so I try and change [them].

Q33. How often do performance measures change?
They should be subject to change, but I think that once they are set they are ‘set in
concrete’, and that is the basis that you are measured on unfortunately.
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## APPENDIX XVI

### QUANTITATIVE SURVEY DATA

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APPENDIX XVII  CONFERENCE PAPERS GENERATED BY THIS RESEARCH


ABSTRACT
The quality movement, and in particular Total Quality Management (TQM) has focused attention on performance measures. Traditional performance measures are deficient in that they tend to be aggregative, backward looking and internally directed. A new wave of performance measures is emerging to cope with a customer oriented focus and the process of continuous improvement. Even where organisations are driven by a TQM philosophy, they often experience difficulties in implementing a system for continuous improvement. Many fail to link performance measures with the organisation's strategic plan. A pilot research study has been conducted to examine the relationship between organisational goals and performance measures. This paper reports on the outcomes of this pilot study and discusses the application of these new performance measures in manufacturing firms in southwest Sydney, Australia.

REFEREED


ABSTRACT
A financial perspective has tended to dominate performance measurement systems. Such systems generate information in standardised reports such as the Profit & Loss Statement and the Balance Sheet. These reports also issue at set intervals which have scant correlation with business activity. Financial performance measures provide a summary of past activity and are of limited value in providing managers with the information necessary to control the ongoing activity of the firm. Indeed, a restrictive set of performance measures may adversely influence the actions of managers. Organisations need to develop a broad range of performance measures, linked to their strategic objectives. When performance measurement systems are constructed in this manner, they should incorporate metrics which recognise the time horizon of the organisation's strategic objectives. This paper examines the relationship between organisational strategy and the performance measurement system within the context of the strategic time horizon. Where appropriate performance measures have been properly defined, there should be a change in the relevance of individual measures as strategies unfold. The active management of performance measurement systems
provides for greater control, a clearer focus on strategic objectives and the factors which impact on them, and greater likelihood of them being successfully carried out.


ABSTRACT

Performance measurement systems not only provide the data necessary for managers to control business activity, they also influence the behavior and decisions of managers (Hiromoto, 1988; Simons, 1991). This being the case, a restrictive set of performance measures, limited to financial aspects, may adversely impact on an organizations long-term viability (Kaplan 1984), organizations should therefore develop a broad range of performance measures. Berliner and Brimson (1988) state that "performance measurement is a key factor in ensuring the successful implementation of a company’s strategy". When organizations implement new strategies they should ensure that the appropriate set of performance measures are in place. In this paper we look at two case studies conducted in a medium-sized manufacturing firm and a large manufacturing firm, and evaluate the managers’ perceptions of the strategy/performance measurement relationship, and the responsiveness of performance measures to changes in strategy.
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AN EXAMINATION OF THE LINKAGES BETWEEN ORGANISATIONAL PERFORMANCE MEASURES AND STRATEGIC OBJECTIVES

A THESIS SUBMITTED TO THE
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LIST OF TABLES

TABLE 1  CLASSIFICATION OF ARTICLES ON PERFORMANCE MEASUREMENT SYSTEM DESIGN 15
TABLE 2  PERFORMANCE MEASURES ACROSS SIX DIMENSIONS 21
TABLE 3  STRUCTURAL DIVERSITY OF RESPONDING FIRMS 32
TABLE 4  SUBJECT PROFILES OF CASE STUDY RESPONDENTS 42
TABLE 5  AUTHORITY LEVEL OF QUANTITATIVE SURVEY RESPONDENTS 45
TABLE 6  INPUT OF PERSONNEL INTO STRATEGIC DECISIONS 46
TABLE 7  IMPACT OF MANAGEMENT SENIORITY ON CHANGES TO PERFORMANCE MEASURES 51
TABLE 8  FUNCTIONAL DEPARTMENTS IN RESPONDING FIRMS AND RELATIVE USE OF PERFORMANCE MEASURES 61
TABLE 9  PERFORMANCE MEASURES: RELATIVE USE AND FREQUENCY OF REVIEW 64
TABLE 10  PERFORMANCE MEASUREMENT - LIFE CYCLE RELATIONSHIP 79
TABLE 11  STRATEGIC TIME FRAME OF CURRENT STRATEGIES 83
LIST OF FIGURES

FIGURE 1  LITERATURE REVIEW CLASSIFICATION MODEL  16
FIGURE 2  ANALYTICAL MODEL OF RELATIONSHIP BETWEEN
ORGANIZATIONAL STRATEGY AND PERFORMANCE MEASURES  22
FIGURE 3  RELATIONAL DIAGRAM OF RESPONDENTS  42
FIGURE 4  RESPONSIVENESS OF PERFORMANCE MEASURES TO STRATEGY SHIFTS  43
FIGURE 5  USE OF PERFORMANCE MEASURES TO IDENTIFY STRATEGY  44
FIGURE 6  DECISION MAKERS FOR PERFORMANCE MEASURES AND STRATEGIC
OBJECTIVES  46
FIGURE 7  DECISION MAKERS FOR PERFORMANCE MEASURES AND STRATEGIC
POLICY IN AUSTRALIAN-OWNED FIRMS  47
FIGURE 8  DECISION MAKERS FOR PERFORMANCE MEASURES AND STRATEGIC
POLICY FOR FOREIGN-OWNED FIRMS  48
FIGURE 9  IMPACT OF SIZE ON STRATEGIC INPUT OF OWNERS IN
AUSTRALIAN FIRMS  49
FIGURE 10  DEPARTMENTAL USE OF PERFORMANCE MEASURES  62
FIGURE 11  FREQUENCY OF REVIEW OF PERFORMANCE MEASURES  63
DECLARATION

I, Charles Edward O’Mara, as sole author of this work hereby declare that the
substance of this thesis has not been submitted for any degree other than the one
specified, and will not be submitted for any other degree.

I certify that to the extent of my knowledge any help received in preparing this thesis,
and all sources used, have been acknowledged.

.................................................................

Charles Edward O’Mara
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All errors and omissions are my responsibility.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>iii</td>
</tr>
<tr>
<td>DECLARATION</td>
<td>iv</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>v</td>
</tr>
<tr>
<td><strong>CHAPTER I</strong></td>
<td>1</td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background to the research</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Research problem and propositions</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Justification for the research</td>
<td>5</td>
</tr>
<tr>
<td>1.4 Methodology</td>
<td>7</td>
</tr>
<tr>
<td>1.5 Outline of this thesis</td>
<td>8</td>
</tr>
<tr>
<td>1.6 Definitions</td>
<td>9</td>
</tr>
<tr>
<td>1.7 Delimitations of scope</td>
<td>10</td>
</tr>
<tr>
<td>1.8 Key assumptions</td>
<td>11</td>
</tr>
<tr>
<td>1.9 Conclusion</td>
<td>12</td>
</tr>
<tr>
<td><strong>CHAPTER II</strong></td>
<td>13</td>
</tr>
<tr>
<td>2 LITERATURE REVIEW</td>
<td>13</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>13</td>
</tr>
<tr>
<td>2.2 Parent discipline and classification model</td>
<td>14</td>
</tr>
<tr>
<td>2.3 Analytical framework for the Strategy - Performance Measurement Link</td>
<td>21</td>
</tr>
<tr>
<td>2.4 Conclusion</td>
<td>28</td>
</tr>
<tr>
<td><strong>CHAPTER III</strong></td>
<td>30</td>
</tr>
<tr>
<td>3 METHODOLOGY</td>
<td>30</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>30</td>
</tr>
<tr>
<td>3.2 Justification for the paradigm and methodology</td>
<td>31</td>
</tr>
<tr>
<td>3.3 Conclusion</td>
<td>37</td>
</tr>
</tbody>
</table>
CHAPTER IV

4 ANALYSIS OF DATA
4. 1 Introduction
4. 2 Quantitative Survey Respondents
4. 3 Case Study Subjects
4. 4 Patterns of data for the research propositions
4. 4. 1 Proposition One
   4. 4. 1. 1 Quantitative data analysis for Proposition One
   4. 4. 1. 2 Summary of Quantitative analysis for Proposition One
   4. 4. 1. 3 Qualitative data analysis for Proposition One
   4. 4. 1. 4 Summary of Qualitative analysis for Proposition One
4. 4. 2 Proposition Two
   4. 4. 2. 1 Quantitative data analysis for Proposition Two
   4. 4. 2. 2 Qualitative data analysis for Proposition Two
   4. 4. 2. 3 Ownership of the performance measurement system
   4. 4. 2. 4 Formulation and implementation of performance measures
   4. 4. 2. 5 Communication of performance measures
   4. 4. 2. 6 Summary of Qualitative Analysis for Proposition Two
4. 4. 3 Proposition Three
   4. 4. 3. 1 Inertia in the performance measurement system
   4. 4. 3. 2 Management of the performance measurement system
   4. 4. 3. 3 Managers’ evaluation of their performance measurement system
   4. 4. 3. 4 Summary of Qualitative Analysis for Proposition Three
4. 4 Conclusion

CHAPTER V

5 CONCLUSIONS AND IMPLICATIONS
5. 1 Introduction
5. 2 Conclusions about the research propositions
   5. 2. 1 Proposition One
   5. 2. 2 Proposition Two
   5. 2. 3 Proposition Three
5. 3 Conclusions about the research problem
5. 4 Implications for theory
5. 5 Implications for policy and practice
   5. 5. 1 Recommendations for private sector managers
   5. 5. 2 Public sector policy analysts and managers
5. 6 Implications for further research
<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX I</td>
<td>QUANTITATIVE SURVEY QUESTIONNAIRE</td>
<td>106</td>
</tr>
<tr>
<td>APPENDIX II</td>
<td>QUALITATIVE SURVEY QUESTIONNAIRE</td>
<td>110</td>
</tr>
<tr>
<td>APPENDIX III</td>
<td>RESPONSE MATRICES FOR PROPOSITION ONE</td>
<td>113</td>
</tr>
<tr>
<td>APPENDIX IV</td>
<td>RESPONSE MATRICES FOR PROPOSITION TWO</td>
<td>115</td>
</tr>
<tr>
<td>APPENDIX V</td>
<td>RESPONSE MATRICES FOR PROPOSITION THREE</td>
<td>118</td>
</tr>
<tr>
<td>APPENDIX VI</td>
<td>COMPANY A RESPONDENT 1</td>
<td>122</td>
</tr>
<tr>
<td>APPENDIX VII</td>
<td>COMPANY A RESPONDENT 2</td>
<td>127</td>
</tr>
<tr>
<td>APPENDIX VIII</td>
<td>COMPANY A RESPONDENT 3</td>
<td>132</td>
</tr>
<tr>
<td>APPENDIX IX</td>
<td>COMPANY A RESPONDENT 4</td>
<td>137</td>
</tr>
<tr>
<td>APPENDIX X</td>
<td>COMPANY A RESPONDENT 5</td>
<td>145</td>
</tr>
<tr>
<td>APPENDIX XI</td>
<td>COMPANY B RESPONDENT 1</td>
<td>150</td>
</tr>
<tr>
<td>APPENDIX XII</td>
<td>COMPANY B RESPONDENT 2</td>
<td>157</td>
</tr>
<tr>
<td>APPENDIX XIII</td>
<td>COMPANY B RESPONDENT 3</td>
<td>164</td>
</tr>
<tr>
<td>APPENDIX XIV</td>
<td>COMPANY B RESPONDENT 4</td>
<td>170</td>
</tr>
<tr>
<td>APPENDIX XV</td>
<td>COMPANY B RESPONDENT 5</td>
<td>175</td>
</tr>
<tr>
<td>APPENDIX XVI</td>
<td>QUANTITATIVE SURVEY DATA</td>
<td>181</td>
</tr>
<tr>
<td>APPENDIX XVII</td>
<td>CONFERENCE PAPERS GENERATED BY THIS RESEARCH</td>
<td>186</td>
</tr>
</tbody>
</table>