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STRATEGIC PLANNING AND PERFORMANCE - A SYSTEMATIC REVIEW OF THE LITERATURE

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Strategic Planning and Performance - A Systematic Review of the Literature

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STRATEGIC PLANNING AND PERFORMANCE - A SYSTEMATIC REVIEW OF THE LITERATURE

A large number of empirical studies have been conducted examining the impact of strategic planning on organisational performance. Many studies have suggested that this relationship is influenced by various factors like the type of industry, environment, CEO characteristics and organisational systems. However researchers have not been able to provide conclusive evidence about the effectiveness of strategic planning to enhance performance. In order to examine the current state of the literature and to summarise the findings from various empirical studies, a comprehensive literature review has been conducted by reviewing sixty eight papers published in leading academic journals. The framework followed by Podsakoff and Dalton (1987) was adapted to conduct the literature review.

1. INTRODUCTION

Formal strategic planning is an explicit and ongoing organisational process with several components, including establishment of goals and generation and evaluation of strategies (Armstrong, 1982; Steiner, 1979; Boyd, 1991). According to Ansoff (1991) strategic planning generally results in better alignment and financial performance than trial-and-error learning. However this view is challenged by a number of scholars and they argue that strategic planning causes too much rigidity. Empirical research conducted in the last three decades has not produced conclusive evidence to support either of these views (Mintzberg, 1991; Pearce, Freeman & Robinson, 1987). In order to examine the findings of previous studies a systematic literature review of the papers published in leading academic journals between 1975 and 2005 was conducted. The contents pages of the following journals were thoroughly searched for articles examining the relationship between strategic planning and performance: *Strategic Management Journal; Academy of Management Journal; Academy of Management Review; Journal of Management; Journal of Management Studies; Long Range Planning; and British Journal of Management.*

The electronic databases namely Business Source Complete, JSTOR and Emerald were also searched in the title, author supplied key words and abstract using the key words like 'strategic planning', 'planning', 'strategy' and 'performance'. Following the guidelines provided by Podsakoff and Dalton (1987) the following details in the papers were examined: (i) Type of firm / Industry sector, (ii) Sample size, (iii) Sampling technique, (iv) Country of origin, (v) Aim of the study, (vi) Data collection method, (vii) Positions of the respondents, (viii) Constructs used to measure strategic planning, (ix) Constructs used to measure

organisational performance, (x) Method(s) of analysis and (xi) Results. Altogether sixty seven studies were examined and the full literature review is provided in Appendices 1, 2 and 3. The main findings from the literature review are presented in the following sections.

2.1 TYPE OF FIRMS / INDUSTRY SECTOR

Organisations belonging to both manufacturing and service sectors were studied by the scholars. A number of studies were focussed only on either manufacturing firms or service firms. However in some studies both manufacturing and service organisations were included in the sample. Altogether twenty studies focussed on small firms, but many of them did not clearly define small firms and hence it is difficult to generalise the findings of these studies. The industry sectors were not clearly specified in a number of studies and hence it is difficult to compare the findings. The number studies focusing on the manufacturing, service and other sectors are shown in Table 1.

Table 1: Number of Studies Focusing on Different Sectors

Industry Sector	Number of Studies
Manufacturing	19
Service	17
Both Manufacturing and Service	7
Others	2
Not Known	23
Total	68

Among the studies focusing on manufacturing and service organisations the number of studies focusing on single industry and different industries are shown in Table 2.

Table 2: Studies Focusing on Single Industry and Different Industries

Manufacturing Firms		Service Firms	
Single Industry	Different Industries	Single Industry	Different Industries
5	14	17	0

While there were only five studies focusing on single industry in the manufacturing sector, all the studies in the service sector focused on single industry. Out of the seventeen studies in the

service sector, ten were based on financial organisations including commercial banks. However among studies in the manufacturing sector, only five studies focused on engineering firms.

The above analysis indicates that a substantial number of studies did not clearly define the target industry sectors. In the studies focussing on service organisations, the sectors were clearly defined. There is a need to conduct more studies on the manufacturing organisations by clearly defining the industry sector. Hence this study will make a significant contribution to the literature by focusing on the manufacturing sector and targeting electrical and mechanical engineering firms.

2.2 SAMPLE SIZE

The sample size used in the studies are summarised in Table 3.

Table 3: Sample Size used

Range	Number of Studies
≤ 50	7
Between 51 and 100	24
Between 101 and 150	13
Between 151 and 200	9
Above 200	13
Not Specified	2
Total	68

This table indicates that in thirty one studies out of sixty eight (nearly 50%) the sample size used was below 100. This may affect the accuracy of the findings.

2.3 SAMPLING TECHNIQUE

The sampling technique used was specified in sixty six out of sixty eight studies. In most of the studies the sampling frame was selected on the basis of a combination of criteria like industry classification codes, geographical location and membership of associations like credit unions. In order to identify the method of selecting samples in those studies a four-fold classification scheme consisting of methods namely geographical location, membership of associations, listings in commercial databases and listings in indices like Fortune 500, has

been developed. The studies have been classified under these four headings on the basis of the fundamental method used for generating samples and this classification is shown in Table 4.

Table 4: Sampling Methods

Method	Studies
Geographical location	Burt (1978) Klein (1979) Wood Jr. & LaForge (1979) Grinyer, Yasai-Ardekani & Al-Bazzaz (1980) Lenz (1980) Klein (1981) Robinson Jr. and Pearce II (1983) Fredrickson (1984) Fredrickson & Mitchell (1984) Capon, Farley & Hulbert (1987) Pearce II, Robbins & Robinson Jr. (1987) Cragg & King (1988) Robinson Jr. & Pearce II (1988) Shrader, Mulford & Blackburn (1989) Lyles, Baird, Orris & Kuratko (1993) Kargar (1996) Rue & Ibrahim (1998) Baker & Leidecker (2001)
Membership of Associations	Robinson and Littlejohn (1981) Unni (1981) Robinson, Jr. (1982) Robinson Jr., Pearce II, Vozikis & Mescon (1984) Ackelsberg & Arlow (1985) Bracker & Pearson (1986) Robinson Jr., Logan & Salem (1986) Miller (1987) Gable & Topol (1987) Odom & Boxx (1988) Bracker, Keats & Pearson (1988) Jenster & Overstreet Jr. (1990) Kukalis (1991) Matthews & Scott (1995) Shrader, Chacko, Herrmann & Mulford (2004)
Listings in Commercial Databases	Grinyer & Norburn (1975) Kallman & Shapiro (1978) Sapp & Seiler (1981) Powell (1992) McKiernan & Morris (1994) Glaister & Falshaw (1999) Rogers, Miller & Judge (1999) Andersen (2000) Baker (2003) Tegarden, Sarason & Banbury (2003) French, Kelly & Harrison (2004) Hoque (2004) O'Regan & Ghobadian (2004)
Listings in Indices like Fortune 500	Karger & Malik (1975) Kudla (1980) Leontiades & Tezel (1980)

	Beard & Dess (1981) Kudla (1981) Kudla & Cesta (1982) Jones (1982) Welch (1984) Rhyne (1986) Ramanujam, Venkatraman & Camillus (1986) Shuman & Seeger (1986) Ramanujam & Venkatraman (1987a) Ramanujam & Venkatraman (1987b) Rhyne (1987) Ramanujam & Venkatraman (1988) Olson & Bokor (1995) Goll & Rasheed (1997) Gibson & Cassar (2002)
Others	Woodburn (1984) Orpen (1985) Orpen (1993) Hopkins & Hopkins (1997)

In some of the studies organisations belonging to the whole sampling frame were included. However when a large number of organisations is present in the sampling frame, authors have generated either a simple random sample or a stratified random sample. As shown in Table 4 most of the recent studies have used commercial databases for generating samples. Arguably this is because of the increased availability of commercial databases in the recent years. In this study a simple random sample of organisations was generated from a leading commercial database.

2.4 AIMS OF THE STUDIES

Basically all the studies have examined the impact of strategic planning on organisational performance. The extent of planning carried out in organisations have been measured using various constructs (discussed in section 2.6) and its relationship with organisational performance measured using the constructs indicated in section 2.7 have been examined.

2.5 COUNTRY OF ORIGIN, DATA COLLECTION METHODS AND RESPONDENTS

Fifty four out of sixty eight studies have been conducted in the United States. Only seven studies have examined UK based organisations and hence there is a need for more studies focused on the UK.

In fifty four out of sixty eight studies, postal survey was used to collect primary data. However in five of those studies postal survey data was augmented by interviews. Two studies relied solely on secondary data.

In forty seven out of sixty eight studies Chief Executives and Senior Managers were the respondents. However in fourteen studies the positions of the respondents in the organisations were not specified. Other executives were the respondents in the remaining studies.

2.6 CONSTRUCTS USED TO MEASURE STRATEGIC PLANNING

Authors used a number of constructs to measure strategic planning while conducting these studies. These constructs are shown in Appendix 3. An examination of these constructs indicates that there are substantial differences in the constructs used by various authors in their studies. Boyd and Reuning-Elliott (1998), after examining several studies concluded that there was remarkably little consistency in the operationalisation of the strategic planning construct. The authors found that planning was defined in numerous ways in the studies. The dimensions used to define strategic planning in those studies were the following: formality, sophistication, effectiveness, comprehensiveness, extensiveness, completeness, importance, rationality, analysis, goal setting, scanning and analysis, process, factors, systems, openness, innovativeness, characteristics, capabilities and strategy. A vast majority of the studies have defined strategic planning as the formality or importance associated with its indicators (Pearce, Freeman and Robinson, 1987) a small number of studies used skills and abilities vs. aspects or elements (e.g. Venkatraman and Ramanujam, 1987). Boyd and Reuning-Elliott (1998) defined strategic planning as a normative process and identified the following items as key indicators of strategic planning: mission statements, trend analysis, competitor analysis, long-term and annual goals, action plans and ongoing evaluation.

2.7 CONSTRUCTS USED TO MEASURE ORGANISATIONAL PERFORMANCE

The constructs used to measure organisational performance in the studies are shown in Appendix 3. As indicated in this table, financial performance measures like financial ratios, sales growth and profitability growth have been used in most of the studies. Return on Assets (ROA), Return on Equity (ROE) and Return on Sales (ROS) are the most commonly used financial ratios to measure performance. However Kudla (1981) used reduction of risk as a performance measure. This is an important construct because the findings of Kudla (1981) indicate that while the firms were engaged in strategic planning they were able to reduce the risk. The literature review shows that only a few non-financial performance measures were used in the studies linking strategic planning and performance.

2.8 METHODS OF DATA ANALYSIS

A number of analytical techniques like correlation analysis, regression analysis, t-test, ANOVA and Chi-Square test have been used in the studies. The extent of the use of these analytical techniques is summarised in Table 5.

Table 5: Analytical Techniques used

Analytical Technique	No. of times used
Correlation Analysis	24
Regression Analysis	14
Logistic Regression	1
Moderated Regression Analysis	1
t-test	23
Chi-Square test	15
Percentage Comparisons	8
Cross Tabulations	4
ANOVA	13
MANOVA	4
ANCOVA	1
Discriminant Analysis	6
Canonical Correlation Analysis	4
Kendall Tau Rank Correlation	2
Wilcoxon Test	1
Structural Equation Modelling	2

As indicated in Table 5 the most widely used analytical methods in examining the relationship between strategic planning and performance are correlation analysis, regression analysis, t-test, Chi-Square test and ANOVA. Regression analysis and correlation analysis were used to determine the relationship between strategic planning on performance. The t-test, ANOVA and Chi-Square test are mainly used to compare the performance of planners and non-planners. Most of the studies have examined bivariate relationships and this could be one of the main drawbacks of the studies. The relationships may change if more variables are

studied together. Structural equation modelling technique which could be used to examine multivariate causal relationships was used only twice. In this study, multivariate relationships are examined using partial least squares (PLS) which is a structural equation modelling technique.

2.9 RESULTS OF THE STUDIES

The results of the studies examining the relationship between strategic planning and organisational performance are presented in Table 6.

Table 6: Results of the Studies

Author	Whether Strategic Planning has a significant positive impact on performance or not?
Grinyer & Norburn (1975)	No impact
Karger & Malik (1975)	Positive impact
Burt (1978)	Positive impact
Kallman & Shapiro (1978)	No impact
Klein (1979)	No impact
Wood Jr. & LaForge (1979)	Positive impact
Kudla (1980)	No significant difference between planners and non-planners in terms of returns. However strategic planning has led to reduction in risk among planners.
Grinyer, Yasai-Ardekani & Al-Bazzaz (1980)	No impact
Leontiades & Tezel (1980)	No impact
Lenz (1980)	Positive impact
Beard & Dess (1981)	Positive impact
Klein (1981)	Positive impact
Kudla (1981)	Positive impact
Robinson and Littlejohn (1981)	Positive impact
Sapp & Seiler (1981)	Positive impact
Unni (1981)	Partially supports the relationship
Kudla & Cesta (1982	No impact
Jones (1982)	Positive impact
Robinson, Jr. (1982)	Positive impact
Robinson Jr. and Pearce II (1983)	No impact
Fredrickson (1984)	Positive impact

Fredrickson & Mitchell (1984)	No impact
Robinson Jr., Pearce II, Vozikis & Mescon (1984)	Positive impact
Welch (1984)	Positive impact
Woodburn (1984)	Positive impact
Ackelsberg and Arlow (1985)	Positive impact
Orpen (1985)	Positive impact
Rhyne (1986)	Positive impact
Bracker and Pearson (1986)	Positive impact
Robinson Jr., Logan & Salem (1986)	Positive impact
Ramanujam, Venkatraman & Camillus (1986)	Positive impact
Shuman & Seeger (1986)	Positive impact
Miller (1987)	Positive impact
Ramanujam & Venkatraman (1987a)	Positive impact
Capon, Farley and Hulbert (1987)	Partially supports the relationship
Gable & Topol (1987)	No impact
Pearce II, Robbins & Robinson Jr. (1987)	Positive impact
Ramanujam & Venkatraman (1987b)	Positive impact
Rhyne (1987)	Positive impact
Ramanujam & Venkatraman (1988)	Positive impact
Odom & Boxx (1988)	Positive impact
Bracker, Keats & Pearson (1988)	Positive impact
Cragg & King (1988)	No impact
Robinson Jr. & Pearce II (1988)	Positive impact
Shrader, Mulford & Blackburn (1989)	Positive impact
Jenster and Overstreet Jr. (1990)	Positive impact
Kukalis (1991)	Positive impact
Powell (1992)	Relationship is industry dependent
Lyles, Baird, Orris & Kuratko (1993)	Partially supports the relationship
Orpen (1993)	Positive impact
McKiernan & Morris (1994)	No impact
Matthews & Scott (1995)	Strategic planning decreases if perceived environmental uncertainty increases
Olson & Bokor (1995)	Positive impact

Kargar (1996)	Partially supports the relationship
Goll and Rasheed (1997)	Positive impact
Hopkins & Hopkins (1997)	Positive impact
Rue & Ibrahim (1998)	Positive impact
Glaister & Falshaw (1999)	Partially supports the relationship
Rogers, Miller & Judge (1999)	Positive impact
Andersen (2000)	Positive impact
Baker & Leidecker (2001)	Positive impact
Gibson & Cassar (2002)	Positive impact
Baker (2003)	Positive impact
Tegarden, Sarason & Banbury (2003)	Partially supports the relationship
French, Kelly & Harrison (2004)	Partially supports the relationship
Shrader, Chacko, Herrmann & Mulford (2004)	Positive impact
Hoque (2004)	Partially supports the relationship
O'Regan & Ghobadian (2004)	Positive impact

The numbers of the studies which have found a positive relationship between strategic planning and performance and the ones which have not found this relationship significant are summarised in Table 7.

Table 7: Summary of the Findings

Nature of Relationship	**No. of Studies**
Positive impact of strategic planning on performance	46
Partially supports this relationship	8
No impact of strategic planning on performance	11
Other results	3
Total	68

The results indicate that a vast majority of the studies have reported a positive relationship between strategic planning and organisational performance. However some of the studies have reported that the relationship between strategic planning and performance is contingent on the operating environment (e.g. Fredrickson, 1984; Fredrickson & Mitchell, 1984; Goll & Rasheed, 1997). Eleven studies did not find a positive relationship between planning and performance. There could be number of reasons behind these findings like differences in the characteristics of operating environments and variations in the constructs used to measure

strategic planning and performance. This also indicates the need for further studies examining this relationship.

The studies which found a positive relationship between strategic planning and organisational performance and the studies which found no impact were grouped separately. The constructs used to operationalise strategic planning in these two groups of studies are presented in Table 8.

Table 8: Comparison of Constructs used in two Groups of Studies

Constructs used in Studies which found a positive impact of strategic planning on performance (Group 1)	**Constructs used in Studies which found no impact of strategic planning on performance (Group2)**
• Mission statement • Duration of the existence of planning systems • Long-term goals, • Short-term action plans • Written strategic plans • Use of analytical techniques • Environmental analysis • Competitor analysis, • Evaluation of internal resources • Matching internal capabilities with external trends • Identifying and analysing alternative strategic options • Time period covered by the plan • Quantified objectives covered in the strategic plan • Schedules for completion of long-range plans • Fulfilment of planning objectives • Control systems for detecting the differences between the plan and actual performance • Size of the organisation • Planning methods • Management philosophy or style • The content of plans and the frequency of revision • Manager's attitudes toward planning and • Percentage of time each manager spent on long-range planning • Participative decision-making at management levels, • Open channels of communication • Company characteristics such as nature of ownership, number of employees, owner's age, average working hours per week, age of the company, experience of the owner and educational background. • Inclusion of plans and budgets for human	• Corporate objectives, • Role perception, • Formal planning systems, • Channels of information, • The number of items of information received and used • Extent of common perception • Presence of change inducing strategic managers • Duration of the existence of planning systems • Planning guidelines like economic forecasts, forecasts of competitor action and policy statements • Lateral and vertical spans of control • Strategy, structure and size • Charter, geographical dispersion and number of sites, number of employees, annual sales and capital employed • Environmental analysis • CEO's rating of planning as performed by his planning staff • CPO's evaluation of the planning department's contribution to the success of his firm • Written long-range plan • Time period covered by the long-range plan • Quantified objectives • Inclusion of specific action programmes • Schedules for completion of long-range plans • Provision for detection of differences between the plan and actual performance • Degree of emphasis in strategic decision-making process • Organisation comprehensiveness and size • Goal setting • Consideration of the firm's strengths and weaknesses in the course of planning

	resources, hiring and personnel development, plant expansion, equipment acquisition, R&D, advertising, technology acquisition and utilisation	activities • Consideration of alternative strategies • Preparation of budgets and contingency plans • Updating the plans • Organisational characteristics and owner / manager characteristics

As shown in Table 8 the constructs used to operationalise strategic planning in the studies belonging to Group 1 are more or less consistent with the key indicators of strategic planning identified by Reuning-Elliott (1998). However some of the constructs used in studies belonging to Group 2 such as the number of items of information received and used, the extent of common perception and organisation comprehensiveness are not consistent with the key indicators identified by Reuning-Elliott (1998) and could be difficult to measure in empirical studies. Lack of conformity of strategic planning constructs to the key indicators could be one of the main reasons why studies belonging to Group 2 did not find a positive relationship between strategic planning and performance.

3. CONCLUSION

A summary of the key findings from the literature review are:

- There is a need to conduct more studies on the manufacturing organisations by clearly defining the industry sector;
- In almost 50% of the studies, the sample size used was below 100 which could be a serious drawback;
- Only seven studies have examined UK based organisations and hence there is a need for more studies focused on the UK;
- There has been little consistency in the operationalisation of the strategic planning construct;
- Financial measures like financial ratios, sales growth, profitability growth etc have been used in most of the studies to measure organisational performance;
- The most widely used analytical methods in examining the relationship between strategic planning and performance are correlation analysis, regression analysis, t-test, Chi-Square test and ANOVA; and
- Even though a vast majority of the studies have reported a positive relationship between strategic planning and organisational performance, a significant number of studies did not confirm this relationship.

The literature review indicated the need for conducting further studies examining the relationship between strategic planning and performance. While some of the studies found a positive relationship between strategic planning and performance (e.g. Jones, 1982; Orpen, 1985; Baker 2003) some others did not find a significant impact (e.g. Robinson Jr. and Pearce II, 1983; Gable & Topol, 1987; McKiernan & Morris, 1994). As indicated by some of the studies, since this relationship is contingent upon the operating environment, the moderating effect of environment in this relationship also needs to be examined.

The planning mode of strategy making proposed by Mintzberg (1973) and the rational mode of strategy making suggested by Hart (1992) are characterised by the rational-comprehensive approach to strategy making (Priem, Rasheed & Kotulic, 1995). The findings of some studies indicate that the rational-comprehensive approach to strategy making is beneficial in stable environments and harmful in dynamic environments. Fredrickson (1984) found a positive relationship between planning rationality and performance in a stable environment. Fredrickson and Mitchell (1984) conducted a study among companies belonging to the sawmills and planing industry (dynamic environment) in the United States and found that there was a negative relationship between planning and performance. However some other studies indicate that planning rationality leads to higher performance in dynamic environments. Miller and Friesen (1983) after studying two samples of organisations consisting of US firms and Canadian firms found that for high performing firms, increases in environmental dynamism are accompanied by increases in planning rationality. Eisenhardt (1989) studied microcomputer industry (dynamic environment) and found that effective organisations belonging to that industry analyse more strategic alternatives which is an indication of planning rationality. Judge and Miller (1991) found that in a dynamic environment, speedy and comprehensive decision making is associated with high performance. In a study on manufacturing firms, Priem, Rasheed and Kotulic (1995) found a positive relationship between rationality in strategic decision processes and performance in a dynamic environment and no relationship between rationality and performance in a stable environment. Goll and Rasheed (1997) studied manufacturing firms and found that environmental munificence and dynamism moderate the relationship between rationality and performance. They found that rationality in strategic decision-making was strongly related to performance in highly munificent and dynamic environments. Hough and White (2003) in a study conducted among Fortune 100 diversified technology companies found that environmental dynamism moderated the relationship between rational strategic decision

making and decision quality. The studies have not produced conclusive evidence regarding the moderating effect of environment in the relationship between strategic planning and performance. Hence the nature and degree of environmental moderation need to be investigated in future studies. The systematic literature review identified the need for conducting more studies examining the relationship between strategic planning and performance. It was found that there were inconsistencies in the operationalisation of strategic planning in empirical studies.

APPENDIX 1

Author	Domain / Type of firm	Sample size (If small firms, definition used to classify firms as small)	Sampling technique	Country of origin
Grinyer & Norburn (1975)	Commercial or industrial segments	71	No earlier study of this kind had been done and the basic assumptions to be tested were general. Hence it was decided that the sample frame should satisfy the following criteria: (i) companies of disparate size of turnover, (ii) a range of profitability among the companies and (iii) access to companies. 71 public companies were selected based on the above criteria and this sample was stratified in order to satisfy the first criteria. They were divided into three groups as follows: Companies with annual turnover of (a) less than £ 5 million (b) between £ 5 million and £ 25 million and (c) Over £ 25 million. An equal number of companies were randomly selected from each group and twenty-one of these companies agreed to participate in the study. These organisations represented 13 sub-segments of the Standard Industrial Classification (S.I.C.).	United Kingdom
Karger & Malik (1975)	Companies belonging to five generic grouping namely (i) clothing, (ii) chemicals, drugs and cosmetics, (iii) electronics, (iv) food and (v) machinery.	273	273 companies with sales between $50m and $500m, representing six categories of industries were selected from Moody's Industrial Manual and Value Line Investment Survey. Based on the responses, only the electronics and machinery groups had meaningful sample size. Chemicals were paired with drugs to produce a third measurable group of reasonable size.	United States
Burt (1978)	Australian retailing industry	20	Publicly listed firms located in the eastern capital cities of Australia and Canberra.	Australia
Kallman & Shapiro (1978)	Motor carrier firms	886	The carrier size, commodity handled and geographic area were determined from the Trincs Blue Book of the Trucking Industry. Class I common carriers whose revenue exceeded $ 3m and which engaged in interstate commerce were selected for the study. In 1975 there were 886 such firms in the United States.	United States

Klein (1979)	Commercial banks	144	All the commercial banks that are members of the 7th Federal Reserve district and participants in the Functional Cost Analysis Program	United States
Wood Jr. & LaForge (1979)	Large banks	50	50 largest banks located in the 10 states namely Alabama, Georgia, Pennsylvania, New York, North Carolina, Maryland, Illinois, Massachusetts, Virginia and Tennessee, were selected from Moody's Bank and Finance Manual (1975).	United States
Kudla (1980)	Firms belonging to a number of industries	557	Fortune's 500 largest companies and 57 other firms which were believed to be engaged in strategic planning were sent the questionnaire.	United States
Grinyer, Yasai-Ardekani & Al-Bazzaz (1980)	Large organisations belonging to 18 different industries.	48	All the selected organisations had head offices in the Southeast of England. 25% of them were in service industries, 43% in manufacturing and 32% in both. All the organisations were large with £200 million average sales. 77% were owned in the UK, 12% in the US, 4% in the EEC outside UK and 4% jointly by UK and non-UK residents.	United Kingdom
Leontiades & Tezel (1980)	Largest industrialised firms	300	The sample was selected from Fortune magazine's 1000 largest industrialised firms. A representative number of companies were selected within the industries to avoid dominance by a single industry category.	United States
Lenz (1980)	Savings and loan industry	80	A random sample of savings and loan firms from a single state and Federal Home Loan Bank district was selected in order to control for differences in regulatory practice.	United States
Beard & Dess (1981)	Single-industry manufacturing firms	40	Single-industry manufacturing firms included in Standard and Poors (1979). All firms included in the final sample were in one and the same industry for the years 1969 through 1974. A firm was considered to be a single-industry firm if and only if during the 1969-1974 period a substantial majority and in most cases all of its sales could be clearly classified within one three digit SIC as defined by the US Office of Management and Budget (1972)	United States
Klein (1981)	Commercial banks	144	The sample consisted of member banks of the Seventh Federal Reserve district.	United States

Kudla (1981)	Firms belonging to a number of industries	557	Fortune's 500 largest companies and 57 other firms which were believed to be engaged in strategic planning were sent the questionnaire.	United States
Robinson and Littlejohn (1981)	Small firms	67 (No definition of small firms was provided)	The sampling frame consisted of 127 small firms which have received in-depth consulting from University of Georgia Small Business Development Center (SBDC) since 1977 and evidencing a minimum of six months since completion of that consulting, and which have not engaged in systematic planning prior to their involvement with the SDBC. A random sample of 67 firms was selected for this study.	United States
Sapp & Seiler (1981)	Commercial Banks	500	Five hundred U.S. Commercial banks were randomly selected through use of a computerised random number generator from a population of all U. S. banks larger than $10 million in total assets. A total of 302 of the 500 banks supplied sufficient information to permit classification into one of the four groups namely non-planners, beginning planners, intermediate planners and sophisticated planners.	United States
Unni (1981)	Small businesses	80 minority and 80 non-minority small businesses. Only 62 minority and 58 non-minority small businesses responses were useable. The definition of small businesses was not provided.	The sample was selected from the Directory of Manufacturers published by the local Chamber of Commerce and from a list of minority small businesses published by an affiliate of the Office of Minority Business Enterprise and the U.S. Department of Commerce. Only those firms that were in existence for at least 2 years were selected, assuming these firms reasonably have had occasion to use strategic planning during that time.	United States
Kudla & Cesta (1982)	Firms belonging to a number of industries	557	Fortune's 500 largest companies and 57 other firms which were believed to be engaged in strategic planning were sent the questionnaire.	United States
Jones (1982)	Small firms	200 (The definition of small firms was not provided)	The firms were selected from Dun and Bradstreet's Million Dollar Survey (1980) – volumes II and III and the Survey of Virginia Industrial Firms. Seven different S.I.C. codes were represented in the sample and it included several different manufacturing and service industries. The final sample had 22 service and 47 manufacturing firms.	United States

Robinson, Jr. (1982)	Small firms	101 firms which had received SBDC consultation and two control groups with 101 and 61 firms respectively (A small firm was defined as the one having less than 50 employees, less than $ 3 million in annual sales and independently owned and operated)	The small firms that had received consultation from Small Business Development Center (SBDC) and two control groups not engaging in outsider-based planning were included in the sample. The first control group consisted of firms from RMA Annual Statement Studies (1978) which were matched with the SBDC sample by type of business (SIC code) and annual sales. The second control group was a random sample from the files of a northeast Georgia bookkeeping service and were similar to the SBDC sample by type of business (SIC code), annual sales and number of employees.	United States
Robinson Jr. and Pearce II (1983)	Small banks	85 (The definition of small banks was not provided)	All federal and state-chartered commercial banks in South Carolina were included in the sample.	United States
Fredrickson (1984)	Paint and coatings (SIC code 2851)	152 executives from 38 firms	The study focussed on an industry with a stable environment. The paint and coatings industry was selected for the study because the sales growth and technological change was very limited in this industry. 51 firms located in the Eastern and Central United States were selected from Dun and Bradstreet's (1981) Million Dollar Directory and 45 of them expressed interest in participating. The CEOs or Executive Vice Presidents of these 45 firms were interviewed in the first phase and finally 38 firms were identified for the second phase of the study.	United States
Fredrickson & Mitchell (1984)	Sawmills and planing (SIC code 2421)	109 executives from 27 firms	The study was focused on an industry with an unstable environment and all firms had to be from the same industry. In order to make personal contacts, all firms needed to be headquartered in the Pacific Northwest. Potential research sites were identified in a review of Dun and Bradstreet's Million Dollar Directory (1979) and Million Market Directory (1979) and contacted if their sole SIC number or one of the first two listed was 2421. 43 firms were contacted by letter and 34 of them agreed to participate. The CEOs of all the 34 firms were interviewed in the first phase and executives including CEOs from 27 firms were selected for the second phase of interviews.	United States

Robinson Jr., Pearce II, Vozikis & Mescon (1984)	Small firms	51 (A small firm was defined as the one having less than 50 employees, less than $ 3 million in annual sales and independently owned and operated)	A random sample of firms that had engaged in outsider-based strategic planning consultation through the university of Georgia Small Business Development Center (SBDC) program was selected.	United States
Welch (1984)	Organisations belonging to a number of industries	380	Organisations which were listed simultaneously in all the three locations namely the New York Stock Exchange, the Standard and Poor's 400 Industrial Index and Public Utility Index and the Compustat files.	United States
Woodburn (1984)	Public and private organisations	3775	Not specified	South Africa
Ackelsberg & Arlow (1985)	Small business firms	732. The definition of small business firms was not provided.	Firms listed in the Chambers of Commerce in a six-county area in the eastern part of the United States	United States
Orpen (1985)	Small firms	58 (The definition of small firms was not provided)	The sample consisted of small businesses of different types.	Not specified
Rhyne (1986)	Fortune 1000 companies	210	The sample was selected from Fortune 1000 companies	United States
Bracker & Pearson (1986)	Small mature firms in the dry cleaning industry	555 (The definition of small firms was not provided)	Members of the South-eastern Fabricare Association (SEFA).	United States
Robinson Jr., Logan & Salem (1986)	Small retail firms	800 (The definition of small retail firms was not provided)	Small independent food retailers that were members of the Food Retailers Association of South Carolina (FRASC) were included in the sample.	United States
Ramanujam, Venkatraman & Camillus (1986)	Fortune 500 and Inc 500 firms	600	A random sample was chosen from the Fortune 500 Manufacturing, Fortune 500 service and Inc 500 directories	United States
Shuman & Seeger (1986)	Fastest growing privately held small companies	500	Companies belonging to the INC. 500 Class of 1983, representing the 500 fastest-growing privately-held companies in the US ranked by INC. magazine according to percentage of sales increase from 1978 through 1982, were selected as the sample for this study.	United States
Miller (1987)	Small and medium sized firms	131	A random sample was selected from the lists published in *Commerce* and *Les Affaires.*	Canada
Ramanujam & Venkatraman (1987a)	Fortune 500 firms	600	A random sample was chosen from the Fortune 500 Manufacturing and Fortune 500 service directories	United States
Capon, Farley & Hulbert	Major manufacturing corporations	155	Random sample selected from 258 Fortune 500 manufacturing companies headquartered East of	United States

(1987)			the Mississippi River	
Gable & Topol (1987)	Small-scale retailers	489 (The definition of small-scale retailers was not provided)	From the membership list of the state-wide retailer's association in the North east region of the United States, 489 small-scale retailers were identified and questionnaires were mailed to them.	United States
Pearce II, Robbins & Robinson Jr. (1987)	Manufacturing firms	609	609 manufacturing firms in a single eastern state were selected in order to introduce a measure of control over external, non-industry factors such as regulation, taxation and wage rates.	United States
Ramanujam & Venkatraman (1987b)	Large organisations	600	The sample was chosen from Fortune 1000 companies.	United States
Rhyne (1987)	Large public manufacturing companies found in the Fortune 1000 lists	210 companies for the survey and eleven executives participated in the interviews	A random sample stratified by sales level was selected from the 1980 Fortune 1000 lists.	United States
Ramanujam & Venkatraman (1988)	Fortune 1000 organisations	600	A random sample was chosen from Fortune 1000 companies including the ones which were designated excellent by Peters and Waterman.	United States
Odom & Boxx (1988)	Churches	253	The sample was selected from the Arkansas Baptist State Convention which met one of the two attendance criteria: (i) must have averaged 150 or more persons attending Sunday school during at least 1 reporting year in the 5-year period of the study (ii) had an average attendance of 100 or more persons during the entire 5-year period and sponsored a mission church.	United States
Bracker, Keats & Pearson (1988)	The study is focussed on small firms more than 5 years old operating in a dynamic growth environment. Electronics industry was chosen for the study because it could be considered to be in the growth stage of the life cycle according to the definition put forward by Zeithaml and Fry (1984)	217	The names and addresses of the companies were obtained from the membership guide of the American Electronics Association (AEA). The firms included in the sample were privately held, had been in business at least 5 years, were owner / managed and had no more than 100 employees.	United States

Cragg & King (1988)	Small metal goods manufacturers	Responses were received from 578 firms. (The definition of small metal goods manufacturers was not provided)	The sample included all the metal goods manufacturing firms located in the East Midlands region of England. All the firms selected for the study met the following criteria: (i) had no more than 50 employees, (ii) were independently owned and operated and (iii) were operating in early 1986. The names of the firms satisfying the above criteria were compiled from various sources such as training groups, trade directories and computerised Yellow Page records.	United Kingdom
Robinson Jr. & Pearce II (1988)	Manufacturing firms belonging to different industries	609	A regionally restricted field setting was selected because of the following three reasons (i) to introduce greater control over external, non-industry factors (ii) to be able to use a current industrial directory of North Carolina as the basis for drawing a random sample and (iii) because of resource limitations to support this research.	United States
Shrader, Mulford & Blackburn (1989)	Small firms	115 (Firms that employed at least ten but not more than 100 employees were considered as small firms)	A stratified random sample of small businesses located within a tri-county area in central Iowa was selected using information from the Dun and Bradstreet Market Identifiers File.	United States
Jenster & Overstreet Jr. (1990)	U. S. credit unions	283	Two questionnaires meant for the chairmen and managers respectively of the credit unions were developed under the sponsorship of the Virginia Credit Union. They were submitted to the chairman and manager of 283 Virginia credit unions.	United States
Kukalis (1991)	Large manufacturing firms	200	The 200 largest manufacturing firms based on sales were selected from the 1985 Directory of the North American Society for Corporate Planning.	United States
Powell (1992)	Single-business firms in two U.S. four-digit SIC-code industries namely wooden upholstered furniture and women's dresses, which have significant differences in strategic planning factor markets.	The total number of firms to which the questionnaires were sent, was not specified. A total of 113 firms responded to the questionnaire.	Questionnaires were mailed using Dillman's Total Design Method to all the firms in SIC codes 2512 and 2335. Out of the 113 firms responded, 68 were in SIC 2512 and 45 in SIC 2335.	United States
Lyles, Baird, Orris & Kuratko (1993)	Small firms	188 (The firms which had been in business for at least four years, had fewer	All the small firms included in the sample were located in the Midwestern United States. The owners of the firms were contacted	United States

		than 500 employees and had gross sales of $1 million or more, were included in the sample)	over phone and an interview time was established. They were interviewed by students in a small business course.	
Orpen (1993)	Small firms	51 (The definition of small firms was not provided)	Only the local small firms employing less than 50 persons and those which were not subsidiaries of larger firms or corporations were selected.	United Kingdom
McKiernan & Morris (1994)	Small and medium-sized enterprises	3000 (Small manufacturing firms with up to 200 employees and medium-sized companies up to 500 employees were included in the sample)	From the Dun and Bradstreet database of over 200,000 companies, a random sample of 3000 SMEs covering 16 manufacturing sectors were selected.	United Kingdom
Matthews & Scott (1995)	Small and entrepreneurial firms	780 (Small and entrepreneurial firms with less than 500 employees were included in the sample. This was done according to the size standards established by the U.S. Small Business Administration)	The sample was randomly selected from a 1500 firm mailing list of the Chamber of Commerce of a large Midwestern city.	United States
Olson & Bokor (1995)	Fastest growing privately held small businesses	442	The sample was selected from the list of 500 fastest growing, privately held small businesses in the United States published by Inc.	United States
Kargar (1996)	Small community banks	69 (47 banks responded and out of these 41 banks were chosen for analysis) Commercial banks with fewer than $500 million in total deposits were treated as small banks.	69 U.S commercial banks in the state of North Carolina represented the entire population.	United States
Goll & Rasheed (1997)	Manufacturing firms	159	645 largest manufacturing firms in the United States as identified in Business Week (1985) were included in the sample.	United States
Hopkins & Hopkins (1997)	Banks	350	Not specified	United States
Rue & Ibrahim (1998)	Small firms	1153 (Firms with at least fifteen full-time employees were included in the sample)	Two lists of small businesses in Georgia were used for selecting the sample. One list was developed by the Small Business Development Center at Georgia State University and the second list was a commercially available mailing list purchased from Wholesale List Marketing. Random samples of 553 firms from the first list and 600	United States

			firms from the second list were selected.	
Glaister & Falshaw (1999)	Pubic limited companies belonging to both manufacturing and service sectors	500	A stratified random sample was selected from the EXTEL database of U.K. listed companies.	United Kingdom
Rogers, Miller & Judge (1999)	Banks	924	A random sample of banks within the 1990 Rand McNally Bank Directory was selected.	United States
Andersen (2000)	To investigate the model relationships in different industrial settings and make comparisons to previous research results, the study was conducted on three distinct industry groups namely food and household products industries, computer products industries and banking industry	456	The industry environment is characterised by dynamism and complexity indices. Dynamism denotes the variance in the industry's net sales and operating income and complexity reflects the diversity of inputs and outputs in the particular industry. The dynamism and complexity indices in different four-digit SIC industries extracted from Compustat helped the selection of industry groups and those indices for the chosen industries are explained below: Food and household products: Low on dynamism and complexity Computer products: High level of dynamism and complexity Banking: A distinct services industry having levels of dynamism and complexity between food and household and computer products industries. Annual reports from nearly 84% of all the firms included in the Compustat database in the selected industries were subjected to thorough analysis to ensure that single business firms and divisions were appropriately identified. Out of the 456 firms identified, 188 were in food and household products industry, 172 were in computer products industry and 96 in retail banking.	United States
Baker & Leidecker (2001)	Agribusiness sector (Tomato processors in California)	25	All the companies in the state of California was obtained from California Tomato Growers Association, Inc and California League of Food Processors	United States
Gibson & Cassar (2002)	Small firms	3554 (Firms with less than 200 full-time equivalent employees in 1995 were treated as small firms)	Data collected in the first three years (1994-95, 1995-96 and 1996-97) of the Business Growth and Performance Survey developed by the Australian Bureau of Statistics (ABS) was used for this study. Firms from the full database meeting the following criteria were	Australia

			included in this study's analysis: (i) be active for all three years (ii) be a privately held company and (iii) have fewer than 200 full-time equivalent employees in 1995.	
Baker (2003)	Food processing firms	943	The industries were chosen from among those with at least 200 companies listed in the industry category as reported by the Thomas Food Industry Register. Five industries namely baked goods; confectionery; dairy (fresh milk); jams, jellies and spreads; and canned and frozen vegetables were selected to reflect the diversity of the food processing sector. A random sample of 200 firms was chosen from the total in each industry. After deleting the firms with incorrect addresses and those no longer in businesses, the final sample consisted of 943 firms.	United States
Tegarden, Sarason & Banbury (2003)	Firms in a range of technology intensive, dynamic industries.	2000	The sample was drawn from the directory of U.S. firms published by the Corporate Technology Information Services (CorpTech).	United States
French, Kelly & Harrison (2004)	Small professional service firms	936 (The definition of small professional service firms was not provided)	Random sample selected from a commercial database consisting of 1700 firms.	Australia
Shrader, Chacko, Herrmann & Mulford (2004)	Manufacturing firms	597	All the manufacturing firms listed in the database of firms associated with a centre for industrial research and service at one of the premier land grant institutions in the USA.	United States
Hoque (2004)	Manufacturing companies	100 (Only those organisations with at least 100 employees were included in the sample)	A random sample was selected from the 1994 edition of New Zealand Business Who's Who.	New Zealand
O'Regan & Ghobadian (2004)	Small-and medium-sized manufacturing firms in the electronics and engineering sectors.	1000 (Firms having less than 250 employees were considered as SMEs according to the European Commission's definition of SMEs)	A random sample was selected from a directory published by a reputable commercial firm.	United Kingdom

APPENDIX 2

Author	Focus / aim of the study	Methodology for collecting data	Respondent(s) who and how many
Grinyer & Norburn (1975)	To determine the characteristics of the strategy planning process in a representative sample of U. K. companies and how these were related to performance.	Data was collected during interviews by using a structured questionnaire. Multiple interviews were used in each company for the following two reasons: (i) perceptions of a single interviewee could be biased and (ii) perceptions of a number of executives were necessary for the level of agreement between them to be established.	Two-thirds of the interviewees were chief executives or executive directors and the rest were senior managers reporting directly to a director. Ninety-one executives were interviewed in the 21 companies.
Karger & Malik (1975)	To measure the effects of formal integrated long range planning upon commonly accepted financial performance measures for industrial firms	Postal survey	Chief Executive Officers (90)
Burt (1978)	To test the following hypotheses: (i) there is a positive correlation between good planning and corporate performance (ii) firms with an acceptable quality of planning will out perform those with less acceptable planning.	Personal interviews and postal survey	Senior managers. 14 firms provided data. Data from 11 of them were collected through personal interviews and from the remaining 3 through postal survey.
Kallman & Shapiro (1978)	The overall aim of the study was to determine what effect planning has on profitability in the motor carrier industry. The study explored the following four basic research questions: (i) whether there was a relationship between the size of the firm, its commitment to long range planning and its economic performance (ii) whether geographic area of operation has any bearing on the economic performance of a carrier relative to its commitment to planning (iii) Does the amount of planning depend on the kind of freight handled? Do the different types of carriers plan the same way and do they perform the same economically (iv) the length of time a carrier has actually been using a planning function	Postal survey	Corporate Presidents or top level executives. 498 responses were received, 20 were unusable. Complete economic data for the full 10 year period could not be obtained for 93 respondents which resulted in 385 usable questionnaires. Of these, 87 started planning in the years between 1966 and 1975 and the remaining 298 started planning in 1965 or before. These 298 firms constituted a large homogeneous group and were selected for analysis.

Klein (1979)	To investigate (i) the relationship between bank size and long range planning efforts undertaken (ii) the relationship between bank size and trends for growth and profit (iii) whether there is a correlation between the extent of long range planning and growth trends, profit trends and bank size and trends for growth and profit and (iv) the extent to which long range planning is used as a management tool in commercial banks today	Postal Survey	Senior officials and executives (77)
Wood Jr. & LaForge (1979)	To test the hypothesis which states that large U.S. banks that had more comprehensive planning would financially outperform those that had less comprehensive planning.	Postal survey and interviews	Officers from 29 banks responded to the questionnaire and in depth interviews were conducted with executives or planning specialists of 17 out of those 29 banks.
Kudla (1980)	To examine whether (i) shareholders of firms engaged in strategic planning earned abnormal returns or not and (ii) strategic planning has enabled the firms to reduce overall riskiness or not.	Postal survey	Not specified (348 questionnaires were returned, out of which 328 were usable. The final sample used for risk analysis consisted of 78 planners and 78 non-planners)
Grinyer, Yasai-Ardekani & Al-Bazzaz (1980)	To test a number of hypotheses to ascertain the nature of relationship between (i) divisionalisation of organisational structure and the traditional measures of height and width of the hierarchy (ii) strategy and structure (iii) size and strategy and size and structure (iv) number of sites and structure and geographical dispersion and structure and (v) Strategy, structure and financial performance. Another two set of hypotheses were also formulated to test whether (i) a good fit of structure to strategy promotes better coping with the environment and (ii) good fit between structure and strategy might be expected to lead to good performance and vice versa.	Data was collected during interviews by using a structured questionnaire.	Senior managers (48)
Leontiades & Tezel (1980)	To test the association between the perceived importance of planning and actual performance.	Postal survey	CEOs and Chief Planning Officers (CPOs) (91 questionnaires were returned and out of these, 61 contained responses from CEOs and CPOs)
Lenz (1980)	To examine whether performance varies in accordance with a firm's overall combination of environment, strategy and organisation structure.	Field and telephone interviews and secondary data	Senior executives (80)
Beard & Dess (1981)	The aim of this study was to provide a balanced test of power of variation in firm corporate-level strategy and in firm business-level strategy in explaining variation in firm profitability. In order to accomplish this aim the following hypothesis specified in terms of an additive linear regression model was tested: $Y_i = b_0 + b_1X_{1i} - b_2X_{2i} - b_3X_{3i} + b_4X_{4i} + U$ Where Y_i = the before tax return on total	Secondary data was used for the analysis. Firm-level data were obtained from Standard and Poors (1979) and industry-level data were obtained from US Internal	Data concerning 40 firms were collected

	investment or on equity of the *i*th firm X_{1i} = the before tax return on total investment or on equity of the industry in which the *i*th firm competes X_{2i} = the debt to equity ratio computed as the *i*th firm's ratio relative to the average ratio of the industry in which the *i*th firm competes X_{3i} = the assets to sales ratio computed as the *i*th firm's ratio relative to the average ratio of the industry in which the *i*th firm competes X_{4i} = the sales to size of the *i*th firm relative to the average firm's sales size in the industry in which the *i*th firm competes U = an error term accounting for unspecified variables i = 1 through n and n = the number of firms in the sample or population	Revenue Service (1974 through 1979)	
Klein (1981)	To examine the following relationships: (i) bank size and extent of long-range planning efforts undertaken (ii) bank size and trends of growth and profit (iii) extent of long range planning and trends for growth and profit and (iv) extent of long-range planning, bank size and trends for growth and profit.	Postal survey	Senior officials and executives (76)
Kudla (1981)	To examine the relationship between strategic planning and risk of common stocks.	Postal survey	Not specified (348 questionnaires were returned, out of which 328 were usable. The final sample used for risk analysis consisted of 78 planners and 78 non-planners)
Robinson and Littlejohn (1981)	The following research questions were explored in this study: (i) What is planning in a small firm? (ii) Is planning of value in a small firm? And (iii) What are the critical dimensions of planning that are unique to the small firm?	Not specified	Not specified (Data was collected from 67 firms)
Sapp & Seiler (1981)	To examine the relationship between long-range planning and financial performance of U.S. Commercial Banks.	Postal survey	Not specified
Unni (1981)	To test the following hypotheses: (i) Among small business owners, the proportion who makes use of overall planning in their businesses is the same for both minority and non-minority (ii) All observed characteristics, such as the type of ownership, number of employees, average working hours per week, age of the firm, owner's experience, owner's age and educational background, were related to their planning efforts and (iii) Since sales and profit growth could be considered as indicators of business success, those small business owners with satisfactory profit (profit growth) were also satisfied with sales (sales growth)	Postal survey	Not specified (Only 62 minority and 58 non-minority small businesses responses were useable)

Kudla & Cesta (1982)	To examine whether planning of a firm affects its performance.	Postal survey	Not specified (348 questionnaires were returned, out of which 328 were usable. The final sample used for discriminant analysis consisted of 27 planners and 27 non-planners)
Jones (1982)	This study was intended to identify important characteristics which differentiate planners from non-planners and to determine the usefulness of planning in the small firm.	Postal survey	Top planners (69 questionnaires were returned)
Robinson, Jr. (1982)	To examine whether there is a relationship between outsider-based strategic planning (OBSP) and firm profitability or not.	Not specified	Not specified
Robinson Jr. and Pearce II (1983)	To examine the relationship between formality of planning procedures and financial performance.	Postal survey	Presidents (50)
Fredrickson (1984)	To test whether there is a positive relationship between comprehensiveness of strategic decisions and performance in an industry operating in a stable environment.	Interviews	Executives including Chief Executive Officers (152)
Fredrickson & Mitchell (1984)	To test the relationship between the comprehensiveness of strategic decision processes and performance in an industry whose environment is unstable.	Interviews	Executives including Chief Executive Officers (109)
Robinson Jr., Pearce II, Vozikis & Mescon (1984)	To determine whether the planning-performance relationship is a small-firm setting is contingent on the stage of development of the firm or not.	Postal survey	Not specified (Data from 51 firms were used for analysis)
Welch (1984)	To determine (i) if the company conducts strategic planning (ii) when strategic planning was formally initiated and (iii) at what level in the organisation strategic plans are developed, corporate and or division	Postal survey	Chief Executive Officers (123)
Woodburn (1984)	To explore the types of strategies, formulation methods and the influences of environmental and organisational characteristics on the planning process in organisations based in South Africa.	Postal survey	Not specified (Data from 518 firms were collected)
Ackelsberg and Arlow (1985)	To test the following hypotheses: (i) There is a positive and significant relationship between planning and economic performance (ii) The relationship between planning and economic performance will be significantly different among types of businesses	Postal Survey	Not specified. Only referred to as potential respondents (135 usable questionnaires were returned)
Orpen (1985)	To compare the performance of small businesses which engage in long-range planning with that of firms which do not.	Data was collected in two stages. (i) managers of the firms kept diaries over a six-week period and it was later	Senior managers, mostly owner-managers (58)

		examined by three independent judges (ii) the same managers completed a brief questionnaire	
Rhyne (1986)	To examine whether long-term financial performance of a firm relative to its industry will be positively related to superior planning systems or not.	Postal survey	Not specified. (89 usable questionnaires were received)
Bracker and Pearson (1986)	To test the following hypotheses: (i) No significant difference exists between the level of planning sophistication employed in opportunistic entrepreneurs' firms and their financial performance data (ii) No significant difference exists in financial performance data between older, opportunistic entrepreneurs' firms (more than 9 years old) and the younger, opportunistic entrepreneurs' firms (iii) A significant difference exists in financial performance data between large, opportunistic entrepreneurs' firms (more than $ 400, 000 gross revenue) and the smaller, opportunistic entrepreneurs' firms (iv) No significant difference exists in financial performance data between opportunistic entrepreneurs' firms with long planning histories (more than 5 years) and opportunistic entrepreneurs' firms with short planning histories.	Postal Survey	Owners / Managers (265 returned the questionnaires, out of which 188 were usable)
Robinson Jr., Logan & Salem (1986)	To address the relationships between operational and strategic planning and the contribution of each to firm performance.	Postal survey	Not specified (Data from 81 firms were used for analysis)
Ramanujam, Venkatraman & Camillus (1986)	To examine what all dimensions of planning are associated with effectiveness as approached from multiple perspectives.	Postal survey	Executives (207 questionnaires were returned and out of these, 93 responses were used for analysis)
Shuman & Seeger (1986)	To explore the following research questions: (i) are definitional variations contributing to the finding that so many small firms do not plan? (ii) is the application of planning the main ingredient that separates the growing (entrepreneurial) business from the small, static (Mom and Pop) business? and (iii) what specific activities should comprise the planning process?	Postal survey	CEOs / Owners (220)
Miller (1987)	(i) To examine the relationship between strategy and structure (ii) to examine the nature of association of structure with rationality and interaction among good and poor performers and (iii) to examine whether the expected differences in the relationships between high and low performers will be more pronounced among innovative and large firms than among noninnovative and	Personal and telephonic interviews	Chief Executive Officers, Vice-Presidents and General Managers

	small firms.		
Ramanujam & Venkatraman (1987)	To examine what all characteristics of a planning system are central for planning effectiveness.	Postal survey	Executives (207)
Capon, Farley and Hulbert (1987)	(i) To document planning practices and identify problems; (ii) To investigate relationships between planning systems and environment, strategy, organisation structure and organisational climate and (iii) To investigate relationship between planning and economic performance	Interviews at the offices of the organisations. Two questionnaires were used.	(i) Chief planning officer or equivalent position who answered questionnaire I (113) (ii) Knowledgeable assistants designated by the executive who responded to questionnaire I filled in the questionnaire II (113)
Gable & Topol (1987)	This study was intended to broaden the understanding of planning in the smaller retail sector and for achieving this overall aim the following objectives were established (i) To determine the degree of planning in smaller retail organisations (ii) to determine if the use of goals, objectives and forecasts of planners can be distinguished from non-planners (iii) to determine if planners' perceptions of problem areas differ from non-planners and (iv) to determine the effect of planning on performance as measured by sales and profits.	Postal survey	The covering letter accompanying the questionnaire was addressed to the President of the organisation. However the letter requested the recipients to forward the questionnaire to the person in charge of planning, if they were not responsible for planning in their organisation. The letter urged the individual receiving the questionnaire to respond if the retailer did not engage in planning. Altogether there were 209 responses and out of them 179 were usable.
Pearce II, Robbins & Robinson Jr. (1987)	The overall aim of the study was to investigate the formality / grand strategy / performance relationship. The following hypotheses were tested (i) the level of a firm's strategic planning formality is significantly and positively correlated with organisational performance (ii) there is no significant difference in the performance of firms across the stability, external growth and internal growth strategies. The performance of firms following a retrenchment strategy will be lower (iii) there are no significant differences in the levels of strategic planning formality across grand strategy types and (iv) the relationship between formality of planning and firm performance is consistent for all grand strategy types	Postal survey	CEOs (73)
Ramanujam & Venkatraman (1987)	To identify those aspects of planning which differ significantly across two groups of organisations classified as either high performers or low performers.	Postal survey	Senior planning executives (207)
Rhyne (1987)	To describe the overall pattern of relationships among the strategic planning system characteristics and to examine their impact on the financial performance of the organisation.	Structured interviews and postal survey	Executives (89 usable questionnaires were returned during the survey and interviews with eleven executives from eight companies representing seven

			industries were conducted)
Ramanujam & Venkatraman (1988)	To test three propositions linking excellence, planning and performance.	Postal survey in two stages.	Chief planning officers (210) in the first stage and chief executives (17) in the second stage of the survey.
Odom & Boxx (1988)	The overall aim of the study was to investigate the relationships of church size and church growth to perceptions of the environment and planning processes. The following research questions were investigated: (i) Is there a relationship between the location of churches and perceptions of the environment? (ii) Is there a relationship between the size of churches and perceptions of the environment? (iii) Is there a relationship between church leaders' perceptions of their environment and the sophistication of the planning process used? (iv) Is there a relationship between the size of churches and the sophistication of the planning process used? and (v) Is there a relationship between the growth (performance) of churches and the sophistication of the planning process used?	Postal survey	Pastors (179)
Bracker, Keats & Pearson (1988)	The objective of this study was to examine sophistication of strategic planning process and financial performance among firms more than 5 years old operating in a dynamic growth environment. To accomplish this objective the following hypotheses were formulated for testing: (i) Level of planning sophistication will be positively related to performance (ii) Entrepreneur type (opportunistic or craftsman) will affect firm performance (iii) Performance differences will be observed between large firms (more than $ 3 million gross revenue) and small firms and (iv) Performance differences will be observed between firms with long planning histories (more than 5 years) and firms with short planning histories	Postal survey	Owner / managers (97 firms responded to the questionnaire)
Cragg & King (1988)	The major hypothesis to be tested was that financial performance is related to planning activities, market oriented activities and the characteristics of the owner / manager.	Postal survey	Owner-mangers (179)
Robinson Jr. & Pearce II (1988)	To simultaneously examine the impact of intended strategies and planning processes on business-unit performance.	Postal survey	CEOs (97)
Shrader, Mulford & Blackburn (1989)	To examine (i) strategic planning / performance relationships of small firms in three major industry sectors and (ii) the degree to which environmental uncertainty affects both strategic and operational planning.	Self-completions questionnaires and interviews.	CEOs (97)

Jenster and Overstreet Jr. (1990)	To investigate the relationship between formal planning processes within credit unions and their immediate environment, organisational processes and structure, administrative systems, strategy and performance.	Survey	Both the chairmen and the managers of credit unions responded to the questionnaires submitted to them (74)
Kukalis (1991)	To investigate the relationship among four design parameters of planning systems and five different firm and environmental characteristics.	Postal survey	Top executives or senior corporate planning officers (115)
Powell (1992)	To test the following hypotheses: (i) In 'planning equilibrium' industries, the correlation between formal strategic planning and profitability does not differ significantly from zero (ii) In 'planning disequilibrium' industries, the correlation between formal strategic planning and profitability differs positively and significantly from zero and (iii) The correlation between strategic planning and profitability is significantly greater in 'planning disequilibrium' industries than in 'planning equilibrium' industries.	Postal survey	CEOs (113)
Lyles, Baird, Orris & Kuratko (1993)	To examine the relationship between planning formality and three other elements namely the process by which the strategic decisions are made, the content of small firm strategies and firm performance.	Structured interviews	Owners or managers (188)
Orpen (1993)	To examine the role of firm and environmental scanning activities on the planning-performance relationship.	Telephone survey	Owner or senior manager (51)
McKiernan & Morris (1994)	The overall objective of the study was to examine the relationship between the formality of strategic planning and financial performance among SMEs. The other objectives were to improve the sampling and methodologies and to incorporate the perceptions of CEOs.	Postal survey	CEOs (1380)
Matthews & Scott (1995)	To find out how the perception of environmental uncertainty influences the strategic and operational planning in small firms.	Postal survey	Owners / Managers and Entrepreneurs (130)
Olson & Bokor (1995)	To test the following hypothesis: "The sales growth rate (performance) of small, rapidly growing firms is influenced by the interaction (cross product) of planning formality (process) and product / service innovation (content)".	Postal survey	CEOs (91)
Kargar (1996)	This study sought to answer the following research questions: (i) Is planning effectiveness is small firms a multidimensional? (ii) What characteristics of planning systems are central for planning effectiveness in small firms?	Postal survey	President / CEO (47 banks responded and out of these 41 banks were chosen for analysis)

Goll & Rasheed (1997)	To examine the relationship between decision rationality and organisational performance and to investigate the moderating roles of environmental munificence and dynamism.	Postal survey	Human Resource Vice President / CEO
Hopkins & Hopkins (1997)	To test an integrative model of relationships among managerial, environmental and organisational factors, strategic planning intensity and financial performance.	Postal survey	CEOs (112)
Rue & Ibrahim (1998)	The objectives of the study were the following: To examine (i) whether small firms prepare written strategic plans and if so the extent to which their planning process attempts to identify external factors and includes quantified objectives and budgets; (ii) whether the plan contains procedures for anticipating or detecting differences between the plan and actual performance and for preventing or correcting these differences and (iii) the relationship between the sophistication of the planning and evaluation process and the firms' performance	Postal survey	Senior managers (253)
Glaister & Falshaw (1999)	To examine the extent to which companies use the tools and techniques of strategic development advocated by the classical model of strategy formulation and to examine views and attitudes towards the standard strategic planning approach.	Postal survey	CEOs, Finance executives, Planning executives and other Senior Executives (Total: 113)
Rogers, Miller & Judge (1999)	To test the hypothesis which states that the relationship between strategic planning processes and organisational performance will depend upon the content of strategy pursued.	Postal survey	CEOs (252 responded and 157 of them were included in the analysis)
Andersen (2000)	To test the model of strategic planning proposed by the authors. This model indicates that both strategic planning and autonomous actions influence organisational performance and might interact in ways that enhance performance.	Postal survey	Executives (230)
Baker & Leidecker (2001)	The primary purpose of this research was to examine the impact of strategic planning on firm performance in the agribusiness sector	Postal Survey	CEO or the manager responsible for the tomato processing division. (16)
Gibson & Cassar (2002)	To find out the influence of business structure variables namely business size (total employment), business volume (total sales) and business age on the incidence of business planning. Another objective of this study was to find out whether differences in the incidence of planning existed among industry groups. Also to find out the influence of management structure variables namely management training, intention to change operations, major decision makers' years of experience as a business proprietor and major decision-makers' education level on the incidence of business planning.	Secondary data was used for the study	Not specified

Baker (2003)	To examine the impact of formal strategic planning on firm financial performance.	Postal survey	CEOs (192 usable surveys were returned)
Tegarden, Sarason & Banbury (2003)	To investigate the impact of different strategy processes on different dimensions of firm performance and the role of the environment in these relationships.	Postal survey	CEOs (377 were returned, out of which 314 were used for the analysis)
French, Kelly & Harrison (2004)	To investigate relationships between firm performance and aspects of strategic planning	Postal survey	Managing partner or owner / manager (127)
Shrader, Chacko, Herrmann & Mulford (2004)	To test the following hypotheses: (i) The existence of both formal and informal strategic planning activity will be positively associated with firm financial performance (ii) The existence of formal and informal strategic planning in conjunction with technology policy and operational planning will be positively associated with firm financial performance and (iii) The degree of formal planning, planning time horizon, technology policy and operational planning will be positively associated with firm performance	Postal Survey	CEOs (64), Plant managers or Vice Presidents (53), Strategic Planners (17) and Managers holding important positions like CFO, Controller or Director of Research and Development (13). Three firms did not specify the position of the respondent.
Hoque (2004)	(i) To examine whether or not there is a significant relationship between business strategy and performance through management's choice and use of a performance measurement system and (ii) to examine whether or not there is a positive and significant association between the uncertainty due to organisational environment and performance through management's choice and use of a performance measurement system	Postal survey	CEOs (52)
O'Regan & Ghobadian (2004)	To investigate the association between the emphasis placed on various factors shaping the strategic plan together with their associated resources and their perceived impact on a range of tangible and intangible performance measures	Postal survey followed by personal interviews	The respondents of postal survey were not specified. 194 valid responses were received. 6 Managing Directors were interviewed.

APPENDIX 3

Author	Strategy / planning construct	Performance constructs (Objective / subjective)	Method of analysis	Results / outcomes
Grinyer & Norburn (1975)	(i) Corporate objectives, (ii) role perception, (iii) formal planning systems, (iv) channels of information, (v) the number of items of information received and used, (vi) extent of common perception and (vii) Presence of change inducing strategic managers	Return on net assets = Profit before interest and tax / (Fixed assets + current assets – current liabilities)	Correlation analysis was used to analyse the relationship between financial performance and (i) perceptions of objectives (ii) role perception (iii) formal planning systems (iv) channels of information (v) number of items of information received and used (vi) extent of common perception and (vii) presence of change inducing strategic managers. Factor analysis of all the 29 variables was also undertaken to find out the underlying dimensions which were not revealed in the earlier analysis.	(i) No evidence to support the assumption that common perception of objectives and financial performance are associated (ii) Clarity of role perception is unrelated to financial performance (iii) Formality of planning is unrelated to performance (iv) There was negative correlation between desire for change and financial performance. But this may not mean that strategic managers do not contribute to improved financial performance (v) Use of more informal channels of communication or information processes are associated with higher financial performance (vi) The number of all information processes used is positively correlated with performance. Overall the results do not support the view that full corporate planning approach is associated with high financial performance.
Karger & Malik (1975)	Formal integrated long range planning (FILRAP) which refers to establishing a written plan for the overall organisation and for each division and each plant in each division for at least the next 5 years and a more expanded 1-2 year plan for each.	Arithmetic means of the following measures were calculated for each firm over the 10-year period: (i) sales volume (ii) sales per share (iii) cash flow per share (iv) earnings per share (v) book value per share (vi) net income (vii) rate earned on capital (viii) rate earned on net worth (ix) operating margin (x) per cent of dividends to income	Student's 't' test and the Wilcoxon Rank-Sum test were used to compare the planners to the non-planners.	The planners outperformed the non-planners by a wide margin except in those measures involving capital spending, stock price and distribution of earnings as dividends. The planners were more aggressive and better sellers of goods, controlled margins so as to reap greater profits and earned higher returns on capital. Better sales, earnings and / or operating performance have no sure positive effect on equity prices.

		(xi) capital spending per share (xii) stock price (average) and (xiii) price / earning ratio (average)		
Burt (1978)	Quality of planning	(i) Changes in profitability (ii) return on invested capital (iii) changes in return on invested capital (iv) return on total funds employed and (v) changes in return on total funds employed	(i) Scatter plots and (ii) regression analysis Relevant weights were applied to the data and a raw score was computed. This score was converted to percent of the maximum possible score of 110 and became the computed indicator of the quality of a firm's planning.	(i) High quality planning was significantly associated with high level performance (ii) Moderate quality planning was associated with moderate performance (iii) The relationship between the quality of planning and performance was found to be ambiguous for low quality planners
Kallman & Shapiro (1978)	Only the planning activities which covered more than 1 year ahead were treated as strategic planning or long range planning. (i) Definition of planning which would most closely describe the long range planning performed by the organisation (ii) No. of years the firm has been performing long range planning and (iii) Various aspects which would reflect the long range planning	The following five economic performance indicators over the 10-year period from 1965 to 1974: (i) gross operating revenue (ii) net earnings before taxes (iii) earnings to revenue ratio (iv) return on shareholder's investment (net income divided by average shareholder's equity) and (v) return on total investment (operating profit divided by the sum of average equity capital and average fixed liabilities)	A composite score was developed from the responses and based on that score each company was placed in one of the five groups. Group one contained non-planners and those companies whose planning was for one year or less. Groups two through five contained organisations who have demonstrated increasing commitments to planning, with group five containing firms with highest commitment. Tables containing (i) details of number of carriers in each planning group and the year in which they started planning covering all respondents (ii) breakdown of planners by commodity handled covering all respondents (iii) summary of the basic sample according to the planning group and also according to their size, commodity handled and	(i) There is no relationship between the size of the firm, its commitment to long range planning and its economic performance (ii) the geographic area of operation does not affect economic performance (iii) there is no difference in the economic performance of planners and non-planners who handle general commodities and special commodities (iv) there is no relationship between the length of time a carrier planned and the productivity of the firm

			geographic territory (iv) the size of carriers as expressed by total gross revenues and (v) the ranges of performance for each of the economic variables as a percentage over the 10 years 1965 through 1974	
Klein (1979)	All planning activities that exceed a time horizon of one year. Planning guidelines like economic forecasts, forecasts of competitor action and policy statements were established after defining corporate objectives in terms of earnings growth, return on investment, share of market and desired loan and deposit growth rates	(i) Bank size was determined by total average deposits of each participating bank during the year 1970. (ii) Growth was measured by calculating the percentage changes of average total deposits of the banks, included in the sample for the years 1970-1974. (iii) Profit was taken as the Net Yield after Cost of Cash. The Net Yield was computed by combining the "Net Yield after Cost of Money" for all classes of loans; the "Net Yield after Cost of Money" for investments and the "Cash and Due from Banks" balance.	ANOVA	(i) There is no evidence which indicates that bank size is a determining factor of the extent of long range planning efforts undertaken by banks (ii) There is a significant relationship between the bank size and growth in commercial banks. Large banks had growth rates that were substantially smaller than those of small banks but slightly higher than those experienced by medium banks (iii) There is no significant relationship between bank size and profit. No significant difference existed between profit trends for large and small banks (iv) There was no significant correlation between long range planning effort on one side and growth or profit trends on the other side (v) When the relationship between bank size, extent of long range planning efforts undertaken and trends for growth and profit was analysed it was found that even though the extent of long range planning efforts undertaken influenced growth trends, this influence was not as strong as the impact of size. There was no empirical evidence to suggest that the long range planning and size influenced the profit. (vi) At the time of this study the use of long range planning in commercial banks as a

				management tool became more widespread when compared to the period of the mid 1960s.
Wood Jr. & LaForge (1979)	Comprehensiveness of planning.	Growth in net income and return on owner's investment	t-tests	A group of large banks that engaged in comprehensive long range planning financially outperformed two other groups that were either randomly selected or were identified as not having formal planning systems.
Kudla (1980)	(i) Written long-range plan covering at least three years (ii) time period covered by the long-range plan (iii) year in which strategic planning was started (iv) quantified objectives concerning sales, return on investment, profit margin and market share covered in the strategic plan (v) inclusion of pro-forma financial statements for at least three years (vi) identification of factors relating to PESTEL and competitive environment (vii) inclusion of specific action programmes (viii) schedules for completion of long-range plans and (ix) provision for detection of differences between the plan and actual performance	Average residuals	Chi-square test, residuals plot and t-test.	(i) There were no significant differences in the returns earned by shareholders of planning firms and non-planning firms and (ii) strategic planning process led to a transitory decline in systematic risk for planning firms relative to the non-planning firms.
Grinyer, Yasai-Ardekani & Al-Bazzaz (1980)	(i) Lateral and vertical spans of control (ii) Strategy, structure and size (iii) Charter, geographical dispersion and number of sites, number of employees, annual sales and capital	Average return on capital employed, growth in profits and ROI and growth in capital employed, sales and numbers employed.	Correlation analysis	Some of the important findings were (i) There is significant positive correlation between strategy and structure. This relationship is independent of other correlates of structure including number of sites, geographic dispersion of sites and size in terms of sales, capital

	employed (iv) Scales for environmental pressure or hostility perceived by interviewees			employed and number of employees as well as a variety of environmental factors. (ii) The linkage between strategy and structure is as strong among service as among manufacturing companies, but was not significant among those combining manufacturing and service operations. (iii) Variables like charter, size, number of sites and their geographic dispersion variables which were not correlated with strategy, were strongly correlated with structure. (iv) There was a positive correlation between each of vertical and lateral spans of control and divisionalisation of organisation structure. (v) There was less perception of environmental hostility in companies where strategy and structure were matched. (vi) Variables on environmental hostility were correlated negatively with measures of performance (vii) Degree of diversification and growth especially in net profits were negatively correlated. Diversified companies displayed no better than average return on capital employed. Single product companies had significantly higher rates of growth in net profits.
Leontiades & Tezel (1980)	(i) CEO's rating of planning as performed by his planning staff and (ii) CPO's evaluation of the planning department's contribution to the success of his firm	The following financial performance measures for four time periods namely 1971 to 1977, 1972 to 1977, 1973 to 1977 and 1974 to 1977 were used: Return on equity (ROE), return on assets (ROA), price-earnings multiples (PE), earnings per share growth (EPSG) and sales	Chi-square test	(i) There was no association between the perceived performance of planning and related performance results (ii) CEO's views of planning were directly correlated with the percentage of time they spend on planning. An emphasis on corporate-level planning is associated with high ratings for planning by both CEOs and CPOs, while low ratings are given by CPOs when a large

		growth (SALG).		percentage of their time spent on non-planning activities.
Lenz (1980)	(i) Environment (ii) strategy and (iii) organisation structure	Return on average assets	(i) Factor analysis and (ii) stepwise discriminant function analysis	(i) High performance firms operate in environments with lower levels of socioeconomic development, obtain higher prices for services sold and have flatter organisational hierarchies and (ii) low-performance firms operate in more developed environments, use media for advertising, charge lower prices and have more peaked organisational hierarchies.
Beard & Dess (1981)	Variation in corporate-level strategy has been measured in terms of the average profitability of the industry in which a firm does business. Variation in business-level strategy has been measured in terms of the firm's relative position within its particular industry on the three variables namely sales size, capital intensiveness and debt leverage.	Before tax return on total investment or on equity	Stepwise linear regression	(i) The variation in a firm's corporate-level as well as business-level strategies help to explain variation in firm profitability (ii) The relative importance of variation in corporate-level compared to business-level strategy in explaining firm profitability remains somewhat ambiguous on the basis of the results (iii) Relative firm size within a given industry doe not hold up here as a powerful predictor of firm profitability (iv) The average level of the multiple correlation coefficients and the statistical significance of the regression equations suggest that the variables under study are important in understanding and predicting firm profitability (v) The variability of the results over time argues for more attention in future research to sources of temporal variation
Klein (1981)	Bank size and extent of long-range planning efforts undertaken	Trends in growth and profit.	t-test and ANOVA	(i) Bank size is an important variable affecting growth trends (ii) Extent of long-range planning effort undertaken influences growth trends, but this influence is not as

				strong as the influence of bank size and (iii) there is no evidence to suggest that long-range planning and size affect the profit.
Kudla (1981)	(i) Written long-range plan covering at least three years (ii) time period covered by the long-range plan (iii) year in which strategic planning was started (iv) quantified objectives concerning sales, return on investment, profit margin and market share covered in the strategic plan (v) inclusion of pro-forma financial statements for at least three years (vi) identification of factors relating to PESTEL and competitive environment (vii) inclusion of specific action programmes (viii) schedules for completion of long-range plans and (ix) provision for detection of differences between the plan and actual performance	The measures of risk are computed from Sharpe's familiar market model. Total risk was partitioned into systematic risk and unsystematic risk. Systematic risk is that part of total risk that cannot be eliminated by diversification while unsystematic risk is diversifiable. Appropriate measures were used to measure these risks.	The firms were classified into three categories namely (i) Class 1 Non-planners – no formal long-range planning process (ii) Class 2 Incomplete planners – written long-range plans but not meeting all the requirements of Class 3 planners and (iii) Class 3 Complete planners – most comprehensive, systematic, future-oriented long-range planning process. All the 78 planners and 78 non-planners selected for risk analysis was widely held and actively traded in New York Stock Exchange. A chi-square test was performed to determine if the industry-by-industry distributions of firms in the planning and non-planning groups were significantly different. Security returns were regressed on market returns using moving beta method. To detect significant differences in the systematic and unsystematic risk measures, paired t-test and plotting the average betas were used. The null hypothesis was tested by computing the difference between each security's beta. A standard F-test was used to detect significant differences in the variance of residuals	(i) A temporary, but statistically insignificant, reduction in systematic risk was found in the period surrounding the month strategic planning was initiated. (ii) A significant reduction in unsystematic risk as measured by residual variance for the planning group was found approximately 5 and 10 years after the initiation of planning

			which was a measure of unsystematic risk.	
Robinson and Littlejohn (1981)	Planning in small firms was defined as a rational decision-making process for predetermining an appropriate course of action to achieve specific objectives effectively and economically within a specified time.	(i) Sales (ii) Employment and (iii) Profitability measured as net profit before taxes as a percent of total sales	t-test	(i) Sales increased significantly (ii) No. of full time equivalent (FTE) employees increased significantly (iii) The mean profitability increased significantly
Sapp & Seiler (1981)	(i) Recognition of specific objectives (ii) duration of the existence of planning systems (iii) relating the resources to the objectives specified (iv) Existence of systems for formal plan review and revision process as well as for comparing plans to actual results and (v) consideration of environmental factors outside the immediate control of the bank.	(i) Deposit growth rate (ii) ratio of capital to risk assets (iii) loan yield and (iv) return on equity	Analysis of variance.	(i) Higher levels of planning efforts were directly correlated with higher deposit growth rates with the influence of size, location, scope and holding company affiliation removed (ii) greater planning efforts were correlated with lower ratios (iii) banks with greater planning efforts were able to realise higher yields on its loans and (iv) sophisticated planners had a significantly higher return on equity than non-planners.
Unni (1981)	Company characteristics such as nature of ownership, number of employees, owner's age, average working hours per week, age of the company, experience of the owner and educational background.	Profit growth and sales growth	Chi-square test and Correlation analysis	(i) The proportion who planned the business as a whole were more among non-minority firms than among minority firms (ii) Among the minority firms, type of ownership, number of employees, the average working hours per week, age of the firm and experience of the owner were not related to the extent to their planning efforts whereas the owner's age and educational background were related to their planning efforts. Among the non-minority firms, number of employees, owner's age and average working hours per week were not related to their planning efforts whereas the type of ownership of business, age of the firm,

				owner's experience and educational background were related to planning aspects. (iii) 54% of minority firms and 71% of non-minority firms were satisfied with their profit levels, but were those who were satisfied with their profit levels were not satisfied with sales growth.
Kudla & Cesta (1982	(i) Written long-range plan covering at least three years (ii) time period covered by the long-range plan (iii) year in which strategic planning was started (iv) quantified objectives concerning sales, return on investment, profit margin and market share covered in the strategic plan (v) inclusion of pro-forma financial statements for at least three years (vi) identification of factors relating to PESTEL and competitive environment (vii) inclusion of specific action programmes (viii) schedules for completion of long-range plans and (ix) provision for detection of differences between the plan and actual performance	Fourteen financial ratios including liquidity, debt, activity and profitability ratios.	The firms were classified into three categories namely (i) Class 1 Non-planners – no formal long-range planning process (ii) Class 2 Incomplete planners – written long-range plans but not meeting all the requirements of Class 3 planners and (iii) Class 3 Complete planners – most comprehensive, systematic, future-oriented long-range planning process. All the 27 planners and 27 non-planners selected for discriminant analysis was widely held and actively traded in New York Stock Exchange. Since financial policy is multidimensional covering investment, financing and operating policies, stepwise linear discriminant analysis (LDA) was chosen as the statistical technique for conducting the analysis.	Planning and financial performance were unrelated.
Jones (1982)	(i) Type of environment (ii) planning methods (iii) management philosophy or style and (iv) style of decision making	Return on assets	Stepwise discriminant analysis was used to determine the type of environmental factors, management practices and demographic which would best describe planners and non-planners. Canonical correlation of the	(i) Planners had greater success than non-planners, when success was measured by return on assets (ii) The findings supported the perception that an informal organisational and management style characterised by easy adaptation to change, little

			linear discriminant function was also calculated. The differences between the group means for planners and non-planners on each independent variable were tested using the t-test to further determine the characteristics which differentiate planners and non-planners.	emphasis on formal procedures and open communication among members of the management team existed in small businesses (iii) Planners viewed the environment as more restrictive than did non-planners. Also the planners regarded the environment as being less a threat to the firm's survival than did non-planners because of lower risk (iv) Planners made greater use than non-planners of all the planning activities (v) Planners were significantly more likely to engage in group consultation before reaching decisions than were non-planners. These group consultations were about decisions concerning the product, the budget and growth strategy (vi) Planners were older and had a higher level of formal education than non-planners
Robinson, Jr. (1982)	To be treated as an outsider based strategic planning (OBSP) firm, the firm had to (i)address business level strategy issues (ii) include thorough analysis and decision making in two or more functional areas (iii) involve 10 or more contact hours between client and consultants and (iv) include three or more substantive contact periods	(i) Growth = percentage change in total sales (ii) profitability was calculated in two ways namely absolute increase in net profit before taxes / total sales and absolute increase in (net profit before taxes plus owner compensation) / total sales (iii) productivity = percentage increase in sales / employee and (iv) employment measured by percentage increase in the number of full-time equivalent employees	(i) Chi-square test (ii) correlated samples t-test and (iii) one-way multivariate analysis of variance (MANOVA) with Duncan's multiple range test	(i) There was a significant increase in the profitability of OBSP firms than that of the control group consisting of RMA firms during the post-OBSP period and (ii) small firms engaging in OBSP had a significantly higher improvement in effectiveness than did control group consisting of a random sample of BKS firms.

Robinson Jr. and Pearce II (1983)	(i) Formality of planning process and (ii) degree of emphasis in strategic decision-making process	(i) Profit margin (ii) return on assets (iii) loan growth and (iv) return on equity	(i) Chi square test (ii) percentile rankings and (iii) t-tests	(i) There was no significant difference between the performance of small banks engaged in strategic planning and those which were not (ii) Regardless of formality, each set of banks placed equal emphasis on all aspects of strategic decision-making except formalised goals and objectives and (iii) mangers responsible for strategic planning do not benefit from a highly formalised planning process, extensive written documentation or the use of mission and goal identification as the beginning of a strategic planning process.
Fredrickson (1984)	Organisation comprehensiveness and size	(i) Average after tax return on assets during the most recent five years and (ii) percentage change in gross sales during the same period.	Correlation analysis and t-test	There was a positive relationship between comprehensiveness and performance in an industry operating in a stable environment.
Fredrickson & Mitchell (1984)	Organisation comprehensiveness and size	(i) Average after tax return on assets during the most recent five years and (ii) percentage change in gross sales during the same period.	Correlation analysis and t-test	There was a consistently negative relationship between comprehensiveness and performance.
Robinson Jr., Pearce II, Vozikis & Mescon (1984)	The firms' strategic planning activities had to (i)address business level strategy issues (ii) include thorough analysis and decision making in two or more functional areas (iii) involve 10 or more contact hours between client and consultants and (iv) include three or more substantive contact periods	(i) Growth in sales (ii) profitability (iii) sales per employee and (iv) number of full-time employees.	One-way multivariate analysis of variance (MANOVA) and t-test	(i) The improvement in effectiveness obtained by small firms that engage in strategic planning is not contingent on stage of development and (ii) stage of development may play a contingency role in terms of strategic planning intensity but not in terms of process
Welch (1984)	(i) Setting long-term financial objectives (ii) gathering and using strategic information that	The average P/E multiple over the 5-year study period from 1975 to 1979.	t-test was used to compare the performance of the two groups namely strategic planners and	(i) Strategic planners achieved a much higher P/E during the study period (ii) P/Es of centralised strategic

	pertains to the social, economic, political and technological environments (iii) identifying and analysing alternative strategic options (iv) evaluating internal resource constraints and (v) planning courses of direction subject to the above factors.		non-planners. t-test was again used to compare the P/E's of centralised and decentralised planners, among the strategic planners.	planners were significantly higher than that of decentralised planners. This suggests that strategic planning may be more effective if it is conducted at the corporate rather than solely at the division level.
Woodburn (1984)	(i) Methods of environmental scanning (ii) application of environmental scanning (iii) formulation of objectives goals and targets (iv) strategic planning (v) long range planning and (vi) operational planning	Profitability	Cross-tabulations, Chi-square test, F probabilities, t-test and Factor analysis	(i) In terms of individual influence, the CEO dominates formulation of all the three classes of objectives (ii) In the case of the participant objectives, the strongest group influence comprising the CEO, divisional and departmental managements and employees, was found to be in harmony with the definition of that type of objective (iii) For strategic objectives, the strongest group influence came from the key decision and policy-making group comprising the shareholders, directors and chief executive as could be expected for the formulation of this type of objective and (iv) for the performance type objective, the strongest of all influences was found in the key decision and policy-making group comprising the shareholders and CEOs.
Ackelsberg and Arlow (1985)	Goal setting, forecasting and execution of planning functions	Percentage change in sales and profits over the previous 3-year period	Chi square, Principal component analysis with Varimax rotation, Correlation analysis, t-test	(i) Most of the small businesses engaged in planning activities (ii) Planning firms tend to engage in more goal-setting activities, forecasting and traditional planning procedures than non-planners (iii) Planning in small business appears to be rational and logical rather than subjective and ad hoc (iv) Planning firms had greater increases in

				both sales and profits over a 3-year period than non-planners (v) The more a small firm used the more analytical aspects of planning the better its performance (vi) Formalising the plans did not affect the performance of small firms except for those in manufacturing whose sales performance deteriorated due to formalised planning
Orpen (1985)	(i) The structure of the planning function (ii) the aspects of the business considered in long-range planning (iii) the content of plans and the frequency of revision (iv) manager's attitudes toward planning and (v) percentage of time each manager spent on long-range planning	(i) Sales growth and (ii) return on assets	The firms were classified as high performers and low performers. Correlation analysis was used.	(i) Small firms which perform well conduct long-range planning process differently than small firms which perform poorly (ii) there is no significant difference between the amount of time spent on long-range planning and (iii) the results suggest that it is quality of planning which is important and not the time spent on it.
Rhyne (1986)	(i) Emphasis on new areas of operations (ii) attempt to match internal capabilities with external trends and (iii) emphasis on long-term variances from prior plans and on contingency plans.	Price appreciation and dividend yield to stockholders	Correlation analysis and t-tests	Firms having planning systems outlined in strategic management theory exhibited superior long-term financial performance both relative to their industry and in absolute terms.
Bracker and Pearson (1986)	(i) Size of the firm, (ii) age of firm, (iii) length of planning history and (iv) sophistication of planning measured by direct classification into one of four categories namely structured strategic planners, structured operational planners, intuitive planners and unstructured planners.	Revenue growth, entrepreneurial compensation growth and labour expense / revenue ratio growth. Revenue growth and entrepreneurial compensation growth were the absolute annual percentage growth rates during the time-frame examined. Entrepreneurial compensation was determined by summing the firm's net profit before	For analysing Hypothesis 1, a one-way multivariate analysis of variance followed by Scheffe's multiple comparison technique was undertaken. Univariate tests (ANOVA) were also conducted for each dependent variable. For testing Hypotheses 2, 3 and 4, Multivariate T Test (Hotellings T) followed by a univariate (ANOVA) were used. MANOVA was also	(i) Hypothesis 1 was rejected because a statistically significant difference existed between level of planning sophistication and financial performance in opportunistic entrepreneurs' firms. (ii) Hypothesis 2 was rejected because a statistically significant difference in financial performance existed between young and old opportunistic entrepreneurs' firms. (iii) Hypothesis 3 failed to produce evidence that size of firm was a determinant of successful financial

		taxes and owner / manager compensation. The labour expense / revenue ratio growth was calculated as the absolute annual labour expense as a percentage of sales during the time-frame examined.	used because there were three dependent variables.	performance. But univariate tests revealed a significant difference with regard to firm size when the dependent variable labour expense / revenue growth was examined. (iv) Hypothesis 4 was rejected because a statistically significant difference existed in financial performance of opportunistic entrepreneurs' firms with long planning histories, compared to opportunistic entrepreneurs' firms with short planning histories.
Robinson Jr., Logan & Salem (1986)	(i) Extent of involvement of store managers in short range, operational planning activities and (ii) The existence of a long range plan and the manager's commitment to that plan	The following were measured in 1981 and 1983 (i) percentage change in sales (ii) percentage change in return on sales (iii) productivity measured as sales per employee and (iv) manager's perceptions of firm performance	Percentage comparisons and t-test.	(i) Firms involved in the above average use of operational planning activities performed better than their counterparts with below average commitment to the use of operational planning activities (ii) Engagement of firms in strategic planning was not directly linked to higher performance. However of managers of such firms perceived the performance of their firms to be significantly better than their counterparts at firms not engaging in strategic planning and (iii) Firms which placed a high emphasis on both operational and strategic planning had the strongest performance advantage.
Ramanujam, Venkatraman & Camillus (1986)	(i) Organisational context of planning: resources provided for planning and organisational resistance to planning (ii) design elements: system capability, use of techniques, attention to internal facets, attention to external facets and functional coverage	(i) Fulfilment of planning objectives (ii) performance relative to competition and (iii) satisfaction with planning systems	Discriminant analysis	(i) The determinants of the effectiveness of planning systems tend to vary depending on the specific criterion of effectiveness used. The overall key dimensions were system capability, resources provided for planning and functional coverage.
Shuman & Seeger (1986)	(i) Management's planning philosophy (ii) the planning	(i) Sales growth (ii) profitability levels and (iii)	Chi-square test	The four categories of findings are summarised below: (i) Management's

	process (iii) planning areas and (iv) the planning organisation	productivity increases		Planning Posture: Most CEOs felt that improved time efficiency, company growth and better understanding of the market will be achieved through planning. (ii) The Planning Process: About a half of the companies did not have a formal business plan at start-up, but the majority of them adopted some form of strategic planning once the company was in operation. As the companies have grown in sales, the planning processes used became more formal. (iii) Planning Areas: Approximately two-thirds of the companies focus their planning activities in the marketing area and about 20% concentrate on plans for operations. (iv) Planning Organisation: The majority of the CEOs prefer an active and strong personal involvement in their company's planning process. Their prime area of involvement is in the setting of company objectives.
Miller (1987)	(i) Variables for strategy making proposed by Khandwalla (1977) and Miller (1983) (ii) Structure variables namely controls, liaison devices and technocratisation proposed by Khandwalla (1977) and Miller (1983) and the other structure variables namely centralisation, formalisation, specialisation, administrative and clerical ratios, number of sites, mechanisation of production and vertical span	(i) Average annual growth rates in net income and average rates of return on investment (ROI) for the previous five years and (ii) ratings of the CEOs about how their firms performed over the last five years.	(i) Correlation analysis (ii) Principal Components analysis and (iii) regression analysis	(i) Structural formalisation and integration were related to the levels of interaction and proactiveness among decision makers and to four aspects of rationality in decision making namely analysis of decisions, planning, systematic scanning of environments and explicitness of strategies. (ii) Centralisation of authority was related to planning, risk taking and consensus-building (iii) Structural complexity had few associations with strategy making and (iv) relationships between strategy making and structure were usually strongest among successful and innovative

	originated from the Aston researchers – Inkson, Pugh & Hickson (1970) and (iii) innovation was measured using five year averages of research and development expenses as a percentage of sales.			firms and seemed to contribute the most to performance in sizeable and innovative firms.
Ramanujam & Venkatraman (1987)	(i) Contextual dimensions: resources provided for planning and organisational resistance to planning (ii) system design dimensions: the degree of external orientation of the system, the degree of internal orientation of the system, the level of functional coverage and integration achieved and the extent of use of analytical tools and techniques.	(i) Objective fulfilment (ii) system-specific capabilities to develop a 'generic view' of the system's capability and (iii) relative competitive performance	Canonical correlation analysis	(i) The most critical impact on planning effectiveness was a favourable organisational context which fully supports the planning philosophy and (ii) Among the design dimensions, use of techniques and external orientation play key roles in determining the effectiveness of planning. Internal orientation and functional coverage emerged as much weaker influences.
Capon, Farley and Hulbert (1987)	Planning, environment, strategy, organisational structure and organisational climate	Return-on-capital = net profit + ½ (interest on long-term debt) / (long-term debt + net worth); Net profit = after tax income before extraordinary gains or losses Net worth = common + preferred stockholders equity, including intangibles	Chi-squares, correlations, ANOVA and t-tests. Analysis was performed on a number of levels namely (i) with individual measurements (ii) with scales developed as summary measures and (iii) with statistical groupings of similar firms. Correlations between values on the planning scales and values on each of the scales namely environment, strategy, organisation structure and organisational climate were analysed. Through cluster analysis, groups of similar firms for each of environment, strategy, organisation structure and	The major findings were: (i) There is no strong link between planning and the environment (ii) There is stronger relationship between planning and strategy (iii) Only scattered relationship between planning and organisational structure (iv) Organisational climate is more related to planning than organisation structure (v) the relationship between planning and performance are weak at best but that there seems to be a tendency for better planning practice to be related to better performance

			organisational climate were developed inductively. The profiles of planning groups were compared with the planning category system and with each set of the other inductively formed groups and their performance are also assessed.	
Gable & Topol (1987)	(i) Extent to which goals are set for the entire firm and for each part of the business (ii) Consideration of the firm's strengths and weaknesses in the course of planning activities (iii) Whether plans are based upon forecasts (iv) Consideration of alternative strategies (v) Preparation of budgets and contingency plans (vi) Usage of control systems to monitor plans and (vii) Updating the plans	Increases or decreases of sales and profits during the previous three years	(i) Comparison of the planning activities of planners and non-planners using means and t-test (ii) Chi-Square test was used to determine whether or not significant differences of demographic characteristics emerged between planners and non-planners (iii) The use of goals, objectives and forecasts was compared between planners and non-planners using means and t-test (iv) The extent of problems encountered by the planners and non-planners were compared using means and t-test (v) The percentage changes in sales and profits over the previous three year period for the planners and non-planners were compared and t-test was used to check the statistical significance of the differences in mean percentage changes of the planners and non-planners.	(i) The findings of this study do not suggest that planning has a favourable impact upon financial performance. (ii) Planners were engaging in planning activities to a greater extent than non-planners. Planners were more likely to put their plans in writing than non-planners (iii) Retailers utilising planning were more likely to be multi-unit operations, be in larger cities, employ larger number of employees and have larger annual sales figures (iv) Planners were setting goals and objectives to a greater extent than non-planners (v) Planners perceived interest rates and unions as more serious problem areas than did non-planners
Pearce II, Robbins & Robinson Jr. (1987)	Type of grand strategy and level of planning formality. Respondents were asked to categorise their overall grand	Firm sales, Return on Assets (ROA) and Return on Sales (ROS) for the beginning and ending years of the	(i) Correlation analysis between planning formality and measures of performance (ii) ANOVA on grand	(i) The extent of formality in strategic planning was positively and significantly related to firm success as measured by economic indicators (ii) There was

	strategy in terms of four generic types namely stability, internal growth, external acquisition and retrenchment. The level of planning formality was measured using a Guttman scale developed for this purpose by Wood and LaForge (1979)	5-year period under study. In addition to the above measures, the CEOs were asked to provide a subjective numerical evaluation of the firm's performance on the above three dimensions plus the firm's overall performance.	strategy with dimensions of performance as the dependent variable (iii) ANOVA on grand strategy type with level of strategic planning formality as the dependent variable.	no significant difference between three of the four grand strategies namely stability, internal growth and external growth in terms of the performance measures. Firms following retrenchment strategy consistently displayed performance levels below that of the other three strategy types. (iii) The grand strategies were statistically not associated with levels of strategic planning formality (iv) There was no significant interaction between grand strategy and planning formality in terms of organisational performance. Planning formality was consistently linked to performance, whereas grand strategy was not.
Ramanujam & Venkatraman (1987)	(i) Fulfilment of planning objectives (ii) general trends in the use and perceived usefulness of planning (iii) key planning issues receiving emphasis and the degree of emphasis placed on different functions in planning (iv) use of planning techniques and (v) the organisational roles of the planning system	(i) Sales growth (ii) net income growth (iii) return on investment and (iv) market share changes.	Comparison of average scores	Six characteristics of good planning were identified.
Rhyne (1987)	(i) Adaptive aspect of planning (ii) integrative aspect of planning (iii) formality of planning process (iv) internal complexity (v) external complexity (vi) specific MIS for planning (vii) accounting system and (viii) supplemental sources of information	Total return to investors	Discriminant analysis	(i) The adaptive aspect of planning received greater emphasis from the high performance firms (ii) There was some evidence to suggest that firms with lower levels of financial performance would place greater emphasis on the integrative dimension of planning (iii) there was no relationship between the formality of the planning process and financial performance (iv) there was no relationship between financial performance and

				specific MIS for planning (v) both high and low performers identified the accounting system as an important source of information for planning decisions and (vi) supplemental sources of information were more important to high performers.
Ramanujam & Venkatraman (1988)	(i) Capability (ii) resources (iii) resistance (iv) internal (v) external (vi) functions and (vii) techniques	(i) Five-year sales growth (ii) five-year net income growth (iii) market share changes and (iv) current return on investment	t-test and ANOVA	(i) Excellent companies are not among the highest performing companies in America and the key characteristics of planning are not different from those of the two benchmark samples chosen from other American companies and (ii) Popular traits of excellence are not the exclusive preserve of the so-called excellent companies.
Odom & Boxx (1988)	The components of the internal environment were (i) church staff (ii) church membership (iii) church facilities (iv) church ministries and (v) church administration. The external components were (i) community (ii) competitive and association (denominational) and (iii) social, political and economic. In addition to the above, environment was scored using location codes furnished by the churches in their annual reports. Level of planning sophistication was determined using the following factors (i) preparation of written plans and budgets covering one year and long-range plan covering	(i) Growth rate of average Sunday school attendance (ii) Growth rate of offerings (iii) Growth rate of total additions and (iv) Growth rate of baptisms	(i) To investigate the relationship between perceptions of the environment and location of the churches the data were cross-tabulated and the chi-square statistic was calculated (ii) Kendall's rank correlation was used to investigate the relationship between size of the churches, perceptions of the environment and location (iii) A series of cross-tabulations and chi-square tests were conducted to determine the relationship between perceptions of the environment and planning sophistication (iv) The impact of environment on planning processes was analysed by cross-tabulating location and planning sophistication. (v)	(i) There was no consistent relationship between perceptions of the environment and location (ii) There was a significant relationship between the size variables and the location of the churches (iii) The relationship between perceptions of the environment and planning sophistication was statistically significant (iv) A significant relationship with planning sophistication was observed between the simple-complex dimension of the environment and not between the static-dynamic dimension (v) The relationship between location and planning sophistication was not significant (vi) The size of a church exerts a definite influence on its level of planning sophistication (vii) More widely varying levels of planning sophistication must be considered before differences in growth rates are evidenced.

	three years (ii) inclusion of specific goals in both the plans (iii) Inclusion of a plan of action for achieving the specified goals in both the plans		ANOVA and Scheffe's test were used to investigate the relationship between (i) sizes of the churches and planning sophistication and (ii) growth rate and level of planning sophistication	
Bracker, Keats & Pearson (1988)	(i) Sophistication of planning was measured by classification into structured strategic planners, structured operational planners and unstructured planners (ii) Size of the firm (large or small) was based on a discussion with an industry expert (iii) Planning histories (long or short) were a function of prior research by Bracker and Pearson (1986) and (iv) Entrepreneur orientation was determined using Smith's (1967) craftsman / opportunistic scale	(i) Growth in revenue (the average sales growth for the 5-year time frame) (ii) Net income growth (the average net income before taxes for the 5-year time frame) (iii) Present value growth of the firm (average book value of the firm, patents and goodwill for the 5 year time frame) and (iv) CEO cash compensation growth over the 5 year time frame (average growth)	(i) For analysing Hypothesis 1, a one-way multivariate analysis of variance followed by Scheffe's multiple comparison technique was undertaken (ii) Hypotheses 2, 3 and 4 were analysed using multivariate T-test (Hotelling's T) followed by univariate ANOVA. MANOVA was also used because there were four dependent variables.	(i) There was a significant relationship between planning orientation and financial performance (ii) Statistical analysis did not produce evidence that type of entrepreneur was a determinant of successful financial performance. However univariate comparisons revealed that opportunistic entrepreneurs (OE) who employed structured strategic planning procedures significantly outperformed OE's firms who used other planning orientations on each of the four dependent variables. Planning orientations of craftsman entrepreneurs failed to produce any significant performance differences (iii) Even though multivariate tests with regard to firm size failed to produce any significant findings, univariate tests revealed that statistically significant differences existed between large and small firms. Large firms financially outperformed small firms with regard to net income growth and CEO cash compensation growth (iv) There was no evidence which indicated that prior planning history resulted in significant performance differences. However univariate tests revealed that firms employing structured strategic plans outperformed the other two planning orientations

				with regard to growth in revenue, present value growth of the firm and CEO cash compensating growth. There was no significant financial performance difference in firms with short planning histories.
Cragg & King (1988)	Organisational characteristics and owner / manager characteristics.	Sales revenue change from 1984 to 1985 and from 1980 to 1985; profit as a percentage of sales revenue for 1985 and change in net profit before tax from 1984 to 1985.	Kendall rank correlation, percentage comparison, two-way ANOVA, factor analysis and stepwise multiple regression analysis.	(i) The study supported the importance of the age of owner / manager, with younger owners performing better than older owners (ii) There was no evidence to support the importance of planning activities (iii) The variable number of marketing / sales staff had a negative correlation with both sales change 1985/84 and profit change 1985/84.
Robinson Jr. & Pearce II (1988)	(i) Strategy measured using a scale comprising 27 competitive methods and (ii) Process describing the firm's strategic planning activities and measured using a Guttman scale of planning sophistication.	(i) Sales (ii) return on assets and (iii) return on sales for the beginning and ending years of the 5-year period under study. A subjective, numerical evaluation of the firm's performance on four performance dimensions in comparison to its overall industry, provided by the CEO was also used.	(i) Correlation analysis (ii) factor analysis (iii) cluster analysis was used to group the firms according to their strategic orientation and as a result five groups emerged and (iv) ANOVA	(i) Significant differences in performance across selected groups were found establishing a baseline strategy-performance relationship (ii) strategic orientations emphasizing product innovation or those incorporating efficiency and differentiation patterns of strategic behaviour were associated with significantly higher performance levels than two other groups and (iii) level of planning sophistication was found to significantly moderate the previously established strategy-performance baseline.
Shrader, Mulford & Blackburn (1989)	Measures for (i) Strategic planning: degree of formality (ii) operational planning: budget planning, inventory planning, human resource planning and market planning (iii) environmental uncertainty: top managers' uncertainty with respect to suppliers,	(i) Sales (ii) number of full-time employees and (iii) after tax profits	Percentage comparisons and correlation analysis	(i) Operational planning is more common and useful than strategic planning to small firms. However there were some indications to suggest that strategic planning could boost the performance of small firms (ii) Both operational and strategic planning seem to help firms to cope with uncertainty and improve performance.

	customers, competition, socio-political forces and technology.			
Jenster and Overstreet Jr. (1990)	(i) Environment, (ii) Organisational processes, (iii) structure, (iv) strategy and (v) administrative systems	(i) Market penetration (ii) Growth in membership (iii) Growth in deposits (iv) Growth in loans (v) Member satisfaction (vi) Employee satisfaction (vii) Employee compensation and benefits (viii) Service convenience (ix) Service offerings and (x) Capital adequacy (financial strength)	Cross-tabulations	The propensity to plan was related to management's perception of environmental predictability, key organisational processes, structural configurations and administrative procedures. Formal planning was related to multiple institutional performance measures.
Kukalis (1991)	(i) Planning extensiveness (ii) environmental complexity (iii) firm size (iv) market life-cycle (v) organisational structure (vi) capital intensity (vii) the role of corporate planning staff and (viii) planning horizon and plan revision	(i) Average return on equity for five years (from 1981 to 1985) and (ii) average growth in earnings per share for the same period	(i) Correlation analysis and (ii) multiple regression analysis	(i) Some relationships exist between design variables of strategic planning systems and a firm's internal and external characteristics (ii) planning extensiveness and other design variables seem to respond simultaneously to a set of contextual variables and these design responses were successful in enhancing firm performance (iii) in complex environments, plans are reviewed more frequently and strategic plans should have shorter time horizons (iv) there was an inverse relationship between level of environmental complexity and the role of the corporate planning staff in the planning process and (v) increasing environmental complexity seems to increase planning effectiveness
Powell (1992)	(i) Strategic planning scales to measure: goal setting, scanning and analysis (ii) locus of control as a measure	Profitability	Means and standard deviations for all variables for each industry were calculated and a correlation analysis	(i) Even though strategic planning was more widely practiced in the 'planning equilibrium' industry, the planning-performance correlation was significantly

	of CEO personality (iii) firm size defined as the natural logarithm of the number of full-time employees and (iv) firm age defined as the number of years since incorporation		was also carried out. Partial correlations controlling for firm size, age and CEO locus of control were used to test the hypotheses.	lower (ii) The planning-performance correlation was near zero in the furniture industry and (iii) The planning-performance correlation was positive and significant in the apparel industry
Lyles, Baird, Orris & Kuratko (1993)	(i) Planning formality (ii) strategy options and (iii) strategic decision processes / environmental scanning	(i) Return on equity (ii) return on assets and (iii) growth rate of sales	(i) t-test and (ii) correlation n analysis	(i) There are significant differences between formal planners and non-formal planners in their emphasis on dimensions of strategic decision-making as well as in the range of strategic choices made (ii) There is evidence to suggest that firms which adopt a more formal planning process will place greater emphasis on improving the quality of the strategic decision making process (iii) a wider range of strategies was viewed as important to formal planners' success (iv) even though there was no significant difference between formal and non-formal planners in terms of return on equity and return on assets, there was a significant difference between the two groups on growth rate of sales.
Orpen (1993)	(i) Cost and expenses in running a firm, (ii) availability of materials and supplies, (iii) capital requirements, (iv) economic conditions in the market place, (v) competition, (vi) sales, (vii) sources and cost of capital, (viii) target market and (ix) advertising opportunities and costs	(i) Amount of sales (ii) cash flow (iii) net profit and (iv) return on investment	Percentage comparisons, t-test, discriminant analysis, correlation analysis and regression analysis	(i) Small firms can improve their financial performance through strategic planning if it is based on their own strengths and weaknesses and an understanding of the opportunities and threats in the environment (ii) Small firms will suffer financially it they are ignorant of their own strengths and weaknesses and are unaware of likely future changes in their environment and (iii) Small firms should be shown how to engage in strategic planning.

McKiernan & Morris (1994)	(i) Setting of specific objectives (ii) calculation of targets and the conception of detailed strategies to achieve them and (iii) management control system	The following performance measures for five years were used (i) year-on-year sales growth calculated as (current year's sales / previous year's sales) x 100 (ii) profit margin = (profit before tax / sales) x 100 (iii) ROCE = (profit before tax / fixed assets + current assets – current liabilities) x 100 (iv) ROSE = (profit after tax / shareholders' funds) x 100 and (v) Employee productivity = sales / no. of employees	(i) Cross-tabulations (ii) Chi-square tests and (iii) Fisher's exact test	(i) The formality of planning systems was not associated with superior performance in the three sectors under review and (ii) there was no differential impact of planning system types on the financial measure of performance chosen.
Matthews & Scott (1995)	(i) Sophistication of strategic and operational planning (ii) perception of environmental uncertainty (iii) business type and (iv) firm size.	None	Correlation and regression analyses.	In small and entrepreneurial firms as perception of environmental uncertainty increases, strategic planning and operational planning decreases.
Olson & Bokor (1995)	Degree of planning formality (strategy process) and degree of innovation (strategy content).	Sales growth rate.	Regression analysis	(i) Performance of small, rapidly growing firms is influenced by the interaction of planning formality and product / service innovation and (ii) certain contextual factors such as CEO characteristics may impact the nature of such interaction.
Kargar (1996)	(i) Internal orientation (ii) external orientation (iii) functional coverage (iv) involvement of key personnel and (v) use of planning techniques	Planning system capability, goal attainment and financial performance. Financial performance was measured in terms of profitability which was calculated as net revenues minus direct operating costs and administrative overhead, before taxes over the most	Factor analysis, correlation analysis and canonical correlation analysis.	(i) Few financial benefits, but significant process benefits may be expected from employing a formal planning process (ii) External orientation, contributing about 29 % to the explained variance, was the most important contributor to planning effectiveness in small firms (iii) The remaining four planning system characteristics namely key personnel involvement, functional integration, internal orientation and

		recent three fiscal years.		use of analytical techniques (in the order of importance) contributed to planning effectiveness.
Goll & Rasheed (1997)	Rationality in Planning	(i) Return on Assets and (ii) Return on Sales	Moderated regression analysis	Environmental munificence and dynamism moderate the relationship between rationality and performance. There was a strong positive relationship between rationality and performance in environments high in munificence and dynamism.
Hopkins & Hopkins (1997)	(i) Managerial factors measured using variables namely beliefs about planning-performance relationships and strategic planning expertise (ii) environmental factors measured using variables namely perceived environmental complexity and environmental change (iii) organisational factors were measured using two variables namely structural complexity and bank size and (iv) strategic planning intensity was measured using twelve variables namely mission, objectives, internal and external analyses, strategic alternatives, strategy implementation and strategic control.	(i) Net income (ii) return on equity calculated as net income divided by shareholders' equity and (iii) deposit growth measured as the percent change in consumer demand deposits for each bank between 1993 and 1994.	LISREL analyses	(i) Intensity with which banks engage in the strategic planning process has a direct, positive effect on banks' financial performance and mediates the effects of managerial and organisational factors on banks' performance and (ii) there was a reciprocal relationship between strategic planning intensity and performance.
Rue & Ibrahim (1998)	(i) Whether there is a written strategic plan or not and if so whether it contains quantified objectives in any of the following areas: sales earnings, return	(i) The answers provided by the respondents for the question whether the performance of the company for the three year period between 1991 to	Chi-square test and ANOVA	(i) 60.1% of the companies in the sample prepared some type of a written plan, had plans which included quantified objectives for at least one area, and had developed plans and budgets for at

	on investment, capital growth, share of the market, sales / earning ratio, and international expansion (ii) whether their plan includes plans and budgets for the following: hiring and training of key management personnel, plant expansion, new product development succession plans, corporate acquisitions, equipment acquisition, research and development, advertising and plans for entering or expanding international markets (iii) whether the plan tries to identify factors concerning external environment and (iv) whether the plan contains procedures for anticipating or detecting differences between the plan and actual performance and for preventing or correcting these differences.	1993 was below industry average, approximately equal to industry average or better than industry average (ii) the approximate growth rate in sales over the past fiscal year and (iii) approximate return on investment for the past fiscal year.		least one area. (ii) greater planning sophistication was associated with growth in sales. (iii) there was a moderately significant relationship between planning and perceived performance relative to the industry and (iv) there was no significant relationship between planning and return on investment.
Glaister & Falshaw (1999)	(i) Company characteristics (ii) time periods of planning (iii) planning procedures (iv) commitment to strategic activities (v) emphasis on areas of strategic planning (vi) tools and techniques of strategic analysis and (vii) views on strategic planning processes	None	Percentage comparisons, rankings according to mean responses.	(i) Firms have a relatively short time horizon across most dimensions of planning (ii) firms appear to have a greater commitment to formulation aspects of strategy and relatively less commitment to the implementation and evaluation of strategy (iii) the most regularly used set of tools and techniques of strategic analysis is surprising in the context of the prescriptive view of strategic management and may be associated with the ease with which the analysis may be undertaken and (iv) the

				perception among the sample of firms is that strategy formulation is more of a deliberate process than an emergent process.
Rogers, Miller & Judge (1999)	(i) Strategy operationalised as a binary categorical variable (Defender = 0, Prospector = 1) (ii) planning process dimensions (accounting control, integration and coordination, flexibility, goals and plans, scanning and broad analysis)	Averages of return on assets, return on equity and loan growth for the time span of 1991 through 1993.	Correlation analysis, regression analysis and factor analysis.	(i) Planning and performance may not be clearly understood without considering firms strategy (ii) strategy is an important moderator of the planning and performance relationship and (iii) banks pursuing different strategies use significantly different planning processes.
Andersen (2000)	(i) Strategic planning construct was measured using tested item scales for mission statements, long-term goals, strategic action plans and ongoing control (ii) The autonomous actions construct was measured using decision authority scales of conventional centralisation measures adapted to consider decisions affecting the firm's strategic development such as new market activities, product and service developments, changes in practices and policies and the like	Organisational performance was expressed as economic performance and organisational innovation. Economic performance was measured as the sum of two economic indicators namely return on assets and sales growth and this measure indicated both efficiency and market position effects. Organisational innovation indicates the extent to which the organisation is a first user of new useful ideas, devices, systems, policies, programmes, processes, products and services.	The validity of the model constructs was assessed was assessed by exposing the item responses from the questionnaire to factor analysis. Multiple regression analyses were used to determine the relationships between the strategy constructs (strategic planning and autonomous actions) and organisational performance measures (economic performance and organisational innovation). In the first regression analysis, economic performance was used as the dependent variable and in the second, organisational innovation was used as the dependent variable. Both the regressions had strategic planning, autonomous actions and the interaction terms between strategic planning, industry dummies and autonomous actions as independent variables. The	(i) There is evidence that strategic planning is associated with higher performance in all the industrial environments studied and this association does not vary significantly between the different industry groups. (ii) Autonomous actions do not show significant effects in the food and household products and banking industries, but have positive performance effects in the dynamic and complex computer products industry. (iii) Autonomous actions exert little or no influence on the performance effects of strategic planning activities. Hence the two approaches coexist but do not significantly enhance each other

			regressions were tested for multi-collinearity, outliers, heteroscedasticity and normality.	
Baker & Leidecker (2001)	Mission statement, trend analysis, competitor analysis, long-term goals, annual goals, short-term action plans and ongoing evaluation	Average annual pre-tax return on assets (ROA) over the last 3 years for the respondent's business unit	Questions regarding the use of specific strategic management tools were similar to the ones in Boyd and Reuning-Elliott study involving hospital executives (i) Ranking of the degree of emphasis placed on the seven planning tools between the groups in both the studies was compared by calculating Spearman's correlation coefficient. (ii) the relationship between the use of strategic planning tools and firm performance was analysed by classifying firms as high and low performers according to their ROA and using t-statistic to compare their planning scores (iii) the relationship between the use of each of the individual strategic planning tools and their relationship to firm performance was analysed by calculating the mean degree of emphasis placed on each planning tool for high and low performers and by calculating the t statistic (iv) the relationship between firm's strategic planning processes and firm performance was analysed by calculating the mean scores for each of the six descriptors for both high and low performing firms and	The most heavily emphasised strategic planning tool were annual goals and long-term goals (ii) There was a strong relationship between the use of strategic planning tools and firms' ROA (iii) Three strategic planning tools namely mission statement, long-term goals and ongoing evaluation exhibited strong correlation with superior financial performance (iv) There was no significant difference in how high and low performing firms describe their strategic planning processes with respect to any of the six descriptors.

			comparing the t-statistic.	
Gibson & Cassar (2002)	(i) Planning incidence (ii) Business structure variables: business size measured in terms of number of employees, business volume measured in terms of total sales and business age. (iii) Management structure variables: management training, intention to change operations, major decision makers' years of experience as a business proprietor and major decision-makers' education level.	None	Percentage comparisons, descriptive statistics, Logistic Regression and Chi-Square test.	There is a positive impact on the incidence of business planning by the variables namely business size and business volume. Industry influences also exist. There is a statistically weaker negative association between business age and planning. Undertaking management training, intention to change operations and the major decision maker's education and experience were positively associated with planning.
Baker (2003)	(i) Mission statement, (ii) trend analysis, (iii) competitor analysis, (iv) long-term goals, (v) annual goals, (vi) short-term action plans and (vii) ongoing evaluation	Financial performance was measured as the average pre-tax return on assets (ROA) for the previous 3-year period for the business unit to which the survey was addressed	Confirmatory factor analysis was used to assess whether the measurement model is consistent with the data collected in the study. Multiple regression analysis was used to test the hypothesis that firm financial performance was related to the use of formal strategic planning tools.	(i) Strategic planning construct which is not directly observable, can be adequately measured by seven indicator variables namely mission statement, trend analysis, competitor analysis, long-term goals, short-term action plans and ongoing evaluation (ii) Formal strategic planning is a tool that may be used to enhance financial performance for a broad range of food processors
Tegarden, Sarason & Banbury (2003)	(i)Strategy processes: Command, Symbolic, Rational, Transactive and Generative (ii) environmental dynamism and (iii) firm size	(i) Financial performance was measured using profitability and sales growth (ii) operational performance measured in terms of product development, diversification and anticipated new products and (iii) organisational performance operationalised as organisational quality and organisational adaptability	(i) Correlation analysis and (ii) regression analysis	(i) Symbolic and rational processes are more strongly related to operational performance. Transactive and generative processes were positively related to organisational performance. None of the processes had a positive relationship with financial performance (ii) environmental dynamism moderates the relationship between process and performance (iii) there was partial but minimal support that environmental dynamism negatively moderates the relationships with processes that involve

				organisation members and performance and (iv) none of the processes had a significant positive relationship with financial performance.
French, Kelly & Harrison (2004)	Vision, mission, latent abilities, competitor orientation and market orientation	(i) Growth data for four years for sales and net profit after tax (ii) Forecasts for five years. Variables used: mean actual sales growth, mean actual net profit growth, mean forecast sales growth and mean forecast net profit growth.	Standard multiple regression to analyse relationships between strategic planning factors and each performance variable. Based on the responses, respondents were classified into one of the four strategic planning categories namely non-planners, informal planners, formal planners and sophisticated planners. ANOVA was used to determine if the four strategic planning groups differed in terms of performance.	There is a link between planning and performance, but it is not strong. The value of elements of the classical strategic planning process namely vision and mission and associated constructs namely latent abilities, competitor orientation and market orientation which have been suggested to underpin the strategic planning process, is in question. The authors conclude that it is the process of planning and not the plan itself that is important.
Shrader, Chacko, Herrmann & Mulford (2004)	**Formal planning**: (i) quantified objectives for earnings, return on investment, capital growth, share of the market, sales / earnings ratio (ii) pro forma financial statements including balance sheets, cash flow analysis and income statements (iii) plans and budgets for human resources, hiring and personnel development, plant expansion, equipment acquisition, R&D, advertising, technology acquisition and utilisation (iv) identification of external factors including political developments, social issues, technological breakthroughs,	Comparison of the firm's performance to their competitors for the past year in terms of sales growth, net income growth, return on investment and market share growth.	Correlation matrix, ANOVA, ANCOVA and Regression analysis	(i) Formal and informal strategic planning, along with technology policy are associated with firm financial performance (ii) Informal planning is as important as formal planning in explaining the performance of firms (iii) Aligning operational activities through operational planning and technology policy enhances the financial performance of firms. Firms with greater deployment of multiple technologies to achieve objectives perform better than those firms with less developed technology policies. (iv) Firms engaging in a variety of short-range forecasting techniques tend to perform well.

	labour / personnel issues, economic trends and international competition (v) procedures for detecting differences between planned and actual performance and having in place mechanisms for correcting or preventing differences. **Informal planning**: Non-written planning **Operational planning**: A 21 – item instrument dealing with the extent to which firms engaged in certain activities on a regular basis was used to measure operational planning. **Technology policy**: A 15-item scale centring on the extent to which firms internally implemented various aspects of technology policy **Environmental uncertainty**: This scale included 12 items			
Hoque (2004)	(i) Business strategy (ii) environmental uncertainty (iii) management's choice and use of non-financial performance measures	Organisational performance over the previous 3 years was measured using a scale comprising 12 dimensions.	Correlation analysis and path analysis	(i) There was no direct relationship between business unit strategy and organisational performance (ii) There was a significant positive association between strategy and management's use of non-financial measures for performance evaluation and (iii) There was no positive relationship between environmental uncertainty and organisational performance through use of non-financial performance measures.

O'Regan & Ghobadian (2004)	(i) External environment orientation (ii) internal environment orientation (iii) functional integration (iv) the use of analytical techniques (v) resources for the strategic planning process (vi) systems capability and creativity (vii) control processes (viii) internal orientation and (ix) resources for strategy	(i) Customer orientation (ii) organisational effectiveness (iii) learning and growth (iv) organisational capability and (v) financial performance	(i) Factor analysis and (ii) canonical correlation analysis	The characteristics of strategic planning namely internal orientation, external orientation, departmental operation, resources for strategy, systems capability and creativity and control processes were associated with performance dimensions namely learning / growth, meeting customer demands and providing quality goods on time.

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STRATEGIC PLANNING AND PERFORMANCE - A SYSTEMATIC REVIEW OF THE LITERATURE

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Abstract:

A large number of empirical studies have been conducted examining the impact of strategic planning on organisational performance. Many studies have suggested that this relationship is influenced by various factors like the type of industry, environment, CEO characteristics and organisational systems. However researchers have not been able to provide conclusive evidence about the effectiveness of strategic planning to enhance performance. In order to examine the current state of the literature and to summarise the findings from various empirical studies, a comprehensive literature review has been conducted by reviewing sixty eight papers published in leading academic journals. The framework followed by Podsakoff and Dalton (1987) was adapted to conduct the literature review.

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