
Is business performance of further education colleges improved by entrepreneurial leadership and the adoption of a positive market orientation? An empirical study of English FE colleges.

by Mark Barry Johnston Flynn, MBA, FCA, BA

**Thesis submitted to the University of Nottingham
For the degree of Doctor of Business Administration, June 2002**



Dedication

To my wife for her untiring patience and support

Acknowledgements

Studying for a doctoral part-time brings both advantages and problems. Part-time study can be lonely and frustrating, as well as being a competing demand on that very precious commodity, time. Part-time study does however allow time for reflection, creating a less intense experience that can result in a sense of balance. To make this experience work, numerous people have helped and provided guidance during the last four years.

I would like to thank my co-supervisors, Dr Inger Boyett for her unfaltering support from the very first day we met and to Professor Martin Binks for his pragmatic sense of balance throughout the last few years. Without them, this thesis would not have 'taken off' so decisively.

I would also like to thank Professor Andrew Brown for his culture and qualitative insights, Professor Don Siegel for his quantitative and DEA perspectives, Dr Heidi Winklhofer for her guidance on LISREL, Dr Mark Dale for his interview techniques and NVivo guidance and Catherine Thompson for her support with the survey work.

My thanks also go to my wife for her support and encouragement, to Richard Wallace-Reid for his diligent and thorough proof reading, Steph Fallows for database design and Brenda Whitehead for copy corrections in the final stages. My last vote of thanks goes to the 250 responding college principals, the three case study principals and the numerous other FE sector staff who have provided the grounding, insights and support to make this study possible.

Abstract

The political role of English further education colleges has been ambiguous for some 20 years, being a nationally funded service administered by local government. In 1993 this role ambiguity was challenged with the incorporation of colleges, accompanied by a shift in the locus of power to national government. Significant cultural change was driven through by an expansionary yet punitive funding regime based on the principles of the free market. In common with other parts of the public sector, this change in orientation has had mixed results. This thesis explores the issues that face the leaders of the modern FE college, approaching the subject from the perspectives of entrepreneurial leadership and market orientation.

The sector was dominated by financial instability during the first five years, with the next three being characterised by improving financial health for some colleges and the failure of others. The sector has lost 25 colleges since incorporation through mergers and takeovers. The removal of barriers to competition and the development of rising standards underpinned by audit and inspection have required colleges to adapt to a hostile and turbulent operating environment. A new management paradigm and approach to client orientation has been required to compete and survive in the post incorporation era. The roles of entrepreneurial leadership and market orientation and their impact on business performance have not been widely studied in the UK public sector and the further education sector in particular.

The thesis is based on an empirical study of a sample of 250 colleges, representing 60% of English FE colleges. Using quantitative analysis tools, the direction and strength of causal relationships are explored. The financial performance measurement problems typical of public sector are explored using data envelopment analysis and linear structural equations. The thesis concludes with a review of the managerial implications of the study by way of three qualitative case studies and elite interviewing, reconciling theory with the results of the study. The thesis ends with a summary of issues for future research direction.

Opening thought

“The planners tried various expedients. They issued instructions that user demand should be met. They modified the bonus systems so that the achievement of purely quantitative targets should not be sufficient, that the assortment plan had also to be fulfilled, that costs had to be reduced, the wages plan not exceeded and so on. They experimented with a kind of value-added indicator known as ‘normed value of processing’. Each of these ‘success indicators’ had its own defect, induced its own distortions. Thus, insistence on cost reduction often stood in the way of the making of a better-quality product. A book could be easily filled with a list of various expedients designed to encourage enterprises to act in the manner the planners wished, and the troubles which each of them gave rise.”

Alec Nove (1992), *An Economic History of the USSR*

Contents

DEDICATION	
ACKNOWLEDGEMENTS.....	i..
ABSTRACT	ii..
OPENING THOUGHT	iii
CONTENTS	iv..
LIST OF VIGNETTES	ix
1 INTRODUCTION AND FOCUS OF THE THESIS.....1	
1.1 Introduction.....	1
1.1.1 The role of the education service in a global economy	1
1.1.2 The invisible sector of UK further education	2
1.1.3 Themes of interest	5
1.2 Relevancy of the study	6
1.3 The research question	9
1.3.1 Observations and common factors	10
1.3.2 Propositions and the research question	11
1.3.3 Developing and clarifying the research question	12
1.4 Model development, research and testing approach	13
2 ENTREPRENEURIAL LEADERSHIP IN FURTHER EDUCATION15	
2.1 Introduction.....	15
2.2 The Entrepreneur, comparative literature review.....	17
2.2.1 The identification of the entrepreneur in the literature	17
2.2.2 The development of trait theory for identifying entrepreneurs	19
2.2.3 The introduction of ethical man into entrepreneurship literature	22
2.2.4 Entrepreneurial activity and its application to the firm	25
2.2.5 Entrepreneurship and teams.....	28
2.2.6 The entrepreneur and managers in the firm	31
2.2.7 Key traits of entrepreneurship from the literature	36
2.2.8 Trait theory and the firm brought up to date	40
2.2.9 Conclusions of the literature review of the entrepreneur	43
2.3 The entrepreneur and the education civil servant	44
2.3.1 The civil servant and educational management to 1992	45
2.3.2 The application of the entrepreneurial construct to the public sector	48
2.3.3 Entrepreneurial barriers for the public sector manager	50
2.3.4 The application of entrepreneurship to further education	56
2.3.5 New managerialism in the public sector	58
2.4 Entrepreneurialism, innovation and market orientation	61
2.4.1 Innovation and its relationship with entrepreneurship	61
2.5 Implications and conclusions for further education college managers	63

3	MARKET ORIENTATION	66
3.1	Introduction.....	66
3.1.1	Managers and the adoption of the marketing concept	66
3.2	Market orientation, comparative literature review	68
3.2.1	The marketing concept and the development of market orientation.....	68
3.2.2	The market orientation construct: Kohli and Jaworski	71
3.2.3	The market orientation construct: Narver and Slater	76
3.2.4	Managerial implications of a market orientation	81
3.2.5	Applying the market orientation construct to the public sector firm	83
3.2.6	Defining a link between output and market orientation: a critique	85
3.3	Modelling market orientation in further education	86
3.3.1	Conflicting paradigms: managerialism and professionalism	86
3.3.2	Customer orientation.....	88
3.3.3	Employee orientation	89
3.3.4	Organisational co-ordination	90
3.4	The competitive environment and market orientation	92
3.5	Implications and conclusions for further education college managers	94
4	ENTREPRENEURSHIP AND MARKET ORIENTATION	97
4.1	Introduction.....	97
4.2	Conceptual framework of market orientation and entrepreneurship interactions	98
4.3	Market orientation and entrepreneurial leadership.....	100
4.4	Culture and climate: Its role in the firm.....	103
4.4.1	Schein's life cycle model	104
4.4.2	Culture and market orientation.....	106
4.4.3	Culture and entrepreneurship	107
4.4.4	Climate and facilitative leadership	108
4.4.5	Climate and organic structure	111
4.4.6	Climate and decentralised strategic planning	112
4.5	Market orientation and top team leadership.....	113
4.6	Conclusions for further education.....	117
5	RESEARCH PROPOSITIONS.....	119
5.1	Introduction.....	119
5.2	Output (dependent variable) constructs	119
5.3	Antecedent (independent variable) constructs	122
5.4	Key hypotheses	124
5.4.1	Hypotheses relating to business performance.....	124
5.4.2	Hypotheses relating to market orientation	124
5.4.3	Hypotheses relating to leadership issues	126
5.5	Antecedents to entrepreneurial leadership	126
5.5.1	Entrepreneurial leadership	127
5.5.2	Environmental awareness.....	129
5.5.3	Clarity of goals	130
5.6	Antecedents to market orientation	131
5.6.1	Intelligence generation	131
5.6.2	Intelligence dissemination	132
5.6.3	Responsiveness.....	133
5.6.4	Inclusive approach	135
5.7	Antecedents to external environmental moderator	135
5.7.1	Personal risk taking.....	136

5.7.2	Ability to implement state policy	139
5.8	Dependent outcomes from the model's antecedents	141
5.8.1	Generate adequate trading volumes	142
5.8.2	Innovation and adapting to changes in customer demand	143
5.8.3	Long term financial stability.....	144
5.8.4	Quality service levels that meet stakeholder requirements	145
5.9	Conclusions and limitations of scope of application	145
6	RESEARCH DESIGN AND METHODOLOGY.....	147
6.1	Introduction.....	147
6.2	The research methodology.....	147
6.2.1	National data sets available from the FEFC	147
6.2.2	Other national data sets available in the FE sector	150
6.2.3	Data set mapping and missing data	151
6.3	Proposed methodology to collect the missing data set.....	153
6.3.1	The Principals' perceptions and opinions data set construction	154
6.3.2	Question construction for the Principals' questionnaire	155
6.3.3	Limitations of scope in the collection methodology	162
6.4	The identification of the population to be sampled	167
7	DATA ANALYSIS.....	170
7.1	Introduction.....	170
7.2	Scale building, validation and initial analysis	170
7.2.1	Data coding and credibility checks	170
7.2.2	Scale building and reliability analysis	172
7.3	Validity assessments	181
7.3.1	Content validity	181
7.3.2	Construct validity	182
7.3.3	Criterion validity	187
7.3.4	Conclusions on validity testing and key hypothesis of the thesis	191
7.4	Differential performance within the FE sector.....	193
7.4.1	Differential market orientation	193
7.4.2	Differential entrepreneurial orientation	200
7.5	Exploring college business performance issues.....	205
7.5.1	Multiple regression analysis and its inappropriateness	206
7.5.2	Output variables and Data Envelopment Analysis.....	208
7.5.3	Causal relationship models and LISREL	214
7.5.4	LISREL model evaluation	218
7.6	Conclusions on data analysis	221
8	INTERPRETATION OF THE RESULTS: MOVING BEYOND QUANTITATIVE ANALYSIS.....	222
8.1	Introduction.....	222
8.2	Key findings from the quantitative research	222
8.2.1	The FE sector wide findings.....	224
8.2.2	General FE college findings	227
8.2.3	Sixth form college findings	229
8.2.4	Specialist college findings	230
8.2.5	Quantitative survey limitations	231
8.3	Moving from sector to college level analysis	232
8.3.1	Qualitative methodology	233

8.3.2 Sampling approach 236

8.3.3 Interview processes, validity and reliability 240

8.4 Results of case studies 245

8.4.1 Operational context 245

8.4.2 Cultural issues 246

8.4.3 Entrepreneurship and innovation 251

8.4.4 Market orientation 256

8.4.5 Business performance 258

8.4.6 The case studies reconciled with Schein's model of cultural change 259

8.5 Limitations and conclusions 262

9 SUMMARY AND CONCLUSIONS 263

9.1 Introduction 263

9.2 Conclusions and observations 263

9.2.1 Policy issues and conclusions at the sector (industry) level 263

9.2.2 Institutional organisational issues and conclusions 267

9.2.3 Principal level issues and conclusions 269

9.2.4 The thesis' contribution to knowledge 271

9.3 Research process and methodology: Reflections and critique 274

9.3.1 Research methodology issues 274

9.3.2 Research study process issues 276

9.4 Future research opportunities 279

9.5 Concluding remarks and final observations 280

FINAL THOUGHT 282

APPENDIX 1: QUANITATIVE QUESTIONNAIRE AND COVERING LETTERS 283

APPENDIX 2: QUALITATITIVE QUESTIONNAIRE FRAMEWORK..... 293

REFERENCES 295

GLOSSARY 309

List of Tables

2.1: Kao's 'balance sheet' of entrepreneurial career decision making	32
2.2: Entrepreneurial management style	34
2.3: Organisational structure and management style and their impact on the firm	35
2.4: Casson's analysis of entrepreneurial traits	40
2.5: Department of Education ideologies, beliefs and values in Further Education	46
3.1: Conflicting paradigms in Further Education	87
4.1: Fragmentation issues of senior management teams its relevance to FE	110
4.2: Planning behaviour in operating environments	115
5.1: The differences in attitude and relations with others - Management vs. Leadership	129
5.2: Applying Maslow's need hierarchy	137
5.3: Alderfer's and Maslow's motivation theories compared	138
5.4: State owned UK further education college numbers as at April 2000	146
6.1: FEFC statistical data sets by component	148
6.2: Relevant FEFC inspection data sets by component	149
6.3: Data set to sub-hypotheses mapping exercise	152
6.4: Numbers of English FE colleges as at August 2000	168
7.1: Frequency analysis of sample and population	173
7.2: Reliability analysis for the model's antecedents by time based split sample	174
7.3a: Reliability analysis for entrepreneurial leadership antecedents	175
7.3b: Reliability analysis for risk antecedents	176
7.4: Reliability analysis for market orientation antecedents	177
7.5: Final items used to construct scales and the variables' names	179
7.6: Final antecedent scores: Means, Minimum and Maximum values	181
7.7a: Correlation analysis for convergent validity: General FE colleges - type 1	182
7.7b: Correlation analysis for convergent validity: Sixth form colleges - type 2	182
7.7c: Correlation analysis for convergent validity: Specialist colleges - type 3	182
7.8: Reliability testing of combined scale for convergent validity	183
7.9a: Correlation analysis for discriminant validity - type 1 colleges	186
7.9b: Correlation analysis for discriminant validity - type 2 colleges	186
7.9c: Correlation analysis for discriminant validity - type 3 colleges	186
7.10: Output performance measures	188
7.11a: Correlation analysis for discriminant validity - type 1 colleges	186

7.11b: Correlation analysis for discriminant validity - type 2 colleges	189
7.11c: Correlation analysis for discriminant validity - type 3 colleges	189
7.12: Correlation analysis for discriminant validity by composite scales	190
7.13: Market orientation and relative college size	194
7.14: Market orientation and cost structure differentials	196
7.15: ANOVA tests: Differential market orientation levels due to specialism	197
7.16: Post hoc tests: Differential levels due to specialism	197
7.17: Market orientation, entrepreneurial leadership and competition concentration	198
7.18: ANOVA tests: Market orientation and deprivation factor of clients	199
7.19: ANOVA tests: Entrepreneurial leadership and top team turnover	200
7.20: Longevity of the Principal, entrepreneurial leadership and risk view.	201
7.21: Principal's professional background in post and entrepreneurial leadership	202
7.22: Principal's gender and entrepreneurial leadership	203
7.23: ANOVA tests: Entrepreneurial leadership and Principals' age	203
7.24: Principal's highest education and entrepreneurial leadership	202
7.25: Business education and entrepreneurial leadership	204
7.26: Summarised results from the hypothesis testing	205
7.27: FE College performance - inputs and outputs for DEA	210
7.28: DEA and turnover descriptive statistics by sub-group of colleges	211
7.29: Structural relationships in final LISREL model (post deletion of the DEA variable)	220
8.1: Conceptual differences between marketing and culture theorists	232
8.2: Group analysis of sample by category	237
8.3: Summary of colleges selected for elite interviewing	238
8.4: Balancing matrix of interview data	241

List of Vignettes

8.1: Culture: A level course delivery in college C	247
8.2: Entrepreneurship and risk taking: Sports academies in college A	252
8.3: Market orientation: Developing new orientation behaviours in college B	258

List of Figures

1.1: Summarised history of FE college management and control	3
1.2: Political policy relationship model in English FE	4
2.1: Entrepreneurs and managers in the context of institutional rules	56
3.1: Antecedents and consequences of a market orientation: Kohli and Jaworski	73
3.2: Market orientation after Narver and Slater	79
3.3: The conceptual framework of FE marketing orientation: Siu & Wilson	88
4.1: Conceptual framework of market orientation and entrepreneurship interactions	99
4.2: Business performance and the interaction of the constructs	99
4.3: A model of perceived provider and customer/consumer relationships in further education	103
4.4: Cultural change mechanisms	105
4.5: The learning organisation	106
5.1: Theoretical model of the antecedents of business performance in a further education college	123
7.1: Relative distribution of market orientation for small and large colleges	194
7.2: Relative College Sizes in 1998/99 of the 250 responding colleges	195
7.3: Relative distribution of market orientation for urban and non-urban colleges	199
7.4: Scatter diagram of market orientation, entrepreneurship and historical surplus	207
7.5: DEA scores and best-fit curve for English FE/Sixth Form/Specialist Colleges	211
7.6: Efficiency frontier for general FE colleges in sample	212
7.7: Proposed initial path diagram model of causal relationships in FE colleges	217
7.8: LISREL equations of final model	219
8.1: Scatter plot of DEA score and average curriculum grade from the last inspection	223
8.2: Principal's tenure and entrepreneurial leadership	225
8.3: Gender of Principals by appointment era	226
8.4: Relative average cash generation by size of colleges in 1996/97 to 1997/98	228

1 Introduction and focus of the thesis

1.1 Introduction

1.1.1 The role of the education service in a global economy

The Further Education sector is a crucial component of government policy to combat social exclusion, unemployment and skill shortages. Modern firms require an adaptable, flexible and skilled workforce to compete and FE colleges are significant providers in the delivery of such a work force. The provision of further education has been a public service in the UK for over a century. The current service bears little resemblance to its roots, consuming some £4 billion per year, employing 250,000 people and educating 3.8 million students in 1998/99, NAO (2001).

The origins of the modern public education sector were in the 1870 Education Act, which allowed local government to raise taxes via the local property rates to fund education in England. This policy initiative was the culmination of nearly seventy years of partial intervention by the state in an area what was perceived as a non-state area of responsibility. The 1870 Act was a Victorian response to a range of strategic factors caused by industrialisation, pre-eminent of which were the structural changes in the economic society as a result of the industrial revolution. The new industrialised society that underpinned the age of empire required an appropriately educated workforce to produce manufactured goods. It also resulted in a philosophical change of the central state from a minimalist and non-interventionist approach, where the freedom of the individual was paramount, to the recognition that the central state must intervene in some form and become more directive of its citizens to ensure that the nation was competitive on an international level. This intervention by the state was characterised by a philosophy of good administration and stewardship of public funds. The emphasis was still on local government, a tradition dating back to 1066, reinforced by the creation of local authorities by the Municipal Corporation Act 1834 and County Councils Act 1888 which created the modern system of local government that is prevalent today.

A hundred years later, society is evolving from the industrialised age of the 1900s to the knowledge age based on information technology, creative endeavour and rapid change. This new society is based increasingly upon open access to knowledge, the rapid removal of barriers to trade and the trend towards globalisation of commerce and knowledge. Individual nation states are finding it progressively

harder to control their own economies on an individual basis, due to the globalisation of money and trade. Even the United States and China can no longer rely purely upon their vast internal markets to shield them from the changes in the global society. To compete, OECD nations have sought over the last twenty years to restructure their education systems to deliver appropriate training and education systems for their post-16 populations, so as to ensure that they can compete in the evolving global knowledge based economy. This reorientation has seen a shift in the modus operandi of the provision of public services generally, and education in particular, from a tradition of service administration to one of good service management based on the practices of the private sector. The introduction of free market forces to the public sector in the 1980s has been a global policy action following the failure of the Keynesian economic model. The use of market forces will be an increasing feature of the organisation of public services for the foreseeable future, irrespective of the political hue of the ruling government in individual nation states. The last decade has seen two reoccurring themes in public sector reform, namely decentralisation and self-management (Pollitt et al, 1997). This has been accompanied by a rise in the centralisation of power by central government at the expense of local government.

1.1.2 The invisible sector of UK further education

There has been considerable academic interest in the impact of the introduction of the rigours of market forces upon the state education service. Much of this interest has focused on the pre-16 sector (namely the primary and secondary schools) and the higher education sectors, with comparatively less research on the UK's further education (FE) sector. The FE sector covers the post-16, sub-degree market and has long been regarded as the Cinderella sector of the state education service. This sector has traditionally had a very low public profile amongst the public and policy makers, Baker (1989). Due to its historically low political visibility, the attention placed on the organisation and management of the sector has at times been weak and the actions of the sector have at times been inconsistent with the policy aims of the central state.

The profile of the sector has been raised since 1992 with the incorporation of colleges by the then Conservative government, colleges were effectively controlled from the centre, replacing their 100 year

tradition of localised management by local government. The history and management paradigms are summarised in figure 1.1 as follows:

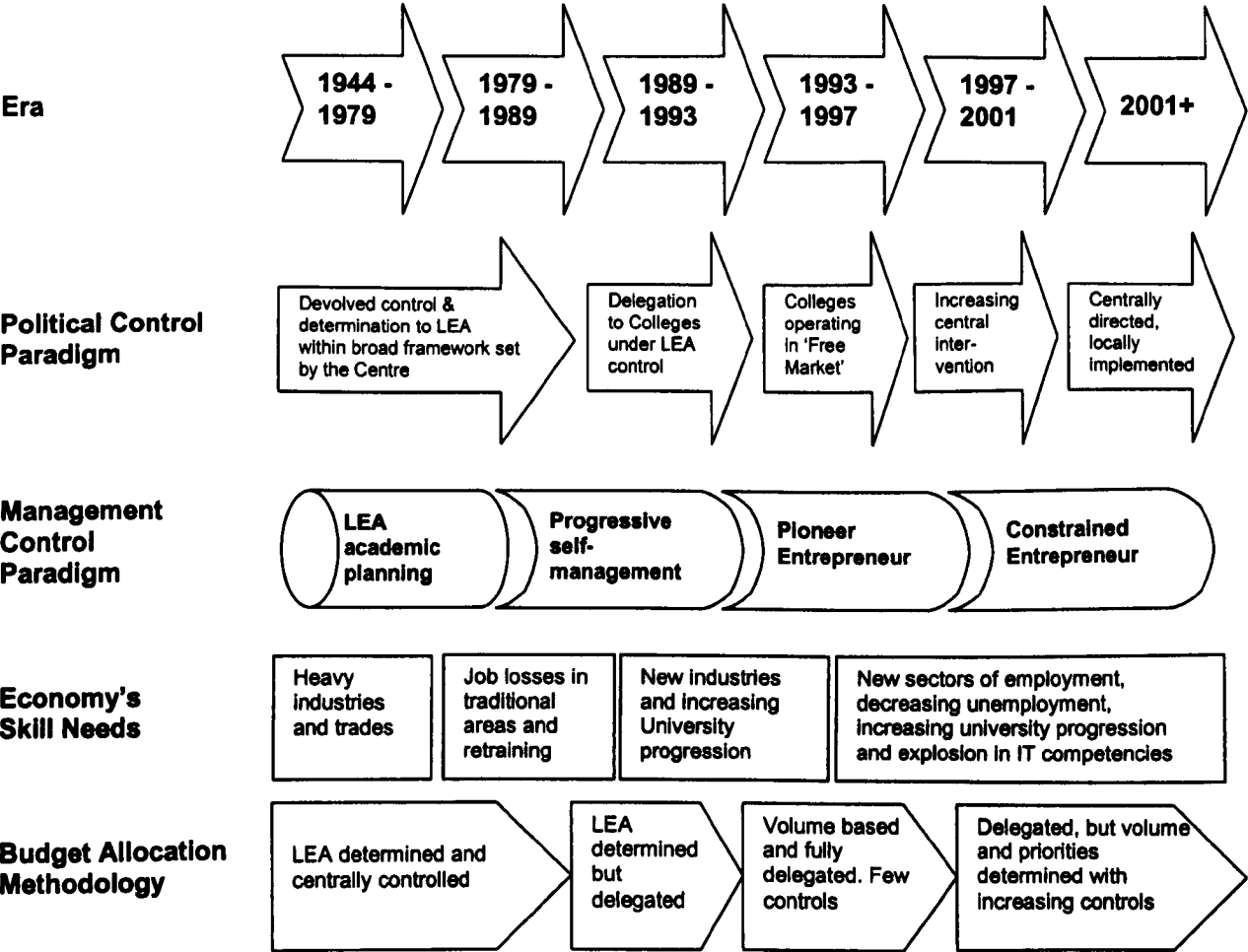


Figure 1.1: Summarised history of FE college management and control

By the end of the 1990s, a series of high profile college failures raised the issue of institutional effectiveness to meet the policy aims of the central state in a cost-effective and accountable manner. These failures involved gross mismanagement, poor use of resources, sub-standard quality and failure to meet the skill development needs of the community, FEFC report on Bilston College (1999) and NAO report on Halton College (1999). The National Audit Office (NAO) concluded that the failure in financial controls at Halton College was not general across the sector per se, but they did perceive that the failures were replicated elsewhere on a small, but financially significant scale. This failure in control was both in the management and in the governance of the college.

Over the last twenty years, a series of White Papers (policy proposals by the UK Government) have been published that identifies the reoccurring theme of poor performance of the UK's workforce in

terms of skill attainment vis-à-vis other OECD nations. The corollary of these policy papers has been the repeated conclusion that the organisational structures of the FE sector are unable to meet the economy's skill demands that are required to successfully compete in a dynamic, globally competitive, knowledge-based society (DfEE 1999, p1-2). The White Paper of 1999, *Learning to Succeed*, definitively identifies that the current arrangements for post-16 education are insufficient to provide the necessary actions to deliver the policy of improving skill levels and therefore business competitiveness. The conclusion was that the creation of a unified system of post-16 learning will be required for sub-degree education and training. The central state, via a new unified quango, the Learning Skills Council, now directly controls the entire post-16 learning system below university level, with another quango, the Higher Education Funding Council for England (HEFCE) to oversee universities. The inductive approach to theory development would propose the relationship model of Figure 1.2 between the political goals of the state and the policy implications on FE colleges:

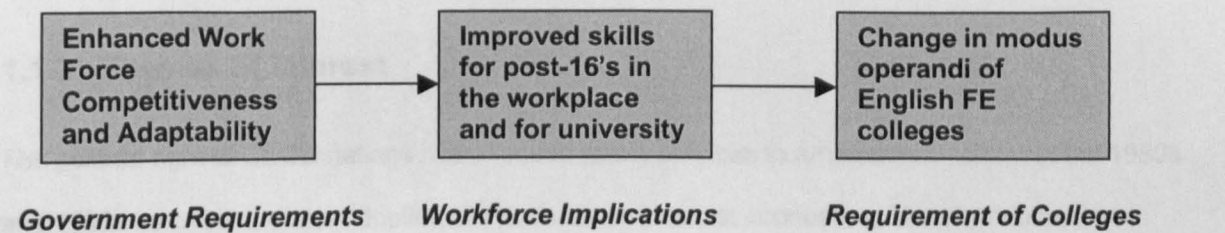


Figure 1.2: Political policy relationship model in English FE

The FE sector has traditionally provided the majority of the technical education and vocational skill preparation work in the UK. It has been suggested that the academic value system has accorded this type of education little attention and low priority McGinty & Fish (1993). In the 1980s, the sector systematically expanded to embrace 16-18 year old full time academic delivery with a progression route to university or higher skilled jobs. This work is often undertaken in specialist sixth form colleges as well as in general FE colleges. This new field of academic work has further confused the role identity of the FE sector in many observers' minds. The sector during the 1990s was essentially composed of three broad groupings of colleges, namely:

- sixth form colleges, specialising in a specific client group, A levels with university progression.
- specialist colleges, focusing onto a vocational subject specialisation such as art & design, agriculture or special needs.

- general/tertiary FE colleges who provide a mix of sixth form, subject specialism and general disciplines.

This third group is the largest, representing over two-thirds of all institutions and over three-quarters of the total FE spending in 1999.

The 420 colleges (as at 1 August 2001) spend some £4 billion drawn from a variety of sources, the majority (85%) from UK and EU taxpayers. The sector shares a common management and governance framework, as prescribed by the Further Education Funding Council (FEFC) on behalf of the Department for Education and Employment (DfEE). However, the three groups of colleges display different levels of student achievement and hold different perceptions in the minds of the public, consumers and government. This differentiation in what is *prima facie* a generic sector, is explored as part of the thesis' hypothesis development.

1.1.3 Themes of interest

The political right of OECD nations has exposed public services to fundamental reform in the 1980s and 1990s as a result of the adoption of Friedman, monetarist economics. The abandonment of Keynesian-style market intervention policies was accompanied by a dramatic increase in the level of distrust in the ability of the public sector to provide the necessary volume, orientation and value for money of public services, particularly in health, education and housing services. In education, Dale (1979) commented that criticism was so strong that some commentators believed that the education system had continued to expand its cost base throughout the twentieth century, with very little reflection of the demands made on it by any of its clients, customers or consumers.

Conservative political doctrine was clear that education and the Health Service would be subject to the disciplines of the market place, Knight (1990). Contextually, Habermas (1976) argued that the global shocks created by crises, such of the oil crisis of the early 1970s, created steering problems for the social systems of society. For the state to maintain and sustain control of the integration of society, the state is required to respond to those shocks by progressively extending its boundaries, and the control mechanisms at its disposal, into the economic and social sub-systems of society. Offe (1975) noted that in order to sustain its increasing influence over the operation of the public sector the state was

being driven to find new forms of intervention. The traditional role of minimalist intervention by the state was failing and therefore the state was forced to develop new operating system infrastructures to ensure that its policies are delivered. This intervention becomes progressively stricter in defining objectives, outputs and outcomes. Paradoxically for teachers and managers alike in the education sector, the exposure to free market forces actually saw the central state increase its control. Stubbs (1986, p56) commented that once central government obtains a new power, it is reluctant to give it up. Stubbs went on to be the first chief executive of the first national FE funding quango, the Further Education Funding Council for England, from 1992 to 1997 and oversaw the introduction of the new control mechanisms for English further education.

There are a number of common themes of interest running through the public sector in general and the post-16 education sector in particular, namely:

- the reorientation of public services from the historical paradigm of administration to the new agenda of market orientation, i.e. customer focused.
- the precursors to successful reorientation of public institutions to meet the new agenda.
- new managerialism that emerged in the education sector.
- the emergence of the evaluation state and its increasing domination of policy implementation vis-à-vis local government.
- the factors that distinguish successful colleges from those that are not financially stable and hence are not as able to meet their aims and objectives due to the absence of a stable organisational environment.
- the impact of different organisational orientation philosophies that underpin the college's direction, namely client organisation (sixth form colleges), product orientation (specialist colleges) or a mixture (general/tertiary FE colleges).

1.2 Relevancy of the study

A large body of research theoretically asserts a positive relationship between market orientation and a firm's business performance. Few empirical studies demonstrate this relationship using multiple and varied measures of a firm's performance. Fewer still have explored this relationship in the not-for-profit

sector and none in the UK further education sector. A recent key study by Sui and Wilson (1998, p316) developed a market orientation model based on English FE colleges. Their qualitative case study approach concluded that the role of management is in the generation of a change strategy to implement an effective market orientation. This thesis develops this theme, exploring the role of entrepreneurial leadership and its impact on market orientation. Few large-scale empirical studies have explored the role of entrepreneurial leadership in the not for profit sector and none in the further education sector.

English further education is a relatively under researched area of the public education service vis-à-vis the school and university sectors. Historically, policy makers and the public have had a poor understanding of the role and purpose of FE due to its great diversity in mission and the different application of that mission by individual colleges. The sector does not portray a heterogeneous *modus operandi* and indeed the orientation of individual colleges creates a distinct lack of hegemony from institution to institution. The lack of attention given to further education is now being addressed by the sector itself, via the Learning and Skills Development Agency (LSDA) and by the DfEE, but it still remains overshadowed by the compulsory schooling and university sectors, despite accounting for ten percent of the global education budget.

The political importance of the FE sector is recognised in 'Learning to Succeed', the DfEE White Paper of 1999, which exhorted the FE service to play a part in delivering national competitiveness and personal prosperity, together with encouraging creativity and innovation in the building of a cohesive society. The White Paper acknowledges that this goal of world-class performance requires the continued change of national and local arrangements and will only be achieved with additional fundamental changes to the organisation and orientation of the service. The fundamental weaknesses of the current system will not be resolved in a few years and the changes that are planned will have ramifications for the next decade or so. This thesis focuses on identifying and proposing the antecedents for delivering superior business performance, i.e. the effective college, in terms of the application of the entrepreneurship and market orientation constructs to the further education sector. The aim of the thesis is to explore, describe, measure and calibrate the predominant factors that describe an effective college as influenced by market orientation, entrepreneurial activity and measured as outcomes in terms of business performance.

A number of recent studies have identified the need for additional research in the field of market orientation, Morgan and Strong, (1988, p1052), and the consequences of adapting market orientation, Seth and Sisodia, (1999, p86). The link between adopting different forms of market orientation and improved business performance is still confused and fragmented and Narver et al (1998, p31) amongst others have called for further research in the area. In terms of entrepreneurship, Casson (1982, p394) summarised that the theory of entrepreneurship is really a special case of a general theory of economic and social process. However, this subset approach is not satisfactory in the modern working environment that individuals operate within. He called for further work, as the development of the theory of the entrepreneur is the key step towards the reformulation of orthodox models of leadership. He contends that the traditional models as represented by the Austrian school are postulated on a rationality construct that is no longer entirely valid. The modernisation of public service provision in the 1980s and 1990s has meant that whole ranges of new firms have joined the entrepreneurial field of research. Siu and Wilson's qualitative study (1998, p315) concluded with a call for a large-scale study in English FE to explore the nature of market orientation and leadership issues. Harris and Ogbonna's 1999 review of quantitative market orientation studies identified epistemological shortcomings of the quantitative techniques used by market theorists when the work involves the review of organisation culture. They called for multidisciplinary studies of culture alongside market orientation studies. This study employs a quantitative approach with a qualitative ex-post case study review of the results.

Every researcher has in mind a model that influences the way he perceives the subjects of his investigation. The model for many is vague, generalised and below the logical consciousness, but none the less it exists and provides a perspective on the world under examination, Berger and Luckman (1967). In further education, the operational management models traditionally in use within colleges have tended to be political and curriculum (product) orientated, reflecting the historical management paradigm of the 1944 Education Act. The introduction of free market forces and private sector *modus operandi* has challenged the *raison d'être* of the orthodox model of college organisation. It is within this context of the reorientation of institutions to meet market needs, coupled with further fundamental reform of the state's role in directing the sector by the consolidation of post-16 funding into a super quango (the Learning and Skills Council in 2001), that makes this area interesting,

relevant and of non-time bound interest. It also has parallels within other parts of the education service and laterally to other parts of the public sector.

1.3 The research question

The research question evolved from a series of observations of the English further education sector derived from the experiences of the researcher and his colleagues as senior managers in the FE sector. The institutional organisational solutions offered by the national Further Education Funding Council as the rational business model for further education corporations, namely the development of super colleges by way of merger, was an anathema to the researcher and his colleagues vis-à-vis their own professional and managerial experiences. Large colleges were not perceived academically as offering superior learning environments due to their overly bureaucratic organisational workings and were they were not seen as generating the 'economies of scale' advocated by the accounting firms providing technical advice to the FEFC.

In terms of policy development in England alongside developments in other OECD nations, the research question is set within the changing operational context of the globalisation of society and the shift from an industrialised manufacturing based economy to the knowledge society, based on information technology and human creativity. The 1999 DfEE White Paper sets out the state's vision of (post 16) lifelong learning, namely:

"That it could enable everyone to fulfil his or her potential and cope with the challenge of rapid economic and social change. The delivery of this vision will ensure the means by which the economy can make a successful transition from the industries and services of the past, to the knowledge and information economy of the future."

Learning to Succeed, (1999, p1)

This political vision is set against the state's intention to revise the focus of institutions away from their own internal perspectives towards the needs of the economy as defined by the state. The thesis was prepared in the period 1997 – 2001, a period of significant change in English FE sector.

1.3.1 Observations and common factors

The research question arose from a series of observations about the English FE sector, namely that:

- some colleges appeared to be more successful than others in meeting the governments policy agenda some eight years after incorporation in 1992.
- the necessity to merge due to a failing financial position does not appear to be a function of a college's size.
- small sixth form colleges tend to be more financially stable than similar sized product-centred or generalist FE colleges.
- medium sized general FE colleges in non-city urban environments tend to have a worse financial health than their city based peers.
- colleges with long-lived senior management teams appear not to be as adaptive to change as their short-lived peers.
- college principals appointed in the LEA era (pre 1992) are more cautious than their peers appointed in the post-1992 independence period.
- gender and education of the principal appears to be irrelevant in terms of college performance.

These observations are focused on English FE colleges post 1992. In developing the observations from the particular to the general, a number of reoccurring themes or common factors appear to be present, namely:

- colleges exhibit different levels of client (customer) or market orientation.
- colleges exhibit different levels of entrepreneurial leadership.
- college leaders have different perspectives on risk taking.

These observations with their common factors require development into propositions.

1.3.2 Propositions and the research question

Propositions are statements that specify the nature of relationships between two factors. As advocated by Stinchcombe (1968, p18-20), the more propositions that are tested, the stronger the test of the theory. From the relationship model in figure 1.2, the observations and their common factors, the following propositions are generated:

1. Colleges successful in terms of business performance will be characterised by the adoption of entrepreneurial leadership and a positive market orientation.
2. Colleges operating in small-town, semi-rural and rural areas will be characterised by having lower market orientation than city/urban colleges.
3. Colleges operating in areas with higher social deprivation factors will tend to have greater market orientation than colleges serving areas with low social deprivation factors.
4. Mono-client colleges (sixth forms) will have higher market orientation than mono-subject (e.g. agricultural and art & design) or generalist FE colleges.
5. Principals appointed after incorporation provide more entrepreneurial leadership than principals appointed under the LEA regime (pre-1992), as they are less risk adverse to working in the post-incorporation operating environment of the Evaluation State.
6. Principals of mono-client colleges are less risk adverse than principals of general and mono-subject FE colleges due to their less complex operating environments.
7. Senior management teams that have lower mobility of membership display lower levels of entrepreneurial leadership.
8. Entrepreneurial leadership is independent of gender and education level, being a function of other innate personal qualities and the operating environment.

The thesis is based on the English FE system as the other three home nations are subject to different forms of state control and intervention. The research propositions are summarised into the following research question:

Is business performance of further education colleges improved by entrepreneurial leadership and the adoption of a positive market orientation? An empirical study of English FE colleges.

In summary, the research question relates to the effectiveness of English colleges to meet the state's agenda and the implications for their governors, chief executives and managers.

1.3.3 Developing and clarifying the research question

Managers and governors of financially stable colleges have greater degrees of choice defining their mission in relation to the state's policies within their sphere of operation as part of their mission. Financially unstable colleges lose this flexibility, and possibly the right to determine the interpretation of their mission. In extreme circumstances, they may lose the right to self-determination to the state's control mechanisms e.g. Sheffield College in Summer 2000. For the purposes of this thesis, effective colleges are defined as those that meet the state's agenda within their allocated budget. Less successful colleges are those that fail to meet the policy orientation demanded by the state, or fail to achieve the orientation within the prescribed resource allocation. These colleges will, if unassisted, fail and will either be subsumed into successful peers e.g. Bilston in 1999, or have new managers and governors placed into them by the central state e.g. Wilmorton in 1995. It is therefore hypothesised that effective colleges will share key characteristics, namely:

- have an entrepreneurial ethos that allows it to respond creatively and innovatively to the needs of the market.
- a positive market orientation (the implementation of the marketing concept) towards its customer's needs.
- generate customer satisfaction whilst delivering its product, thereby reinforcing the market orientation of the college as a quality service provider.
- pay attention to internal customer market orientation factors.

Conversely, less successful colleges will be those that have a poorly developed entrepreneurial leadership culture, with a lower market orientation and deliver poor customer satisfaction. To survive

as an independent corporation, a public sector FE college must share the following characteristics of a private sector firm, namely:

- generate adequate trading volumes to cover their fixed cost base in the long-run.
- innovate and adapt to sustain trading volumes by introducing new products.
- be cash positive in the long run.

The research study aims to identify the antecedents of successful English FE colleges in terms of their ability to survive long-term and hence carry out their mission, however defined by themselves. In line with the three common factors underpinning the observations, three themes are developed, entrepreneurial leadership, positive market orientation and a moderator, the external regulatory environment (risk). The unifying proposition is that college business performance is a function of entrepreneurial leadership as moderated by the external environment and the adoption of a positive market orientation.

1.4 Model development, research and testing approach

The next stage is to translate the initial proposition's abstract concepts into discrete and directly observable propositions. The propositions can then be tested and the hypotheses can be assessed. The model is developed following a literature review of entrepreneurship and market orientation and is driven initially by the experiences of the researcher and his fellow senior managers. The literature review methodology was to explore the issues laterally from the core constructs of entrepreneurship and market orientation. These two sources of theory are reviewed within the context of English further education and the organisational behaviour aspects of motivation in the not for profit public sector. Chapter 2 and 3 are literature reviews of entrepreneurship and market orientation respectively. Chapter 4 consolidates the two constructs' respective bodies of literature and reconciles it with organisational behaviour and culture studies work. The chapters also develop the important moderator of state regulation and its effect on the degree of self determination of orientation of individual institutions. It then proceeds to propose a number of themes to be explored in the model-testing phase of the thesis. The model, its testable hypotheses and propositions are then formulated in chapter 5, having been developed from the supporting literature. Chapter 6 develops the quantitative research methodology, a cross-sectional survey study of the entire population of English FE colleges (420

institutions). The analysis is conducted in chapter 7 and compares different groups within the FE sector for the factors proposed by the model. The quantitative conclusions are then explored with three representative college principals by way of qualitative interviews in chapter 8. This qualitative review explores the relevancy and context of the results at the level of the individual college. The final chapter provides conclusions, reflections and areas for future research.

2 Entrepreneurial leadership in further education

2.1 Introduction

The objective of this chapter is to review the entrepreneurial literature and its application to the public education sector. The education reforms made by the Conservative government since 1979 and continued by the Labour government post 1997, have affected all sectors of the education service from pre-school nursery education through to university teaching and research. The *raison d'être* of these changes has been the exposure of the education service to market forces, the most significantly influenced sector being further education colleges.

The incorporation of colleges in 1992 removed 453 relatively immature corporations spending £3 billion per annum from the control and oversight of the relatively mature local government civil service known as the Local Education Authority (LEA). The enabling legislation specially excluded politicians, as representatives of local government, from being governors of the new organisations. This operating environment was augmented by the rapid creation of a new national funding supervisory body, the Further Education Funding Council for England (FEFC). The FEFC was radically new and inexperienced. The initial control environment adopted came from the higher education sector which was typically applied to institutions that had a long track record of financial self-government and were typically ten to fifteen times the size of FE colleges. In contrast, at incorporation, few FE colleges had the professional staff, experience or skill base in its senior management and governors to cope with complete autonomy from their LEAs in the early years post incorporation.

This set of circumstances provided a comparatively weak control and policy framework for the newly independent corporations to operate within the first few years. This allowed college managers and governors to operate free of many of the historical political restraints that were imposed by the local government civil service and elected politicians. In the absence of strong political oversight or intrusive policy intervention from the FEFC, a power vacuum in terms of institution orientation was created at the college level that in turn provided a fertile ground for the rise of the college entrepreneur. It also allowed scope for poor management and subsequent business failure to occur within the sector, as witnessed by the failures of four large colleges, Cricklade, Wirral, Halton and Bilston in 1999.

This chapter commences with a review of the definitions of the entrepreneur in the classical literature and goes on to explore the key traits of entrepreneurial individuals that operate in the free market. The chapter then reviews the evolution of the literature from 'heroic individual' to the modern firm, embracing entrepreneurial teams. It then explores the nature of public sector education, its origins and the changes that it is making. The literature review covers the application of entrepreneurship to the charity sector, also known as the not for profit sector. The chapter goes on to identify the key characteristics of the manager with respect to the public sector and English further education in particular and then reviews the application of entrepreneurship to public sector managers. The role of innovation vis-à-vis entrepreneurial endeavour is reviewed and applied to the market orientation construct, the subject of chapter 4. The chapter reviews the literature in respect of top management teams and their impact on the levels of entrepreneurial activities within the firm. The issue of innovation and its relationship to market orientation is reviewed, linking entrepreneurship to market orientation, the subject of the chapter 4.

2.2 The Entrepreneur, comparative literature review

2.2.1 The identification of the entrepreneur in the literature

The Collins English Dictionary (Collins 1985, p489) defines an entrepreneur as an owner or manager of an enterprise that by taking risks attempts to make profits. The historical literature has traditionally sought to define the entrepreneurial individual in term of their traits or functions. The term entrepreneur is cited by Collins (1985) as being derived from the French word for enterprise and arose in the eighteenth century. The earliest literature that described the entrepreneur dates from the Irish émigré Cantillion's writing in France (1755), but it was, the Frenchman, Say (1803) who brought the concept to prominence.

The earliest of these insights into the nature of the entrepreneur came from Cantillion (1755), who sought to demonstrate that trading activities between individuals would result in the reallocation of risk between parties. With the split in allocation of the risk burden between parties, risk premiums are reflected in the profits that are sought for each type of contract by the lead risk bearer. On the basis of willingness to take risks, Cantillion divided society into two groups of people. The first group are those individuals who were not prepared to take risks namely workers who sought to be paid for their outputs with minimal personal risk and consumers who sought to buy finished goods/services without significant risk. The second group, entrepreneurs, are those who were prepared to match workers outputs to consumer demand and take the risk that the match may not be right. Say (1803) went further, regarding the entrepreneur as a rare phenomenon who is able to combine and co-ordinate the factors of production. The individual is faced by uncertainty and therefore must make judgements about the risk involved. As the decisions relate to a range of markets, Say's definition of risk taking is more complex than Cantillion's relatively simple transaction model. Say perceived the individual as being a specialist at accommodating the unexpected and overcoming the resulting problems and challenges that occurred. In addition to believing that a range of traits was necessary to produce an effective entrepreneur, Say believed that the entrepreneur was the conveyor of the market process in a condition of perpetual disequilibrium. In this respect, Say's work is similar to the Austrian school of economics some hundred years later.

The Austrian school on the market process has sought to explain the entrepreneur in terms of being the key figure in driving the economy towards market equilibrium. Entrepreneurs identify that future product prices will not be adjusted to today's input prices and hence a profit can be made. Therefore, the entrepreneur plays a crucial role in the market process of achieving market equilibrium, Kirzner (1973, p30, p86 and p229). Hayek (1949, p84) contends that the speed of reaction to market signals requires individual intervention, not a collective committee decision. Perfect knowledge cannot be achieved, and hence an element of risk taking is involved. The individual or individuals best judge this risk, as they are the closest to the markets. On the basis that an individual can spot a temporary monopolistic gain from the market, they seek to change the supply of goods, gaining short-term profits. The freedom of markets, namely the absence of barriers to trade, allows the entrepreneur to gain only short-term profit, effectively receiving a premium over the normal level of profits for his cost of discovering the information. The Austrian school promotes individualism over the firm in terms of entrepreneurial definitions and hence has limited applicability to public sector firms without considerable interpretation. Many management practitioners have defined entrepreneurship in terms of leadership traits, arguing that it is a special form of leadership. To follow this development of entrepreneurial leadership theory, the theory of personality traits as applied to the class of the entrepreneur is explored from its origins in the 1930's, to the modern writings of Casson and Drucker.

In public sector administration, the terms leadership and management are often juxtaposed. In private sector management terminology, entrepreneurship and innovative management are often confused. Before proceeding any further, the definitions of innovation, leadership and management are explored vis-à-vis the definition of entrepreneurship.

Leadership and Management

Defining what we mean by the term leadership can be problematic, with many attempts made by academic and business writers to codify what the term leadership means. Leadership is best defined by the roles and behaviours adopted by a leader (Hallinger & Heck, 1998):

- Process of influencing
- Can be exercised by people who do not necessarily possess formal authority in the organisation
- Improves the achievement of goals or objectives
- Implies followers

As proposed by Sawbridge (2001, p7), the leadership is best seen as the exercise of influence to move and organisation forward, whereas management is largely concerned with the maintenance of existing systems and structures. Fullan (1991) amplifies this distinction by relating leadership to the development and promotion of mission, direction and inspiration of an organisation. In contrast, management involves designing and carrying out plans, getting things done and working effectively with the people in an organisation. Bennis (1989) summarised the difference in relation to the organisational culture namely that managers operate within the firm's culture, whereas the leader creates the firm's culture. These differences in attitudes and relationships are explored further in table 5.1, although as Mullins (1996, p249) comments, in practice it is difficult to separate management and leadership actions, as modern managers tend to display both forms of working. The two terms of often inter changeable and is probably best seen as ends of a continuum of behaviours. New managerialism is the system of management that places management at the fore of activity rather than the doctrine of either administrative efficiency or professionalism. The managerialism paradigm is explored further in section 2.3.5 and table 3.1.

Innovation and Entrepreneurial Endeavour

Hurley and Hult (1998, p44) developed the constructs of innovativeness and capacity to innovate. They proposed that innovation is the cultural notion of openness to new ideas. In contrast, Casson's (1982) definition places an emphasis on the co-ordination of scarce resources rather than their allocation or the adoption of new ideas, per se. This emphasis confines the attention to decisions of an economic nature that are changed (co-ordinated) by the entrepreneur for his benefit and acknowledges classical economic theory of markets being dynamic in terms of the supply and demand of resources. Entrepreneurial activity may be innovative, in that it implies the implementation of new ideas, but innovation in itself is not entrepreneurial, as entrepreneurship may simply be the identification of a gap and exploiting it in terms of economic theory. The definition of entrepreneurship is developed more fully the remainder of this chapter.

2.2.2 The development of trait theory for identifying entrepreneurs

Early writers sought to identify common traits of individuals that made up the class of entrepreneurs, the corollary being that these behavioural traits defined entrepreneurial behaviour. The trait theory

proposition of entrepreneurial behaviour of early writers was augmented by the work of Schumpeter in the 1930s, who put forward the concept that entrepreneurialism was time bound by the circumstances surrounding the entrepreneurial transaction. Schumpeter was primarily concerned with the explanation of economic development and hence did not seek to provide a clear definition of the entrepreneur per se, but he clearly identified the role as being a key component in the explanation of economic development. The key driver according to Schumpeter is innovation in capitalist development that results in business cycles.

The Schumpeter entrepreneur (1934, p133) differed from Say's, in that the entrepreneur was not one category of person, but an innovator who identifies new combinations, technologies, products, ideas, sources of materials, etc and exploits their potential before others do. Schumpeter is clear that the entrepreneur is not an inventor but a catalyst for change, identifying the potential for commercial gain. Whatever the entrepreneurial activity, once the combination is no longer novel and unique and hence enjoying a competitive advantage over other enterprises, then the combination loses its uniqueness and is no longer considered to be entrepreneurial, irrespective of the nature of the individual (p78). In summary, the Schumpeter entrepreneur causes the change in the nature of resource allocation, rather than responding to the signals from resource reallocations by other people. In addition, the entrepreneur is not a risk bearer per se, as the risk is borne by the capitalist financier. The individual may also be the financier of the transaction, but they conduct this part of the role separately from their actions as the entrepreneur (1934, p137). Schumpeter (1934, p155-6) identifies that certain entrepreneurial traits are innate and are not passed from generation to generation. He also identifies that the entrepreneur's motivation is not purely that of pecuniary gain, as articulated by Maslow (1954), namely the need for self-realisation goals, self-fulfilment and power.

In the way that Say proffered a more complex interaction of risk taking decisions than Cantillon, Leibenstein took Say's work further in terms of exploring the precipitators for entrepreneurial action. Leibenstein (1966) introduced the concept of 'x-efficiency', the efficiency that is present in the economy as a result of non-allocative efficiency. In pure market competition theory, resources are continuously reallocated to the most effective producer to deliver market equilibrium. In the real world, imperfect competition exists and hence the total freedom in the reallocation of resources is slow or simply does not occur. From this failure to perfectly reallocate resources, there is a resultant allocative

inefficiency in the overall market. However, Leibenstein argued that the actual levels of inefficiency that are experienced were not of the adverse magnitude predicted by the theory of imperfect competition. This extra efficiency derived from non-allocative means is the x-efficiency in the market. This extra efficiency can be variable and the reciprocal corollary of this efficiency construct is x-inefficiency. In his article, Leibenstein (1966) argued that x-inefficiency will increase if firms do not sustain the pressure for innovation, hard work and responsiveness to imperfect competition barriers to organising resources. The motivations to drive down the x-inefficiency factors were identified as the motivation of individuals, motivation of competitors and the acquisition and use of market information. Leibenstein proposed that the relationship between inputs and their resulting outputs was indeterminate. In this way, his construct challenged the orthodoxy of neo-classical model of competition and the allocation of resources. Like Schumpeter, Leibenstein's work was not seeking to define entrepreneurship per se; he was exploring the x-factor that explained the hidden gain in productive efficiency in the context of imperfect competition. The x-inefficiency reduction involves decisions by individuals and hence entrepreneurs are involved. Stigler (1976) criticised Leibenstein's key construct on the basis that the definition of output is not empirically sound.

Stigler's critique argued that no person seeks to maximise the output of any one thing. When more than one goal is achieved at the cost of less of another goal, Stigler (1976, p213) argued that the change in output is due not to an increase in efficiency, but a change in outputs and hence the neo-classical model's axioms still stood. Binks and Vale (1990) developed the work of Leibenstein and Stigler's critique. They simplified the Leibenstein model for the application to entrepreneurship by restating x-efficiency in terms of output applications of the mismatch between utility functions of the labour inputs in the firm or industry. Upon modification, the revised theory is sufficiently academically robust enough to move on to its application to entrepreneurship.

The x-efficiency paradigm creating extra non-allocative efficiencies requires a facilitator to make it work. Leibenstein's 1968 follow up paper put forward constructs of two types of entrepreneur, namely:

- the entrepreneur as a routine, managerial figure that allocates the inputs to production in the traditional manner.

- Schumpeterian entrepreneur as one who fills the observed market gap with a new product or process.

The difference between Leibenstein and Schumpeter is the former's emphasis on the sustaining of the incentive for entrepreneurial activity even when the market has reached equilibrium, whereas the latter believed that the entrepreneurial event finished once equilibrium had been reached. The difference is that Leibenstein's paradigm of x-efficiency challenges neo-classical theory.

Leibenstein identified four characteristics of the entrepreneur, namely:

- an ability to connect different markets to exploit potential arbitrage opportunities.
- they remove market deficiencies by filling gaps.
- they are input completers, as they are key co-ordinators of all the required inputs for the production process.
- they create, expand or restructure firms as market producers to receive the inputs.

The skills and abilities that are required to conduct these roles are scarce and in some cases, are innate to the individual. In summary, Leibenstein's work developed the interpretation of the observed operation of imperfect markets into the identification of the catalysts that create the x-efficiency opportunities which challenge the operation of the markets set out in neo-classical theory. In turn, his work evolved to identify that the market and the entrepreneur did not work in a robotic manner and hence there are characteristics that are applicable for describing the entrepreneur.

Two views of the entrepreneur have been put forward: the view of the role of establishing and running businesses that create and respond to market opportunities and the other view that defines the entrepreneur in terms of the organisation of new combinations to create resource change. Both views share a common foundation of the entrepreneur being an individual that has prevalent personal traits.

2.2.3 The introduction of ethical man into entrepreneurship literature

Previous writers were concerned with the operation of the market and the role of the individual to stimulate market equilibrium. These writers had identified that not everyone can be an entrepreneur, and those that are, share an underlying assumption that this class of people act in the best interests of

the market, namely they sought to maximise profit. Later writers modified this to the goal of maximising utility. However this approach, known as 'economic man' still leaves unresolved issues, as the underlying assumption is that individuals work in a rational and logical manner to maximise either profit or utility. Later writers such as Knight, Drucker and Casson, proposed that human beings operate in the market place for a myriad of reasons and not always in an obvious, rational and economic manner. Definitions of the entrepreneur are not the exclusive preserve of economists, social scientists also contribute to the literature.

The theme of human action being a key driver in entrepreneurial behaviour was extensively explored by Knight (1921, p23). His work was concerned with the nature of pure economic profit, arguing that profit is a reward for bearing uncertainty and in this proposition, supports the writings of Cantillon. The markets are not truly free, having a multitude of barriers to perfect competition. When disequilibria occurs, market place entrants or leavers are required to restore the equilibrium, however, due to market imperfections, this responsiveness cannot be instantaneous. The timing of this responsiveness is a function of the speed of operation of market signals and a function of the uncertainty surrounding the signals and opportunities. Uncertainty therefore exerts a fourfold tendency to select people to act as market leaders and to create specialise functions Knight (1921, p270-1), namely:

- an adaptation of individuals to occupations on the basis of knowledge and judgement.
- a similar selection on the basis of degree of foresight.
- a specialisation within production groups, with the people with superior managerial ability being placed in control.
- those with confidence to use and follow through their judgement.

From this, Knight argued that a special social class of business people directs economic activity and they direct the vast majority of the population. These people are society's entrepreneurs and are remunerated accordingly for their ability to make and implement judgements. This separation of the population into two broad groups was similar to Cantillon's observation of 166 years before, but like Casson, who followed 70 years later, Knight proposed that these people act for many reasons and not

just for economic profit. Knight (1947) explored the personal motivation of entrepreneurial man within social groups, identifying six main levels of human activity, namely:

- physical actions
- biological organism
- sociability and existing in communities
- problem solving and selecting the most appropriate means to achieve given ends
- a social being, deliberately participating in co-operation, ethical debate etc
- ethical problem solver, judging between alternative ends.

For advanced societies and the study of entrepreneurial traits in particular, actions 1 to 3 are not relevant. Actions 4 and 5 are pertinent and are useful in the ascribing of motivation for the action of entrepreneurs in making and taking judgmental decisions. Action 6 is useful in describing the way that man is not purely driven by rational, economic theory and doctrine.

Proponents of utility theory advocate that individuals seek to maximise profits, whereas social scientists have countered that individuals seek to automatically maximise their marginal utility of something, but not necessarily economic profit. Individuals seek different ends for personal and at times illogical and seemingly irrational reasons. Individuals can not be sure that they have actually maximised their marginal utility, the surrogate measure for maximising of profits in classical market theory Knight (1935, p160). Knight subsequently reviewed and critiqued the application of utility theory to decision making. Individuals seek to satiate their wants, redefining those wants as time and the resolution of those wants occurs. Effectively, every end is redefined in the process of achieving it. Three principal moderators influence this dynamic process of redefining of the purpose of actions:

1. Individual's satisfaction functions do not, per se, remain the same throughout the implementation of actions. An individual may be disappointed once he has obtained, or is close to achieving the target outcome. He may decide to pursue another end instead (Knight, 1956, p175).
2. An individual may become so committed to achieving this end, that the means become an end in itself and thereby the original purpose of the actions is lost (Knight, 1947, p253).

3. The most important channel for modifying ends is a social one, in that man is a product of his environment and rarely can be a wholly autonomous member of society free from peer and society pressure (Knight, 1956, p170).

Knight summarises his arguments by stating that economists can underestimate the ethical and social influences on economic man. As society has structure, that society in turns places a considerable level of pressure to conform on individuals. He goes on to argue that the simple dismissal of ethical behaviour of individuals by economists on the grounds of their naivety, is in itself, a naïve assumption.

Entrepreneurship theory developed with Casson's revised definition (1982, p23) that embraced the construct of judgmental decision making about the co-ordination of scarce resources. Casson's definition places an emphasis on the co-ordination of scarce resources rather than their allocation. This emphasis confines the attention to decisions of an economic nature that are changed (co-ordinated) by the entrepreneur for his benefit and acknowledges classical economic theory of markets being dynamic in terms of the supply and demand of resources. The corollary is that entrepreneurial actions are a dynamic series of events and not a one-off occurrence or action. Casson (1990, p57-8) went on to identify that the quality of judgement depends upon the individual's character. Key traits were proposed to identify and describe the entrepreneur. These traits include self-confidence, breadth of experience, flexibility of thought, high norms (integrity), long-term views, progressive outlook, self-reliance and an attitude to deliberate. Casson (1995, p23) concludes that the narrow concept of economic man who acts in purely rational and economic terms has been undermined. He develops the argument that ethical man is the relevant basis for the study of entrepreneurship. Ethical man, like economic man is purposeful and intelligent. However, ethical man is motivated by a diverse range of factors, not just economic profit and the underlying goal of driving markets towards market equilibrium by identifying short-term monopolistic profits.

2.2.4 Entrepreneurial activity and its application to the firm

A reoccurring theme of entrepreneurship trait theory is the placing of the individual at the centre of the analysis either as sole trader or as owner-manager. The conventional wisdom is that entrepreneurs are iconoclastic individualists and tend not to work in large, structured organisations, Robinson (1990), as bureaucratic rules, accountability and the need for conventional solution generation stifles

innovation. The traditional view has been that contracts of employment concentrate risk uncertainty on the employer rather than the employee and hence remove employees from the historical definition as they are not risk bearing, Casson (1990, p46). The previous proponents in this area of theory, namely Schumpeter, the Austrian School and Knight, have not addressed the issue of exactly what the entrepreneur does and each proponent only provides a partial account of the subject of the role of the employee.

Schumpeter's theory indicates that an employer that correctly decides not to innovate because it is uneconomic cannot be considered to be an entrepreneur. Likewise, the Austrian school is centred upon the individual and contends that he does not need to form a firm to operate in the market place, although he may be incorporated in law to contain his personal liability. However this legal vehicle of limitation of liability does not compromise his attitude towards risk bearing, as he is still the dominant owner of the firm and exposed to the consequences of his risk bearing choices. Therefore the analysis of the entrepreneur within the larger firm using the Austrian school is difficult to apply as the connection between actions and the risks stemming from those actions is more tenuous. Knight is clear that the shareholders are the successor to the merchant adventure and it is they who are entrepreneurial, not their employees. However, Knight was writing within a social and economic climate pre the rise of the Welfare State, in the 1940s and 1950s.

The preceding definitions propose that the entrepreneur identifies new combinations and opportunities, but focuses on the individual acting alone, rather than within a team structure. Casson's 1982 definition of the entrepreneur is based on individuals or collections of individuals; not corporate bodies per se. Casson (1995) stipulates that membership of a firm cannot be assumed to be so cohesive that the firm has a 'will of its own'. He goes on to state that judgmental decisions are those that require innovative action, rather than the application of existing principle, laws and formulae to the problems faced in the workplace. The corollary is that the solution of problems is not entrepreneurial per se. The level of subjective judgement involved in the decision making process rises with the level of uncertainty, complexity, or ambiguity of a situation, especially where there is evolution in the parameters of operation, (Casson, 1990, ch3). Casson (1990, p75) places emphasis on groups of individuals working within a structure, namely an entrepreneurial team within the incorporated firm. With the appropriate circumstances, such teams can be innovative and implement solutions, the

necessary prerequisite for being defined as entrepreneurial, and hence being an entrepreneur, as defined by earlier writers. Casson suggests that the firm may be regarded as a social unit comprising individuals (1990, p76) who regularly co-operate to solve problems. In support of this contention, Casson proposes that firms exist as a result of entrepreneurial behaviour, not that a firm creates entrepreneurial behaviour because it exists.

Drucker (1985, p135) disagrees with the conventional wisdom that big businesses and by inference, public sector firms do not innovate. He argues that there are plenty of examples of innovation and implementation from large firms, enough to counter the cited failures of large firms. The argument that organisational size creates the bureaucracy and conservative behaviour which are impediments to innovation is to an extent true. Given this, Drucker draws upon evidence that demonstrates that small firms in America fail to systematically generate more entrepreneurial activity than very large firms, despite the organisational bureaucratic impediments larger firms face. He concludes that it is not size that is the impediment to innovation and entrepreneurship, but lack of dynamism within a firm that occurs when it reaches a natural operating niche of activity, in effect a 'comfort zone' that promotes operational inertia and complacency. To break this 'state of mind', these firms require entrepreneurial endeavour to break the cycle of mediocrity and avoid the inevitable drift into mediocre performance and business decline, Drucker (1985, p137). Drucker challenges the conventional wisdom that entrepreneurship and innovation are natural, creative and spontaneous, arguing that entrepreneurship is neither natural nor creative, but a function of targeted hard work. Creative flair is a human endeavour, but the skills needed to marshal those resources (the Schumpeter definition of the entrepreneur) can be taught to appropriate people. Drucker (1985, p138-161) puts forward that entrepreneurial management requires policies and practices in four key areas:

1. The firm must be receptive to innovation and willing to perceive change as an opportunity not a threat. Without the willingness and climate to change, managerial entrepreneurialism will not be possible.
2. Systematic measures and appraisal of actions to calibrate the responsiveness and effectiveness of the firm's actions are required. Without learning and improvement, the firm can not be sure that it is innovating and moving forward.

3. Entrepreneurial management requires specific human resource management policies to actively promote a progressive and innovative climate for entrepreneurship.
4. Entrepreneurial and managerial units should not be mixed as the modus operandi of the two groups are fundamentally different. The firm needs both types and the unwise mixing of the two types will result in mediocrity at best and disaster at worst. The same statement applies to diversification into areas that are outside the core competencies of the firm. Diversifying does not address the current performance of the existing business and will result in two different speeds of development that may hold back the new business and leave behind the old one.

In conclusion, Drucker proposes that for the firm to be a successful entrepreneur, irrespective of its size or status, it has to be managed as an entrepreneurial business.

2.2.5 Entrepreneurship and teams

In developing Drucker's work further, the increased size of the modern firm must be considered, especially in relating entrepreneurship to the public sector firm. The original construct of the entrepreneur was centred upon small firms that were effectively vehicles for one person or a small handful of individuals. As developed by Drucker, large firms are also entrepreneurial. By definition, larger firms must be organised into teams of people and are managed by hierarchies. The role of entrepreneurship and teams must therefore be explored.

Casson's research of large multi-national enterprises (1990 p77) defined the key features of these larger firms (i.e. not those firms that are either very small or effectively a vehicle for a dominant owner/manager) in terms of contracting arrangements:

1. The firm solves problems that are common to a wide group of people or firms.
2. Problems are solved using standard solution concepts.
3. Internalisation of the market in solution concepts means they are typically developed and implemented by the same firm.

4. An entrepreneurial team manages the firm. The team's organisation represents a division of labour in problem solving, in which a synthesiser has a central role (i.e. the chief executive officer).
5. Shareholders are the majority owner of the firm and the entrepreneurs are the minority shareholder. The majority shareholders tend not to direct or organise the affairs of the firm.
6. The entrepreneurial team chooses the rules and procedures that are used to delegate routine aspects of decision making to administrative staff and professionals.
7. Routine staff are supervised and, like members of the entrepreneurial team, attached to the firm on long-term employment contracts, regulated by employment law.
8. The corporate ethos reflects the rational view of problem solving and a progressive view of scientific advancement and material improvement.

The types of contract specify the various roles that individuals must occupy within the organisation of the firm. The contracts determine the division of responsibilities between entrepreneurs, administrators, suppliers and customers of the firm. Casson (1990, p78) proposes the rationale for these contracts are based on four factors:

- the contracts establish long-term and stable relationships between various parties both within and outside the firm.
- promotes efficiency by allowing a customer to contract for a myriad of services in a complex service environment with one contracting organisation.
- conflict resolution is promoted by contract form and precedence, making contracting easier, quicker and less risky to all parties by removing (unsystematic) risk.
- logical separation between the individual and the role they occupy. This allows structures to be developed and sustained, especially following a change in personnel.

Although Casson was writing about multinational enterprises, the application of the construct to domestic large firms and laterally to public sector organisations is both logical and credible. Both groupings exhibit the same characteristics that are used to define the multi-national corporation. In the UK public sector, the shareholder is known as the stakeholder. A governing body represents the

stakeholder and is different from the management group, eg a board of college governors council vis-à-vis the college senior management team. In turn, the college's governing body is ultimately a proxy for the central state, the ultimate stakeholder in the public sector. The use of proxies is important, as Casson (1990, p80) goes on to explain that in the multinational firm, the shareholder cannot operate direct supervision and therefore must trust the appointed entrepreneurs within the firm. This trust needs to embrace their managerial competency, ability to judge risks on behalf of the shareholders appropriately and to exercise ethical stewardship over the funds entrusted to them.

Binks and Vale (1990, p128-9) commented that policy making tended to focus on individuals and business start-ups, with a lesser emphasis upon existing businesses. They explored the theme of corporate entrepreneurship and started with entrepreneurial teams, rather than entrepreneurial firms. Binks and Vale were reviewing the policy implications that affected the supply of entrepreneurship or entrepreneurial activity and its impact on economic development. They proposed that the entrepreneurial system has three basic components:

- a continual graduation of development potential through the materialisation of catalytic entrepreneurial events.
- the efficient exploitation of that potential, through the materialisation of allocating entrepreneurial events.
- the efficient realignment and operation of affected industries and organisation through refining entrepreneurial events.

Different factors and policies will affect entrepreneurial activity positively and negatively through these three spheres of policy. Putting the external, non-firm controllable circumstances aside, the internal organisation of the firm is important if it is to develop an entrepreneurial ethos as advocated by Drucker and Casson. The transferability of the above entrepreneurial system to the public sector is relevant to the public sector during the 1980s and 1990s. With the relaxing of direct control, public sector bodies are more able to operate in the manner of private firms and hence the constructs of entrepreneurship are transferable.

In conclusion, Casson and Drucker have broadened the field of entrepreneurial research from the sole trader, merchant adventurer of the nineteenth century to embrace the modern organisational construct of the firm. Their work is consistent with earlier writers in that they both argue that individuals, albeit operating within teams, are still the entrepreneurial drive not the firm itself, which is an artificial construct. They also demonstrate that contracts of employment do not automatically preclude an individual from being an entrepreneur, the contract is a form of working that codifies interactions in complex organisations. Their work on large private sector and multi-national companies is transferable to public corporations and firms, therefore entrepreneur theory has an application to the public sector as well. The end result of these developments of team based application has been the conceptualisation that entrepreneurship is a firm-level phenomenon, Burgelman (1983) and Zahra (1991 and 1993).

2.2.6 The entrepreneur and managers in the firm

Classical literature identifies the entrepreneur as being a separate class of individual from the manager. As advocated by Harris and Jackson (1999, p42), the application of entrepreneurship is much broader than small business start-ups, being equally applicable to large firms and public sector organisations. Entrepreneurs are engaged in risk bearing scenarios for the sake of the firm, whereas the manager is motivated by externally imposed goals and rewards and is less tolerant of personal risk taking on behalf of the firm. Classical economists suggest that there is a clear demarcation of individuals into two groups of people. They propose that entrepreneurship is synonymous with leadership and management is synonymous with administration. Social scientists however argue that there is differentiation in terms of behaviour between entrepreneurs and managers, however, the corollary that there are separate classes of people does not automatically follow.

Kao (1989, p102) believes it is a myth that the aforementioned construct of separate entrepreneurial and managerial classes is valid, especially in the modern working environment. Individuals should be measured against a spectrum or continuum of management style. People may behave in a managerial or entrepreneurial style depending upon the measures they are evaluated with. Different environments require different responses by an individual. A highly structured, externally regulated and formal organisation such as a public sector firm is less likely to tolerate innovative or iconoclastic behaviour. In contrast, a less structured and informal organisation such as an Internet start up company is more

likely to actively promote individualism and reject structured, bureaucratic approaches to problem solving. Kao (1989) also identifies that different personality styles lead to the use of different skills based on personal preference. The former chairman of the UK Post Office, and first chairman of the University for Industry quango in 1999, was Sir Ron Dearing. He wrote from experience (1986, p3) that a state controlled enterprise may wish to think and operate strategically in an entrepreneurial manner, and indeed be tasked by the state to act entrepreneurially, but may in reality find itself in a conflict of interest. The politician represents the controlling stakeholders of the public firm. The politicians require (political) jam today, rather than (economic) jam tomorrow (1986, p4). Therefore the manager may aspire to act in an entrepreneurial manner, but their actions are limited by political interference. In support of this practical example, Kao contends from the literature that the roles of the manager and the entrepreneur overlap and that the underlying issue is the mix of managerial and entrepreneurial traits that need to be used in response to the operating environment.

Maslow (1962) proposed in defining his hierarchy of needs paradigm, that individuals interact with society in response to the pressures, real and perceived, placed upon them. Therefore an individual will act in a manner consistent with their self-actualising needs at their point of their career, rather than as a response to negative stimuli. Effectively, an individual's responsiveness to entrepreneurial behavioural opportunities is a function of their perception of personal risk, Kao (1989, p 104). Kao represented the trade-off that an individual faces between staying and leaving from their unresponsive firm as Table 2.1:

Table 2.1: Kao's 'balance sheet' of entrepreneurial career decision making

To Stay	To Go
Financial obligations	Financial resources available
Need for security	Desire for self-actualisation
Family obligations	Family support
Inexperience	Relevant experience

Kao concludes that the retention, and by inference the initiation, of entrepreneurial individuals into the firm is a direct function of the firm's ability to provide avenues for these people to develop and flourish. Static firms that do not provide the appropriate entrepreneurial stimulæ to their employees (irrespective of their position in the firm) will ultimately lose those staff or eliminate their entrepreneurial capacity to act.

A key criticism of public sector managers is their tendency to be administrators, with their traditional emphasis on conservatism based on the focus of stewardship and accountability of resources. Maslow explored stereotyping versus true cognition and its lateral application to the conservatism of the public sector manager is relevant. Thinking is the key innovative trait of entrepreneurial individuals and in turn the absence of creative and innovative thinking is a key barrier to the implementation of an entrepreneurial modus operandi. Maslow (1954, p203) identified limitation of thinking as consisting of:

- stereotyped perception of problems, the overlooking of problems in the first instance, supported by active denial of a problem, and/or
- using only stereotyped techniques for solving these problems, the use of approved, orthodox protocols and procedures to resolve the problem, and/or
- having in advance of all life's problems, a set of ready made, cut and dried solutions and answers.

He proposes that these three tendencies add up to an almost complete guarantee against creativity or innovation and hence entrepreneurialism. Maslow counsels that these three tendencies need to be acknowledged and actively tackled if the individual is to avoid falling into the trap of stereotyped thinking. The corollary is that a manager who is prepared to positively address these issues may operate in an entrepreneurial manner. The manager in this definition is not confined to the private sector, but includes public sector firms. The application of this paradigm of motivation and personality underpins the need to consider environment as advocated earlier by Chell (1991, p67).

However, Chell (1991, p52) states that the problem with a wholesale attack on the conventional approach to trait theory, in terms of defining the entrepreneur, is what to replace it with. Conventional trait theory proposes that by defining the traits, the applicable person will, per se, be entrepreneurial. The critique of conventional trait theory is the issue of independent variable, namely that having these traits does not automatically result in entrepreneurial actions due to environmental factors that limit independent actions. Further critique is made of trait theory in general, in terms of its robustness of application, Chell (1991, p54). The typologies of the firm life cycle are relevant to provide a contextual framework within which the individual operates. Stevenson et al (1989, p7) developed this to define entrepreneurship as being an action or approach to management that is a pursued opportunity, without

regard to resources that are currently controlled. They conceived a spectrum, or continuum of business behaviour, rather than discrete groups of people per se. This contrasts with earlier writers who contend that there is an entrepreneurial class irrespective of the environmental factors. Stevenson et al (1989, p59) identified six dimensions of management style from which they develop two contrasting styles of management, represented in Table 2.2.

Table 2.2: Entrepreneurial management style:

Key Dimension	<div> <div>Promoter</div> <div>Trustee</div> <div> <div>←</div> <div>→</div> </div> </div>	
	Entrepreneurial Domain	Administrative Domain
1. Strategic orientation	Opportunity driven	Resource driven
2. Commitment to opportunity	Revolutionary - of short duration	Evolutionary - of long duration
3. Commitment of resources	Multi staged with minimal commitment at each stage	Single staged with complete commitment upon decision
4. Control of resource	Episodic use or rent when required	Ownership or employment of resource when required
5. Management structure	Flat with multiple informal networks	Formalised hierarchy
6. Reward philosophy	Value driven, performance based, team orientated	Security driven, resource based, promotion orientated

Chell concluded that individuals adopt various postures according to the circumstances they find themselves in and in turn, an observer better understands their behaviour when these circumstances are taken into account, (1991, p67).

Covin and Slevin (1986 and 1989) have argued in support of Stevenson et al (1989), that the measurement of entrepreneurial styles of firms yields more reliable results than attempts to measure the style of individuals. They defined entrepreneurial activity as having three components:

- risk taking
- innovation and pro-activeness
- relationship to organisational structure and performance

From this contingency approach model, Covin and Slevin developed a matrix of organisational structure and management style and it's impact upon the firm:

Table 2.3: Organisational structure and management style and their impact on the firm

Management Style	Organisational Structure	
	Mechanistic	Organic
<ul style="list-style-type: none">• Entrepreneurial	<ul style="list-style-type: none">• Pseudo-entrepreneurial firms	<ul style="list-style-type: none">• Effective entrepreneurial firms
<ul style="list-style-type: none">• Conservative	<ul style="list-style-type: none">• Efficient bureaucratic firms	<ul style="list-style-type: none">• Unstructured unadventurous firms

Although this work is based on small firms, its application to larger private firms and public sector is valid, once the work of Miller (1983) is considered.

Miller’s 1983 study was focused on the behaviour of owner/managers (within the private sector) and she was able to distinguish between three types of firms:

- simple firms operating in a hostile environment, dominated by an entrepreneurial owner/manager.
- organic firms operating in dynamic and unpredictable environments - decision making is decentralised and the personality of the manager is less apparent.
- planning firms are more highly differentiated structurally. These firms tend to be bureaucratic, pursuing systematic, orderly processes of innovation. Their strategy is explicit and well integrated in order to be effective.

Simple firms are so intrinsically linked with the leader's personality, decision-making power and control of information, that almost nothing else seems to matter (1983, p783). Simple firms do not have true parallels in the public sector, as although some public sector firms have dominant figures, these individuals are rarely omnipotent and autonomous in the medium operating term. Organic firms are more orientated towards their environment and attempt to develop the best responses to the needs of the market and their environment. This external orientation influences the strategy of the firm and its range of options. Planning firms tend to buffer themselves from their environment and entrepreneurial activity depends on internal initiative. Miller defines this as a function of their product, market strategy and personality of the leader. Chell (1991, p66) does propose caution with the use of the Miller taxonomy of firms in this manner as although the environment influences the firm, it is still led by

people. The firm that is faced with a range of environmental factors identified by Miller is not automatically entrepreneurial per se, as cogently argued by Drucker and others. However, Miller's classifications are useful to demonstrate the transferability of entrepreneurship and the firm construct to the public and not for profit sectors.

In conclusion, it has already been established that individuals may have a contract of employment and hence be an employee, yet still be deemed to be entrepreneurial. The environment of the firm, in terms of the external influences placed upon it, the leadership within the firm and the structures that it adopts, has a bearing on the firm's collective propensity towards entrepreneurial behaviour. In essence, entrepreneurial firms develop a competitive strategy aimed at making dramatic innovations as a matter of routine, whereas conservative firms innovate only when they are forced to do so. Those firms that fail to innovate at all, ultimately fail. Within the firm, individuals are grouped into teams that operated in either an administrative capacity or entrepreneurial (developmental) capacity and numerous writers have argued that this is a spectrum of operation, rather than discrete groups of actions. The literature, although originating in the small firm private sector, is applicable to the public sector and larger firms following the analysis of the operational context of large firms and the teams that make them up.

2.2.7 Key traits of entrepreneurship from the literature

Having identified that an entrepreneur may either be working for a small firm as owner/manager or within an entrepreneurial team within a larger firm, historical trait theory is still weak in terms of identifying the key characteristics of entrepreneurial individuals due to its grounding within the field of competition theory. A major weakness of the psychological classification approach to describing the entrepreneur is that it does not provide a substantive method of discriminating between the entrepreneurial activities and the functions of owner/managership, Watson (1995). Entrepreneurial activity has so far been described in terms of economic man and ethical man in terms of their role within the economic system. However, many writers have sought to describe the key traits of the entrepreneur in social-science terms. Say's and even Knight's writings are too general when seeking to define individual characteristics that make up the entrepreneur. Their descriptions are more applicable to identifying the class of individuals, rather than their sociological traits that define them as

entrepreneurial individuals. Four key writers, Kao, Maslow, Chell and Casson have sought to describe the personal traits of the individual, as well as the class of people.

In studying entrepreneurial traits, Kao (1989, p4-7) developed the analytical framework of entrepreneurship, creativity and organisation and placed it within the context of the person, the organisational setting and the task to be achieved. Collectively this produced an operating environment, a blend of person, organisation and task that in turn interacts with the rest of society. To avoid confusion between entrepreneurs and entrepreneurial activity, Kao explored entrepreneurship, the action of risk-taking in the mobilising of resources to bring a project to fruition, Kao and Stevenson (1984, p91). From this framework, Kao develops a model of the individual that is heavily influenced by the external factors of society as argued by Knight. His objective was to create a framework of understanding and there from, generate skill flexibility in so minded individuals to develop entrepreneurial tendencies. In placing the individual's actions within a context, Kao believed that society defines the competitive situation and hence influences the operation of individual entrepreneurs. Kao believed that skills could be taught, but only those with certain traits would make truly effective entrepreneurs.

Most writers agree that creativity is a pre-eminent trait, combined with an ability to make and implement judgements and decisions, although creativity should not be regarded as a euphemism for entrepreneurship. You can be creative, but lack the ability to implement the idea Kao (1989, p18). Therefore organisational ability and vision are key requirements. The characteristic of creative people draws from the psychology branch of the social sciences. Maslow (1968) defines creativity as being of two forms, namely 'special talent creativeness' such as musical talent of Mozart, and 'self-actualising creativity', which he believed originated in the personality and was visible in the ordinary affairs of life.

Drucker (1985, p27) added innovation as a specific measure of entrepreneurship. Innovative acts are those that endow resources with a new capacity to create wealth. Drucker states that there is no such thing as a resource until man creates a purpose for it. The concept of purchasing power is the corollary of the creative actions of the innovating entrepreneur. Kuratko and Hodgetts (1989, p122) explored the emergence of creative man in succession to his predecessor, intelligent man. Based on Drucker's work on innovation, they believed that entrepreneurs blended together imaginative and creative

thinking with systematic and logical process ability. Entrepreneurs identify opportunities from problems and they resolve the issues by developing solutions. Kuratko and Hodgetts proposed that problems are to solutions what demand is to supply. In support of Maslow's special and self-actualising creativity, Kuratko and Hodgetts (1989, p124-127) put forward that while there are people with very special gifts, the real barrier to creative, and therefore innovative, thinking are 'killer phrases' that are used in communications. The use of negative message framing in a discourse typically prohibits further development of an idea and this has to be tackled to develop ideas and innovation further. Therefore environmental factors that an individual works within are very relevant.

Other writers sought to explore a more express set of characteristics that could be used to classify entrepreneurs. Timmons et al (1985) summarised the characteristics of the entrepreneur from a review of fifty research studies and it has become the regularly cited benchmark of entrepreneurial traits, as follows:

- total commitment, determination and perseverance,
- opportunities to exploit and goal orientation to make it happen,
- taking the initiative and accepting personal responsibility,
- problem solving and resolution skills,
- seeking and using feedback to learn from,
- low need for status and power, combined with integrity and reliability,
- personal drive to achieve and grow,
- calculated risk taking and risk seeking attitude, and
- internal locus of control.

These identified traits combine Knight's social dynamic pressure issues with the rational economic man view of other writers, notably Schumpeter and the Austrian school. The underlying theme is the entrepreneur's willingness to take risks as previously identified by Cantillon some 210 years earlier. Therefore entrepreneurial individuals cope objectively with setback and are prepared to try again. By being prepared to try again after failure, the locus of control trait implies a willingness to consider risk taking objectively and its implications as a hazard of achieving superior business performance.

The definition of risk taking is relative and indeed Schumpeter considers risk taking to be a characteristic of business ownership and not of entrepreneurship per se. The internal locus of control is further explored by Chell (1991, pp39-42), where the locus is described as the belief that the individual controls and or influences their own destiny. However, Chell does identify that research to date on the locus of control has produced conflicting results. However, the identification of traits is not entirely satisfactory, as the traits are sufficiently generic to describe managers as well as the entrepreneur. The identified traits also have gender and cultural bias Kao (1989, p98) against non-American/European men and hence may not be universally transferable. Bhidé (1994, p150) argues that too much rigid planning, as typified by larger organisations, including those in the public sector, can actually delay decision making to such an extent that entrepreneurial opportunities are missed. Profitable survival, Bhidé argues is a function of deriving some combination of a creative idea with the superior capacity for execution. Bhidé concludes (1994, p160-161) that entrepreneurs may have a plethora of personality traits, but as a group, they share a number of characteristics:

- handling analytical tasks in stages, breaking down the decision process into steps that limit exposure and hence risk, test ideas and speed up the decision process,
- plug holes quickly when problems or risks develop by looking for solutions or being prepared to write off the proposal rather than pursue it for illogical reasons,
- evangelical investigation that involves pulling others into the decision process. Market research is used to test ideas proactively, rather than in a clinical manner. Research is an opportunity to test and develop the idea, not simply to evaluate the current idea in its current form. Effectively this is a learning organisation approach to market research, and
- smart arrogance, defined as the entrepreneur's willingness to work on outline plans and ideas that involve a degree of risk taking. The arrogance in their ability to make judgement calls ahead of their peer group must be able to stand the test of adverse performance and be backed with a degree of humility to drop poor ideas once proven to be poor.

In summary, the literature demonstrates that entrepreneurs do not display common, unifying characteristics per se and in the modern work place, it is necessary to place the individual into the

context of their operating environment. Drucker, Casson and others have argued that in addition to individuals in small firms, larger organisations exhibit entrepreneurial traits via teams.

2.2.8 Trait theory and the firm brought up to date

Casson (1995, p129) sought to bring together the social science dimensions of entrepreneurship and economic modelling. He identified that the key service supplied by entrepreneurs is quality of judgement; a capacity that is often unique and allows monopoly or monopsony profits to be made in the short-term. He further contends that even when information flows in the market place are good, the entrepreneur may still make excess short-term profit due to their greater tolerance to risk taking. Casson (1982, p35) summarised that the entrepreneur is someone whose judgement is different from that of other (mainstream) people, believing that without intervention, the wrong decision would be made. He goes on to list the qualities of entrepreneurship and their nature in terms of scarcity:

Table 2.4: Casson's analysis of entrepreneurial traits (1982, p36)

Personal Quality	Essential to all non trivial decisions	Scarce and unequally distributed	Difficult to screen for	Capable of enhancement	Essential, scarce and difficult to screen for	Scarce, difficult to screen for and can be developed
Self Knowledge	Y		Y			
Imagination	Y	Y	Y		Y	
Practical Knowledge	Y			Y		
Analytical Ability	Y	Y		Y		
Search skill for ideas	Y		Y	Y		
Foresight	Y	Y	Y	Y	Y	Y
Computational Skills	Y	Y		Y		
Communication Skills	Y		Y			
Delegation Skills		Y	Y	Y		Y
Organisational Skills		Y	Y	Y		

The implication of the above skill/quality matrix is that the entrepreneur needs to be a generalist rather than a specialist. Casson (1982) states that the qualities cannot all be acquired or developed. Some skills, namely imagination and to a great extent, foresight are innate. Other qualities, such as computational and analytical skills, can be developed via education, training and experience. The traits defining the entrepreneur to date promote the construct that the entrepreneur represents a select group of individuals who create or exploit opportunities. In contrast, Drucker did not believe that

entrepreneurialism was restricted to one group of individuals. He identified that individuals were not born with a specific set of characteristics, but that these were developed.

Drucker's (1985, p19) work effectively proposed that Say had defined entrepreneurial activity, not the entrepreneur. Since Say's introduction of the phrase entrepreneur, Drucker argued that the entrepreneur (the person) and entrepreneurship (the action) were regularly confused. New business start-ups are not entrepreneurial per se, especially if they are an effective mainstream replication of a tried and tested idea, e.g. the opening of new McDonalds franchise restaurants by a new businessman. The entrepreneurial event was McDonalds' positioning of the firm in the market place and using franchising as the business model to expand globally. This Drucker would define as being entrepreneurial. The new franchisee may display the social traits of being an entrepreneur, but he is not acting as a Schumpeterian entrepreneur by opening a McDonalds restaurant as he is not an innovator who identifies new combinations etc and exploits their potential before others do. Drucker argues that an entrepreneurial ethos can be developed within a firm or organisation that promotes entrepreneurs to work. Applying entrepreneurs to a firm will not automatically result in an entrepreneurial firm.

Top management people in most organisations, irrespective of firm size or whether they are in the private or public sector, typically have developed their skills in one function or area, Drucker (1985, p35). This area is the one that they feel at home in and this creates orthodox behaviour and opinion that influences their way of thinking. To work outside this 'natural field' can create problems, as disciplines outside the professional's natural field of work can be perceived as an alien concept that is at times a very disconcerting experience. Hambrick's (1995, p112-114) study of chief executives and the problems they face with their top leadership teams identified five reoccurring performance issues:

- inadequate capabilities of an individual executive,
- common team-wide shortcomings,
- harmful rivalries,
- groupthink, where everyone acts and consequently operates in too harmonious a manner and hence stifling innovation,
- fragmentation, the opposite of groupthink.

Hambrick identified fragmentation as an under researched area due to its enigmatic nature and this concept has great relevance to English FE colleges. The incorporation of colleges in 1992 completely changed the *raison d'être* of educational management in what had been for most colleges, a relatively stable political working environment. Hambrick (1992, p117) argues that fragmented teams are not designed that way, but evolve due to subtle degradation of performance and identified a number of themes of such deterioration in performance:

1. The larger the firm, the greater the physical distance between team members, the larger the manager's own sub units and hence the more time they will devote to managing the internal affairs of their caseloads. Typically most Senior Management Teams (SMT) in FE have become smaller over the last ten years.
2. Product diversity matters, the more diverse, the less interdependence between managers due to role diversity. Monotechnic colleges such as sixth form and agricultural colleges with a single emphasis will present less diversification than a large general FE college that seeks to serve a very broad and diverse client group. In addition, complex firms have more complex performance targets to achieve and typically this places less reliance upon co-workers to assist in their achievement, Pitts (1980).
3. Firms that compete primarily on low costs, delivery of tried and tested products with an emphasis on efficiency have fewer interactions amongst senior staff as opposed to those that compete in product-market innovation, with frequent adjustments to the product/service mix. In the efficiency driven firm, business units are buffeted from instability, Miles and Snow (1978).
4. Long tenured teams develop homogenous mindsets and in turn tend to undertake little strategic change, Weirsema and Bantel (1992).
5. Long tenured teams expect and are given more autonomy, especially late in the tenure of a chief executive's term of office.

Hambrick (1995, p119) concluded that cohesion in top teams can give way to parochialism, unity gives way to fiefdoms and interdependent action gives way to parallel and piecemeal action. The competitive market pressures can be so great in the modern FE environment, that SMT members cannot be allowed to do their own thing. Therefore inspirational leadership from both individuals and the team they form is required to avoid the problems of fragmentation.

Challenging traditional management practices develops the entrepreneurial ethos of the individual, Drucker (1985, pp30-32). The successful entrepreneur, irrespective of the personal motivators, seeks to create value and make a contribution to their firm. Systematic innovation is in Drucker's view a purposeful and deliberately organised search for change and its exploitation. Drucker offers seven sources of innovative opportunities:

- the unexpected event, failure or success,
- the incongruity between reality and the working assumption,
- innovation based on process need,
- changes in the market/industry structures that catch all parties unaware,
- changes in demographics of the market,
- changes in perception, mood and meaning of the market, and
- new knowledge and inventions.

In conclusion, Drucker (1985, p129) surmises that entrepreneurial management is different from administrative management, requiring systematic, organised and purposeful behaviour. A business that wants to succeed will have to build entrepreneurial management into its own systems (1985, p161). The construct applies to all parts of the market.

2.2.9 Conclusions of the literature review of the entrepreneur

The literature has identified two main types or levels of entrepreneurship, namely high-level entrepreneurship that involves integrated system-wide co-ordination and low-level entrepreneurship that is concerned with more partial and limited forms of co-ordination. Schumpeter, Drucker and Casson are proponents of the former type, with an emphasis on the entrepreneur's role with the system-wide macro operation of the market. This contrasts with Kirzner and Knight's emphasis on small changes to the system by firms operating in a free market economy. Casson (1990, p90) observes that both levels of entrepreneurship are crucial.

Whereas the early literature focused on the individual, small firm entrepreneur, theory has evolved to place an emphasis on the importance of the entrepreneurial team within larger organisations. This evolution in the literature is important as the industrialisation and the current trend of globalisation has seen the creation of larger trading firms and the emergence of significant public service organisations that spend a significant proportion of the world's GDP. The division of the work force into specialised teams is common to public and private firms. The literature shows that management hierarchies are generated, with entrepreneurial activity being concentrated at the top in the low-regulated, non-bureaucratically focused environment, whereas entrepreneurial individuals are diffused or absent in the more highly regulated and bureaucratic environment.

The social science literature demonstrates that individuals are highly influenced by their social and operational environment. Modern society is more structured and organised but the key role of the entrepreneur in terms of being the identifier of innovation has not lost its relevance. It has simply been updated for today's operational context, namely regulated markets, large firms, teams, public sector firms and legal contracts that regulate the conduct of individuals and organisations.

The above literature is set against a backdrop of relatively free markets, with the entrepreneur working in the private sector for private gain or profit. The transferability of this literature to individuals working in the public (government co-ordinated) sector needs to be explored further, as the most obvious incentive, monopolistic profit is not a key motivator, or indeed a possibility for many individuals working in the public sector. Maslow has provided an explanation for why people work for other motives than profit and Casson forwarded the concept of personal status (1995, p231), but it is Drucker's work that provides a gateway for the application of entrepreneurial theory to managers in the public sector. The next section reviews the historical role of the civil servant within the further education service, prior to considering the application of Drucker's work to the public sector manager.

2.3 The entrepreneur and the education civil servant

The Collins dictionary (1985, p279) defines a civil servant as a member of the service that is responsible for the administration of government. Members of the service typically have no political allegiance and are generally unaffected by a change in (political) government. Government is further defined to include the provision of public goods such as education. Until the conservative governments

came into power in the OECD nations during the 1980s and the subsequent privatisation of larger portions of the public services, few commentators would have argued that managers of the civil service were expected to operate in an entrepreneurial manner. The management of state funded education is an extension of the civil service being organised by professional managers on behalf of the state as directed by politicians. It is within this context that the application of entrepreneurship to the public service of further education is explored.

2.3.1 The civil servant and educational management to 1992

The organisation and management of the English further education system stems from the Education Act of 1944 and lasted until the Education Reform Act 1988 and the subsequent Further and Higher Education Act 1992, which together completely revolutionised the organisation of the service. The historical context of the 1944 Act is important as it created the key governance and management paradigm upon which the service was built and organised for nearly 45 years.

The 1944 Education Act created the need for consensus between the Secretary of State for Education, who financed the majority of the sector, and the Local Education Authorities (LEA) who were responsible for policy implementation. The LEA was part of the elected local government and as such, semi-autonomous from the Secretary of State in the implementation of detailed policy. The key political governance paradigm was articulated by Raison (1976, p8) as follows:

"The education service is run as a partnership between the Secretary of State and the local authority is a truism: as everybody knows, it is meant to be a national service, locally administered."

The policy approach was perceived as being 'client focused', with the learner's experience being central in all decisions, with the consideration of the cost per learner of the service being of low priority. In addition to these two political participants, the teaching profession represented the third dimension. The teaching profession implemented the educational system and was typically represented by strong staff unions and professional associations. Policymaking was a function of the interactions of these three interest groups. The aim of the tripartite arrangement was to promote a consensus amongst the teaching professionals, the LEA and the central political establishment. The Secretary of State for

Education was the guardian of the system, establishing what was to be taught and to what standard. In turn, the Secretary of State left the implementation and the administration of policy to the local democratic government framework supported by the informed advice from the teachers, typically via their unions. This arrangement became known as the triangle of tension, as each partner held different views of why and how the service should be operated, Ball (1990, p3).

Since the 1944 Act, the teachers and their unions systematically extended their political role and influence on the management of colleges. This influence reached such a level that Shirley Williams as Labour Secretary of State in the mid 1970s stated that the central state did not really have control, but indirect influence over the orientation of the service (Ball, 1990, p105). The education service became synonymous with restrictive employment contracts, long holidays, low productivity levels and extra contractual payments or allowances for additional duties. The need of the employee was perceived as being put before the need of the consumer with budgets were being used to cross- subsidise wages, irrespective of market needs. The tensions between the three groups were replicated at the centre, within the Department of Education (DES later to become the DfEE). The conflicting views were between the politicians, the central professional civil service and the important HM Inspectorate of Education (HMI), the senior representatives of the education profession. Over the years, these differences in approach become more acute so that by the 1970s there was a breakdown in the consensus of how the service should operate. The conflicting views within the central Department for Education by the 1980's were represented as follows:

Table 2.5: Department of Education ideologies, beliefs and values in Further Education, (Ball, 1990 p5)

Educational Ideology of Central power group	Beliefs	Values	Tastes
Politicians (Secretary of State)	Market focus	Freedom of choice	Independent schools
Central Policy Advisers (Civil Service)	Good administrative maintenance and systems	Efficiency	Central control via exams and tests
Professionals (HMI)	Professionalism, experience and practice	Quality	Impressionistic evaluation

The conflict between the groups was centred on the Secretary of State's decreasing ability to make the centre's policies work at the local level. Cantor et al (1995, p21) noted that the new Conservative Government of 1979 believed that the use of the LEA to run the FE sector on behalf of the state

resulted in the development of a framework that was rigid and unresponsive to change. The LEA created local market inequalities based on political needs, rather than economic or resource needs. The conservative reformers argued that the 1944 Act's consensus paradigm had resulted in education being entrusted to 'amateurs' in local areas, elected by party allegiance (Lawrence 1972, p162). The original system proposed by the 1944 Act was based on three distinct parties, whereas over time, the Centre perceived that the LEA and teachers had resolved their operational differences to the extent that they were politically united on most issues. As a result, teachers' unions had increasing influence over the management and organisation of colleges via the LEA. By the 1970's, the balance of power had shifted away from the Centre to the LEAs and the staff unions, (Ranson, 1985, p110). Cantor (1986, p40) commented that the voluntarism of the educational professional had not developed a post-16 educational system that matched OECD contemporaries. This created a crisis of confidence in the Centre's judgement of the teaching professions and LEAs that became known as the critique of the educational 'secret garden'. Ironically James Callaghan, Prime Minister of the Labour Government started this process of destabilising the power base of the teachers in 1976 with the 'Ruskin College' speech. It was his successor, the Conservative Margaret Thatcher, who was to capitalise upon it.

The state's desire for change could not be effected under the 1944 Act's management paradigm. Thereby the new Conservative administration sought to systematically re-engineer the education service by removing the LEAs from control of post-16 education and marginalising the professional power and influence of the teachers. The 1988 and 1992 Education Acts were based on two tenets of faith:

1. There was a commitment to free market ideology to raise standards that were judged to be too low. This would be achieved by placing a greater emphasis on enterprise and competitiveness on the part of individual institutions.
2. Many LEAs (and in some politicians view, the majority) were politically misguided and ideologically unsound. Such organisations were viewed as an active bureaucratic hindrance to raising standards in the FE sector.

The changes proposed dealt with the fundamental block that central Government perceived existed, namely that the professionals (local Government officers and some senior staff in Colleges) were no longer disinterested promoters of the public's interest, but were self-serving status groups (Loughlin,

1996). One of the key implications of the changes was the fundamental transformation of the operating environment for the senior managers that operated in the colleges and the challenge to the historical power dominance of the teaching staff trade unions

The radical restructuring of the management of the service was planned to result in the transformation of managers into enablers and supporters, rather than supervisors and message carriers (Flynn 1992). Free of their interventionist LEA and devoid of strong policy management from the centre, college managers were able to operate in a different way for the first time since the 1944 Act. The aspiration of the central state was that entrepreneurial endeavour would now enter the FE education service which was perceived as stale, bureaucratic and self-serving. This started with the Local Management of Colleges (LMC) in 1988 and was followed by the incorporation of colleges in 1992. The first step was to change the staff union's right to central pay bargaining. In the period 1993 onwards, there were no nationally enforceable pay deals, merely non-binding recommendations by the College Employers Forum (CEF). The fragmentation of national pay bargaining allowed college managers to drive through change in response to policy steers provided by the state via the FEFC's funding formulae. The power of the trade unions was changed from being gatekeepers of change to moderators of change. Unions still retain power in the late 1990's as witnessed by the case study work of this thesis, but that power was now expressed as a brake to change rather than a block as experienced in the late 1970s and 1980s. One of the most radical changes has been the introduction of instructing delivery staff, who are paid at a lower salary and work more student contact hours than a traditional lecturer. This deskilling of some of the roles of the academic/vocational lecturer would have been unthought of in the heady days of the trade union power in the 1970s, (Flynn, 1992).

2.3.2 The application of the entrepreneurial construct to the public sector

Say's work, written at the time of the First Empire in France, was concerned with the economic sphere of working as represented by the private sector and merchant classes. Indeed the public sector as typified by the development of the Welfare State was some 100 years away. Drucker (1985, p24) commented that Say's concept of economic sphere of working could be applied to public goods, such as education, as the resources applied to generate the outputs are economic. The public education business, like its private enterprise peers, co-ordinates labour, assets, information and financial capital

to generate the product that is its output. The definition of output is problematic and as such, placing the workings of the public sector entrepreneur in the context of neo-classical market operation theory is difficult due to the absence of profit as a driver of entrepreneurialism. None the less, Drucker argues that the (public sector) education entrepreneur does very much the same thing as their private firm peers. UK research in the private sector has demonstrated that innovative organisations financially outperform their non-innovative counterparts (Geroski and Machin, 1994). Their work emphasised the significant financial benefits that occur long term with innovative processes compared to short-term gains derived from innovative products. Their work concluded that the long-term benefits were derived from the organisation of the company's research, its integration into the service delivery chain and the necessary flexibility and adaptability to the needs of the market. Their work supported the market orientation construct from the innovative and entrepreneurial research aspect of their work. The recurring dilemma for the public sector manager is defining their overriding commercial objective when delivering the service, as the private sector construct of maximising profit/utility is not readily applicable.

Sir Ron Dearing (1986, p3) as chairman of the public sector owned UK Post Office during the 1980s counselled the state to provide a clear and stable perception of the role of the public corporation. The corporation's management would convert this state-defined framework into consistent and communicable policies. In the absence of clarity of purpose, managers will have a dysfunctional view of the political objectives of Ministers and this will be converted into poor managerial focus for the corporation. This poor focus will result in the stifling of innovation. In support of Drucker's argument that large and public sector firms can be innovative, Dearing demonstrates from experience that the public sector can be innovative, creative and consistent when given a clear operational framework (1986, p13). Dearing concludes the key complication for the public sector firm is the involvement of the state. The state is a fundamentally more complex and at times paradoxical stakeholder than the private sector shareholder. The state is shareholder, performance regulator, banker-cum-investment controller and the minder of the nation's best interests (1986, p10-11). The (pure) application of the private sector model to public services is, in the view of Dearing, naïve and unrealistic. However he argues that the traditional restraint of the public sector model of management, control and leadership must be addressed if performance is to be maximised and costs minimised.

The role of the public sector firm has been radically redefined in the 1980s. The systematic privatisation of what had been perceived as public industries and services has been a global activity and has now been progressed to such an extent, that the nationalisation of the 1950s and 1960s can not be repeated. The rapid changes in today's society require all organisations to respond rapidly and therefore all firms need to be entrepreneurial and innovative. Public sector firms have historically been perceived as self-perpetuating omnipresent bodies that have a function irrespective of their leadership and/or clients. Today's view is that even moribund institutions are composed of teams and few teams can ignore the speed and scope of systematic change within society. Neave (1988, p7) commented that policy that was created as a short-term response to fiscal problems at the start of the 1980s, has now assumed a long-term strategic thrust. Reform and privatisation of the public sector has been a global experience and has left no aspect of the public service unaffected. This change has been accompanied by the rise of the Evaluation State, whereby the state has withdrawn from the murky plain of detail, with the centre identifying the system goals and quality outputs that it requires. In turn, using the policy levers of political control and funding, the periphery is required to operationalise and implements the centre's framework (Neave 1988, p11-12). In the further education service, Kedney and Jeans (1993, p345) commented that after two decades (the 1970s and 1980s), little progress or radical change has occurred in the relationship between the funding mechanisms used by the central government and the further education service's responsiveness to the state's policy steers. They concluded that competition could be a powerful force particularly in the short term in such a loosely linked service as that of English further education. The radical reform of 1992 brought competition, employment contract reform and the development of systematic service quality into the operating environment in a consistent and permanent manner on a national level.

The logical extension of the rise of the Evaluation State is a clearer expectation of the role of the public sector firm in terms of its outputs and the removal of the detailed interference from the centre in the operational meeting of targets by individual organisations.

2.3.3 Entrepreneurial barriers for the public sector manager

A fundamental problem for education managers has been agreeing what their common expected objectives and outputs are. Lamb (1987) in a seminal article, identified that public sector bodies had

confused objectives, vis-à-vis their private sector peers. Public firms typically had a plethora of goals and a range of constituents including users, funders, politicians, public officials and the managers within the public firms themselves defined these objectives. College management had, until 1992, been pulled between their students, the LEA and the expectations of the centre (DES). When combined with the teacher's aspiration of a self-regulating and self-managing professionalism, as opposed to directed service orientation, the managerial focus of most colleges has been confused (Levacic et al 1989, p160). The role of academic professionals, aided by their strong trade unions, came into conflict in the late 1980s with the increasing empowerment of college managers under LMC. This reached a crescendo upon incorporation in 1992, when the mediation role of the LEA between the management and those being managed was removed (Bush 1995, p13).

Hughes et al (1985, p275 and p282) had identified that all teachers have managerial as well as academic responsibilities. Those teachers that acknowledged their enhanced role vis-à-vis their historical role model were identified as 'extended professionals'. Those that did not, or could not acknowledge this responsibility, were said to be acting in a 'restricted professional' manner. This division into two groups was similar to the early classifications identified by Say and Knight for entrepreneurs. The ability for college managers to directly negotiate reform to the employment contract changed the balance of power in the majority of colleges, in favour of the entrepreneurial elements, at the expense of the conservative status quo. However, it should be noted that the majority of college management was drawn from the very group of people that they were now seeking to reform.

Drucker explored the forces that impeded entrepreneurship and innovation in public service institutions, believing that these factors are inherent, integral and inseparable from the service (1985, p163). In this context, the term 'firm' is synonymous with the college's controlling managers. Drucker contends that the historical activity of public service firms is the creation of empires that want to do more of the same with the minimal level of accountability and direction from the centre. These empires are very resistant at abandoning anything they are currently doing and are typically led by managers promoted from the core service profession, i.e. teachers for FE colleges. Drucker identified three main reasons why the existing public firm presents a larger obstacle to innovation than its private peer.

1. The public firm is based on a historically derived budget that is not necessarily paid for from results. The greater the volume of work, the larger the firm's budget and the larger its influence within its environment. The larger the firm, the more politically important it is to the politician. Managers in the firm resist hiving off activity as this diminishes its budget and thereby hence its importance and resulting influence.
2. The public firm services a plethora of consumers, many of whom do not directly pay for the firm's services. These consumers are stakeholders and are reluctant to lose their share of the public firm's services and will seek to exercise their veto in whatever form they can. New initiatives are difficult to adopt, as the current consumers must not be alienated or perceive that their stake is being deprioritised. As the firm's funds are not directly related to the provision of the service, the consumer groups argue that they pay for the service via their general tax receipts and hence are losing out if their service is diminished or eliminated.
3. The public firm is established to 'do good' and fill a gap that is not met by the private, commercial sector. The managers and staff of the firm perceive themselves as part of a moral absolute that is providing a service that can not be measured in economic terms alone. Such argument introduces abstract measures such as quality of service, that are hard to quantitatively evaluate or challenge.

Drucker (1985, p165) comments that public firms as represented by their management, are out to maximise, rather than optimise their use of resources. With the abstract definition of objectives for the service, the maximisation of the business goals by the managers are harder to achieve. Indeed it can be paradoxical because as the closer the firm gets to maximising the goal, the unit costs rise and the harder it becomes to reach that goal, as either the firm has to secure more funds or deprioritise some other activity, either of which are hard to achieve. Drucker further contends that the public sector firm will not change its method of operation. It will strive even harder to achieve the improbable and be resistant to new ideas as it seeks to complete its current. Drucker observes that the inertia of existing enterprises to pursue orthodox behaviour is why innovation comes from new ventures rather than from existing ones.

The historical organisational paradigm for the efficient delivery of public services has been the use of bureaucracy (Lane 1987, p2), but the key critique of bureaucracies is their inability to respond to the challenge to evolve quickly to the needs of their consumers in a dynamic and evolving market.

Bureaucracies are seen as organisations with an excessive adherence to rules and routines and tend to lack the imagination to evolve and adapt to change. They are essentially conservative organisations that when threatened, entrench and becomes less flexible (Inglis, 1993). In some respects this operational paradigm is why the application of entrepreneurship to public service managers is perceived as difficult or impractical, unless it is directly forced upon the firm by creating a crisis, such as cutting their budget, or expanding their obligations without new resources as contended by Habermas (1976). Just such a crisis occurred in FE in 1992 with college incorporation, accompanied by a rapid expansion in student numbers and significant cuts in the unit of resource per student in the period 1993 to 1997.

The use of private sector style remuneration reward systems is strikingly absent in further education, as the perception that the use of taxpayers' monies to fund extravagant reward for public employees is typically unacceptable. This limitation on public firms to developing private sector remuneration schemes with suitable financial motives for enhanced performance is inhibited subtly via peer pressure from funding quangos. Paradoxically, the FEFC (2000, p6) stated that college merger activity in the FE sector was hampered by the lack of financial incentives for Principals to pursue mergers. At the same time, the FEFC has intervened to reduce exit payments to Principals for those leaving the sector. Part of the reason for blocking high remuneration packages for public sector workers is the perception that the level of technical competence and risk required of the public worker is lower than that of their high-risk private sector peer. The construct that public sector is not complex has been challenged by numerous researchers and the real comparator has developed to embrace the concept of relative complexity.

Finkelstein and Boyd (1998, pp181-183) contend that oligopolistic and highly regulated (private sector) industries present a less challenging environment for CEOs and hence boards should not need to pay as much for managerial discretion powers within their senior managers. Such industries are not confined to previously nationalised industries that have now been deregulated. Finkelstein and Boyd (1998, p194) conclude that agency theory indicates that boards monitor and discipline the CEO to

ensure that the executive operates in the best interests of the organisation. However, this monitoring tends to encounter problems when the CEO has high levels of discretionary powers. These include the necessity to develop an evaluation framework to specify appropriate levels of behaviour and the ability of the board to fully comprehend the range of options open to the organisation, without unduly hampering the speed of decision making. Casson (1982 and 1991) explored the concept of entrepreneurial profit and its adaptation to the public sector manager. He proposed that a successful entrepreneurial leader act as an optimising agent. Such a role makes the individual the environmental assessor and manipulator of incentives for the group of people that they lead. Like Cantillon and Say's earlier classification of a specialist class of individuals, there are those that lead by spotting opportunities and delivery of the mission and there are those who are led to deliver this vision or entrepreneurial strategy. Casson's construct is based on the axiom that individuals have different perspectives on 'guilt' or sensitivity to do something, e.g. not to let the students down etc. Casson concludes that a leader that can persuade others to participate in the way that the firm requires, together with being able to provide the rewards required by employees (e.g. pay awards, status, promotion opportunities etc), should achieve a successful delivery of their entrepreneurial strategy. Boyett (1997, p81) suggested that public sector leaders have self-selected to work in the public sector and hence are more likely to have a higher level of personal sensitivity. In turn they will seek to mitigate this form of motivational leverage by reducing their manipulation by entrepreneurial managers.

Economic theory assumes that rational actors reach optimal decisions by considering firms as constraints which themselves are the object of calculating considerations (Vanberg 1994). This economic construct assumes that political interference in the form of operational constraints are minimised, whereas the rise of the Evaluation State has seen an increase in the political control and direction of the work of the public sector firm. Operating within the state environment imposes a set of politically orientated institutional rules upon college managers and governors. Beckert (1999, p779) observed that under market conditions, institutional rules and strategic agency (the drive for business goals) are two co-ordinated mechanisms that destabilise each other. The violation of institutional rules may bring extra business performance and Beckert observes (p780) that rules often conflict and cause problems for managers, especially in complex operating environments. DiMaggio (1988, p15) developed the construct of the institutional entrepreneur, an individual who organises resources to facilitate change and socialise the effectiveness of other managers, using their interpretation of the

institutional rules as the key management paradigm of the firm. The differentiation between managers and entrepreneurs (leaders) in the firm was represented by Beckert (p788) as Figure 2.1.

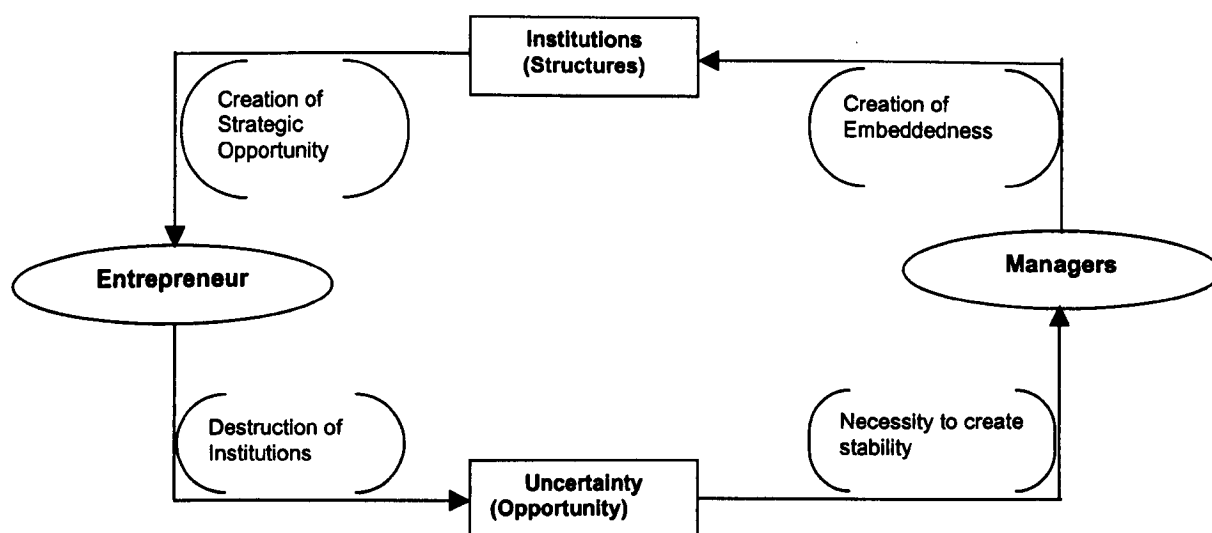


Figure 2.1: Entrepreneurs and Managers in the context of institutional rules (Beckert, 1988, p788)

The use of detailed and complex institutional rules is typical of the UK Further Education environment which has adopted a very convoluted funding model for measuring and resourcing student learning activity. Over time, these rules become too difficult to use. In most environments, the conflicts and ambiguities within institutional rules is such that Swindler (1986) proposes that this creates a notion of culture as a ‘tool kit’ from which actors select different pieces to assemble a course of action. The critiques of the failed Halton (FEFC) and Bilston (NAO) Colleges found that managers had developed creative, and for those colleges, disastrous interpretations of the complex funding methodology faced by colleges in the mid 1990s.

In conclusion, entrepreneurship theory promotes the ability to work innovatively and quickly, whereas traditional governance paradigms of the public sector emphasise the need for accountability and consensus. This dichotomy of dominant paradigm presents operational problems for managers and their supervising boards of governors.

2.3.4 The application of entrepreneurship to further education

Researchers and central government identified the inertia of public firms and their management as a serious operational problem. In the early 1980s the relative ineffectiveness of the FE sector to

improving the quality of youth apprentices vis-à-vis OECD contemporaries led to the removal of the management of youth training monies from the LEAs to a new agency, the Manpower Services Commission (MSC). The MSC represented the interest of the central state and deployed the resources to Local Education Authorities for actions against an agreed three-year plan. The transfer of resources was made by way of contract and was accounted for by way of a specific audit of inputs (resources) and outputs (qualifications and volumes of training). The key difference between pre-and- post-MSC intervention was the specific accounting for outputs on a significant central government allocation. The MSC was operated nationally and was not judged to be a great success primarily due to its inability to make material changes in the effectiveness of the training systems. However, this approach was perceived to have had a positive impact on the sector's normally indifferent approach to the implementation of the central state's policy wishes. Sir Roy Harding (1985, p180) stated that the actual plans themselves were not very important, but what was important was the work done in bringing many people together to agree the detailed actions that would be carried out at the local level with the agreement of the state. He went on to observe that there is a need at the local level to react quickly and positively to the evolving needs of the workforce and that the current operating structures are not flexible enough. The state concluded that more fundamental change was required to affect the desired level of responsiveness in colleges. The MSC experience was a key driver in the removal of LEAs from operational control.

To break the cycle of mediocrity, Drucker (1985, p167-171) advocates the adoption of the following entrepreneurial policies to break the constraints of dogma so as to promote innovation amongst the firm's entrepreneurial managers.

1. Clear definition of mission expressed in clear and concise language, supported by qualitative and quantitative measures, is required.
2. The firm should support goals that are expressed as outcomes, not programmes of activity. Once the volumes of outcomes have been achieved, the firm will know that it has been successful. Programmes without outcomes will result in the never-ending quest for total achievement of something that cannot be achieved. The programmes are means to an end, not an end within themselves.

3. Failure to achieve objectives should be considered a market signal that the objective or the method of achieving the goal is wrong. It is not rational to consider that failure is a signal to try again and again.
4. Change needs to be viewed as an opportunity rather than a threat. Operational policies and practices need to promote the continuous search for innovative opportunity.

Drucker argues that innovation is critical within public sector bodies, as they are too important to be ignored, consuming substantive proportions of the GDP and employing large numbers of people. Whereas Casson is a strong advocate for the privatisation of state services (1995, p206), on the basis that state-owned enterprises along with their professional regulators cannot be trusted to operate in the public interest, Drucker believes that a substantive proportion of public goods will continue to remain provided by public firms (1985, p170). With the rapid change in society public sector firms will have to learn to adapt to the social, economic, demographic and technological changes that will occur in the first quarter of the twenty-first century. Firms that do not evolve their mission will be by passed as ineffective and will ultimately fail. Failure will result in either the absorption or abolition of the firm. To avoid this, public firms will have to adapt their missions, redefining their clients, services, pricing structures and in some circumstances, abandoning parts of their current mission.

2.3.5 New managerialism in the public sector

A new form of public sector management style has emerged in the UK, starting in the early 1980s with the central Civil Service and spreading to embrace Local Authorities, the BBC, the health and education sectors and even the armed and uniformed forces. Pollitt (1990) and Flynn (1993, p167) put forward that new managerialism could be understood as a package of management techniques that include:

- assertion of managerial control and the managers right to manage.
- creation of a disciplined, flexible workforce, using flexible/individualised contracts, staff appraisal systems and performance related pay.
- strict financial management and devolved budgetary controls.

- the efficient use of resources, with an emphasis on productivity, accountability and evaluation of use of those resources.
- extensive use of quantitative performance indicators.
- the development of consumerism and the discipline of the market.
- the manifestation of consumer charters as mechanism and open accountability to the public.

Typically new forms of independent public auditing or inspection accompanied new managerialism e.g. Ofsted for schools. Metcalfe and Richards (1987) observed that the philosophy underpinning new managerialism was that good management will deliver value for money public services. Value for money is defined as the efficiency, economy and effectiveness of resource application. The corollary from this philosophical standpoint argued by John Major (1989), who was later to become Prime Minister in 1990-1997, was that prior to the reforms imposed by the Conservative government of 1979, the public sector did not have good managers, but good administrators. The organisation of the public sector as a whole, Major argued, was pernicious, making the public sector a preferential creditor of the economy as a whole, irrespective of its' necessity or value for money. This philosophy was taken further by the succeeding Labour government of 1997, which introduced the 'Best Value' management process. State organisations were required to fundamentally challenge the need to provide the service using evidence for their justification and then achieve value for money in procurement if the service was required. This process was subject to external audit. The practice was extended to include schools, but not directly to FE or HE institutions, as the concept was applied to the funding agencies that funded the colleges and universities.

The funding regimes imposed by the state in the 1990s required a new breed of public sector manager to deliver the new *modus operandi*. This new cohort of public sector leaders tend to view the provision of public goods as a tangible service industry rather than the provision of an abstract, morally based service that was not based on cost control and service completion. In the higher education sector, Miller (1991) identified that this was occurring and Parker and Jarry (1995) argued that the service was being transformed into a neo-Fordist service, moving away from a specialised service with strong practitioner led professional control, towards a Fordist mass production arrangement they termed the

'McUniversity'. The paradigm underpinning this position is the uniqueness of the professional teacher's ability to impart knowledge to the learner and the de-professionalisation of that learning methodology.

This paradigm of the uniqueness of the professional teacher's abilities has been challenged on the basis that it is restrictive and outmoded. Furthermore, the localisation of learning strategies is an anathema in the provision of nationally accredited learning. Information Communication Technologies allow learning materials to be shared and accessed on a global basis. Derber (1983) commented in the US, that the computer and its associated technologies could mechanise much of the professional's work, leaving the innovative and unique work for the true specialist professional. Wilson (1991) writing about the UK higher education sector, argues that the de-skilling of the learning process is a reallocation of work loads between professional academics and other grades of staff for the more routine, lower levels of tasks. In effect, the de-skilling or de-professionalisation process has seen the removal of a pluralistic approach to staff contracts and the introduction of the flexible firm construct that has a hierarchy of staff, remunerated at different pay rates. The process within higher education is replicated within further education. Attempts by professional associations and trade unions to halt the changes have typically resulted in the political marginalisation of that body. Successive governments, irrespective of political hue, have not restored the removal of trade unions' power by the Thatcher government of 1979-1990.

The traditional view that public sector management is about highly ethical behaviour and that private sector commercialism, as represented by entrepreneurial behaviour of the private firm, is not so ethical, is no longer a valid construct. Over the past ten years, larger private corporations have had to develop and adopt ethical codes of conduct as typified by the Cadbury and Greenbury governance reports (Vallance 1999, p202). In comparing the NHS experience of ethical approaches to customers with that of private companies, Vallance comments that public sector agencies can learn from their private peers. Vallance (1999, p203) observes that the private sector has the ability to operationalise their values and link them directly to the service, supported by a customer care and orientation ethic. Vallance observes that in the NHS there is still a preoccupation with the custom of service delivery dominated less by a commitment to patients rights and choices, than by an assumption that consumers will accept what they are given by the professionals. This construct is applicable to the work of the education service. Vallance concludes (p206) that although the (NHS) service is a not for

profit business, it does not absolve managers from the responsibility to be explicit about where they are heading and how they intend to get there.

2.4 Entrepreneurialism, innovation and market orientation

The literature review has followed the theory development of entrepreneurialism from the classic model of the 'heroic individual' to the modern construct of the firm and entrepreneurial teams. Throughout, the underpinning construct of entrepreneurship, namely the adoption of new combinations of resources in the market place to meet emerging changes in new or existing markets, has not changed, (Lumpkin and Dess 1996). With this core construct of entrepreneurship theory, market orientation in terms of understanding and interpreting new markets is critical. Day (1994, p43) proposed that a market driven culture supports the development of superior competitive advantage and requires organisational learning. He also proposes that culture unifies organisational capabilities into a cohesive whole, promoting sustainability and effective actions of the firm. Deshpande, Farley and Webster (1993, p34) were one of the first researchers to relate market orientation to culture and organisational innovativeness. Menon and Varadarajan (1992, p68) suggested that pro-innovation culture within a firm, promoted information sharing and use. This is a critical precursor to entrepreneurial teams working effectively, however innovation is not synonymous with entrepreneurialism per se.

The underpinning concept of innovation is broader than entrepreneurialism, in that the former embraces the implementation of new ideas, products or processes (Thompson 1965, p36). Hurley (1994) illustrates the point by commenting that the introduction of Total Quality Management (TQM) by a large US corporation is not an entrepreneurial act, but it is an innovative step in the creation of superior business performance by the firm. In a similar manner, FE colleges adopt administrative innovation on a regular basis. Therefore it is important to consider the application of innovation within the context of entrepreneurialistic behaviour, before moving onto market orientation literature.

2.4.1 Innovation and its relationship with entrepreneurship

The 1980s witnessed systematic organisational change, embracing public and private sector alike, in response to the dynamic change in the nature of most markets. This process continues as markets carry on evolving and adapting to the changes implied by globalisation, rising standards of living (and

hence consumers' expectations of public services) and structural changes promoted by the adoption of the Information Society. By definition, all firms change either proactively by seeking out new changes, or reactively by adopting changes before the firm fails. The changes referred to are typically the application of innovation, which in FE has included the following since 1992:

- new teaching staff contracts that allow flexible deployment to meet client needs as opposed to teachers' needs.
- new learning technologies, typically computer based.
- introduction of new customer centred teaching techniques, involving more pedagogic support for the learner.
- superior customer service to appeal to new client groups and improve retention on learning programmes.
- new learning opportunities in different environments, rather than at the traditional FE college, e.g. workplace, community centres and in the home.

To deliver these changes, the management tools of TQM, Business Process Reengineering and Investors in People, amongst others, have been applied to colleges. In many respects these changes are predominantly innovative, being new to English FE, however they also tend to be universal in their adoption, being a response to the central state's policy steers delivered via the funding formula that has forced colleges to respond to the new environment.

The innovation literature does not support the construct that learning organisations in themselves are simply an antecedent to market driven innovation. Simply by being orientated towards your customers could result in the firm following innovative trends. Zaltman, Duncan and Holbek (1973, p64) proposed that there are two different stages in innovation, namely initiation and the capacity to implement. They concluded that the critical stage was the firm's openness to initiating innovation. Members in the firm determine this willingness to innovate. Developing this work further, Hurley and Hult (1998, p44) developed the constructs of innovativeness and capacity to innovate. They proposed antecedents to innovativeness, defined as the cultural notion of openness to new ideas. In this respect it is similar to entrepreneurialism, where Casson (1992) proposed that successful entrepreneurial leaders operate as

an optimising agent. With the development of entrepreneurial team theory by Casson and Drucker, Hurley and Hult's construct of capacity to innovate is valid. Firms in more turbulent environments tend to be more innovative, risk-taking and proactive than those operating in more stable environments (Naman and Slevin, 1993, p151). The construct of innovative capacity was first proposed by Burns and Stalker (1961) and was defined as the ability to adopt or implement new ideas, processes or products successfully. Cohen and Levinthal (1990) described this absorptive capacity as the inherent ability to successfully implement innovative actions. Their work centred on the measurement of the number of actions implemented and they linked it to the firm's culture. They concluded that the greater the capacity to innovate, the greater the firm's ability to develop a competitive advantage and achieve higher levels of business performance.

In conclusion, entrepreneurial leadership per se is not automatically critical to superior business performance. However, it is the organisational learning and the development of a firm's capabilities to respond to innovative actions that can lead to superior business performance. Within this respect, the development of grounded theory of entrepreneurial teams becomes more important. Barringer and Bluedorn (1999, p422) propose that the main notion that underpins corporate entrepreneurship is that it is a behavioural phenomenon that all firms fall along. The continuum extends from highly conservative to highly entrepreneurial. It is against this construct that entrepreneurial leadership will be investigated in the English FE sector.

2.5 Implications and conclusions for further education college managers

The rise of the Evaluation State has fundamentally altered the loci of policy control from the locality of delivery to the centre as represented in figure 1.1. Jenkins (1995) argues that the removal of FE colleges from the control of the LEA was not an evolution in the systematic organisation of further education, but the centre's 'compulsory seizure' of control from local government. The development of regionalisation in England is operationally from the education perspective, an extension of the central state, as the regional bodies are still reliant upon the centre for policy direction and funding. Regionalisation will not see the re-emergence of the local political operational frameworks that existed prior to 1992, as the creation of local Learning and Skills Councils (LSC) in 2001 as successor to the FEFC has created a local service controlled from the centre. The entire public sector has been

exposed to market forces and the historical paradigm of administration has been abandoned as it has failed to deliver the necessary service levels expected by the state. This change in the organisation of public services has been repeated in most OECD nations. Lazonick (1991) researched the antecedents of successful innovation in America, Britain and Japan. He concluded that two key features emerged, namely capital and research investment resources and the necessary managerial ability to implement the resulting innovation. He concluded that investment alone does not guarantee competitive advantage and innovation requires managerial process to develop, harness and exploit it.

The operating environment is changing for colleges as it is for society in general. Boyett (1987, p88-90), in reviewing entrepreneurial behaviour in the public sector, concluded that the new ownership of resources derived from budgetary empowerment to the organisation had resulted in greater degrees of freedom for managers to work within. In turn, such managers are driven by enhanced levels of guilt and self-satisfaction manipulated by the various stakeholders in their organisation. She concludes that entrepreneurship occurs where there is an uncertain environment, devolution of power and the change in resource ownership to the organisational level. The driven individuals are those that have a high level of social self-satisfaction, ability to spot opportunities and, critically are able to follow through and implement the entrepreneurial strategy. The implications for the college manager are clear. The historical role of the administrative manager with limited appreciation for the commercial rational and logic of decision-making is no longer acceptable to the central state. The importance of entrepreneurial teams is critical, as the 'heroic leader' model of entrepreneurship will not work in the modern public sector.

Public education services exist because there is a need for them, rather than because they are there. The self-serving public service is no longer tolerated by the state, as it will not meet the needs of the state. The state has changed its focus from the 1944 paradigm of passive direction to a role that its permanent secretary defined as challenging accepted wisdom and seeking continuous ways to improve performance, DfEE (2000, p153). Colleges must follow the policy orientation of the state, whilst adapting its interpretation and application to their particular locality. The transition from the industrialised society to the knowledge based technological society has fundamental implications for the organisation of colleges as they deliver their missions. Just as the banking sector has had to redefine its market, customers and products, further education colleges have to do the same or they

will find themselves out of touch with their customers and ultimately out of business. The role of leadership is important, but the cultural and operational environment of the college is important. Basset-Jones and Brewers 1998 study of 14 FE colleges led them to conclude that indifferent management can be good enough to secure survival in some contexts, while even talented leadership can fail to prevent closure or amalgamation in others. The next chapter explores the market orientation literature before reconciling the two bodies of literature with culture studies in chapter 4.

3 Market orientation

3.1 Introduction

The objective of this chapter is to review the market orientation literature and its subsequent application to the public sector. The chapter starts with the barriers to strategic thinking self-imposed by managers in small and medium sized private sector firms, organisations that are very similar to FE colleges in size. These self-limiting beliefs provide a framework for the analysis of the marketing concept and its application to medium sized firms and FE colleges. The chapter proceeds by reviewing the pillars of the marketing construct and the historical problem of converting the construct into operational policy as identified by Day (1994, p49), prior to the development of the market orientation construct. The chapter proceeds with a review of the two pre-eminent conceptualisations of the market orientation construct and their subsequent general applicability to the public sector. The chapter goes on to review the introduction of the market orientation construct to the education sector with a resume of the history of its application to the end of the 1990s. The chapter proceeds to review the implications of the construct to the FE college of the future and the resulting challenge to the historical administrative paradigm. The literature demonstrates the need for effective leadership as part of the process of adopting a positive market orientation. The chapter concludes that effective colleges are likely to have strong market orientation within their management that in turn creates an organisational responsiveness to consumer demand, thereby meeting government policy. The next chapter links the entrepreneurial and market orientation literature together, before moving onto the development of measures to support the testing of the hypothesis.

3.1.1 Managers and the adoption of the marketing concept

The exposure and application of the public sector to the rigours of the free market from the early 1980s has been a global phenomenon. The privatisation of state industries and organisations has occurred in most nations, yet the provision of certain services, namely Police, Education and Health tends to remain a significantly state organised activity even in the United States. Therefore the application of the marketing orientation construct to state organised public services needs to be considered in support. Porter (1980, p37) proposed that firms generate competitive advantage from either emphasising low cost or product differentiation vis-à-vis their competitors and Hall (1980, p78)

commented that firms might combine these approaches in different combinations in response to market needs. The formal strategic marketing plan is seen by many as a source of significant benefits (McDonald 1989, p2), as it compels the firm to consider the issues required to meet market orientated needs in the quest for superior competitive advantage. However, McDonald goes on to identify (1989, p3) that few small and medium sized companies actually practice the theory of marketing. He proposed that two key reasons for this were the over-reliance on simplistic financial indicators to measure market share and the complex contextualisation of the process into the working operational scenarios of the individual firm. Piercy and Giles (1989, p19) reinforced this view that senior staff in smaller organisations tended to be very close to the business operations and therefore perceived the traditional marketing process as a 'gross and unnecessary simplification' of their environment and plans. Smaller firm senior managers typically perceive the process of marketing as an iterative process that is constantly revisited and refined, rather than being a fixed grand plan of what will be done. Typically, the majority of English FE colleges are medium sized public sector enterprises, operating from a start point in 1992 (incorporation) of working in relatively static and stable environments with an emphasis on good administration rather than management and leadership.

Leaders in small and medium sized organisations, irrespective of whether they are public or private sector firms, tend to be technically minded process people (Lancaster and Waddelow 1998, p855). The traditional route for promotion to principal in FE in the two decades prior to incorporation was from the curriculum route. This skill base did not necessarily involve strategic management, being the prerogative of the Local Education Authority. Bedeian and Zammuto (1991, p33) proposed that senior staff construct 'enacted environments' that help the senior leaders to make sense of their complex environments. The less they are aware of the greater operating environment, the more the manager develops their model of the working world. In turn, the manager is not so willing to revise their construct if it simply serves to challenge and destabilise their working *modus operandi*. Handy (1991, p22) observed that in such scenarios, (senior) managers tend to pick similar, like-minded individuals that reinforced their constructs, rather than those that would challenge them. Senge (1990, p241) commented that too many managers are caught up with this perception of their own version of reality, a *modus operandi* called '*group think*' by Hambrick (1995).

Managers in small and medium sized firms therefore tend to be more comfortable with the act of doing rather than the processes of planning. Scott (1992) contends that a market orientated firm is one that considers itself to be an 'open system' where the emphasis is on the firm's interactions with the environment. In contrast, an internally focused firm emphasises internal optimisation of resources where management seeks to defend the firm from the environment. Johnson and Scholes (1993, p16) identified that the lack of marketing and strategic orientation in senior managers in smaller firms was not uncommon. Managers tend to prefer concentrating on manageable issues, typically operational and tactical in nature. Strategic management requires managers to deal with complex issues that are often partly resolvable and imply significant organisational change to make happen. They observed (1993, p63) that typically the culture develops and creates dominant operational paradigms that inhibit innovative and radical strategic thinking. Often, as proposed by Habermas (1976) it will take a significant crisis, often potentially fatal, before these paradigms are challenged. The rapid expansion of FE in the 1990s, coupled with the removal of the LEA and dramatic reduction in operational unit costs were just such crises. This crisis was restated in 1997 with the removal of 'unlimited growth funding' and the introduction of cash-capped budgets.

3.2 Market orientation, comparative literature review

3.2.1 The marketing concept and the development of market orientation

The marketing concept is essentially a business philosophy, an ideal or policy statement (Barksdale and Darden, 1971, p29). Within the marketing profession, it is a fundamental belief that superior skills that capture the knowledge of your customers will generate superior business performance. Day (1971) found that this tenet of faith is abstract for business managers who are tasked with developing the desired superior skills, particularly in smaller firms. He concluded that two key capabilities are required:

- the market sensing capability to detect and anticipate the needs of customers.
- customer linking capability that includes the skills, abilities and processes need to achieve collaborative customer relationships, thereby sating customer needs.

Day was effectively describing the managerial application of the market orientation construct. The orientation construct is concerned with the application of the marketing concept into practice and is

represented by the activities and behaviour of the organisation and its managers. Slater and Narver (1995) define effective organisations as those that successfully organise management practices that promote the development of knowledge that in turn is focused into competitive advantage for the firm. Market orientation needs to be linked to entrepreneurialism, namely the process of innovative leadership and action as previously explored in the last chapter. This necessary process whereby knowledge is converted into competitive advantage is the precursor to providing a platform for business success. In their seminal article, Kotler and Levy (1969, p13) proposed that the marketing philosophy could be extended to non-profit organisations, namely charities, and by extension, public sector organisations. Many writers have subsequently advocated the need for non-profit organisations to adopt the marketing concept. Kotler and Andreasen (1991) segregated those organisations that accepted the philosophy of marketing as a guiding culture, from those that focused on the internal needs of the organisation. The groups were identified as 'customer-centred' as opposed to 'organisation-centred'. The customer-centred approach proposed by Kotler and Andreasen is the same as the paradigm of the marketing concept, alternatively known as market orientation.

As articulated by Day and others, marketing is the theory of developing superior business performance by specific actions. Implicit within these actions is the development of sustainable competitive advantage (Aaker 1989, p91). The firm creating superior value for the customer vis-à-vis the firm's competitors will derive sustainable competitive advantage (SCA). Porter (1985, p15) advocates that a market-orientated business continuously examines the source of competitive advantage in developing and sustaining superior value for its customers. Peters and Waterman (1982) support the construct that market orientation is the collection of values and culture that creates the necessary behaviour to generate SCA. In the highly regulated market, monopolistic provider conditions as historically enjoyed by public sector providers diminish the importance of creating SCA. The deregulation of the suppliers market in English further education and the lowering of barriers to entry in the 1990s have promoted the necessity of creating SCA in colleges. However, a free market does not operate per se in post-16, sub degree level education. Such education provision is a public good and hence a free market activity, namely the entrance of new providers to meet customer demand, does not automatically occur due to historical regulation of the market place. However, the central state has stepped in to provide a market signal in the form of insisting that quality be raised amongst current service providers. A failure to raise standards will result in the current service provider being sanctioned in some form. These

signals are driven from a teaching perspective that standards, a euphemism for product quality, should increase. This policy lever is exercised in the form of performance target setting, the use of published performance league tables and the linking of new funds to targets.

The marketing concept has been identified as having three core themes or pillars (Kotler 2000, p20-23), namely:

- customer focus.
- co-ordinated marketing.
- profitability.

In the non-profit and public sectors, the definition of the concept of profitability is abstract, therefore an alternative definition is required (Drucker 1989, p89). Typically this is articulated as the desire to discharge their mission. Kotler and Andreasen (1991) redefined the non-profit sector definition of profitability to embrace survival, generation of adequate revenues and operating reserves and to achieving long-term organisational objectives. The key issue for non-profits is the effectiveness of application of the marketing concept in terms of operational philosophy to the organisation. Kotler (2000, p64) identified that successful firms know how to adapt to a continuously changing market place. He defined the art of market orientated strategic planning as the managerial process of developing and maintaining a viable fit between the organisation's objectives, skills and resources and its changing market opportunities. This definition is applicable to either the public or not for profit sector firm. Parasurman, Zeithmal and Berry's study (1985, p46) demonstrated that the frontline personnel of a service industry firm are critical in the forming of a customer's perceived level of service quality. Kelly (1992, p28) therefore proposes that it is critical that frontline customer contact staff remain focused on customers' needs. This customer orientation is more important in service firms than tangible goods firms due to the formers intangibility, heterogeneity and inseparability of service (Kelly, 1992). This market orientation is fundamentally important and the two dominant conceptualisations of the market orientation construct and its subsequent application to the public sector are considered in detail.

3.2.2 The market orientation construct: Kohli and Jaworski

Kohli and Jaworski's seminal article (1990, p6) defined market orientation as:

“... the organisation wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation wide responsiveness to it”

The application of the marketing concept to a business will not automatically generate positive business performance. It is the context in which the concept is applied that will determine whether the marketing construct will have a positive effect on business performance (Kohli and Jaworski, 1990, p1). Their seminal research challenged the orthodox view of exactly what is the marketing concept in terms of its application to the firm. Barksdale and Darden (1971, p36) identified that the codification of marketing theory into the three pillars was not proving that effective when it came to developing implementation tools, which were resulting in poor applicability to the firm. They identified that the major challenge was the need to operationalise the marketing construct in tangible forms. Kohli and Jaworski's fieldwork supported this conclusion, and in terms of operational policies to implement the marketing construct, the three pillars were a useful classification of actions and policies.

Customer focus in marketing terms is the understanding of the needs, wants, preferences and expectations of the customer. This understanding has to be organised and interpreted, as the raw information will not provide a sound foundation for policy actions. The interpretation process, known as market intelligence, is broader than a simple listing of customer preferences. The market intelligence concept involves knowledge of the wider operating environment that affects the needs and preferences of consumers and the future needs of customers. The former includes competitor actions, government regulations, research and technology changes and general society attitudes to the firm's proposed actions. The latter, includes current and potential customers for current and potential products sold by the firm, not simply an analysis of current activities.

Co-ordinated marketing is the concept that marketing is a whole firm cultural issue and not just a job description for the marketing department. In common with the total quality construct, marketing is the responsibility of all departments and functions of the firm Oakland (1983, p5). This responsiveness and participation requires co-ordination to ensure that the actions and messages are consistent and

promote the correct messages about the firm in response to the marketing intelligence gathered about the firm and its customers. Kohli and Jaworski (1990, p3) contend that this relationship defines the interpretation of co-ordination to be subject to the interpretation of market intelligence. This relationship ensures that the firm co-ordinates the appropriate resources and responses to the need of the customers, as opposed to pursuing its own perception of customer need.

Profitability (business performance) is typically perceived to be achieved as a result of market orientation, rather than being part of the construct. Kohli and Jaworski observed that this finding was consistent with some academic writings, namely Levitt (1969, p236). Using Drucker's and Kotler and Andreasen's substitutes for profit, the Levitt critique is still pertinent. The Kohli and Jaworski construct therefore focuses on the first two pillars of the marketing concept, namely customer focus and co-ordinated marketing.

Kohli and Jaworski proposed that a market orientation involved three key activities:

1. generation: functions that collated and interpreted market intelligence.
2. dissemination: processes whereby that information was shared across the organisation.
3. responsiveness: the teams and functions within the organisation that engage in activities, which are aimed to meet the selected customer needs.

They also proposed that the system should be termed market rather than marketing orientation, thereby implying a whole firm approach, rather than a specialist function that did marketing to the rest of the firm. This cultural approach to the marketing construct directly implies the placing of the customer and their markets at the centre of attention as advocated by Park and Zaltman (1987, p7). Importantly, Kohli and Jaworski (1990, p6) contend that market orientation is a continuum of activity rather than a simple 'yes' or 'no' to doing it. The issue therefore is the degree to which a firm is market orientated, that is generates, disseminates and responds to market intelligence about the firm's customers and their markets.

Based on the findings from their fieldwork as guided by their literature review, Kohli and Jaworski (1990, p7-15) proposed a conceptual framework that expressed the antecedents and consequences of a market orientation as represented in figure 3.1.

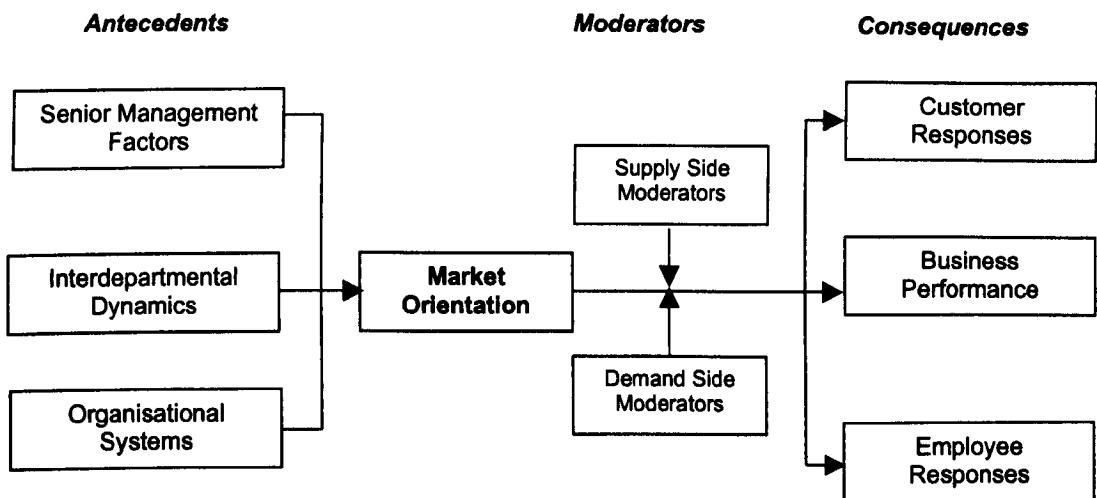


Figure 3.1: Antecedents and consequences of a market orientation: Kohli and Jaworski (1990)

The antecedents are the organisational factors that influence the implementation of the market concept whereas the moderators are those factors that stem from operating environment and influence the effectiveness of the firm's actions and policies. The net effect of the firm's market orientation, as moderated by the greater operating environment that the firm works within (i.e. industry and society influences), has consequences for the firm, expressed as customer responses, employee responses and critically business performance. The antecedents are prerequisites to the focus of a firm's market orientation. Kohli and Jaworski (1990, p7-12) proposed three hierarchical categories:

- senior management factors.
- Interdepartmental dynamics.
- Organisational systems.

The senior management factors reflected the critical role of the top managers and the chief executive in establishing a culture. Without commitment from the top, the rest of the firm cannot be expected to pursue a business philosophy. In this respect, the fundamental nature of this antecedent is echoed in the adoption of the Investors in People's development framework and total quality management as advocated by Oakland (1990). Management literature and Kohli and Jaworski's fieldwork provides further analysis of this critical factor to include the following five points:

1. Cognitive dissonance between senior management rhetoric and actions. In turn, middle managers ambiguity over the firm's overall commitment to market orientation will affect the firm's adoption of the construct.
2. Risk aversion of senior management and their propensity to support risk taking decisions by their subordinates.
3. Upward mobility of senior staff and their level of formal education will directly influence their willingness to adopt the construct.
4. The more inclined the senior manager is to propose change, the greater the market orientation of the firm.
5. The greater the (political and personal) ability of the leader of the marketing function to win the confidence of senior non-marketing managers, the lower the cognitive dissonance between the various teams within the firm.

Collectively, these five points form the *modus operandi* of the senior management team's willingness to adopt an entrepreneurial approach to managing the firm. The more conservative, risk adverse and less mobile the managers, coupled with poor ability to communicate and inspire change amongst middle managers, the less probable it will be that the firm adopts a positive market orientation.

The second cluster of antecedents centres upon interdepartmental dynamics. Earlier entrepreneurship writers such as Say (1803), had dismissed teams as falling within the definition of entrepreneurial, as he perceived that the entrepreneurialism construct required speed and decisiveness in decision making and teams could not be guaranteed to provide this due to their inherent inertia. As argued by Drucker (1985), large firms are entrepreneurial and the corollary is that they have had to overcome internal inertia to achieve this. Casson (1990) and Binks and Vale (1990) have developed entrepreneurship theory to embrace teams. Interdepartmental conflict has been identified as inhibiting the development of the marketing concept (Levitt 1969). Kohli and Jaworski (1990) summarise this antecedent into three points, namely:

1. The greater the inter-team conflicts within the firm, the lower the propensity to co-operate and collectively adopt the market orientation construct.

2. The greater the interdepartmental connectedness, the greater the orientation.
3. The greater the concern for ideas of other departments (teams), the greater the orientation.

Casson (1991, p28) identifies that the level of trust within a firm between its teams, managers and employees, sets the tone for the operational approach of the firm. The greater the trust, the superior the business performance is likely to be.

The third cluster of antecedents relates to firm wide characteristics and is based on the themes of organisational structures and the level of formal behaviour adopted by the firm. Levitt (1969) argues that specialisation or departmentalism is a barrier to effective communication, thereby having an adverse affect on the co-ordination of the firm's effectiveness within the second pillar of the marketing concept. Zaltman, Duncan and Holbek (1973, p62) have reviewed the impact of organisational structure upon innovative behaviour. They have identified two distinct phases. The initiation phase involves the awareness raising and decision-making stage and the second, implementation phase involves the carrying out of the decision. Their work draws upon other studies and proposes that departmentalisation, formal structures and the level of centralisation may actually have different effects on innovative behaviour. The more formal, structured and centralised the firm, the lower the promotion of initiation actions; whereas due to this formalisation, structure and centralisation, the firm is more disciplined to actually implement what it decides to do. Kohli and Jaworski summarise this antecedent into three points:

1. The greater the departmentalisation, formalisation and centralisation, the lower the intelligence generation, dissemination and response design and, conversely the greater the response to implementation.
2. The greater the reliance on market-based factors for evaluating and rewarding managers, the greater the market orientation of the firm.
3. The greater the acceptance of political behaviour in an organisation, the greater the interdepartmental conflict.

These external factors are especially relevant in the public sector due to the involvement of the political process of service delivery. The traditional governance paradigm of administration in public

sector firms orientated organisational structures towards rational bureaucratic approaches to management. Packwood and Turner (1990, p75) observed that newcomers feel that their work is prescribed and they are not allowed to express themselves until they have proved themselves. March and Olsen (1972) state that anarchic organisations such as further education colleges are typified by three characteristics:

1. problematic preferences as to what the goals of the organisation are.
2. fluid membership of participants in terms of programme (academic subject and client) orientation, management and external stakeholder interest from the serviced communities.
3. unclear technology and teaching methodologies in terms of the teaching and learning process. (It is only in the last decade that inspection has become a regular feature of UK education, but even then, it is still evolving in terms of best practice and expectation of the teaching professional).

In conclusion, external influences on internal structures and orientation are important consequences of market orientation and its resultant impact on business performance. This conclusion is applicable to public sector firms as well as their private peers, upon which much of this research was developed.

3.2.3 The market orientation construct: Narver and Slater

Narver and Slater (1990, p21) provided the first operational measure of orientation with an analysis of its impact on a firm's profitability. Their construct was centred on three behavioural components, customer orientation, competitor orientation and interfunctional co-ordination, and two decision criteria, long-term focus and profitability. Their work was published shortly after Kohli and Jaworski (1990), but essentially both groups of research were internally consistent. Each of the five components is reviewed within the context of further education.

Customer orientation is a behavioural component as it centres on the firm's awareness of customer demands. Narver and Slater (1990, p21) define customer orientation as the ability to understand customer's expectations so as to create superior, continuous value. Value can be defined as either a lower cost of ownership vis-à-vis other sellers (i.e. lower price) or superior benefits of ownership

(superior product/service features). To do this, the firm must understand the political and economic environment faced by the buyer. The buyer's preference of price versus features will change as a result of their competitive environment, e.g. the introduction of a new product will see early adopters paying premiums for features, whereas once the product is no longer innovative and becomes mainstream, typically price will take over as the key purchasing rationale.

This awareness of the environment extends to include future product requirements. In further education, customers have historically been poor at articulating their demand in terms of product specification. Sixth form product tends to be dictated by the state and companies have sought products that solve business problems, rather than qualifications per se. Over the last decade, the definition of the product has evolved from a narrow definition of the qualification to embrace the whole service. With the national setting of qualifications by examination bodies, colleges can no longer offer curriculum product differentiation. Therefore service delivery differentiation is important, which is expressed in the form of place, timing, price and auxiliary support services, e.g. quality of guidance, student support, physical environment, etc.

Competitor orientation is the firm's awareness of the short-term strengths and long-term capabilities of competitors, both current and potential (Aaker 1988). Post incorporation in 1992, competitors were still other FE colleges, a looser system of control than pre 1992, but still closed to new market entrants. Davey (1980, p96) commented that real conditions for choice are dependent on the existence of real alternative choices for consumers, with the consumer being able to select from different providers and their being an absence of artificial barriers to trade. Davey concluded that without legislation, it is very difficult for a truly free market to exist in the provision of public goods. Post-2001, the new Local Learning Skills Councils are tasked with stimulating new providers from both the private and public sectors in each of their districts. The latter would be new sixth form colleges established by the Local Education Authorities, something they were prohibited from doing under the 1992 Act. In addition, the new learning technologies offered by ICT will see a change in emphasis from the traditional 'fixed building' approach to qualification attainment to 'at the work place' learning styles, bypassing the traditional building orientated FE college. Effectively, the continued deregulation of the FE market will allow new entrants to join the market as niche operators with potentially superior cost

structures and better service levels than the traditional generalist FE college. Although there is not a pure free market, it is significantly more fluid than the pre 1992 model.

Narver and Slater (1990, p22) define interfunctional co-ordination as the co-ordinated utilisation of the firm's resources in creating and delivering superior competitive advantage. In common with Kohli and Jaworski (1990) and Webster (1988), they contend that the delivery of Sustainable Competitive Advantage (SCA) is a whole firm approach, not just the exclusive preserve of a few departments of the firm. Wind and Robertson (1983, p23) argued that the multi-dimensional nature of creating superior SCA requires the deliberate and systematic incorporation of other departments (other than marketing) into the firm's business marketing strategy. This is an important point for public sector firms.

Historically the LEA, who would effectively control the flow of consumers to colleges, conducted the management of demand. For tertiary colleges (those colleges set up as age 16-19 sixth form colleges dependent upon age 11-15 feeder schools) there was no need to conduct marketing as the LEA automatically provided trading volumes. As the historical demand management approach of public goods disappears the historical organisational cultures that did not promote an inclusive marketing approach will no longer result in adequate volumes of business being automatically generated for individual colleges. Colleges have to compete against other providers and promote themselves as being holistically attractive to consumers. This is not the exclusive responsibility of the marketing function of the college and Ruekert and Walker (1987, p17) found in the private sector that an inclusive participative approach that is backed by rewards tends to produce superior performance. Anderson's (1982) work found that marketing functions must be extremely sensitive and responsive to the perceptions and needs of other departments in the firm, if the firm is to achieve an inclusive market orientated approach. This is pertinent for colleges, as the historical emphasis for the majority of colleges has been on the product (curriculum) and its organisation and application to learners. These curriculum teams have not necessarily been required to perceive their work in terms of sustainable competitive advantage and desirability vis-à-vis competitors. The removal of artificial barriers of competitiveness via college incorporation has resulted in numerous courses becoming uneconomic, the victim of oversupply from alternative suppliers rather than poor product quality per se.

A long-term strategic perspective is relevant to all firms, irrespective of whether they are public or private sector based. In the long term, all firms must make a profit or, for public sector firms, meet their

fixed cost base of delivery. In a monopoly scenario, a firm can ignore competitive pressures and simply charge consumers amounts sufficient to recover their costs. However, further education and most of the public service sector in general, has had its monopolistic or oligopolistic barriers to competition removed over the last two decades. Chapman and Cowdell (1998, p58) comment that there is now a growing recognition amongst the managers of the public firm that the consumer, not the supplier is at the centre of the economic universe and unless they do something about this, they will not survive in the long-term. The second decision criterion, business profitability is drawn from the same literature sources used by Kohli and Jaworski. In contrast, Narver and Slater (1990, p22) develop this criterion further and separate profitability from the consequences of a market orientation. For non-profit firms, they propose that profitability is synonymous with survival, the ability to generate adequate volumes of revenues in the long-term to cover the operating costs of the firm.

To generate superior value for customers, Narver and Slater (1990, p23) contend that a firm must be customer-orientated, competitor-orientated and interfunctionally co-ordinated, with an equal emphasis on each behavioural dimension. Their model is represented in figure 3.2 as follows:

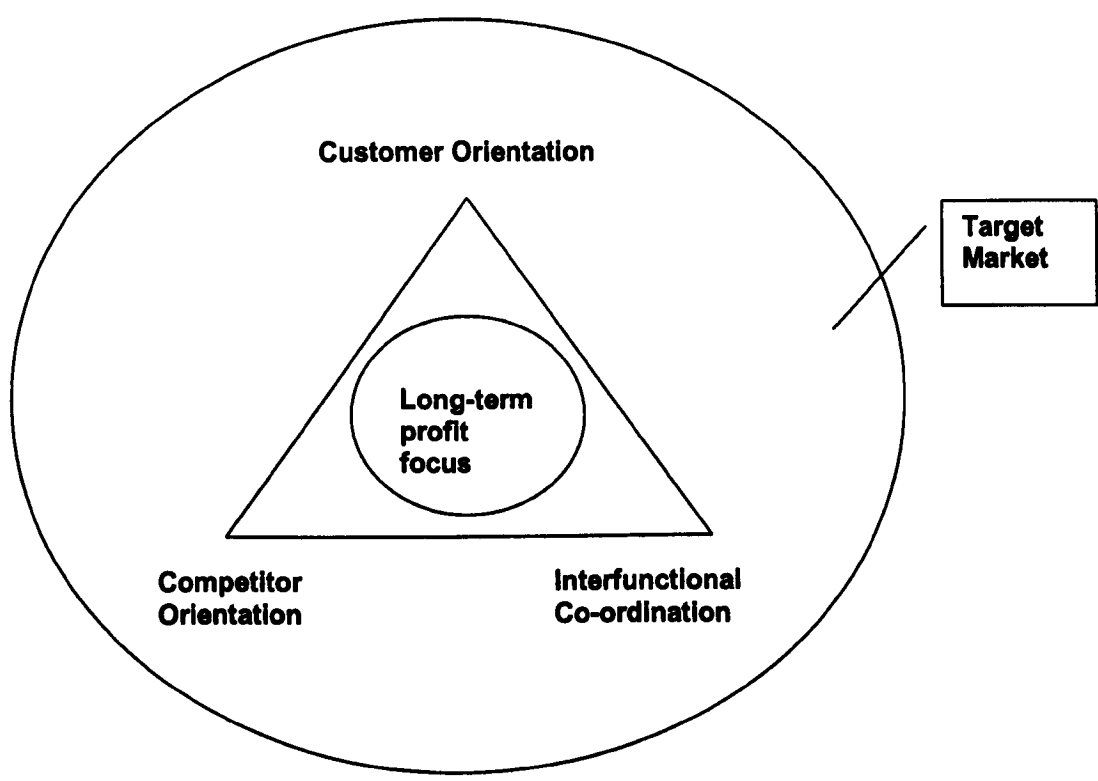


Figure 3.2: Market Orientation after Narver and Slater (1990, p23)

They identified from Sherer's work (1980) that there are external factors that influence the businesses' profitability, namely:

1. *Buyers power*, the degree to which buyers can set prices or extract superior service/value at the same price (negative).
2. *Supplier power*, the degree to which suppliers can set prices or set the product specification (positive).
3. *Seller concentration*, the degree to which the top few suppliers dominate sales in the market. Domination by a low number of suppliers is tantamount to monopolistic behaviour and allows such firms to restrict competitive pressures in the market (positive).
4. *Ease of access for new competitors* will influence the pressure on current supplier to pay attention to customer needs (negative or positive).
5. *Rate of market growth* is the rate at which the market is expanding and hence more attractive to firms to join (negative or positive).
6. *Rate of technological change*, with an increase in technological change offering more opportunities for entrants.
7. *The firm's size relative to largest competitor*, the larger the differential, the harder it is to compete.
8. *Cost to enter the market*, if the competitors have low costs of production and set up costs are high, it may be too expensive to enter the market.

Based on the strategic business units of a private USA corporation, they concluded that the construct had validity. Narver and Slater's study (1990, p31-32) identified that those firms with the lowest market orientation had the lowest customer retention rates. An interesting finding from their work is the greater longevity of top management teams in low performing firms, coupled with a poorer ranking on human resource management orientation. In further education, longevity of management teams is an emerging issue, especially with the withdrawal of the financially assisted early retirement (at age 50) option by the DfEE in 1997.

In conclusion, the Narver and Slater work is important for further education as it demonstrates a clear relationship between superior business performance and market orientation as defined by customer orientation, supplier orientation and interfunctional co-ordination. A pertinent finding is the longevity of senior management teams and adverse business performance. They observe that the key question is how willing is the firm to move effectively and efficiently through the stages of culture change to the higher profitability of a fully implemented market orientation.

3.2.4 Managerial implications of a market orientation

The adoption of the market orientation construct leads to a cohesive service focus, clear leadership, and better co-ordination of selling activities, improved product reviewing and the promotion of product differentiation. The work also supports Kotler's (2000) assertion that market orientation is likely to lead to greater customer satisfaction and repeat business. Kohli and Jaworski concluded (1990, p15) that a market orientation has a relationship on business performance in general. The market orientation approach will require the commitment of resources and hence is not a 'free cost' activity. However, they also identify that market orientation is useful where the benefits exceed the costs of implementation. They identify that in conditions such as limited competition, stable market preferences, technologically turbulent industries and booming economies, a market orientation may not be strongly related to business performance, the cost of market orientation may not outweigh the benefits that are derived from the approach.

As early as 1960, Levitt argued against the product centred view of the firm. He advocated that the dominant paradigm should be the marketing view that puts customer satisfaction ahead of production. This perspective has been dominant in marketing for some forty years, and in the last ten years has come to the fore in public services, including education. The promotion of the service element of the product, Doyle (1994) argues is now the most important factor in determining the long run market share and profitability of the firm. With nationally organised qualifications for further education, local competitive advantage at the college level by means of product differentiation is limited. Quality, in terms of customer perception of service therefore comes from the client-employee contact experience vis-à-vis other providers. However Gummesson (1998, p243) cautions against exclusively focusing upon customers and competitors. He argues that Levitt's internal marketing myopia of 1960 is being

supplemented by a dominant focus on the external market, a second form of myopia. Foss (1997) develops the implementation for managers identifying the importance of developing strategic approaches that accommodate both the internal and external aspects of the market orientation. The internal aspects include employees, whereas the external aspect relates to customers, stakeholder and competitors. Lings (1999, p241) proposes that firms that accommodate both internal and external aspects of market orientation on an equal footing will be more effective in formulating strategic responses to market intelligence than firm that are predominantly externally focused.

The internal market construct is not the exclusive reserve of marketing literature, as it is also a key emphasis of quality management literature (Oakland, 1990). In common with the quality management literature, the marketing academics Reynoso and Mores (1996, p59), have identified six common steps in internal marketing campaigns that are used as part of market orientation strategies, namely:

1. creation of internal awareness.
2. the identification of internal customers and suppliers.
3. the identification of the expectations of the internal customers.
4. the communications of these expectations so as to identify issues that require addressing in meeting these requirements.
5. the identification of the work necessary to make the required changes so as to be able to deliver the level of service required.
6. the measures for internal service quality, with feedback of service performance.

The last point involves the use of performance indicator (PI) methodology that was coming to the fore in further education at the end of the 1990s. Burton (1994, p399) had identified that college principals had historically paid attention to 'bums on seats', a euphemism for recruiting learners to meet the critical census dates that determined funding. The educational outcomes of those learners were of lower importance in terms of business performance. The use of other PIs has started to focus college principal's minds onto a balanced scorecard of business performance measured in terms of financial performance and qualitative effectiveness ratios, e.g. achievements, progression and retention of students.

In conclusion, the reorganisation of the sector under the auspices of one integrated funding agency, the Learning Skills Council (LSC) from April 2001 potentially removes the artificial barriers to supplier participation in the market place for training and education. In further education, or the post-16 sector as it has been relabelled, competition is increasing due to technological change and the use of Information Technologies to deliver the product in the communication age of the early 2000's. Kohli and Jaworski go on to argue that senior managers (as a generic group) must be convinced of the value of market orientation and they in turn need to communicate this to their staff. This communication must be more than rhetoric and needs to result in the development of an appropriate culture of orientation. They further contend that an organisation must first perceive a gap between its current and its preferred orientation (i.e. culture). Lings (1999, p258) proposed that managers must balance internal needs with the external needs of market orientation. A failure to balance those needs may result in decreasing quality to the external customer as employees, especially in service led environments such as public services, become less motivated to provide a quality service to the external customers, however defined.

3.2.5 Applying the market orientation construct to the public sector firm

Kotler (2000, p65) comments that (large) firms in either the private or public sector undertake four planning activities:

1. Define the corporate mission.
2. Establish Strategic Business Units (SBUs).
3. Assign resources to each SBU.
4. Plan new businesses and the downsizing of old businesses.

Kotler goes on to identify (2000, p3) that there are three stages through which marketing practice might pass, namely:

1. **Entrepreneurial Marketing:** this stage starts with an entrepreneurial individual or team who promotes an idea and creates a firm to deliver that idea.
2. **Formulated Marketing:** the small firm adopts formulae to promote its marketing message, without necessarily slavishly copying other firms.

3. **Intreprenurial Marketing:** this represents a formulaic approach based on 'hard science' approaches with lower levels of entrepreneurial and innovative behaviour.

Kotler observes that there will always be a dynamic tension between the formulaic side of marketing and its creative side. He proposes that it is easier to teach the formulaic aspects of marketing, but like the characterises of entrepreneurship, flair and innovation is not a mechanistic trait.

The marketing concept originated in the commercial sector and was developed swiftly into a series of constructs and working practices that are designed to add value, as measured by profit (real or economic) and shareholder value. The transference of the marketing concept to the not for profit (non-profit) sector is widely recognised to have occurred as witnessed by the plethora of writings on the subject following Kotler and Levy 's initial propositions (1969) on the transference of the concept. Numerous writers, including Fine (1990) and Lovelock and Weinberg (1989), have recorded the benefit of the adoption of market orientation on non-profit charities. Non-profits include voluntary sector charities and public sector firms whose prime goal is the provision of public goods. However the interpretation of the concept and its application to the non-profit organisation is not so obvious, as the *raison d'être* of commercial firms, profit and shareholder value, is not the key economic driver for the charity and public sectors. Indeed in many non profit organisations marketing is a euphemism for publicity and public relations rather than the application of the marketing concept. Mokwa (1990, p49) argues that the challenge for non-profits is to expand its promotion functions into a comprehensive and coherent philosophy, and critically, a guiding methodology for integrating the marketing concept into their work, as opposed to perceiving it as effective promotion.

The *modus operandi* for non-profit organisations is fundamentally different from the private firm and the transference of the commercial marketing concept requires adaptation. Kotler and Andreasen (1991, p43) described the non-profit firms that accepted the marketing mind-set as 'customer/centred' as opposed to 'organisation centred'. The former group places an emphasis on customer research (knowledge acquisition), defines competition in its broadest sense and use a range of marketing tools in developing their marketing mix, within the limitations of their resources (budgets and funding). The latter group is concerned with projecting their beliefs and values that may not necessarily coincide with the customer's needs. In applying the marketing concept and specifically market orientation, it is

necessary to appreciate the different goal orientation of non-profits vis-à-vis commercial firms. Drucker (1989, p89) stated that non-profits do not base their strategy on money and profit, but on the achievement of their mission. Money is not the driver of service per se, but it is a key constraint in defining and achieving the mission of the non profit organisation. Kotler and Andreasen (1991) adapted the commercial firm's objective to create profits to the non-profit firm as the desire to survive with the objective of generating adequate revenues to meet long-term goals.

3.2.6 Defining a link between output and market orientation: a critique

The seminal articles of Kohli and Jaworski (1990) and Narver and Slater (1990) developed the marketing orientation construct. As critiqued by Meziou (1991, p76), the measures created are insufficient to capture the comprehensive nature of a truly market-orientated operating philosophy. During the 1990s a range of studies examined the link between market orientation and business performance, e.g. Jaworski and Kohli (1993) and Avlonitis and Gounaris (1997). Typically the studies find significant associations between judgmental measures of performance and market orientation (Jaworski and Kohli, 1993, p64). The strength of the assumption that there is a direct link between market orientation and performance has been the subject of significant criticism (Pelham 1997, p69). Two key critiques have been derived, namely that environmental conditions moderate this association (Greenly, 1995, p11) and the link is mediated by innovation (Han et al, 1998, p41). A study by Harris and Piercy (1999, p639-640) concluded that market orientation is not a single condition that in turn drives superior performance, but that there are different performance outcomes in different situations. In addition, they concluded that managers are able to evaluate what organisational and managerial changes are required in shifting from one form of market orientation to another. In turn, managers must acknowledge that the desired market orientation may not be achievable by the firm due to inherent structural factors, involving personnel, markets, systems, structures and competitors. In such event, managers are advised to adopt other forms of performance leverage, as market orientation may not necessarily provide it. In concluding, Harris and Piercy call for further research to be conducted in other sectors to test the veracity of their conclusions.

In reviewing market orientation in further education, it will be necessary to model market orientation. The modelling will need to allow for environmental factors, which are predominantly the segmentation

of the FE colleges into families of like colleges, and the role of innovation and leadership as advocated earlier in the literature review on entrepreneurship. Hunt and Morgan (1995) observed that the sustaining of a firm's market orientation is dependent upon the actions of the firm's employees, a view supported by Hall (1993). Measures of market orientation success tend to be focused on the external environment and tend to ignore internal measures of success, namely employee retention and motivation, internal service quality improvement and their resultant impact on the external customer environment. Total quality management advocates such as Oakland (1983) promote an inclusive model of actions and measurement tools.

3.3 Modelling market orientation in further education

3.3.1 Conflicting paradigms: managerialism and professionalism

English further education has an organisational pedigree derived from the professionalism paradigm and a traditional of strong trade union representation. The deregulation of the sector, coupled with a shift in the way consumers are perceived has resulted in the introduction of the further education service to the marketplace. Donaldson and Runciman (1995, p244) commented that consumer culture has now arrived in (English) further education with the emphasis on quality, choice, standards and value. The introduction of the language of marketing and in particular the construct of market orientation has been accompanied by the rise of the managerialism paradigm. There are conflicts between the managerialism and professionalism paradigms which Randle and Brandy (1996, p10) summarised as follows:

Table 3.1: Conflicting paradigms in Further Education

Principle	Professional Paradigm	Managerialism Paradigm
Dominant orientation	Primacy of student learning and the delivery process	Primacy of student learning throughputs, outputs and income generation
Goals and Values	Loyalty to students and colleagues	Loyalty to the College
	Concern for academic standards and not costs	Concern to achieve acceptable balance between standards and costs
	Lecturers as funds of expertise	Lecturers as flexible facilitators and assessors
Key Assumptions	Resources deployed on the basis of educational need	Resources deployed on basis of market demand and value for the taxpayer
	Quality of provision on the basis of input	Quality assessed on the basis of output and outcomes
	Collegiality and community of practice	Control by management and the market
Management Ethos	Professional autonomy, the trust principle and accountability to peers, tacit knowledge	Management by performance indicators and surveillance
	Pluralism	Unitarism

Against this context, the market orientation constructs needs to be applied to further education. Narver and Slater (1990, p34) identified that market orientation and business profitability are closely related and that two key drivers in developing market orientation, namely profit direction and competitor orientation, are important. Siu and Wilson (1998) identify that not for profit organisations such as FE colleges are unable to use profit direction as key decision criteria for the development of market orientation. They contend that for long-term survival, a dynamic balance of different resources and the continued satisfaction of different client groups at different times are required. Siu and Wilson go on to comment that competitor orientation is less defined in English further education colleges. Although external competitive threats exist, many senior managers identify the internal dynamics as the key barrier to competitive orientation. The relative importance of this internal challenge is derived from the conflicting managerialism and professionalism paradigms, identified by Randle and Bradey (1996, p6). Sui and Wilson’s model is represented in figure 3.3 as follows:

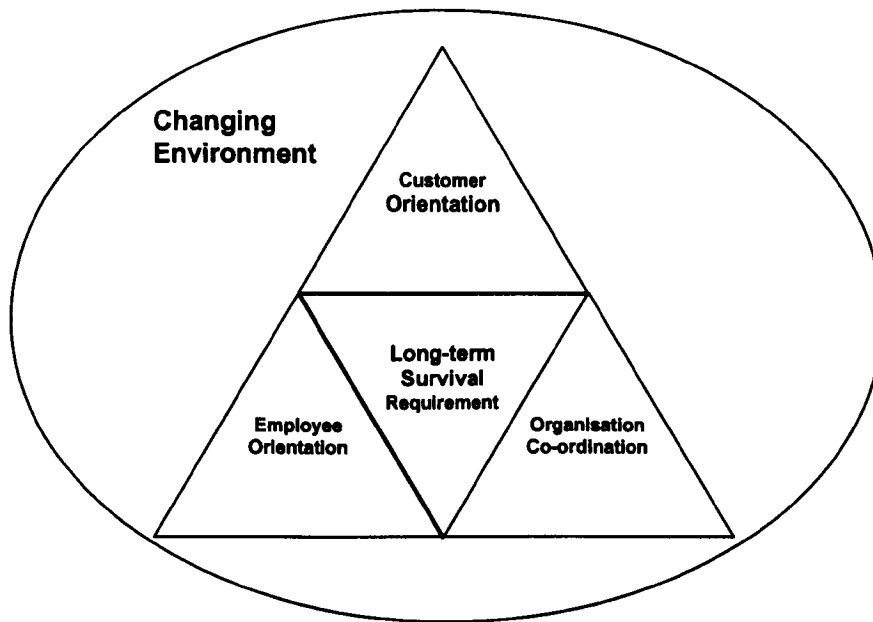


Figure 3.3: The Conceptual Framework of FE Marketing Orientation: Siu & Wilson (1998, p297)

Siu and Wilson contend that service quality is the key to survival for colleges post incorporation. In turn, they have identified three components in their model of marketing orientation for colleges:

- customer orientation.
- the internal customers (employee orientation).
- integrated marketing efforts (organisational co-ordination).

The implications of this model are explored in the following sections.

3.3.2 Customer orientation

Defining the customer is relatively simple for private services, as the consumer is predominantly the payee for the service. With public goods, the definition of customer is more difficult. For some service segments, the consumer and the payee are often different e.g. school leavers' (sixth form) education is consumed by 16-19 year olds, who are supported by their parents financially whilst studying, but the college is paid by the state for the education process. In this example there are three stakeholders, the young person, their parent and the state. For employer-based work, the employer is both the consumer and payee, however the student (the employee) and their sponsor (the employer) are both stakeholders.

The customer orientation in colleges (and other public service providers) is therefore complex. However, service marketing theory, and in particular relationship marketing theory as proposed by Gummesson (1987), places emphasis on customer interaction. Gummesson (1991, p68) went on to describe the interaction between the firm and the customer as having four themes:

1. Front line staff and the customer.
2. Customer interaction, the part-time marketer.
3. The customer and the providers physical environment and tangible products.
4. The customer and the provider's systems and routines.

This interaction can be calibrated in terms of expectations or the 'promise' that is made to the customer and their resulting expectation. The customer will evaluate the effectiveness of the college in terms of what it has promised and its delivery against that promise (Grönroos, 1982).

3.3.3 Employee orientation

Service marketing literature clearly identifies the importance of employees' relationship with customers (Grönroos, 1990). In an environment that is based on customer perception of service and the delivery of that service, the role of the employee in setting the expectation and then delivering it is critical. The traditional professionalism paradigm has always placed the consuming customer (the student) at the centre of the process. However, the paradigm does not place output, value for money and the sponsoring customer (the payee for the service) at its centre. Bowden and Lawler (1992, p29) comment that empowerment in service based firms encourages the firm's staff to produce superior performance as they:

- respond more quickly to customers needs and complaints.
- are more satisfied with their workloads and hence deliver their caseloads more effectively.
- are more enthusiastic at delivering the intangible service to the customer.
- tend to be more innovative, believing that the working environment encourages risk taking and experimentation.

Scott and Bruce (1994, p603) comment that empowered employees are more likely to be more flexible and adaptive in the face of changing customer needs.

The critical point for college managers is whether the lecturer and their supporting infrastructure perceive themselves as marketers whilst delivering the service. Ardley (1994) contends that lecturers are marketers, however not all lecturers perceive that they are. Accordingly, their behaviour and the perception of customers towards them will be different. The development of motivated and customer orientated staff is important for all organisations, and more so for service orientated firms (Grönroos, 1981, p237). In conclusion, employee participation in market orientation in terms of customer satisfaction is crucial in service industries.

3.3.4 Organisational co-ordination

Classic marketing theory advocates environmental intelligence as a critical component of developing a successful approach to meeting customer needs (Kotler, 1977). The construct of marketing intelligence has been developed and amplified by Kohli and Jaworski (1990) and Narver and Slater (1990). Siu and Wilson (1998, pp291-292) used Kohli and Jaworski's framework to propose that the organisation needs to organise its role along three dimensions, namely individual, inter group and infrastructure levels.

At the individual level (Siu and Wilson, 1998) propose that senior management set the framework for junior staff to work within. This requires the communication of commitment by example (Payne, 1988, p49), and by the rewarding of market-orientated behaviour, Kohli and Jaworski (1990). At the inter group level, the interaction of teams has risen to the form and the development of the entrepreneurial team construct has occurred. The interaction of teams is therefore important especially in the adoption of the managerialism paradigm in Further Education. Teams that refuse to participate in the market orientation construct due to their perpetuation of the professionalism paradigm will have an important influence on other teams. Piercy (1990) contends that culture can be operationalised via power and political argument. The historical prominence of the academic in FE and the continuation of its importance via the Academic Board and mission determination enshrined in the legislation (Further & Higher Education Act 1992) allows Piercy's contention of debate to be applied to FE corporations.

Piercy (1989) argues that culture is affected by formal structure and information dissemination and by the adoption of key corporate values. Schein's culture work (1992) supports this contention. At the infrastructure level, corporate culture and structures are considered to be precursors to successful working. Daft (1989, p211) proposed that the three components to structure are:

- formal relationships that promote hierarchy.
- grouping together of individuals and teams.
- the design of systems.

Structure plays an essential part in reflecting the official culture of the organisation (Deal and Kennedy, 1982). They contend that the more developed and coherent a corporate culture, the more effective the organisation's performance in the market place. Narver and Slater (1990, p21) stated that a developed marketing culture allows the firm to create the necessary behaviour to develop, maintain and sustain superior value for buyers. In turn, this should lead to superior performance. The more volatile the environment, the more important this is.

Siu and Wilson (1998, p303) contend that the critical behavioural aspects within the FE environment are based on the three identified themes. The combined goal of the themes is the long-term survival for the institution. Siu and Wilson define market orientation in terms of the extent that the college's systems, culture and procedures are established and developed in a manner that ensures long-term customer relationships. They observe (1998, p314) that due to the service nature of further education, marketing needs to start from the organisation itself. In turn, there is a need for a fundamental commitment from the senior management to market orientation. Sui and Wilson conclude that management needs to systematically reinforce market-orientated behaviour in the employees and focus on three dimensions:

1. attitude and behaviour of employees to clients (customers).
2. tangible aspects of the service, both course provision and the physical environment.
3. intangible aspects of the service.

The summary conclusion from Siu and Wilson's research is that effective market orientation must extend to the whole organisation and not just be the responsibility of a specialist team. In turn, this

approach must be underpinned by actions, policies and reward systems that reinforce the necessity and benefit from an inclusive approach to market orientation.

3.4 The competitive environment and market orientation

The marketing literature supports the link between the market orientation construct and superior business performance and this is transferable to non-profit organisations. Specifically, Kohli and Jaworski (1990, p13) concluded that a market orientation appears to provide a unifying focus for the organisation and it should lead to superior organisational performance. Narver and Slater (1990) developed a measure of market orientation based on three behavioural dimensions that coincided with the market orientation construct of Kohli and Jaworski. However the principle that market orientation is automatically a strategy to be pursued is not a universal truth. Kohli and Jaworski (1990, p14-15) observed that four key moderators on the degree of positive impact of adopting the market orientation construct were:

1. **Market turbulence:** Changes in the composition of customers and their preferences creates instability in the market place. A stable market with low levels of change in preferences is unlikely to require a high degree of market orientation by the firm. This scenario was typical of further education pre-1992.
2. **Technological turbulence:** Fast evolving technological industries develop rapidly new products. This is not typical of further education, as although new qualifications and learning methodologies are developed (e.g. computer and Internet based learning), they are not technologically turbulent from the customer's perspective.
3. **Monopolistic conditions:** There is low competition or a supply side regulated industry, a scenario very typical of further education until 1992. Indeed, it still persists in some areas, especially in smaller town, semi-rural areas, vis-à-vis metropolitan areas. As FE is actually a series of markets (e.g. school leavers, employers, community courses etc), it is possible that an individual college may have a monopoly in one market but be subject to fierce competition in another. This is particularly true for general multi disciplinary FE colleges.

4. Economic condition: The weaker the economy, the stronger the relationship between market orientation and business performance due to increased pressure on consumers to act wisely with their scarcer resources in times of lower economic performance.

Similarly, Day and Wensley (1988, p17) proposed that the competitive environment affects the firm's approach to collecting and analysing the environment. The greater the competition, the greater the propensity to collect data on customer alternatives to the firm. This is very true of monopolistic firms and was a typical feature of public sector firms that had their environment regulated controlled by/for them, e.g. sixth form colleges that automatically had local schools feeding them pupils. This changed in 1992 when artificial barriers to competition were dismantled with college incorporation.

The Slater and Narver study (1994, p53) into moderating influences on the adoption of the market orientation construct concluded that the impact of such moderators on market orientation as a business cultural approach was low. They observed that a market-orientated business with a commitment to innovation should be prepared to achieve and sustain competitive environment, irrespective of the environmental situation. However, a key limitation of their research was the cross-sectional design of their study, which was based on the *Fortune 500* private sector business units, not recently deregulated state bureaucracies such as UK FE colleges. In turn, it is widely accepted that the development of a market orientation will improve the performance of charities (Fine, 1990; Lovelock and Weinberg, 1989; Kotler and Andreasen, 1991), therefore it is necessary to explore the potential alternative independent variables on college business performance as moderators.

The provision and consumption of FE is not a free market, being a predominantly state funded activity. As discussed earlier, the rise of the Evaluation State has seen greater indirect intervention by the centre in the delivery of services in the locality. The DfEE, in the White Paper *The Learning Age* (1999, p2 and p7), tasked the new organising body for FE, Learning Skills Council (LSC), to promote 'greater rationalisation' of the service so as to reduce wasteful competition. It also tasked the new LSC to raise standards by prioritising the funding of learning that meets the state's quality standards, taking firm action where providers are falling short. In conclusion the FE sector is not a relatively free trading environment as set out in Slater and Narver's 1994 work, but a state-directed sector where colleges

receive instruction on priorities and are verified for service delivery quality by an independent Inspectorate.

The underlying point of Slater and Narver's 1994 work is that the identified moderators may slow down the take up of the market orientation construct, but it will not make the outcome of adopting the construct negative in terms of impact on business performance. It may be the case, however, that in adopting a market orientation approach, the costs of implementing the business culture implied by the construct outweighs the benefits gained from adopting a positive market orientation. For FE, it will be necessary to review these moderators as potential factors that affect senior staff in adopting the market orientation construct in part or in whole in their strategies for corporate survival.

3.5 Implications and conclusions for further education college managers

The historical right of the college to determine its orientation at a local level was challenged by the state in the late 1970s. This culminated in the incorporation of FE colleges in 1992, with the colleges reporting to a nationally directed funding agency, the FEFC. Since then, the introduction of performance related funding based on throughputs and outputs, coupled with the use of citizen charters has raised the profile of customer need and, critically, customer satisfaction. Hebert and Callender (1997, p23) comparing the UK and USA student participation in FE, concluded that American Community Colleges (FE college equivalents) perceive students as consumers with consumer rights, a relationship that is mediated by cash. In contrast, UK students are only now being perceived as customers, although the majority of UK students do not meet the full cost of their consumption, unlike their American peers. American institutions are attentive to price sensitivity and cost and have developed marketing techniques, admissions policies and increased commitment to student financial support to improve student participation, retention and achievement. The promotion of consumer choice is developing in the UK, albeit not yet to the levels witnessed in the USA. Hillman (1998, p315) commented that as individuals (in the UK) are given greater financial responsibility for their learning, they would in turn seek greater control over the location, content and process of learning. This has significant ramifications for traditional FE colleges that have a product led rather than a customer led focus.

Kennedy (1997, p3-4) offered a contrasting view on the limitations of 'free enterprise' in the further education service. Her Commission into participation in further education was set its terms by the FEFC to measure the effectiveness of the funding methodology (adopted on behalf of the state) in addressing the social exclusion agenda. Her Commission's work concluded that:

1. Resource efficiency in FE colleges has improved dramatically since 1992.
2. Funding related to throughputs and outputs will result in colleges selecting the most financially productive learners.
3. Attracting learners that are hard to retain and engage is not financially rewarding.
4. In the rush from the 'heavy hand of the state planning' (by the LEAs), colleges were no longer operating in a strategic overview of local needs, focusing on their perception of the priorities based on the attractiveness of funding.
5. Destructive competition resulting in the wastage of public money was increasingly common.

The Kennedy Commission's fundamental conclusion was that in the UK a national system of relatively autonomous providers, steered only by national agreements, cannot adequately identify and achieve strategic goals at the local level, (1997, p38). Kennedy did not advocate the return to the discredited operating models of pre-1992, but a more fundamental and experimental approach to the provision and delivery of FE to customers. As the state progressively intervenes at a sub-regional level, colleges will be driven by a myriad of performance goals, not just broad financial targets. The implications for college managers are clear. The historical role of the college being the ultimate decision-maker in determining what is best for local learners has long past, a fact confirmed by the Secretary of State's remit letter to the new LSC in November 2000. This letter placed this power within the remit of the central state operating via local executive agencies (local learning and skills councils).

The combination of the rise of the consumer and the increasing intervention of the Evaluation State require colleges to adapt to survive. The successful college will need to develop a high awareness of its operating environment, the needs and expectations of its customers, funders and employees, together with the creation of cost effective solutions to meet those needs. As advocated by Siu and Wilson (1998, p316), it is the role of management to generate a (cultural) change strategy that

embraces a market orientation perspective that employees can embrace and that meets the needs of the college's customers. In the development of scales to measure market orientation in FE, Deng and Dart's cross-sectoral work (1994, p741-2) provides a useful reference base for the development of relevant scale items, along with the MARKOR scale developed by Kohli, Jaworski and Kumar (1993).

4 Entrepreneurship and market orientation

4.1 Introduction

The relevance of market orientation for all types of organisations has been clearly demonstrated in terms of the construct and the benefits of its adoption. Slater (1997, p165) proposed that successful innovation is the product of a market orientated culture, coupled with entrepreneurial values. Jaworski and Kohli (1996 p129) recognised that their earlier work had incorrectly ignored the role of innovation in the measurement of market orientation. The updating of both key theory developers' market orientation constructs to involve innovation and entrepreneurialism is very relevant for this thesis. Harris and Ogbonna's qualitative study (1999, p189) observed that market researchers have typically deployed a selective use of culture theory in developing the construct of market orientation. They propose four areas of concern, namely:

- market orientation culture is assumed or prescribed to be unitary in nature,
- culture is frequently proffered as being subject to conscious management by a firm's management,
- an orientation towards market needs is commonly conceptualised as comprising organisational artefacts, and
- marketing theorists assume that cultural dominance by a market subculture is achievable under any circumstance.

Harris and Ogbonna (1999) contend that this simplification of culture theory is in part a reason why empirical studies to date have found a limited adoption of the market orientation concept. Another reason for such empirical findings occurs as firms find it hard to develop a market orientation culture as put forward by theorists. Harris and Ogbonna propose that future researchers would benefit from a collaborative approach between market orientation researchers and organisational culture theorists. In line with their proposition, this chapter starts with an overview of the connection between the two constructs, proposing a relationship model. The chapter then develops these links and in turn goes on to explore their application to the non-profit sector and FE in particular. The chapter reviews Schein's life-cycle model of culture. The chapter reviews the role of a firm's learning orientation, its top management team and their interaction with the constructs of the thesis.

4.2 Conceptual framework of market orientation and entrepreneurship interactions

The relationship between two related but distinct organisational characteristics, market orientation and entrepreneurial leadership, are the subject of study of this thesis. Both constructs influence the firm's market information processing (MIP) activities. The better the firm's ability to identify and interpret these market signals, the quicker it is able to react and remain competitive vis-à-vis its competitors. Market orientation influences the scope of market information processing activities directed at customers, competitors, distribution and communication channels, together with the identification of strategic priorities for the firm. In contrast, entrepreneurial leadership is an organisational characteristic that places an emphasis on responding to changes in the environment by constantly identifying opportunities for development and interpreting the implications of identified strategic priorities faced by the firm.

As contended by Deshpande and Webster (1989), a market orientated culture can achieve maximum effectiveness only if a spirit of entrepreneurship and appropriate organisational climate and cultural values compliment it. As advanced by Dickson (1992, p72) and de Geus (1988), the critical challenge for any firm is to create the combination of culture and climate that maximises organisational learning of the know how to create superior customer value. Slater and Narver (1995, p63) argue that market orientation in itself will not create superior competitive advantage and it must be augmented by entrepreneurship. Market orientation is reflected by knowledge producing behaviours, whereas a learning orientation is reflected by a set of knowledge questioning values, Sinkula et al (1997). The thesis explores the role of entrepreneurship, as part of a college's culture in developing the complementary organisational characteristic to market orientation. The interrelation of the two constructs is illustrated in figure 4.1.

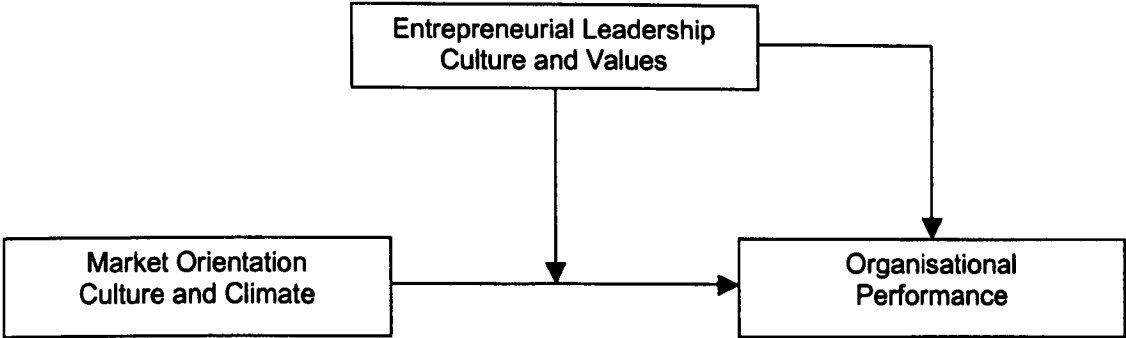


Figure 4.1: Conceptual Framework of Market Orientation and Entrepreneurship Interactions

The nature of this interaction between the two constructs implies the organisational performance relationship illustrated in figure 4.2.

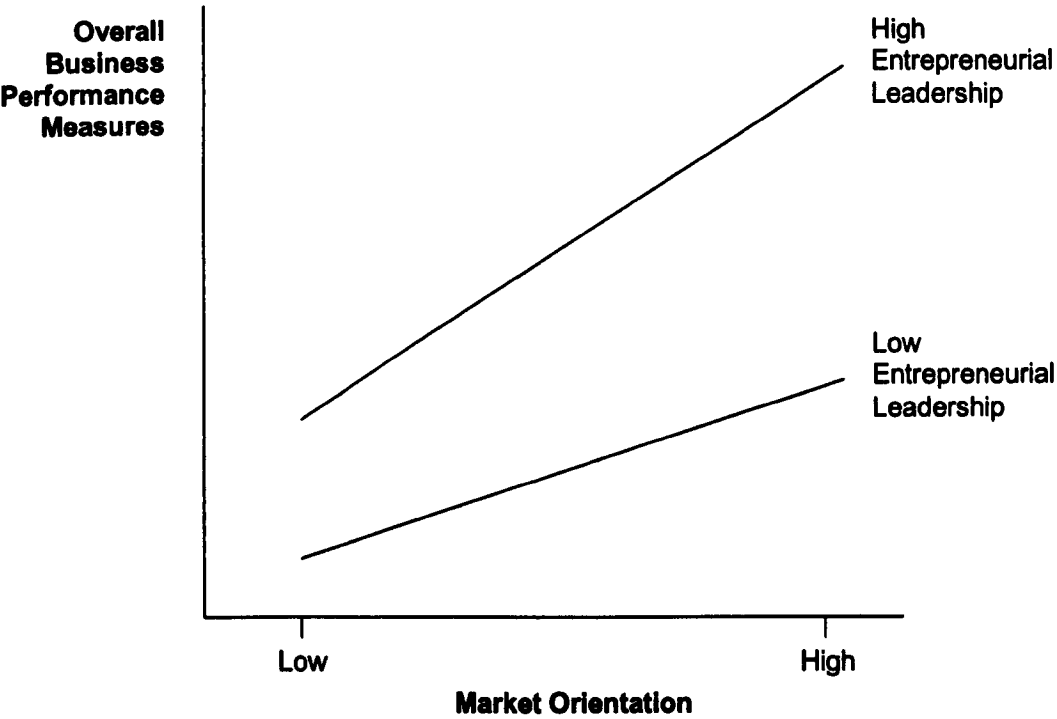


Figure 4.2: Business Performance and the Interaction of the constructs

The performance differentials in the above figure are illustrative and are not a hypothesised magnitude of the absolute impact of the two constructs. However, it is anticipated that the active combination of the two constructs has a synergistic, multiplier effect upon overall business performance. This synergistic relationship is illustrated by Day's study (1994, p39) that conceptualised the outside in (i.e. market orientation) and inside out (i.e. learning orientation and by implication, entrepreneurial leadership) processes have a mutual involvement in optimising customer interactions, which in turn improve business performance.

4.3 Market orientation and entrepreneurial leadership

The market orientation process is a firm wide activity that requires clear leadership from the top.

Market orientation is a whole organisation philosophy that in the correct circumstances will add competitive advantage to the firm, although there are some circumstances where the costs of orientation will outweigh the benefits. Deshpande and Webster (1989) contend that the precursors to maximising the effectiveness of market orientation are a culture of entrepreneurship and an organisational climate that follows through actions in a coherent and consistent manner. Dynamic market orientation based on continuous learning, de Geus (1988, p71) contended, may be the only source of sustainable competitive advantage for organisations in the future. In turn, Slater and Narver (1995, p63) concluded that although market orientation should provide a strong basis for learning from a firm's customers, entrepreneurial leadership and support systems must complement it.

Historically, consumers as customers of English FE have exercised low consumer power, with the sector predominantly being a supplier led market system organised by a locally controlled planning framework. The incorporation of the FE sector in 1992 and the removal of barriers to entry for new service providers in 2001 by the new Learning Skills Council have resulted in a change in the balance of power towards the customer. By the late 1990s, FE educational customers were becoming more sophisticated in selecting learning products as a result of enhanced access to product information by national freephone help lines (Learn Direct established in 1999), selective financial assistance to participate (Individual Learning Accounts in 2000) and more localised, flexible types of learning. The fundamental change that has led to more consumer orientation has been the introduction of customer led funding. In August 1994 the FEFC introduced a funding model that expressed colleges budgets as a function of the level of consumption by consumers. Each course was prescribed a tariff (units of learning with a national price per unit) and its generation was subject to the recruitment, retention and achievement of the consumer, or learner. The corollary of these changes was that as customers moved from passive consumers of FE to active buyers, the latent power of the demand side was increased and state providers (colleges) had to acknowledge the change in the balance of consumer power or run the risk of missing signals to adapt to the new operating environment. To adapt entrepreneurially and create superior competitive advantage as contended by Deshpande and Webster (1989), colleges would need to adopt a strategy for change that keeps it ahead of the pace of

change dictated by the state. Treacy and Weirsema (1993) concluded that superior strategies in private sector firms are derived from delivering customer value in one of three ways.

- *Operational excellence* through service delivery, price and location. This requires tight cost control and close links with customers to detect changes in demand.
- *Customer intimacy* that emphasises the ability to adapt the project on a highly specialised basis. This predicates a very high quality and swift customer knowledge system.
- *Product leadership* derived from product innovation.

The conclusions of their work are as equally applicable to the public and not for profit sectors. For FE colleges a mixture of all three strategies is very typical, although the funding of learners by the FEFC/LSC is structured for mass delivery of product rather than product niching as typified by customer intimacy strategies.

Where the relationship between inputs and outputs is more abstract repetition, the ability to understand the customer is of critical importance. This proposition has great relevance for non-profit organisations, as their goals are more complex to define with accompanying scope for ambiguous orientation by management and employees. This importance stems from the lack of the normal commercial measures of success, namely the absence of profitability or shareholder value to the non-for profit sector. Its absence has often been substituted with proxies, however they are typically more difficult to comprehend and measure quickly in the non-profit sector. The corollary is that an organisation that has a strong appreciation of the customers' needs and is effective in meeting those needs within the constraints of their resources (budgets) should in turn generate superior outcomes Dickson (1992). Slater and Narver (1995, p66) also identify that a flexible learning organisation that allows for adjustments when the unexpected occurs is better at responding to change and reallocating resources to focus on the new opportunity or threat. With the significantly volatility in the Further Education sector, this skill is of fundamental importance. In turn, the corollary is that the inability to learn quickly can result in significant operational problems within a very short time span Loomis (1993). Slater and Narver (1995, p67) conclude that an organisation's superior ability to learn is:

1. critical due to the swift and fundamental changes in the market, the method of service delivery and customer expectations, and

2. a competency (people) based source of competitive advantage due to its inherent complexity and hence it is also difficult to replicate by competitors.

This construct is very relevant to the FE sector. The sector is currently in the midst of adapting to new learning technologies (Information Communication Technologies: ICT and radical change in 16-19 education known as Curriculum 2000), changes in the expectations of customers (customer charters and greater expectations of entitlement) and enhanced competition due to the homogenisation of the teaching product, effectively removing product differentiation between providers. The imperfection in competition within the Further Education sector, coupled with complexity of direct imitations makes the adoption of a learning organisation approach to market orientation a credible means of delivering competitive advantage and the long-term survival requirement as advocated by Siu and Wilson (1997). The adoption of a learning organisation philosophy requires a suitable culture and climate for effective working. Theodossin (1986) explored the concept of multiple markets in further and higher education, whereby there are four key markets that college leaders seek to influence.

1. *the Primary market* of actual users or direct beneficiaries of the service,
2. *the Secondary market* of those in a position to influence the primary market, e.g. parents, family and teachers of the students,
3. *the Legitimiser market*, consisting of those groups that ensure the service is delivered to the prescribed levels, e.g. FEFC, Training Standards Council and Ofsted Inspectorates, and
4. *the Resource market*, involving those that are responsible for funding the service, typically the Funding agencies, DfEE and their scrutiny agencies, such as the National Audit Office.

The balancing of the four markets is complex and an ongoing process; it is a challenge for all managers in the public sector. Often the demand placed on managers is conflicting and results in dysfunctional decision making. The following figure (4.3) adapted from Chapman and Cowdell's (1998, p64) application of the construct to the National Health Service represents this multiple market construct:

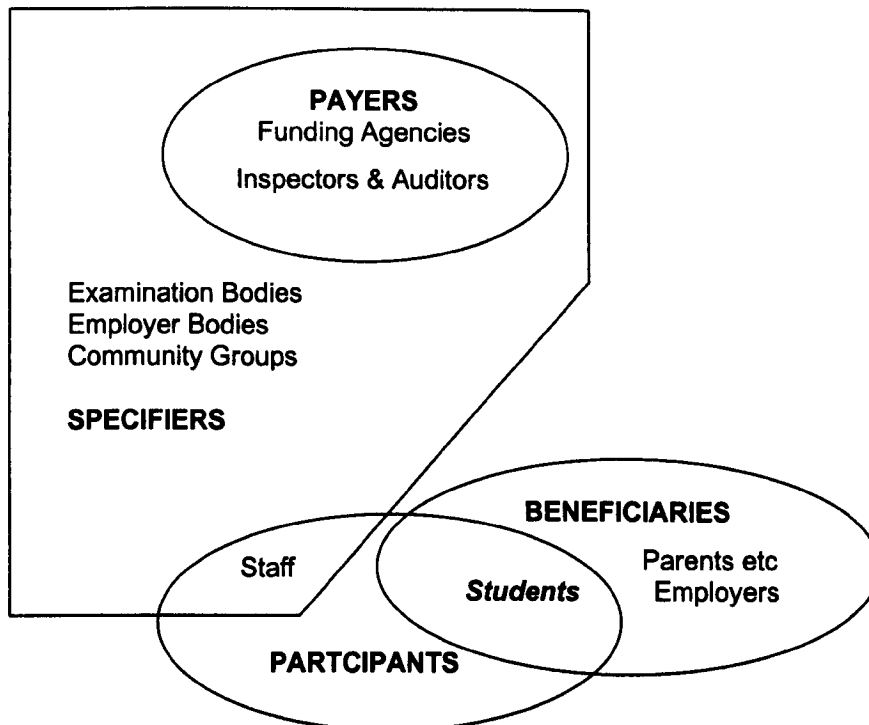


Figure 4.3: A model of perceived provider and customer/consumer relationships in further education, after Chapman and Cowdell

In summary, the existence of multiple markets and stakeholders makes the direct application of the market concept difficult in the public sector, but not impossible.

4.4 Culture and climate: Its role in the firm

There is consensus amongst researchers that market orientation is a continuum between very low and very high adoption, rather than a discrete yes or no to its adoption. Dickinson (1996, p104) contends that market orientation describes processes that enable a firm to learn from its contact with customers and hence derive competitive advantage. Sound market information processing, interpretation and organisational memory are regarded by Slater and Narver (1995) as being critical for creating superior market orientation. Day (1994a) contends that the success of these functions depends on the often tacit decision rules for selecting or rejecting information, the mental models used by employees to convert the information into knowledge and in turn, the customers expected responses to the firm's actions. Day's (1994a) definition also embraces how the firm expects competitors to act to its actions as well. A firm's repeated success in interpreting MIP can breed a complacent approach to accurate interpretation of signals and the retention of the information amongst the staff, (Sinkula 1994). Sinkula goes on to argue that successful firms reject the presumed effectiveness of past actions and

continuously recheck and challenge the information presented to it. The development of this type of organisational learning process is a function of a firm's culture, climate and values.

A firm's values are the tenets of faith that the firm is developed upon, stemming from beliefs and aspirations of the firm's founders. In a FE college, these values centre on the learner as client and often embrace quality delivery, affordability and equity of opportunity for individuals. An organisation's culture is the set of fundamental values and beliefs that provides the operational parameters for the organisation, Deshpande and Webster (1989). Typically culture is deeply rooted in the firm's psyche. In turn, the climate is the description of how the organisation goes about organising itself in terms of structures, processes and approaches that deliver the desired set of beliefs articulated in the organisation's culture, Deshpande and Webster (1989). Schein (1990) argued the critically complimentary nature of culture and climate. It is difficult to develop and sustain appropriate behaviour if the value systems are not in place and in turn, values are difficult to sustain if there is an absence of appropriate behaviour and reward systems to create and reinforce the attitude of the employees.

4.4.1 Schein's life cycle model

Scholars have developed a number of models for describing and understanding organisational culture. However, no one model has gained universal acceptance, reflecting the proposition that culture is not a uniform model in all types of firms, together with the early stage of theory development in this relatively new area of work, Brown (1998, p116). Although developed with the private firm in mind, one of the stronger models in terms of it's relevance to not for profit organisations, is that developed by Schein (1985). The model is relevant as it suggests that culture change can occur in a variety of circumstances, although it is an observant model rather than an explanatory one. The model is based on a life cycle construct.

- The first phase is birth and early growth of the firm and may last from a few years to a few decades. The emphasis in this stage is on differentiating the firm from its competitors and developing its own structures (culture), Schein (1992, p303). Schein proposed that a firm in this stage would only face culture change if its existence is threatened or there are succession problems with the founder. For the FE college, typically it will be the former

issue and concurs with Habermas' (1976) legitimisation crisis construct. Few (less than 15%) FE colleges are in this stage, principally from the result of recent mergers.

- The second phase is organisational midlife. These firms are well established and are faced with complex strategic choices, concerning growth, development of new products and markets, together with cost control and mergers, Schein (1992, p314). The culture and possibly subcultures are formed and deeply embedded.
- The third phase refers to the stage where the firm is highly stable, exploiting mature markets and lacks the motivation to change. Maturity is often synonymous with market saturation, Schein (1992, p321). The emphasis on cultural change is conflict rather than incremental changes.

The majority of FE colleges are in the midlife and maturity/decline phases of the model. This life-cycle model, along with the change mechanisms identified by Schein (1992), is represented in figure 4.4.

Organisational Stage of the Firm	Change Mechanisms
Founding and early growth	<ol style="list-style-type: none"> 1. Incremental change through general and specific evolution 2. Change through insight from organisational therapy 3. Change through promotion of hybrids within the culture
Midlife	<ol style="list-style-type: none"> 4. Change through systematic promotion of subcultures 5. Planned change through organisation development projects and learning structures 6. Unfreezing and change through technological seduction
Maturity and decline	<ol style="list-style-type: none"> 7. Change through infusion of outsiders 8. Unfreezing through scandal and myth explosion 9. Change through turnarounds 10. Change through coercive persuasion 11. Destruction and rebirth

Figure 4.4: Cultural change mechanisms, (after Schein, 1992, p304)

There are criticisms of this model and Brown (1998, p135) comments that the model in itself offers few insights into how cultural change mechanisms actually work. Gagliardi's (1986) work develops the distinction in the nature of culture change between radical and incremental change. His framework

also recognises that values can be emotional rather than rational, often through a process of idealisation, a construct valid in the not for profit sector firm.

Slater and Narver (1995, p67) recognised that their 1990 model was limited by its failure to explore the culture/climate construct. Their 1995 study sought to remedy this shortfall and identified five key aspects, as set out in figure 4.5.

Culture	Climate
<ul style="list-style-type: none">• Entrepreneurship	<ul style="list-style-type: none">• Organic Structure
<ul style="list-style-type: none">• Market Orientation	<ul style="list-style-type: none">• Facilitative Leadership• Decentralised Strategic Planning

Figure 4.5: The Learning Organisation: Slater & Narver, 1995, p67

The five dimensions when balanced provide an effective corporate approach that generates outcomes in the form of profits, shareholder value, and for non profits, growth, sustainability and economic viability. The location of leadership in culture or climate is ambiguous. Deshpande, Farley and Webster (1993) contend that leadership is an element of climate, whereas Slater and Narver (1995) contend that is an element of client. Other scholars contend that it is probably both cultural and climate. The five elements proposed by the Slater and Narver construct are developed in the following sections.

4.4.2 Culture and market orientation

Slater and Narver (1995, p67) define market orientation as the culture that places the highest value on creating stakeholder value whilst providing the norms for behaviour regarding the development and focus of the organisation. They argue that market orientation is inherently a learning orientation as it is about the speed of response to new information from the customers and their environment. They also argue that market orientation may not in itself create a risk taking culture, a critical precursor for entrepreneurial behaviour. The slavish following of customer demands may create an ultimately imploding organisation as the firm misses the new and emerging markets pursued by competitors, Argyris (1994, p78). The most obvious danger is to simply diversify the product lines to meet customer expectations, as opposed to developing variations and new products to meet current and new customer needs. In addition, the organisation may not perceive or evaluate the threat of other entrants to the market, being concerned with current competitors.

This is relevant for Further Education as the channelling of state funding via the consolidated Learning Skills Council from April 2001 is designed to allow entrants free access to the use of public funds, subject to certain audit and academic inspection requirements. Similarly, FE colleges are able to compete with private sector training providers for non-state sponsored work, although this has been an option not regularly used since the late 1980s. Slater and Narver's (1995, p68) conclusion that the danger of defining an organisation's market orientation in too narrow a manner can lead to organisational learning (i.e. adaptation) within traditional boundaries and this is particularly true for FE colleges. They advocate that to avoid this problem, market orientation should include all stakeholders, current and potential, that have knowledge that can contribute to the creation of superior customer value or are threats to competitive advantage. The DfEE (1995, p3) advocates that FE colleges should broaden their perspectives to include the needs of all potential consumers.

4.4.3 Culture and entrepreneurship

Market orientation typically involves entrepreneurial behaviour in that it promotes creative and responsive actions. Market orientation could be argued to be inherently entrepreneurial, but Slater and Narver (1995, p68) advocate that entrepreneurial values have to be made explicit and are different from market orientation. Hamel and Prahalad (1991) contend that a culture that values entrepreneurship and innovation provides the supportive environment that allows effective organisational learning to occur. This learning embraces exploring and experimenting in a suitably risk assessed environment, Quinn (1985). Firms with greater capacity to innovate will be more successful in responding to their environment and developing new abilities and resources that lead the firm to create and sustain superior competitive advantage, Hurley and Hult (1988, p44). However, market orientation is not entrepreneurialism per se. An entrepreneurial team or individual is prepared to take risk and entrepreneurial values promote the creation of new business within the existing business, business regeneration and revitalisation, Schendel (1990, p2). In contrast, market orientation does not in itself promote risk taking. Firms that have a history of acting upon the information that they collect and analyse, tend to be considered to be more entrepreneurial than their peers, Jacobson (1992).

Slater and Narver (1995) identified a series of characteristics of innovatory firms, including working with lead customers on new product innovation, piloting of new experimental protocols and continuous

experimentation with new quality and low cost programmes. A reoccurring theme of successful innovators is the evaluation and review of such actions, Garvin (1993). The use of systematic review and evaluation reduces the risk that the organisation will move too quickly to the next stage of evolution of the process, without having consolidated the initial steps of the process. Webster (1994, p14) states that management must develop a broad concept of organisational culture that focuses the organisation outwards, onto its customers and competitors. He contends that this will create an overwhelming predisposition toward entrepreneurial and innovative responsiveness to market changes (MIP). Slater and Narver (1995, p68) conclude that the linking of market orientation to entrepreneurial values provides the necessary focus for the organisation's efforts, whilst simultaneously promoting iconoclastic endeavours. The development of the right climate is important to allow an entrepreneurially led market orientation culture to thrive.

4.4.4 Climate and facilitative leadership

Much has been written about the strong role of leadership in education including the FE sector. As explored earlier in the literature, the rise of entrepreneurial teams as part of leadership has come to the fore. Colleges, in common with all other medium sized firms, are led by top management teams and typically called the senior management team (SMT) in FE. Complex operating environments such as those experienced by non-profits require complex management and leadership styles that appreciate the subtleties of the environment.

Entrepreneurial leaders tend to be strong leaders and Senge (1990, p172) commented that the leader's commitment to challenge and inquiry about the norm is a necessity for organisational improvement. Furthermore, Senge proposes that facilitative leaders help to focus the organisation on the key issues, encouraging employees to create change and innovate. Slater and Narver (1995, p69) observe that facilitative leaders are frequent and effective communicators within and outside of their organisations. Such leaders dynamically articulate the organisation's vision and are key to the 'unlearning' of traditional thinking within the organisation, promoting new ways of thinking and operating. Slater and Narver (1995) identify this single point as the most important role for the organisation's chief executive to adopt if they are to promote a climate of change and responsiveness. Finlay (1995, p46) commented that facilitative leadership, as a part of the college's culture is

important. College incorporation does not imply the adoption of authoritarian and bureaucratic approaches to sharing and using market information. Colleges that have open and frequent communication are likely to be more responsive and open to the needs of their students. Hambrick's work (1995, p110) identified that chief executive officers (CEOs) are often stymied in their quest for business performance due to real and/or perceived shortcomings in the top management team. His work identified five themes of problems.

- inadequate capabilities of an individual executive,
- common team-wide shortcomings,
- harmful rivalries,
- groupthink - an approach that stops the group thinking and acting in new, alternative and innovative ways, and
- fragmentation.

Of these themes, fragmentation is perhaps the most difficult to overcome. Hambrick (1995, p111) identifies that the term 'management team' can actually be an oxymoron, with the top team in reality consisting of a series of senior executives pursuing their own agenda, with a minimum of collaboration or exchange of information. Hambrick proposes that such fragmentation is a problem that 'creeps up' on team leaders and can actually be a resulting problem of successful business growth. Growth by its nature creates change, and such change places stress on the normed relationships within the team. It is therefore necessary for the team to adapt to such changes. The danger of such fragmentation issues is the top team's ability to respond on a firm wide basis to fundamental threat. This construct is pertinent to English further education, as many senior managers (executives) have been in post for a long time during the most volatile period ever of growth in the sector.

The emphasis of significant growth in further education during the period 1992-1997 was a twin policy objective of learner expansion and unit cost reduction (i.e. resource efficiency). Miles and Snow (1978) argue that in an efficiency driven firm, especially a not for profit firm, everything is focused on creating a buffer to allow constituent business units to operate in as stable an environment as possible as they reorientate themselves. The corollary is that this pattern of behaviour often extends to the top management team and the members only meet for highly formalised encounters. This approach is then replicated further down the management structure with middle and team managers. This creeping

inert system of management effectively inhibits the entire organisation from working openly and effectively as entrepreneurial teams. Fragmentation occurs due to a number of factors, which are listed in Table 4.1.

Table 4.1: Fragmentation Issues of Senior Management Teams its relevance to FE

Issue	Rationale	Relevance to FE
Size	<p>The bigger the firm, typically:</p> <ul style="list-style-type: none"> the greater the physical distance among team members; the larger the sub units responsible to the senior manager and hence the less time is spent on interacting with senior co-workers; the tendency towards executive specialisation 	<p>The trend is towards larger business units. Typically colleges have grown 25% over the five years 1993-1998, with consolidation and collaborating with other agencies and providers</p>
Diversity	<p>The more diverse the firm:</p> <ul style="list-style-type: none"> the more esoteric and niched the product, resulting in fewer managers participating in developing and promoting the product the more difficult it is for the CEO to construct credible interdependent targets for executives the more infrequently portfolio's overlap and hence interaction becomes more formalised and stylised 	<p>The product offering is becoming progressively more complex, e.g. the introduction of the new sixth form Curriculum 2000 programme in 2000/01.</p> <p>More work is being turned into special projects by the central state, requiring special protocols and procedures to implement e.g. New Deal in 1999</p>
Competitive Strategy	<ul style="list-style-type: none"> Firms that are engaged in innovative, market-orientated innovation tend to have more team integration. Firms that are driven towards efficiency measures tend to focus on highly formalised interactions and do not automatically focus on innovation 	<p>The sector has been subject to severe pressure to expand its volume of work and cut its unit cost of delivery in the period 1993-1998</p>

Hambrick (1995, p118) articulates these factors as 'centrifugal forces' that if unchecked, will result in the top management team drifting apart and performing in a progressively less effective manner. He identifies two key drivers in this process of atrophying, namely longevity of the CEO and longevity of the other executives forming the top management team. Hambrick (1994) found that the longer the two dimensions have worked together, the more homogenous the operational paradigms employed by the top team. Weirsema and Bantel (1992, p92) found in turn that such homogenous teams tend to undertake little strategic change, adopting reactive approaches to management rather than pro-active approaches to innovative change.

In conclusion, as Casson and Drucker have argued that teams need to be entrepreneurial if the firm in turn is to be entrepreneurial. Therefore the leadership effectiveness of the top team is important. With

the adoption of the new managerialism paradigm in FE and the rapid policy changes in the sector, the role of the top management team in terms of leadership dynamism will need to be incorporated as part of the hypotheses' constructs.

4.4.5 Climate and organic structure

The proposition of flexible organisational structures originated with Burns and Stalker (1961), who proposed that high performing firms operating in complex and dynamic industries tend to favour 'organic forms' of working. They described organic as organisational structures that are decentralised and are supported by fluid and ambiguous job responsibilities with extensive lateral communication networks inside and outside the organisation. The corollary from this is the need to dismantle artificial barriers to communication within the organisation (Woodman et al, 1993).

Further education colleges have historically been highly structured and regulated organisations, with a very high level of union involvement, Ebbutt and Brown (1978, p16). The power of the academic board to actually direct the institution's responsiveness based on customers was typically either very low or inert, being a competition ground for opposing interests and perspectives. The more complex the customer base a college serves, the more difficult it is to respond to their different needs. Gupta and Govindarajan (1991) concluded that high environmental uncertainty requires informal and very frequent communication patterns to ensure that information and the derived knowledge is shared widely throughout the organisation. This is a significant challenge for traditional hierarchical colleges.

Slater and Narver (1995, p70) conclude that learning organisations are progressively open towards external partners in developing a modern and responsive organisation. The development of these relationships with key suppliers, alliance partners, customers and distributors improves the overall knowledge within the organisation. Providing these flows of information are treated as organic as opposed to external to the organisation, more benefit is achieved. Glazer (1991) observes that the development of long-term relationships leads to the creation of mutually beneficial developments. These contacts force the pace of development and innovation, offering a critical friend approach to change and results in a better fit to end user requirements by the organisation. Webster (1992, p1) comments that the new organisational form includes strategic networks and partnerships that are

replacing the historical market-based relationships of the last four decades. The DfEE White Paper, *Learning to Succeed* (1999, p2) set the task for the new Learning Skills Council and FE colleges to build learning partnerships with end users, interest groups and other suppliers. In a coherent learning organisation approach, the DfEE aspires to improve the overall effectiveness of the state's expenditure on further education. The corollary for colleges is that partnership is the only acceptable approach and insular, self directed approaches are not only politically indispensable, they will also reduce the college's ability to draw down state funds.

4.4.6 Climate and decentralised strategic planning

The traditional model of rational formalised planning has been much critiqued for its limitations in terms of assumptions of rationality and cognitive capacity in environments that are relatively stable, Slater and Narver (1995, p70). It is recognised that this approach is not inherently stable at times of turbulence or in a dynamically evolving environment, (Mintzberg, 1994, p403). Hart (1992) concluded that strategy should be developed from a framework established by the senior managers, but driven from the bottom tiers of the organisation. The top management's role should be to encourage experimentation and the development of the best ideas. The literature is therefore supportive of a flexible, participative approach to strategic planning that is developed from the bottom upward against a vision framework established by senior management. The vision framework is important to ensure that decentralised managers are pursuing a strategic dimension to their planning, rather than repeating current work plans with different descriptors (Hamel and Prahalad, 1991). Zahra's work (1991, p282) on the predictors of financial outcomes in terms of corporate entrepreneurship identified that strategic management practices are an important part of facilitating entrepreneurial behaviour in the organisation. Critically this involves empowerment of various grades of management.

Planning at too high a level in turbulent and dynamic environments can lead to too many unrelated influences being introduced into the process, such that the key relationships and conclusions are not fully understood, Senge (1990). The higher the level of employee involvement in planning, the higher the level of entrepreneurial activities within teams, Baringer and Bluedorn (1999, p442). They also found that the link between strategic management practices and entrepreneurial activity is stronger when the form promotes flexibility in planning, coupled with a clear planning horizon of operation with a

focus on the control attributes of the process, namely the strategic and financial constraints that the form is working to. Slater and Narver's work (1995, p71) concluded that the effectiveness of the planning system is in its ability to correctly identify key relationships and leverage points and manage the conflict resolution that is required to create a market orientation. In turn, top management planning systems will not create a genuine organisation-wide orientation towards the customer, as teams and individuals will absolve their responsibility for this back up the line of managerial control. The role of senior management is therefore to focus the decentralised strategic planning process to achieve the vision established by the top team.

4.5 Market orientation and top team leadership

Market orientation literature demonstrates the value of its application to public services, including further education, subject to the benefits outweighing the costs of implementation. The literature emphasises that firms need to redefine their roles towards serving customers, as opposed to providing services that the firms perceives its customers want. This will require a different *modus operandi*. Central to the development of market orientation is the role of leadership from the senior management teams, the chief executive and middle managers. The consensus within the literature is that a centralised, directive bureaucracy will not be able to obtain 'best fit' for customers in anything other than the very short term. Similarly, directed policy based on funding formulae will not alone achieve the policy objectives of the state. This literature review has concentrated so far on culture and climate. It is necessary to look at top team leadership in terms of the leadership propositions put forward by Drucker and Casson in chapter 2.

The role of the chief executive is critical, as he/she is the key person for the formulation of the vision for the organisation. Fullan (1991, p165-166) drawing on North American experiences, observed that principals face a number of barriers to effective performance. They are:

- not usually helped by the centre (the state) in devising ways of dealing with change, typically receiving state policy by means of circular, directive or briefing,
- rarely have an effective peer support network,
- unable to, or do not share, concerns with other internal staff,

- personally uncomfortable with leading state-demanded change that they do not always understand or agree with, with no additional resources provided, or a steer on the reprioritisation of current priorities, and
- in the middle of existing change processes, often implementing the last set of strategic change imperatives.

Undoubtedly, the calibre and skill set of principals in the late 1990s are different to those appointed at the height of the LEA controlled college environment of the 1980s. However, the same political barriers are still faced by chief executives of both eras and leadership qualities are still very important. In turn, market orientation literature identifies entrepreneurial leadership as one of the precursors to its successful implementation.

With complex environments, organisational behaviourists advocate decentralised decision making. However, in a hostile and volatile environment the organisation needs to consider the need for centralised decision making to protect itself from the environment, Mintzberg (1983). The state has not prescribed a unifying managerial system for colleges, preferring to set the overall strategic policy and leave the operational detail to the periphery, effectively avoiding the *'murky plains of (operational) detail'*, Neave (1988, p12). By this method, the state sets the control framework, without accepting the risk for implementation failure, overcoming the historical problem of being 'subject to subversion' by local inaction, contrary to its centralised wishes. The centralisation versus decentralisation debate within organisations has occupied much research attention, and has been extended to further education. Flynn (1993, p171) codified the propensity of senior staff to impose planning control in terms of various operational scenarios according to table 4.2.

Table 4.2: Planning behaviour in operating environments

Operational Environment	Tendency to	
	Decentralisation	Centralisation
• Complex Environment	High	Low
• External Threats	Low	High
• Need for innovation due to environmental changes	High	Low
• Complex and difficult to define	High	Low
• Consensus on best approach to problems	High	Low
• Risk (personal/corporate) associated with failure	Low	High

The role of top managers is critical to facilitating the development of market orientation, Jaworski and Kohli (1993, p64). They shape a firm's climate and influence its culture. Almost alone, this group of managers has the ability to set new values and challenge old ones. This involves reinforcing the message to the firm's middle and junior managers that they need to be sensitive and responsive to market developments. It also requires a degree of risk taking on the part of senior managers. The corollary of risk taking is a willingness to accept failures in a positive and developmental manner. A key finding of their work was the importance of interdepartmental relationships.

Natural bureaucracies (large public or private sector firms, governmental agencies, older non-dynamic firms and heavily regulated industries) will form natural introspective teams unless checked by senior management. Interdepartmental bickering reduces market orientation, although it should be noted that there would always be some form of conflict due to the differing modus operandi of teams, (e.g. between credit control and sales regarding extending credit to a slow paying debtor). This aspect of market orientation, namely interdepartmental conflict, is very pertinent for FE colleges due to their historical pedigree of public service provision based on the supplier's perspective of consumers' needs, the adoption of the professionalism paradigm of management and the absence of market-based reward systems to motivate staff. Greenwood and Hinings (1996) in reviewing the inhibitors to radical change within organisations, identified the following three key themes of resistance.

1. Resistance is derived from normative embedded nature of the values of an organisation within its institutional context; e.g. "once a sixth form college, always a sixth form college".

2. Incidence and pace of radical change varies across institutional sectors because of differences in structure, e.g. agricultural colleges are as a sector less dynamic institutionally than those colleges at the forefront of information communication technology developments.
3. Propensity to change and the speed at which such change occurs is dependent upon the institutional organisational dynamics, e.g. college structures that are focused on the professionalism paradigm vis-à-vis those on the new managerialism paradigm.

An interesting conclusion from Jaworski and Kohli's work (1993, p65) is that formalisation and departmentalisation (the adoption of teams with rules and protocols) does not appear to affect market orientation. However, it would seem that the content of formal rules is a more important determinant of market orientation. In addition the nature of departmental interaction is important, not the volume of links to other departments per se.

4.6 Conclusions for further education

The literature concerning market orientation and leadership expressed in terms of entrepreneurial endeavour is very important in terms of determining the institution's effectiveness and its long-term survival. Entrepreneurial leadership and market orientation constructs work at the values and cultural level of the firm. Therefore, the operational setting of the college is important in terms of its ability to develop and implement change. As Hoggett comments (1996, p25), college incorporation was advanced as a method by which colleges could shape their own structures to meet the needs of clients, whereas it was a vehicle through which local managers are given the doubtful privilege of performing cutbacks themselves, rather than having them imposed from above as it was in the LEA days. Entrepreneurial and market orientation literature places an emphasis upon empowerment and decentralisation, whereas the political nature of public sector introduces political risk to college leaders in both personal and institutional terms, suggesting a propensity towards centralisation and 'safe' management practices. In such circumstances, the tendency for the top team to centralise decision making results in a decrease in empowerment. This in turn reduces entrepreneurial endeavour and makes it harder for a market orientation approach to be adopted.

The literature review demonstrates that our understanding of the role and impact of entrepreneurship and market orientation upon business performance within the Further Education sector is comparatively limited. The removal of colleges from the bureaucratic and at times politically motivated planning of the LEAs in 1992 to the target driven planning framework of the Evaluation State presented a series of challenges for colleges and their managers. The development of the not for profit sector, the change in operational paradigm from professionalism to managerialism, combined with the rise of the use of performance indicators to measure effectiveness and set improvement targets, has required college staff to reconsider the way in which they organise their work and, critically, respond to the needs of their customers.

The work of colleges is complex and private sector organisational models are not directly transferable, Kennedy (1997). Furthermore, Kennedy determined that unfettered competition would not result in the delivery of social policy imperatives of the state, as they represent a complex combination of financial performance, social policy needs and public service ethos. The work of further education is complex as it is not a purely commercial transaction, but involves the desired attainment of social policy. Its

outputs are not readily measurable against universally accepted performance measures. In addition, colleges are not generic organisations forming a homogenous group. Each college is a unique mix of types of work, operating different methodologies to deliver their work from different start points in terms of baseline resources expressed in terms of physical and human resources. Colleges also work in different social and geographical environments. The differences between cities, urban, semi-rural and rural are acknowledged in the central government formulae when allocating resources to local authorities and those same social measurement factors (Department of the Environment Indices) are used by the FEFC for allocating resources for deprivation funding. However, the operating environment is sufficiently different in most colleges to require managers to localise the resources for application in their immediate environment and customer group. In conclusion, colleges are a common group when viewed in aggregate at the sectoral level, but analysis will need to account for their different orientation towards the customer groups.

Finally, the role of a firm's culture has been explored using Schein's life-cycle model. Succeeding market orientation studies have attempted to address the implications of culture theorists' work, typically on an empirical quantitative basis. As critiqued by Harris and Ogbonna (1999), this approach is ontologically weak. In developing the thesis, the role of culture will need to be addressed. Therefore a qualitative case study will be completed after the empirical quantitative study to explore the application and limitations of the findings at the level of the individual college.

5 Research propositions

5.1 Introduction

This chapter sets out the key constructs and hypotheses to be tested as part of the thesis as initially developed from the model design in section 1.4. The chapter starts with the observed phenomena that is being investigated, namely that businesses *prima facie*, appear to improve their business performance when they increase their client (market) orientation levels. The importance of entrepreneurship has been identified as a key antecedent in developing market orientation. Specifically, the role of entrepreneurial leadership and its potential inhabitation by perceived threats of the Evaluation State is reviewed. The chapter translates the concepts developed from the literature review chapters into indicators by clarifying the concepts and developing initial indicators for testing. Data collection is covered in chapter 6 and indicator evaluation is dealt with in the chapter 7. Chapter 8 reviews the critique of quantitative techniques and extends the methodology to embrace quantitative interviews.

Chapter 5 starts with the development of the key dependent and independent variables that drive the hypothesised relationships developing these constructs from the earlier literature review. The construct's behavioural components are proposed to have equal importance and are represented by the model in figure 5.1. The chapter develops by proposing the hypotheses to be tested; the component variables are developed from the literature review. The chapter concludes with the limitations of scope of the proposed hypotheses, before progressing to quantitative research design methodology and data analysis.

5.2 Output (dependent variable) constructs

The hypothesis has been developed from a series of participant observations as outlined in chapter 1. The participant observations have been developed via an extensive literature review and the reconciliation of the two supporting bodies of literature and its reconciliation with the culture and climate aspects of the firm. The thesis aims to identify the antecedents of successful business performance in English FE colleges in terms of market orientation and positive entrepreneurial leadership. As this thesis addresses new research issues in public administration, namely

entrepreneurship in English FE, the antecedents are developed and reconciled with the underpinning literature sources explored in chapters 2, 3 and 4.

The key challenge is to define the business success criteria for not for profit organisations. For the purpose of this thesis, business success is expressed in terms of its scope for long-term survival without unduly compromising the achievement of the mission (Kotler and Andreasen 1991). Drucker (1989, p89) proposed that not for profits do not base their strategy on money per se, focusing instead on the performance of their mission. Typically two evaluation criteria are proposed by the literature for non-profits, efficiency and effectiveness (Lamb and Crompton 1990, p174). However, the measurement of goal success can be abstract being characterised by ambiguity and the difficulty of defining an objective measure of success (McGill and Wooten 1975, p442). Casson (1992) and Drucker (1989) concur that the promotion of not for profit firm's goals and mission is best served within a financially stable environment. This stable environment is expressed in terms of the institution's ability to generate sufficient resources to meet its mission.

The literature review has proposed a series of constructs that conceptually have a direct relationship with effective business performance for English FE colleges.

1. Essentially, colleges need to generate sufficient levels of business to cover their operating costs. Such costs include delivery costs and, critically, create investment resources for new physical facilities and product/client development.
2. With the harmonisation of the product quality by national standard setting (e.g. Quality Curriculum Agency) and the progressive establishment of price norms by the DfEE via the funding agencies, colleges can effectively only compete via service differentials. These differentials are measured in terms of the timing, location and customer orientation to generate perceived superior customer value. Successful colleges will pay attention to internal customer market orientation factors, an historic weakness of public sector bodies vis-à-vis profit making bodies. Conversely, weaker colleges will be those that have a poorly developed entrepreneurial culture, with a low-level of market orientation that delivers poor customer satisfaction. To attract students in a consistent and resource

efficient manner, colleges need to be effective in both attracting students and then delivering the product in a cost effective and cash positive manner.

3. All businesses need to operate with an ultimately positive cash flow. With this definition, the creation of sufficient trading volumes in itself is not an adequate measure of success. The trading volumes generated need to be both cash positive in their delivery and be cash positive after allowing investment funds for fixed asset replacement and new product/client development (i.e. allow for intangible asset development). In the short term, a firm can be cash negative, using external financing to support its operations, but ultimately, it must generate sufficient cash to service that debt financing and asset investment. The definition of long run varies by individual sector and institution. For some industrial sectors, it can be a matter of months (e.g. travel companies and e-commerce firms) or years (e.g. aerospace industries or chemical manufacturing), as well as being a function of the firm's size. For further education colleges typically this could be a matter of two to three academic years, but it could also be considerably shorter if the college has no cash reserves to start with or longer if it had a cash reserve to delay the impact of poor trading. Therefore cash generation is important and poor cash flow and failing performance, if uncorrected, will ultimately result in the college's insolvency.

On this basis, the dependent variables are defined as the ability to generate long-term trading volumes via innovative and adoptive policies that in turn result in the generation of adequate cash flow to allow the college to meet its mission, however defined. To achieve this the public sector FE College must share the following operating characteristics of a private sector firm.

- be able to generate adequate trading volumes to cover their operating fixed cost base in the short to medium term as ultimately all fixed costs are variable in the long term,
- innovate and adapt to sustain trading volumes by introducing new products and/or work with new clients,
- be cash positive in the long term,
- have good quality products.

In conclusion, to overcome the difficulties of defining output success criteria, the dependent (output) variable is defined in terms of the not for profit colleges' ability to survive in the long term as independent corporations, thereby meeting their mission.

5.3 Antecedent (independent variable) constructs

From the literature, the two driving constructs that influence business performance in private and not for profit (public) firms are entrepreneurial leadership (by individuals and teams) and enhanced market orientation vis-à-vis competitors. As identified from the literature review, the focal constructs, entrepreneurial leadership, positive market orientation and the external regulatory environment are those that must be addressed if the college is to be an effective and independent institution in the long run. It is proposed that superior business performance will occur where:

- the college has *entrepreneurial leadership*, a necessary precursor to change in a public sector firm as proposed by Drucker (1985) and Casson (1990 and 1992),
- the college embraces a *positive market orientation* as proposed by Kohli and Jaworski (1990), Narver and Slater (1990) and Siu and Wilson (1998),
- the College's leadership is not adversely affected are affected by the *external environment*, which is the college's ability to implement national policy at the local level as constrained by eligibility issues and the college leader's perception of the personal risk of being innovative in a highly regulated and inspected operating environment, as proposed by Drucker (1985) and Siu and Wilson (1998).

The conceptual research framework is expressed in the following theoretical model in figure 5.1.

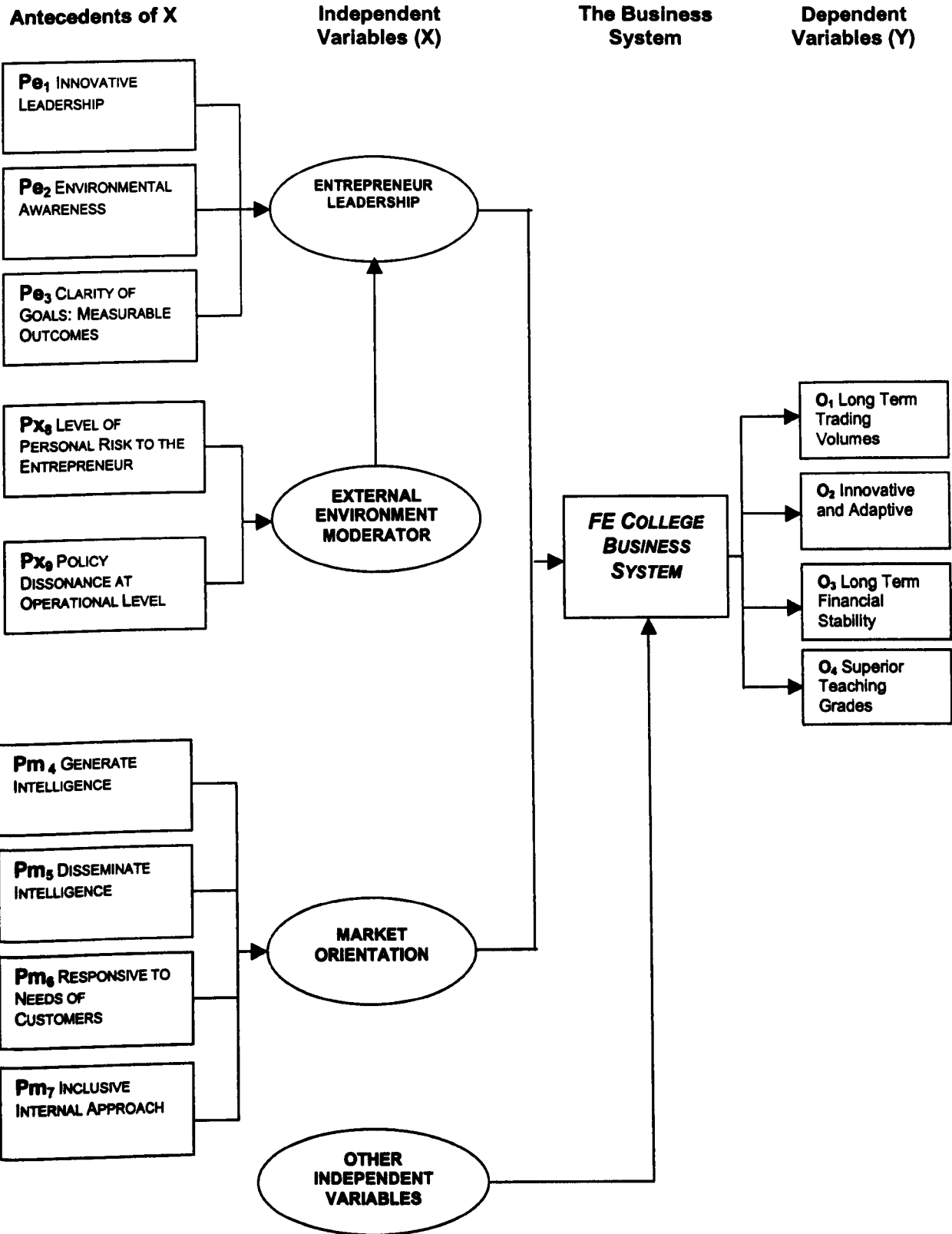


Figure 5.1: Theoretical model of the antecedents of business performance in a further education college

The next step is to develop the hypotheses and the underpinning model, incorporating the relationships among the three constructs and their antecedents, which are defined as the model is developed.

5.4 Key hypotheses

The survival and success of colleges is becoming increasingly dependent on their success in meeting government targets. These targets are often set in qualitative terms as well as in quantitative volumes of learners. Both types of target ultimately have their goals expressed in cash terms. To meet those targets successfully, college governors and managers will need to provide entrepreneurial leadership and generate a positive market orientation for the college. I hypothesise that market orientation and entrepreneurial leadership are one-dimensional constructs consisting of four and five behavioural components respectively, and that each component can be measured reliably with a multi-item scale. The constructs are one-dimensional as I hypothesise that the behavioural components are closely related, in common with the literature review and the findings of earlier studies. In order to test each of the pathways in the model a number of cross-sectional hypotheses are developed.

5.4.1 Hypotheses relating to business performance

The fundamental hypothesis of the thesis is the demonstration that there is a positive relationship between business performance and a positive market orientation and entrepreneurial leadership in English FE colleges. As proposed by Kohli and Jaworski (1990), Narver and Slater (1990) and Siu and Wilson (1998) the adoption of a market orientation will improve business performance as will entrepreneurial leadership as advocated by Casson (1990 and 1992) and Drucker (1985), therefore:

H₁ Colleges with higher levels of entrepreneurial leadership and a more positive market orientation with lower levels of risk adversity will have superior business performance.

5.4.2 Hypotheses relating to market orientation

Narver and Slater (1990) conceptualised that the relative size and relative delivery costs of a firm is a control factor on the implementation of a market orientation. Firm size is perceived as an inhibitor to

performance due to extended lines of communication and the inherent bureaucracy issues attendant to larger organisations. In contrast, lower cost structures are indicative of a lower cost business model that will be able to respond cost effectively and hence profitably to new business opportunities, therefore:

H₂ Larger colleges have a lower market orientation than smaller colleges.

H₃ Colleges with a superior cost differential have a superior market orientation.

Furthermore, Narver and Slater (1990) conceptualised that the nature of a firm's market will have an impact on the firm's willingness to adopt a market orientation, therefore:

H₄ Specialist product colleges (art & design and agricultural colleges) will have a lower market orientation than general FE colleges and sixth form colleges due to the greater product stability in the sub population.

H₅ Sixth form colleges will have a higher market orientation than general FE colleges due to their homogenous client group.

As found by the National Audit Office study (2000), the geographical location of general FE colleges is in an important factor, with city/urban environments being more competitive due to greater proximity of competitors and the more concentrated nature of consumers with superior and cheap transport infrastructures. As proposed by McDonald (1992), a crowded marketplace requires a firm to develop competitive differentiation so as to survive. On the proposition that city and urban environments have greater mobility of the customers and a greater concentration of providers, it is hypothesised that:

H₆ General FE and sixth form colleges in city/urban areas have a higher level of market orientation and entrepreneurial leadership than those colleges operating in small-town and rural environments.

As identified by Narver and Slater (1990) and Deng and Dart (1994), external market factors influence the firm's responsiveness to market signals. As the State has prioritised social exclusion as a priority policy area in the period 1998-2001 for new funding in FE, it is proposed that:

H₇ General FE and sixth form colleges that serve clients in areas with higher levels of social deprivation have a higher market orientation than those colleges serving clients with relatively lower levels of social deprivation.

Specialist colleges are excluded from the above hypotheses as the main constituent of the group (67% by number), agricultural colleges are in rural locations with relatively low deprivation scores.

5.4.3 Hypotheses relating to leadership issues

As proposed by Hambrick (1995) and Weirsema and Bantel (1992), top management teams that have lower levels of staff turnover tend to atrophy in their entrepreneurialism and undertake less strategic change, therefore:

- H₈** Colleges with relatively lower senior staff turnover provide lower levels of entrepreneurial leadership.
- H₉** Principals that were appointed prior to the Incorporation of colleges (pre-1992) are more risk adverse and have lower levels of entrepreneurial leadership than their peers appointed post incorporation.

As proposed by Casson (1982, p36) and Bhidé (1994, p160), the biographical traits of the individual are not moderators of the strength of entrepreneurial leadership, as this is the subject of other innate qualities, not gender or education, therefore:

- H₁₀** Principals that come from a traditional curriculum background are no more entrepreneurial than those from other backgrounds.
- H₁₁** Gender, age, educational background and the Principal's last job are not relevant for the determination of entrepreneurial leadership.

These hypotheses are tested in section 7.4 of the analysis chapter.

5.5 Antecedents to entrepreneurial leadership

Entrepreneurial leadership has already been identified from the literature as being a prerequisite for change within an organisation. For the further education college, the change in operational ethos of the service away from the historical professionalism paradigm towards the managerialism paradigm has had a fundamental impact on the sector. The removal of the safety net of the Local Education Authority in 1992 has resulted in college managers and governors becoming more directive of the college's future. The adoption of the new managerialism in public services was initially accompanied by a hardening of senior management approach to the traditionally unionised workforce. In the FE

sector, the removal of the political influence of the LEA from colleges' boards and the DfEE's refusal to create a national pay bargaining unit for the sector, resulted in the piecemeal deconstruction of lecturer's national contract terms and conditions. By the late 1990s the focus of power between management and unions had changed in favour of management in the majority of colleges. In this respect, the state had permanently dismantled the power base of FE lecturers, a target goal for the central state. Avis (1998, p254) commented that the development of the post Fordism approach to the post-16 agenda is based on a strong continuity of policy by the central state, following the election of the Labour Government in 1997.

The post Fordist approach has the state setting the strategic agenda and identifying the sectors that are to be supported. The Regional Development Agencies and the Learning and Skills Council are implementing this policy on behalf of the centre. Avis (p257) concludes that class conflict is increasingly seen as outmoded. Economics based on conflicts of interest are seen as belonging to an earlier stage of capital development. As the market competition globalises, nation states need to modernise their approaches to workforce development from a low skills and low trust environment to a high skills and high trust environment.

5.5.1 Entrepreneurial leadership

The change in the *raison d'être* of the FE sector has been accompanied by a desired change in operational emphasis away from getting results by close control of the workforce towards an environment of coaching, supporting and empowerment, a construct already adopted in parts of the private sector (Gretton 1996, p21). As advocated by Drucker (1985) and Casson (1992), entrepreneurial traits are applicable to management, irrespective of the profit motive of the firm in which the manager works. In developing a market orientation, Webster (1988, p37) contends that senior management are uniquely responsible for the values and beliefs of the firm. The UK's Investors in People standard and total quality management literature (Oakland, 1990), support this contention. Levitt (1969, p244) proposes that the chief executive must actively communicate their commitment to the marketing concept by leadership acts. By their example, others will get the signal to follow. Without clear signals, performance by others will at best be confused and at worst, counterproductive to achieving the organisation's goals. It is important to differentiate between the actions of leadership and

management in developing the hypotheses that underpin the construct of entrepreneurial leadership, as the two are not synonymous per se, Mullins (1996, p247).

Historically educational professionals rather than business managers have led colleges. Bush (1995, p11) commented that college principals were typically promoted teachers and, as a group, perceived themselves as leading academics rather than chief executive officers of multi-million pound organisations. This management approach was a valid construct in the era when the responsibility for employment, the hire and fire decision, together with resourcing issues rested with the LEA. With the adoption of the new managerialism in the 1990s, principals' have had to review this *modus operandi*, as the role of chief executive and leading professional do not sit easily side by side. Leadership and management are not automatically synonymous, and in this respect the construct focuses on leadership, namely the motivational elements of the organisation's operations, not the managerial competency to execute work plans. Zaleznik (1977, p72) explored the differences between management and leadership in terms of approach to goals and colleagues, listed in table 5.1.

Table 5.1: The Differences in Attitude and Relations With Others - Management vs. Leadership

Principle	Management	Leadership
Goals	Impersonal or passive attitude towards goals	Personal and active attitude towards goals
Conceptions of work	Co-ordinates and responds to conflicts in value systems between team workers	Creates excitement in work and develops choices to workers
Relationships with others	Low level of emotional involvement	Empathy with others and place attention to what events and actions mean
Development	Conservators and regulators of the existing state of affairs with which they identify	Work in, but do not belong to their organisation per se, but seeks opportunities for change

Mullins (p249) comments that in practice, it is difficult to separate management and leadership as typically modern managers have to display both forms of working. For professional environments, leadership is often based on sapiential authority, namely the use of wisdom, personal knowledge, reputation or expertise, rather than job title and position in the hierarchy. Drucker (1988) and Casson (1990 and 1992) advocated the need for the leader to innovate, enthuse and drive forward an organisation; therefore the first proposition is that colleges are:

Pe₁ led by innovative and entrepreneurial individuals and/or top teams that promote innovation, risk taking, rapid adaptation and experimentation over the traditional values of good administration, bureaucracy and conservatism.

5.5.2 Environmental awareness

It should be noted that no one style of leadership is superior per se. The appropriateness of the style is dependent upon the characteristics of the individual and the organisation they work in, together with the operating environment they collectively work within (Schein, 1992). The environment, the organisation's value system and resource constraints are important issues for entrepreneurs to address. In a directed environment such as the provision of public further education, entrepreneurs are given a set of resources and are rarely able to act as significant market makers without the agreement of the centre. Austin (1979) found that individuals conditioned to expect inequitable situations are less outraged when inequalities occur. Within further education, the environment is often political and the

application of state policy can result in unusual consequences for the localised working environment of the individual college.

Effectively the environment establishes opportunities for entrepreneurs to take up. Thompson's work (1999, p294) on the issues of environment, values and resources concluded that entrepreneurial managers must view the environment as a source of opportunities and threats, and that resources constitute strengths and weaknesses that either match or fail to match the environmental needs of the firm. Thompson concluded that entrepreneurship is a process that is essential to establish winning strategies and is applicable to all types of organisations. Therefore the second proposition is that entrepreneurs:

- Pe₂** display awareness of their operating environment and the opportunities that are offered by it, rather than just being aware of the problems that the environment creates.

5.5.3 Clarity of goals

Casson (1982, p331) in developing the construct of the entrepreneurial firm, states that the firm has an elaborate network of contacts, which enables it to identify and make judgmental decisions. These decisions concern the spotting and interpretation of potential new activities and hence this requires systems to screen these ideas quickly and effectively. To achieve this, it is important that goals are expressed clearly as objectives, strategies and organisational goals (Heller 1994, p45). Drucker (1989, p59) identified the fallacy of following a single goal, especially in not for profit organisations. Indeed the pursuit of a single goal could be considered a naïve objective as, with few exceptions, non-profit organisations do not have sufficient resources to pursue one specific goal to its conclusion, as there are competing demands placed upon it. Tilles (1969) suggested that without an explicit statement of strategy, it becomes progressively difficult to expand the organisation and reconcile co-ordinated action with entrepreneurial effort. Without clarity, the firm's employees will interpret the goals as best they can. In turn, it is difficult for managers to subsequently modify patterns of behaviour that develop as a result, a scenario that is at the heart of the critique of public sector enterprises, namely conservative behaviour that follows historically tried and tested patterns of work. With respect to the construct, clarity of mission needs to be expressed as two precursors, namely clarity of mission and

the generation of relevant actions to meet the mission of the college. Therefore, the need to set clear goals requires entrepreneurial leaders to:

Pe_{3a} express the mission in clear and concise language that is understood by key delivery managers in the form of qualitative and quantitative measures of output.

Pe_{3b} the goals need to be expressed as outcomes, not programmes of activity, and they are complemented by a measurement system that identifies non-delivery of outcomes as a signal of adverse reaction by the market that requires correction, not blame apportionment.

In conclusion, the three propositions make up the entrepreneurial leadership construct of the hypothesis.

5.6 Antecedents to market orientation

The key literature underpinning the market orientation construct is the work of Kohli and Jaworski (1990) and the learning organisation work of Narver and Slater (1995). Market orientation, learning orientation, innovativeness and innovative capacity are organisational properties that affect the innovation process within FE colleges. Colleges with a greater capacity to innovate are more successful in responding to their environments and in developing new responses to the demands placed upon by their funding agencies and customers. This leads to the development of competitive advantage and better performance. Four antecedents or dependent variables define the market orientation construct: the three propositions made by Kohli and Jaworski (1990) and the fourth variable being an inclusive organisational approach to market orientation, rather than the occupation of a select few people, with a culture of facilitative leadership. Each proposition is considered in turn with respect to the UK further education environment.

5.6.1 Intelligence generation

The first proposition for the construct is concerned with intelligence generation. The generation of intelligence is applicable to all firms in all industries. For an entrepreneur to function effectively, they must have access to good market intelligence. Mintzberg (1989, p22) identified that the manager's effectiveness is significantly influenced by their own insight into their own work. Without the generation and interpretation of environmental information, the insight will be severely limited.

This knowledge collation includes awareness of the political operating environment of the sector. Customer product needs are only a component of the demand side, as in the UK the majority of the cost is borne by the state via various funding initiatives. Therefore colleges need to be aware of both what customers want and what the state is prepared to fund. The development of decentralised decision making within FE colleges is well advanced; therefore many managers make decisions regarding the delivery of product to customers without the explicit support of the centralised college's functions. Therefore as decision making in terms of product delivery is not centralised, it follows that the use of market intelligence is not simply a purely centralised function. Hence the knowledge generation of local delivery teams is important within a FE college, as it will affect end users' perception of reliability of market signal detection by any centralised team. Therefore a college that has a positive market orientation towards its customer needs:

Pm₄ generates, collates and interprets market intelligence about the operating environment in its broadest sense for the further education college.

5.6.2 Intelligence dissemination

Dissemination across functional boundaries is important, given the historical context of college management tending towards administrative rather than innovative paradigms of management. Stohl and Redding (1987, p498) identified that dissemination of marketing information could be either formal or informal and is described as verifiable or spontaneous. The formal, verifiable method is via written documentation or seminar delivery where the recipient attends a briefing. Informal or spontaneous refers to the delivery of information ahead of term via non-structured documentation or informal briefing sessions. Typically this could be a discussion in a corridor or a review of uncompleted briefing papers by the recipient. The reliability of such information from the receiver's view is also important. O'Reilly (1982, p768) commented that the user's perception of the accuracy and relevance of the market information has an impact on the end user's adoption and action upon the information received. Poorly perceived information will have limited use, hence relevance and timeliness are important criteria for end users. Maltz and Kohli (1996, p54) found that the more receivers obtain formal, regular and relevant information, the more likely they are to accept such information as pertinent to their needs and be prepared to accept the information as being materially accurate. They

also found that the more dynamic the market, the more focused the disseminated information has to be for the end user to accept and use it.

Managers receive a lot of information from inside and outside the FE college from a plethora of agencies and co-workers. Fiske and Taylor (1991, p13), writing about American private sector companies, observed that due to the excess of information, end users are likely to be 'cognitive misers', placing a lower level of importance to infrequent information supplied by the internal marketing manager. This is in part due to the substitution of alternative information sources to fill the gap in the internal dissemination function and due to the end user's lack of experience in decoding the phraseology of the internal information provider. Maltz and Kohli's (1996, p57) fieldwork demonstrated that there was an inverted bell shape relationship between dissemination formality and perceived intelligence quality by end users. They concluded that an equal mix of formal and informal communications appeared to be optimal for the maximisation of market intelligence dissemination across all functions. They also concluded that formal channels had a higher cognitive value due to the verifiability of the information. Therefore, the proposition is that a college generates a positive market orientation by:

Pm₅ disseminating market information in a timely, relevant and systematic manner across the organisation to the appropriate levels to support entrepreneurial decision-making.

5.6.3 Responsiveness

Responsiveness is defined as the actions taken in response to the market intelligence generated and disseminated by the organisation. Kohli and Jaworski (1990, p6) observed that the appropriate unit of analysis was the firm's different business units, as they were likely to be orientated to different degrees. For the purpose of this study, the whole college is looked at, on the basis that senior management and governors will review the entire college's performance at the consolidated level vis-à-vis its long-term survival indicators of business volume generation, product innovation and cash generation.

For the public funded sector, there are two customers, consumers and funders who are typically different groups. The expectation of the two customers may not always agree. Kennedy (1997) stated

that widening (educational) participation amongst the middle classes and larger employers was not the policy intention of the state during the early 1990s. However, the general allocative formulae used by the FEFC to implement the DfEE's policy provided the operational steer for colleges to reduce their unit cost of production via expansion by any (legal) means. It did not prescribe how that expansion should occur. Successive Secretaries of State have deemed that the private purse will pay a contribution towards the cost of delivery. However, consumers, both individuals and corporate, signal to colleges that they will only consume if courses are free or heavily discounted. The allocative mechanisms of the late 1990s incorporated targeting of state funds towards certain client groups. Therefore colleges need to consider the needs of both consumers and the funders when determining how they will respond to market signals.

Responsiveness can also be expressed in terms of the firm's ability to innovate in the light of new market information. The capacity to innovate is the firm's ability to accept new ideas and operationalise them, that is to be innovative in response to new needs placed before it (Burns and Stalker, 1961). Cohen and Levinthal (1990, p149) called the innovative capacity of the firm its absorptive capacity, its ability to create and absorb new innovative responses made on its operating capacity. Firms that have a greater capacity to innovate are able to create competitive advantage. As argued earlier by Drucker (1995), non-profit firms have competing demands placed upon their resources and find it difficult politically to remove such activities from their portfolio of work. The historical precedent for such firms is to continue with their existing activities, whilst seeking to develop the new activities. Drucker advocates that the non-profit firm needs to be able to differentiate between new ideas and redundant ideas. This requires entrepreneurial leadership and the political will to see through the implementation of the business decision.

Hurley and Hult (1998, p52) found that people working in a market orientated non-profit organisation think about, talk about and act in ways that respond to the external environment. They commented that this market orientation provided the organisation with a source of new ideas and the motivation to respond to the changing environmental needs of their customers, however defined. Therefore, the propositions are that a college generates a positive market orientation by:

Pm_{6a} displaying an innovative responsiveness to the needs of consuming customers, and

Pm_{6b} displaying an innovative responsiveness to new government funding initiatives.

5.6.4 Inclusive approach

Narver and Slater (1990, p27) commented that staff within firms might articulate the firm's mission in words that are different to that of senior management, e.g. we are in the business of providing education, rather than we are in the business of identifying and satisfying buyers' needs. Weiner et al (1971) observed that self-serving rational bureaucracies tend to attribute success to their own efforts and failures to external forces beyond their own control. The challenge for management and leaders in particular is to get 'front line staff' to perceive themselves as part of the market orientation approach to meeting customer needs. Therefore, certain business policies may be required to reinforce internal orientation to delivering sustainable competitive advantage and a positive market orientation.

Therefore, the proposition is that a college generates a positive market orientation by:

Pm₇ adopting a whole college approach to market orientation, rather than the work being the occupation of a select few people. The college pays attention to internal market orientation issues with a culture of facilitative leadership.

In conclusion, the four propositions make up the market orientation construct of the hypothesis.

5.7 Antecedents to external environmental moderator

The external environment is identified as a discrete moderating influence on the business performance of the college. Entrepreneurial leadership and market orientation both include subsets of the environment, but they both work on the basis of relatively free markets. The entrepreneurial construct centres on awareness of the operating environment (Pe₂) and the market orientation construct centres on innovative responsiveness to new government initiatives. The External Environment factor (X) goes further as further education colleges actually work in a regulated environment and like the Post Office cited earlier, the orientation of the manager is subject to the 'political' orientation of the state.

Specifically two factors are identified, namely:

1. the down side risk of adopting a new strategy and the repercussions for getting it wrong.
2. the inability to operationally implement the state's plans due to the absence of local factors to allow the orientation to occur, e.g. an agricultural college not being able to draw down sixth form funding etc.

The National Audit Office (2000, p1-2) reviewed the antecedents to colleges with poor financial health and they concluded that:

1. some external factors play a significant role in determining whether a college is in good financial health, namely type of college, types of student and start point at incorporation in 1992.
2. the way in which a college is managed and governed influences the financial viability of colleges.

As the NAO is an independent body that is able to objectively criticise politicians and the quangos that operate the public services, their work provides a useful reference point for the framing of the external environment moderator. Their report also provides useful evidence to support the importance of entrepreneurial leadership and the nature of the institution.

5.7.1 Personal risk taking

A key trait identified from the entrepreneurial literature is the willingness to take risks and provide a risk taking culture within teams to promote adaptation and innovation. Casson (1982, p25) concluded that entrepreneurs are motivated by self-interest and they will work in an entrepreneurial manner for as long as they perceive that the rewards outweigh the risks. Cooper and Artz (1993, p229) found that individuals who promote entrepreneurial strategy for non-economic reasons (i.e. not personal fiscal gain), are more likely to be personally satisfied in their work. In addition, they found that such individuals are more likely to stay with marginal ventures and are less likely to close them down. As identified earlier, people who work in the public sector do so for a plethora of reasons, but a key factor is their perception of personal risk.

There are many theories of work-based motivation, but essentially they all share similar conclusions. Therefore I have used one of the original proponents of motivation theory, Maslow as modified by Alderfer. Maslow's hierarchy of needs provides a useful classification for the motivation of individuals at work. Steers and Porter (1991, p35) mapped the rewards and organisational factors against the hierarchy as follows:

Table 5.2: Applying Maslow's need hierarchy

Needs Levels	General Rewards	Organisational Factors
1 Physiological	Food, water, sleep etc	<ul style="list-style-type: none">• Pay• Working conditions
2 Safety	Safety, security, stability	<ul style="list-style-type: none">• Safe working environment• Company benefits• Job security
3 Social	Love, affection, belonging	<ul style="list-style-type: none">• Cohesive work group• Friendly supervision• Professional ethos
4 Esteem	Self-esteem, self-respect, prestige, status	<ul style="list-style-type: none">• Social recognition• Job title• High status job• Feedback from the job itself
5 Self-actualisation	Growth, advancement, creativity	<ul style="list-style-type: none">• Challenging job• Opportunities for creativity• Achievement in work• Advancement in the firm

Alderfer (1972) who expressed needs as having three dimensions modified Maslow's hierarchy of needs into the following dimensions, existence, relatedness and growth (ERG). Alderfer's ERG theory concurred with Maslow that an individual progresses through the hierarchy, but critically, he proposed that it was a continuum rather than mutually exclusive categories of existence. Individuals did not have to satisfy one level before moving to the next level. The model is represented in table 5.3 as follows:

Table 5.3: Alderfer's and Maslow's motivation theories compared

Maslow's hierarchy of needs	Alderfer's ERG theory
1 <i>Physiological</i>	Existence
2 <i>Safety</i>	
3 <i>Social</i>	Relatedness
4 <i>Esteem</i>	
5 <i>Self-actualisation</i>	Growth

With the ex-post review of Halton College by the FEFC and Bilston College by the National Audit Office giving a damning indictment of the governance and management of colleges, the perceived personal risk in terms of penalties has increased in the sector. The corollary is that principals and the teams they lead will be more cautious. Casson (1992) argued that mistakes do occur and such events act as learning points in the learning environment. Such learning environments however need to use the reward system in a positive manner, not as a pejorative method of controlling staff. The Lord Nolan principles concerning standards in public life reminded public sector leaders that they led publicly accountable institutions that used the best practice of the public and private sectors. Using the ERG model proposed by Alderfer, the model requires one or more basic set of needs. Hence, if a leader's needs are blocked at one level, then they will be motivated if a higher level of needs are supported, e.g. if pay is capped, then social recognition and achievement at work may become a motivating driver. The corollary is that if basic needs are threatened, e.g. job security, then higher level needs may not be enough to remotivate the individual, creating a frustration-induced behaviour in their performance. Mullins (1996, p512) suggests that such circumstances will result in frustration being expressed as aggression, regression, fixation and withdrawal.

In change programmes, the fear of the unknown is only moderated to a reasonable level when there is a positive environment that communicates a non-pejorative response to failure. FE culture has historically been based on the bureaucratic organisational model and leaders and teams of such organisations tend to find security in tried and tested solutions (Burnes, 1992). With the number of high profile failures in 1999 involving the dismissal of the college principal (e.g. Halton, Bilston, Wirral,

Matthew Bolton, Calderdale, Isle of Wight), the exposure of the principal to personal risk, i.e. dismissal, is very high. In conclusion, there is a fine line in the difference between innovative iconoclastic behaviour and innovative but maverick behaviour. The chief executive (principal) sets the operational tone for other managers and teams in the firm. Therefore the principal's perception of personal risk is an important moderator in the degree of entrepreneurial uptake in the organisation. The sub-hypothesis is that the entrepreneur:

PX₆ is adversely affected by the perceived risk of being innovative in a highly regulated and inspected operating environment.

5.7.2 Ability to implement state policy

Unit cost reduction programmes started by the Conservative administration in 1992 were continued by the new Labour administration of 1997, albeit at a slower rate of reduction than previously set. In itself, this cost reduction programme would not necessarily be a problem for the majority of colleges if they were able to expand their volumes of work, thereby their marginal revenue gains from expansion would keep ahead of the marginal unit cost reduction per total unit of funding. However two limiting factors were imposed, namely the effective removal of franchising (the ability to sub contract at a low rate and keep the 'profit element' to cross subsidise core/organic business) and the targeting of new growth monies for specific client groups to the exclusion of others. Not all colleges were eligible for adequate volumes of growth monies post 1997/98.

To manage in any political environment, it is important for managers to understand the needs of the ruling group by mapping the local and national power structures, Kotler (1992, p47). Kotler comments that the traditional marketing approach that sought to differentiate between environmental (i.e. uncontrollable) and controllable variables is now blurring. Due to the rise of lobbying, many environmental factors can be influenced (Zeithaml and Zeithaml, 1984) but only so far.

Competitiveness theory is typically that an individual firm cannot change the regulatory environment and that anti-competitive legislation exists to deter cartels and other anti-competitive measures by groups of firms. However, in regulated industries such as further education, end providers do have the ability to influence their local environment. The White Paper, *Learning to Succeed*, (1999, p2) actually encourages local partnerships to determine the nature of demand management on the localised area

of operation. The FE sector is a generic label for a range of different types of colleges. In the 1992-1997 period this differential was essentially irrelevant from a funding perspective as the FEFC funded growth irrespective of the social policy make up of the recruited learners. Kennedy (1997) commented that this growth did not mirror the policy imperatives of the State (DfEE). From 1998 onwards, growth monies were targeted at specific client groups. Therefore colleges would only be able to receive significant growth monies for these client groups. An absence of relevant clients resulted in marginal growth allocations from the central allocation budget formulae and the college finds itself 'out of step' with mainstream policy orientation of the state, a scenario that it can not control per se. This factor, coupled with the continued squeeze on the average level of funding per learner causes 'out of step' colleges significant problems. The change in franchise payment policy and the development of local catchment areas, which resulted in a useful method of managing the reduction in core budget funding, was being closed. Colleges dependent on franchising operations to cross-subsidise their core operations no longer enjoyed this benefit. In conclusion, the local factors that inhibit a college to actively orientate its operations in line with state policy are an important moderator on business performance. Therefore the construct is that the entrepreneur:

Px₉ pays attention to the development of government policy and is able to include state policy into college action plans.

The two propositions make up the external environment moderator construct of the hypothesis.

5.8 Dependent outcomes from the model's antecedents

The focus of this research is the multiplier effect of market orientation and entrepreneurial leadership on a college's business performance. A range of measures, especially in the not for profit firm can define an organisation's performance. Walker and Ruekert (1987) commented that no individual business approach would have a uniform impact on business performance. Earlier studies of market orientation have relied upon traditional accounting based performance measures and have been used on profit orientated firms. The use of such measures have been criticised in the literature (Montgomery and Wilson, 1986), especially with regards to their adaptation to the not-for profit sector. Kotler and Andreasen (1991) adapted the commercial firm's objective of creating profits for the non-profit sector as the desire to survive with the objective of generating adequate revenues to meet long-term goals.

This thesis is based around the constructs that entrepreneurial leadership coupled with a positive market orientation has a positive effect on college business performance. The definition of college business performance is based on describing the outcomes of the process of the modern FE college. As already proposed, successful business performance in FE colleges can be expressed as their scope for long-term survival. In common with private sector firms, a modern FE college must, over the long run:

- generate adequate trading volumes to cover their fixed cost base,
- innovate and adapt to sustain trading volumes by introducing new products to meet the change in client and/or government demand,
- be cash positive,
- to generate quality product outcomes that meet the expectations of the state, typically good quality teaching and learning.

Within the current environment, a two to three year time period will be sufficient to measure the effectiveness of a college as defined by the four proposed measures of survivability. A college may not necessarily fail within this time frame, but a change in its performance should be measurable.

Comparable studies of market orientation have relied upon subjective self-assessment of performance by respondents. Dess and Robinson (1984) have concluded that such subjective self-assessments are appropriate for use when objective (i.e. independent to the respondent) measures are not obtainable.

The FEFC Chief Inspector (FEFC 2000a) commented that colleges systematically overestimated business performance as defined by teaching inspection grades. As externally produced data sets are obtainable, the objective performance measures are used as part of this study, rather than the more common subjective, self-assessed measures of performance.

5.8.1 Generate adequate trading volumes

Within the FE sector, trading volumes are defined as individuals and purchasers of training (companies, government agencies etc) selecting the college as the provider of their desired training and education needs. To achieve cash to pay the colleges costs, trading volume can also be defined as the level of cash generation that stems from delivering a given quantity of training activity. The cash derived from these operations is a function of price point and quantity. The state and its funding formula sets the price paid for training on a national level. There are no differentials between colleges for running the same programme. There are differentials for recruiting different types of students and for geographical location.

Students from deprived areas (as measured by a modified form of the DoE deprivation indices) attract funding premiums to allow colleges to spend additional resources on recruiting these more difficult to reach clients. Typically, extra costs additional to the premium paid will need to be expended to recruit and retain these clients. These individuals have lower participation rates in FE and they experience higher rates of non-completion and non-achievement of learning goals. In effect, the extra cash paid for these students typically result in additional costs or lower academic performance for the host college. Geographical premiums apply for London and metropolitan areas, as these colleges have higher operating costs due to salary weightings paid to staff. The FEFC typically pays colleges 80% of the cost of delivering a programme, with the remaining 20% being collected from the individual student or their employer. Although differentials exist in the collection of this money by colleges, at a localised level in terms creating competitive advantage via pricing, most colleges tend to set tuition fee levels on par with their immediate competitors. With the introduction of Individual Learning Accounts and the establishment of tuition fee collection targets for FE colleges in 1999 and the ability of colleges to restate their prices to meet competition, the ability to create sustainable competitive advantage via pricing has effectively diminished. Non-FEFC income streams are not paid at uniform prices, but

typically government supported training is paid on set tariffs or involves cost reimbursement (e.g. the European Social Fund). Therefore the ability to create price differentiated competitive advantage is limited to private sector funded contracts, which typically are relatively small volumes of work, or involve overseas student recruitment, a feature that is not typical of most FE colleges.

In conclusion, nationally set unit prices and the localisation of tuition fee charging policies means that material price differentiation tends to be absent from the environment. Therefore colleges have to focus on student numbers to achieve the cash trading volumes they require thereby sustaining their cost infrastructures. As colleges are faced by pay rises and non-pay inflation of their cost infrastructures, managers will need to either increase their activity volumes year on year or reduce their operating costs to meet static volumes. On the basis that cost control can only go so far without adversely affecting service quality, managers effectively have to grow the size of the firm. Therefore the sub-hypothesis on outputs is that trading volumes can be expressed as:

O₁ the ability to generate adequate volumes of learners expressed as the meeting of funding targets and expansion of activity volumes over time.

5.8.2 Innovation and adapting to changes in customer demand

As developed from the market orientation and entrepreneurship literature, the modern public sector firm must evolve and adapt its mission, redefining the clients, services and pricing structures, and in some circumstances, abandoning parts of the current mission in the drive for long term survival. The historical role of the college being the ultimate decision-maker in determining what is best for learners has long passed. The successful college will need to develop a high awareness of the working environment, the needs and expectations of their customers, and create cost effective solutions to meet those needs.

This definition of innovation does not necessarily require the college to be market leader or even an early adopter of change. However it does involve the college changing its portfolio quickly enough to avoid losing material market share. Therefore the sub-hypothesis on innovation and adapting to change in customer demand can be expressed as:

- O₂** the College's ability to identify changes in customer demands and adapts the product offering into cost-effective solutions, thereby sustaining adequate volumes of learners. This is expressed as the expansion of activity volumes over time and the introduction of new products and/or locations to sustain customer demand for the college's offering vis-à-vis competitors.

5.8.3 Long term financial stability

Ultimately, everything is measured in money, but in itself as a measure of success it is too crude an indicator to be used to determine sustainability of the firm. A firm can be profitable in the short-term, but not sustainable due to competition and/or change in consumer demand, e.g. the mono-product Filofax company of the 1980s. As argued by Casson and Drucker, non-profit firms are at their most effective when they operate within financially stable environments; stable enough to promote service delivery consistency and avoid short-termism, but not too stable that it promotes complacency and atrophying of performance.

The definition of 'too stable' and 'not stable enough' are by implication subjective and not necessarily time bound. What is not subjective though, is the firm's ability to be cash positive over the long run, which for FE has been identified as being a three-year time period. The FEFC requires colleges with (historical) operating deficits to recover this adverse position to prescribed levels within 36 months of the year-end in which the deficit was created. Therefore the sub-hypothesis on long-term financial stability can be expressed as:

- O₃** the college's ability to create a financial stable operating environment so as to meet its mission in an orderly and client focused manner. This is expressed as the ability to generate cash surplus from trading and meet long-term cash solvency targets.

In conclusion, when long-term financial stability, expressed as the ability to generate cash, is combined with the output measures of achieving adequate trading volumes and product innovation and adaptation, the three measures provide a good proxy for measuring the scale of college business performance.

5.8.4 Quality service levels that meet stakeholder requirements

For state firms, the quality of service delivery is important. State firms provide public goods, which are often, supplier led rather than consumer led services. Education, Police and Health are such provisions in Western Europe. Effectiveness is important to elicit and retain the political and economic support of the external stakeholders as set out in figure 4.3 (Fottler and Lanning, 1986). To test the market orientation and performance relationship amongst English FE colleges, this study employed the use of inspection grades for teaching and learning. It is hypothesised that a market orientated college that is entrepreneurially led will exhibit higher teaching and learning grades than other colleges with lower orientations. Therefore the long-term financial stability sub-hypothesis can be expressed as:

- O₄** the college’s ability to generate superior outputs expressed in terms of product quality.
This is expressed as the ability to generate superior inspection grades.

5.9 Conclusions and limitations of scope of application

In conclusion, the model and its sub-hypothesis have been developed from the entrepreneurship and market orientation literature. As further education is a state funded activity, the external environmental moderator represents the resulting regulatory environment due to the involvement of the political stakeholder. As the FE systems of Wales, Scotland and Northern Ireland are organised along similar lines as their English counterpart, the application of the constructs can be extended to embrace the UK in general. The only exception to this generalisation are the monotechnic colleges of the Isle of Man, Jersey and Guernsey which are effective monopolies organised by education departments autonomous from Whitehall or the empowered regional assemblies. The potential population of state organised FE colleges is represented in table 5.4.

Table 5.4: State owned UK further education college numbers as at April 2000

<i>April 2000</i>	Total
England	420
Wales	28
Scotland	46
Northern Ireland	17
Total	516

It is possible to collate the quantitative performance data from Welsh, Scottish and Northern Irish colleges. However due to significantly different use of performance indicators and the localised application of the Inspection framework, it is not possible to collect a consistent quantitative and qualitative data set of proxies for output measures. In conclusion, due to the absence of data for triangulation purposes to validate a survey of principals' attitudes in Scottish, Welsh and Northern Irish colleges, only the English population has been covered by the research thesis. It is proposed to survey all English colleges due to the absolute low number of colleges in the population.

The model is applicable to former state derived further education colleges in England, (i.e. those that existed or are derived from the 1992 group of incorporated colleges) and is not transferable to private sector firms that service the state education system or to universities that deliver further education. The next chapter looks at the research design to test the model and its hypothesis.

6 Research design and methodology

6.1 Introduction

This chapter outlines the method by which data is collected to test the hypotheses developed in the previous chapter. The chapter is organised into four sections:

1. research methodology, identification of data sets and missing data sets,
2. how the missing research data sets are to be collected,
3. method of collecting the data, and the propositions to be tested, and
4. the identification of the sample population and data collection.

The following chapter will present the data findings and analysis.

6.2 The research methodology

The research methodology is dependent upon the nature of the hypotheses to be tested and the availability of data sets to test those propositions in a robust and credible manner. The testable propositions derived from the extant literature have been constructed so as to provide tentative answers to the research problem. If the collected data supports these propositions, then the propositions may become proven theories.

The thesis is a national empirical investigation of the English FE sector testing the strength of the relationship between entrepreneurship and market orientation on the business performance of FE colleges. The data collection strategy will therefore have to obtain data on the antecedents proposed by the hypotheses and the outputs that the antecedents are hypothesised to have an impact upon. This section begins with a review of the data sets available to researchers. It then proceeds identify the gaps in available data, the method of obtaining the data to meet these gaps and the rationale for selecting a quantitative method of analysis.

6.2.1 National data sets available from the FEFC

Prior to incorporation in 1992, there are no statistically robust national data sets of college performance. Data that exists has limited scope and was not subject to independent audit and hence has poor reliability. From 1992-2001, the sector was under the control of the Further Education

Funding Council for England, which collated college performance statistics on a national basis from 1994 onwards, against an audited framework of conventions. There are two broad groupings of data:

- 1. quantitative data measures of outputs, and
- 2. qualitative assessments of individual colleges on a 4-year cycle of inspections expressed in numerical form.

The data represented by Inspection reports are primarily concerned with college outputs, but they also provide an insight into the inputs used by the college to derive the outputs. Both of these data sets are available for analysis by researchers. The data is identified by individual institution and is directly comparable with other colleges, as it has been prepared against national frameworks of data collection and validation by independent (to the college) auditors and inspectors.

The quantitative data sets are derived from the FEFC's data collection strategy and the data available covers the 1996/97 to 1998/99 academic years. The statistical data is available by individually named colleges and the relevant data sets include the following information:

Table 6.1: FEFC statistical data sets by component

Data component	Variable Name	Relevance of data sub set	Nature of the Data
1 In year retention	RETPT & RETPT (PI 3)	Effectiveness of the college's teaching and guidance and support systems in retaining students on learning programmes	%'s Separated into full and part-time students
2 Achievement rates	ACHMRATE (PI 4)	Effectiveness of the teaching process in enabling students to achieve their learning goals	%'s
3 Relative deprivation of students	DEPRVD (RDS)	The relative proportion of students recruited from areas of social deprivation. High levels of deprivation tend to have an adverse affect on PI 3, 4 and 5. Therefore this data provides context for those other data sets.	Hierarchical Category Derived from underlying data sets by the FEFC

Note: The variable name has been assigned as part of the thesis study. The FEFC's name for the variable is shown in brackets.

This data is extracted from the independently audited individual student record (ISR) data recorded by individual colleges but collated centrally by the FEFC. It is available in spreadsheet form. The performance data is adjusted by the FEFC for changes in definition so as to obtain consistent

comparisons over time. In summary this data set is validated, comparable and spans an adequate period of time to allow information to be extracted in the testing of this thesis' hypotheses.

The FEFC is also responsible for the implementation of the FE Inspection framework and their results are in the public domain. Although the Inspectorate is not independent of the funding agency like Ofsted in the schools sector, nonetheless it is autonomous of the colleges that they inspect. The issue of the Inspectorate being part of the FEFC, is that of observer bias by the Inspectorate when reporting on failing college management and governors. In conclusion, the Inspectorate's results are materially independent for research analysis, but there is a potential for observer bias in the report. The relevant data sets from the inspection reports are composed of the following information:

Table 6.2: Relevant FEFC Inspection data sets by component

Data component	Relevance of data sub set
1 Governance	Critique on the strengths and weaknesses of college governance and ability to determine and meet mission.
2 Management	Critique on the strengths and weaknesses of management to lead the college in defining and meeting its mission in a cost effective way.
3 Support for students	The range, diversity and effectiveness of the college's student recruitment, retention and support systems. It also measures in qualitative form the diversity of the clients and the college's effectiveness in meeting their needs.
4 Quality Assurance	Reviews of the effectiveness of quality control framework to measure calibrate and interpret information about the college's performance. Includes external surveying, internal credibility of assessing the organisation and performance targets.
5 Curriculum	Individual curriculum areas are sampled and individual grades are awarded. A composite (average) unweighted grade can be computed across the sampled curriculum areas.
6 Classroom teaching observation	Quality of teaching annotated into five grades typically based on circa 100 classroom observations
7 Classroom Attendance	Attendance data for students during observed classroom sessions
8 Average class size	A measure of class size (resource efficiency) based on the approximately 100 classroom observations by the inspectors

All of the above data sets are qualitative in nature, but they have been summarised as a numerical (quantitative) grade against a nationally moderated scale. The awarded grade is an iterative process determined by the Inspectors based upon evidence. However, the grade is an overall assessment of the area and it is not correct to infer that all aspects of the area covered are of the same performance calibre and hence grade, per se. This data set is not pre-tabulated and hence will need to be compiled from individual college inspection reports. These statements are indicators of the effectiveness of the college to adapt entrepreneurially and adopt market orientation strategies. The FEFC inspects an

additional area, resources, which is a review of staffing and physical resources. However this can be a description of historical conditions such as inherited buildings and it is difficult to objectively infer qualitative statements that support the hypothesis testing. In summary, the inspectors and auditors independently validate this data set of college performance; it is comparable between colleges and spans an adequate period of time to allow information to test the hypotheses. The inspectors' comments will be useful in validating the elite interviews that will be conducted to follow through the quantitative analysis phase of this thesis.

The FEFC also publishes basic financial performance data, but the information is aggregated at too high a level to support the detailed analysis required for the testing of the hypotheses of the thesis. This would require prime information extracts. College accounts (financial statements) are in the public domain, but no publicly accessible central archive of college accounts exists. However, this financial data is available another source.

6.2.2 Other national data sets available in the FE sector

There is very limited availability of other data sets on FE colleges outside of the FEFC, and where they do exist, the data sets are either incomplete, reiterations of FEFC prime data or are time expired. However, one key data set exists outside the FEFC, the Noble's financial yearbook. Noble's specialises in the publication of financial yearbooks in a number of market sectors and undertakes specially commissioned research projects. Noble's Financial Publishing, in conjunction with The Times Higher Education Supplement, collates UK FE college accounts and conducts financial analysis. This information is published in a financial yearbook and provides a relatively comprehensive guide to individual colleges. Not all colleges actively disseminate their financial statements, so there are gaps in the source book. Their analysis work is copyrighted, but the financial information they summarise is in the public domain. Therefore the Nobles' yearbook was used to provide key information from individual English FE colleges accounts. The following data can be extracted from college accounts data:

- cash generated from operations,
- staff costs margins, and
- turnover

This data set of financial data therefore needs to be extracted from the information source that it originates from independently audited college accounts. FE college curriculum inspection grades are extracted from the latest inspection report of the college and averaged to obtain an institutional grade for the teaching and learning process.

6.2.3 Data set mapping and missing data

The three data sets, inspection, performance data and financial information are drawn from information that is compiled using national conventions that are audited/inspected independently of the colleges that provide the source information. The financial and student performance data is available in a time series of at least two years and therefore the hypotheses' cause and affects can be studied, reducing the scale of Type II errors during the analysis phase. The three national data sets have been mapped against the propositions as follows using three classifications, namely:

- *direct* evidence of the proposition's outputs,
- *triangulation* evidence that potentially supports the robustness of the antecedents. The triangulation evidence derived from the inspection reports in itself is not necessarily sufficiently detailed to provide direct evidence to test the hypothesis that entrepreneurial leadership and positive market orientation have a positive effect on business performance. The evidence is useful in construct validity and reliability testing, and
- *indirect* evidence that is unlikely to be statistically robust for analysis.

Table 6.3: Data set to sub-hypotheses mapping exercise

Sub-Hypotheses	Statistical Data Set	Inspection Data Sets	Financial Data Set	Direct Data Missing?
Pe ₁ Innovative leadership		Triangulation		Yes
Pe ₂ Environmental awareness		Triangulation		Yes
Pe ₃ Clarity of goals		Triangulation		Yes
Pm ₄ Generate intelligence		Triangulation		Yes
Pm ₅ Disseminate intelligence		Triangulation		Yes
Pm ₆ Responsiveness	Indirect	Triangulation		Yes
Pm ₇ Inclusive approach		Triangulation		Yes
Px ₈ Personal risk taking				Yes
Px ₉ Ability to implement policy				Yes
O ₁ Long term trading volumes	Direct		Direct	
O ₂ Innovative and adaptive	Indirect	Direct	Indirect	
O ₃ Long term financial stability	Indirect	Indirect	Direct	
O ₄ Inspection grades		Direct		

From the above data mapping exercise, the critical data set that is missing is the causation information of corporate performance involving entrepreneurial leadership and market orientation. The four national data sets provide proxies for outputs (i.e. consequences) and useful evidence to triangulate other antecedent data. Therefore a new data set will need to be collated to support the testing of the hypotheses of the thesis.

In conclusion, the hypothesisises are to be tested using the identified four data sets, as follows:

1. A quantitative data set of Principal’s response to the survey questions underpinning the nine research propositions collected by postal survey.
2. A quantitative review of Inspection reports grades available in the public domain prepared by independent inspectors on the governance, management and responsiveness of institutions.
3. A quantitative data set of statistical non-financial performance outcomes drawn from audited ISR data collected by the FEFC.
4. A quantitative data set of financial performance data extracted from colleges audited financial statements.

These four data sets are collated together in the analysis phase of the thesis. The key data set is the information collated from college Principals on entrepreneurial leadership, market orientation and the regulatory environment. The research instrument has two key limitations, namely the information is self-responding and the information is a cross sectional analysis in time, hence it is about levels rather than changes. These are empirical weaknesses and reflect the complexity of collecting a national dataset for the first time in the English further education system. Subject to the caveat on the breadth of the dataset in terms of interpretation of the data, the data collected nonetheless is still relevant for this thesis. The next section sets out how this missing data set was devised to provide information to test the hypotheses.

6.3 Proposed methodology to collect the missing data set

As the data set of entrepreneurialism and market orientation opinions in the English FE sector does not exist, it needs to be created from the perceptions and opinions of college Principals. Yin (1984) contends that survey techniques are most suitable quantitative techniques to adopt when the data is not accessible to the researcher's direct observations. The researcher collects the data by asking people presumed to have undergone the certain experiences to reconstruct those experiences in terms of the framework prescribed by the thesis's research propositions. There are three main methods that can be used to collect information, namely:

1. Postal surveys,
2. Face to face interviews, and
3. Telephone surveys.

The quantitative research framework designed to test these propositions is based around the use of a closed and structured postal survey and follows the survey methodology work of Dillman (1978). Postal survey technique was selected due to its relative simplicity, low cost and the elimination of observer bias or influencing as part of face-to-face or verbal surveys. It was also judged to be less intrusive for Principals to respond to than face-to-face interviews as the range of answers were predetermined and could be answered at their own pace. The use of postal surveys is also familiar to Principals, being the principle method of opinion gathering used by the FEFC via consultation

circulars. FEFC circulars typically obtain 50% to 75% response rates, irrespective of the esoteric nature of the consultation.

6.3.1 The Principals’ perceptions and opinions data set construction

From the preceding literature review, a broad base of theory is available to propose causations for entrepreneurial and market orientation behaviour. The concepts have not been defined very narrowly, primarily due to the absence of fieldwork in the English FE sector. As proposed by de Vauss (1985, p249), multiple questions are used to test complex constructs for the following reasons:

- 1 To avoid the pitfall of testing a single or limited range of measures that may subsequently be proven to be either irrelevant or statistically unreliable.
- 2 To allow more valid measures to be tested, as a single measure on its own can be misleading. Multiple item scales help to avoid distortions and misclassifications that may arise with the use of single-item measures of complex concepts.
- 3 To increase reliability particularly in the collection of subjective information vis-à-vis objective data. The way in which questions are phrased and placed in a questionnaire can have an influence on the responder (Youngman, 1984, p158). The use of multiple questions should minimise the interpretation error of questionnaire responders.
- 4 To provide for more precision. A single question in itself, does not allow for significant differentiation between Principals, especially when the respondents' answer may be influenced by a series of factors. Additional questions help to differentiate between the respondents and provide greater precision in construct testing.
- 5 The summarisation of the information from multiple questions into one variable results in the analysis being significantly simplified. Instead of analysing each question separately, the whole can be summated and analysed together.

The questions devised to collect the data for each proposition's antecedent were based on the literature review and existing research studies. Each construct is therefore hypothesised to be quantifiable by a number of measures obtained via questions. Each measure ranks *pari pasau* in construct design. Therefore during scale building, the questions retained to build the scale are

computed to contribute equally to the measure. To overcome different distribution patterns, z-scores (standard deviations from the mean) are used.

6.3.2 Question construction for the Principals' questionnaire

The questionnaire will collect self-reported findings from the observed group, namely the Principals. To obtain the data set at a national level, there is no methodology to collate a cross-verified data set of opinions from second tier, directly reporting managers and get Principals to self-report in an open and self-critical way. Before deploying the questionnaire, the research instrument was piloted with two experienced college principals and one principals' results were cross-checked against a the results of his senior management team. The piloting indicated that the instrument should be robust if the correct language was used and questions were structured so as not to imply to the respondent the desirability of over reporting the positive performance of their college, e.g. avoid a tendency to overstate the positive manegmetn behavioural aspects of the college the responder leads. With the quantity of propositions being tested and the need to use multiple questions to gain a robust evidence base for statistical testing, a significant number of questions would need to be asked.

As suggested by the trait theory literature of entrepreneurship proposed by Chell (1991) and Kao (1989), biographical details of the responder were obtained and included:

- Gender, age by category, education level and professional background (questions 0c,0f, 0g, 0h, and 0i)

As proposed by Hambrick (1994), the longevity of the Chief Executive in the post and the lack of change in the composition of the top management team has an impact on the performance of the leadership function of the top team, therefore information was collected on the following issues:

- Date of starting post (0b), number of staff in the top team (0d) and the number of members who have joined it in the last 2 years (0e).

These contextual questions allow the secondary analysis phase to control for different potential influences on leadership orientation.

In terms of leadership issues as represented by antecedent P_{e1} , the following questions were asked:

- As proposed by Webster (1988) and Hamel and Prahalad (ibid.1991), the origination of organisational value creation is relevant (question 1a).
- Levitt's (1969) work placed an emphasis on the communication of the firm's values by the leader vis-à-vis the delegation of their role to other managers (1b).
- Bush (1995) has identified the emergence of business leadership as opposed to academic leadership as important within English FE. Hughes et al (1985) emphasised the rise of new managerialism to replace the traditional paradigm of academic leadership in community orientated public-sector service firms (1c).
- Zaleznik's (1977) work identified four issues that are relevant for this study, namely the personalisation of goals (1e), the creation of excitement in the role for managers (1f), the level of empathy with the challenges faced by managers (1g), and the development strategy adopted by the leader (1h).
- The attitude of the firm as advocated by the leader towards the use of performance indicators was proposed by Wright (1998) to have relevance in leadership management (1j).

In terms of environmental awareness as represented by antecedent Pe_2 , the following questions were asked:

- Austin (1979) observed that the leaders attitude towards accepting the political inequity that they sometimes face is important (question 2a), together with their willingness to respond to the challenges of such scenarios (2b).
- Thompson (1999, p294) proposed two relevant dimensions, namely whether new Government policy initiatives are seen as opportunities by leaders (2c) and that winning strategies tend to come from the leader (2e).
- Casson (1982 and 1991) contends that not for profit entrepreneurs act as optimising agents and prioritise their resources to respond to new challenges (2d).

Antecedent Pe_3 concerned with the clarity of goal setting and measurement is constructed in two dimensions, namely the setting and measurement of goals. However for analysis, the two dimensions

are aggregated into one antecedent due to their fundamentally integrated nature. The relevant questions generated to collect evidence on this antecedent is as follows:

- Casson (1982) develops his argument to propose that entrepreneurs acting as optimising agents adopt working approaches that quickly identifies new opportunities (question 3a), allows them to interpret the information and make judgements (3b) and ensures that opportunities are systematically identified (3c).
- In terms of goals, Heller's (1994) work identifies that stronger performance occurs when goals are clearly expressed to managers in written form and tracked on a systematic basis (3d).
- Drucker (1989) contends that effective entrepreneurial behaviour allows managers to prioritise new opportunities without unnecessary intervention from senior staff (3f).
- Tilles (1969) proposes that effective firms encourage their customers to articulate their views on service, and that the generated comments and complaints are perceived objectively by the firm's staff (3g).

In terms of market orientation the questions for the four antecedents have been developed from complimentary research studies, as well as from the review of the literature. The first antecedent **Pm₄** derived the following questions from Kohli, Jaworski and Kumar's MARKOR study (1993) and covers the generation of market intelligence as follows:

- Customers are met regularly to ascertain their needs (question 4a).
- Delivery teams liase directly with customers so as to understand changes in their customer's environment (4b).
- The speed of detection of customer expectations is a function of effective business performance (4c).
- Customers are surveyed regularly to determine their attitude to service and product quality (4d).
- Market intermediaries are met on a regular basis. Such intermediaries in FE include funding providers and decision facilitators (4e).

- Informal as well as formal methods of collecting viewpoints are used to obtain market intelligence (4f).
- Market intelligence on competitors is collected by delivery teams (4g).
- Fundamental shifts in the operating sector must be detected quickly, otherwise there is a potentially adverse impact on business performance (4h).
- The periodic review of changes in the operating environment faced by our customers increases awareness of the impact of the college's work (4l).

The second antecedent, **Pm₅**, covering dissemination of market intelligence is covered by questions drawn from a range of complimentary research studies and journal papers:

- Stohl and Reading (1987) proposed that informal sharing of market intelligence is a strong method of dissemination (question 5a).
- In contrast, Fiske and Taylor (1991) found that semi structured interdepartmental meetings between teams improves market intelligence dissemination was relevant (5b), together with sharing of knowledge about major customer issues (5e) and the frequency of contact between marketing and delivery teams (5g).
- The role of marketing personnel was covered by O'Reilly (1982), who proposed that such staff should discuss the future needs of customers with delivery/production departments (5c).
- Maltz and Kohli (1996) identified that that the circulation of information by non-marketing teams improved dissemination activities and take up within the firm (5d).
- The sharing of customer data across the firm was identified by Stohl and Reading (1987) as being important, especially on a regular and systematic basis (5f).
- Kohli, Jaworski and Kumar MARKOR study (1993) identified the speed of interdepartmental briefing to be an important facet of dissemination (5h).

The third antecedent, **Pm₆**, covers the responsiveness of the college to the dissemination of market intelligence. It is divided into two dimensions, responsiveness to consumers and responsiveness to Government funding initiatives. For analysis, the two dimensions are aggregated into one antecedent

due to their fundamentally integrated nature. The questions are drawn from grounded theory developed from the literature review, augmented by complimentary research studies as follows:

- In terms of marketing competitiveness, Kotler (2000) proposed that market segmentation (question 6b) and the college's responsiveness to changes in customers needs is important (6c).
- Casson (1982) from an entrepreneurial activity perspective, observes that the speed of response vis-à-vis competitor changes is important (6a).
- Oakland's (1990) TQM focus proposes that product development should be periodically reviewed, ensuring that it is aligned with customer demand (6d) and that when quality in terms of product/service is found to be wanting, the firm responds quickly (6h).
- Bush (1995) commented that the internal and historical focus of the not for profit firm could have a stronger influence on the shape of the response to customers' needs (6f).
- Kohli, Jaworski and Kumar (1993) observed that business plans can be driven by product and technical innovation, rather than market led demand (6e), so that when customers ask the firm to modify the product, the firm's speed of response is important (6g).

The last antecedent for market orientation, **Pm₇**, concerns the inclusive nature of the internal marketing of the firm in the generation of the firm's market orientation. Drawing from the literature and complimentary research studies, the following questions were proposed:

- As proposed by Kohli, Jaworski and Kumar (1993), the firms ability to respond to a competitors new initiative aimed at the firm's customers (question 7a).
- Burns and Stalker (1961) proposed that where the activities of different teams are well co-ordinated, the dissemination and hence responsiveness to new idea and opportunities is improved (7b).
- The ability to implement a marketing plan was identified by Cohen and Levinthal (1990) as a hurdle that firms face (7c).
- Hurley and Hult (1998) proposed that the ability to respond positively to new initiatives was a key factor in developing market orientation (7d).

- Narver and Slater (1990) identified that front line staff need to perceive themselves as providing a service to customers, rather than delivering a product which is consumed by customers (7e).
- Mintzberg's work (1989) on hierarchy of needs and motivation can be extended to cover the necessity for teaching (delivery) teams to identify with the underlying reasons for consumption by their customers (7f).
- Weiner et al (1971) concluded that delivery teams (in FE colleges, teaching teams) must accept responsibility for customer attraction and retention (7g).
- Wind and Robertson (1983) argued that the multi-dimensional nature of creating sustainable competitive advantage (SCA) requires departments other than marketing to accept responsibility for generating SCA. Therefore teaching teams must show an acceptance that winning new business is as much their responsibility as it is of business development teams such as marketing (7h).

The environmental moderator is a subset of the entrepreneurial construct, but due to the public sector and hence political nature of service delivery, the construct has been identified as a separate area for review. Px_6 defines the personal level of risk to the leader and the following questions were constructed from the literature review to cover this antecedent:

- Drucker (1985) proposed that the leader's willingness to take personal risk is a key driver in their approach to entrepreneurial endeavour (question 8a).
- Casson (1982) proposed that the leader must perceive that the positive aspects of risk taking outweigh the negative aspects (8b).
- In not-for profit sectors, Cooper and Artz (1993) propose that the non-financial aspects of the job should outweigh the financial rewards to enhance personal job satisfaction (8c).
- The use of blame culture is an inhibitor of risk taking (Burnes, 1992). Therefore the perception of blame apportionment by the Government on college managers will have an impact on the attitudes of individual managers (8d) and the attitude of other managers to the leader's perception of operating risk is also important (8g).

- Mullins (1996) contends that managers need to be able to place their work in context, being able to rationalise the demands placed upon them (8e and 8f).

The second antecedent to the external environmental moderator, Px_9 , concerns the ability to implement Government policy. This antecedent is concerned with the ability to understand and operationalise the policy statements at a college level. The questions were drawn from the literature review as follows:

- Kotler (2000) contends that effective strategic staff spend proportionally more time analysing their environment and planning what to do than simply just carrying out operations (8o).
- Zeithaml and Zeithaml (1984) identified that leaders need to perceive that they have the ability to respond to their environment and make a difference (8h).
- Lumpkin and Dess (1996) contend that through out the revision of entrepreneurship theory, the ability to adopt new combinations of resources to meet new needs has not changed. This applies to new Government initiatives, which typically represent new proposals to address 'old' problems (8j).
- The role of innovation is important and Burns and Stalker (1961) propose that the ability to adopt or implement new ideas is relevant. Therefore the role of innovation versus effectiveness needs to be considered (8k).
- Hurley and Hult (1998) contend that the firm's attitude to adopting innovative approaches is important. Cohen and Levinthal (1990) contend that the greater the firm's willingness to innovate, the greater its ability to generate competitive advantage (8l).
- Boyett (1987) proposed that the freeing of state enterprises from the traditional ownership of resources has resulted in a greater degree of freedom for managers to operate within. The creation of the FEFC in 1992 and its replacement by the LSC in April 2001 represents two different approaches to the 'freeing' of ownership of resources. Therefore the leader's perception of freedom to operate within either regime of control is relevant (8m and 8n).

The ability to think innovatively and entrepreneurially is important as proposed by Casson and Drucker. Therefore a final open question (9a) was proposed, asking the Principal to identify one

example of innovation from their college's work. This qualitative question is useful during the secondary analysis phase to explain the initial analysis results in qualitative terms.

Due to the number of questions asked (67 attitudinal plus 7 biographical questions) and the magnitude of the sample size (estimated at circa 50%, i.e. 210+), personal and telephone interviews were judged impractical. The impracticality is expressed in terms of time, cost and potential ontological problems in obtaining the data by direct methods due to confidentiality and/or observer bias. Therefore a postal survey was chosen.

6.3.3 Limitations of scope in the collection methodology

As with all data collection techniques, there are limitations of scope of the postal survey data collection technique:

1. potentially low response rates,
2. construction of simple, easy to understand and unambiguous questions,
3. the assumption that the answers are true and fair, and are not answered so as to prevent the responder in a positive light,
4. getting the right calibre of person to answer the questionnaire in a rational and objective manner, and
5. ensuring that the responder perceives the questionnaire to be objective, confidential and 'of value' to them, in terms of giving up their time to read and answer the questions.

To address these issues the following steps were taken to ameliorate the potential problems of the survey methodology.

1. Potential low response rates were dealt with as follows:
 - The questionnaire was desktop published using the University's and the Institute's logos, together with a full colour cover, thereby promoting the professionalism of the request.
 - The covering letter was direct mailed to named Principals and attention was paid to salutation and honorary titles (Verma and Mallick, 1999, p122). The one page covering

letter came from the director of the University of Nottingham's Business School's Institute for Innovation and Enterprise, rather than from the researcher, reinforcing the peer review nature of the questionnaire request.

- Completed returns were by freepost envelope to the University and mailings out and return were in good quality white envelopes.
- The documentation's design style was similar to the 'house style' adopted by the DfEE during Spring 2000 for the consultation phase of the Learning & Skills Council, a document at the top of the agenda of every college Principal.
- The offer of providing confidential feedback on the data collected against which the responder could map their own responses vis-à-vis their peer group.

2. The effective construction of the questions was achieved by:

- Piloting of the questionnaire as advocated by Wilson and McLean (1994, p47). The pilot determined that Principals prefer straight forward 'tick box' responses and tend not to spend their time on answering open-ended questions. Misunderstood and ambiguous questions were identified in the piloting phase and these issues were addressed prior to mainstreaming.
- Avoiding ambiguous questions by using value statements against which the Principal ranked their agreement or disagreement.
- Rank ordering and open questions were avoided following the pilot phase. To obtain a large number of responses on the national questionnaire, it was judged that Principals would only respond to a plainly constructed questionnaire that was simple to self-administer in approximately 15-20 minutes. The use of open questions or ranking scale questions would slow down the self-administration of the data collection tool and hence potentially reduce the overall response rate through frustration, irritation or lack of time.
- Open-ended questions were also avoided due to the potential problems of coding the answers. The potential response rate of 50% (some 210 plus questionnaires) and the volume of sub-hypotheses that needed to be tested made such questions impractical.

- Multiple choice questions asking the respondent to rank pre determined answers were avoided as the survey is collecting qualitative opinions on personal issues expressed in quantitative forms and hence predetermined answers would require the researcher to prejudge and categorise the potential responses.
- The questionnaire was constructed around the use of ratings as originally proposed by Likert (1967, p39). By definition, each respondent will interpret statements such as 'seldom' or 'often' differently, therefore the use of a sliding scale of degree of support on an issue was judged to be more suitable. Scaled opposing questions were used for enquires about personal management style and views on personal risk, whereas single sided scaled questions were used for questions seeking information about the individual's perception of their environment. The use of semantic differential questions is useful in that it allows respondents to reply in a flexible manner whilst providing information for quantitative analysis.
- A box for comments was provided at the end of the questionnaire to allow responders to bring any matters to the attention of the researcher. A number of Principals used this box to amplify their interpretation of language in the questions.

3. Minimising responder bias by:

- Asking sensitive questions carefully so that a negative response is not perceived as unacceptable to the responder. The piloting of the questionnaire was very useful in identifying question phrasing that was too stark or ambiguous to encourage frank, unambiguous or open answers.
- Questions were written in plain English, with minimal use of jargon or acronyms, other than those in common use (such as the FEFC).
- For semantic differential questions, opposing statements were put to respondents using a Likert five-point type scale so as to allow a neutral answer for issues relating to personal management styles.
- Youngman (1984, p163) suggests that it is a natural human tendency to agree with statements rather than to disagree and a simple dichotomous question might build in respondent bias. For questions seeking an opinion on a single sided statement, a six-point

scale was used to stimulate a net positive or negative answer. However a 'Do not know' box was provided. Occasional reverse coding of questions thereby requiring the responder to tick at the other end of the scale to achieve a positive answer was used to address the potential issue of responder bias as proposed by Youngman.

- Reinforcement of the fact that there are no right/correct answers per se, only opinions, attitudes and viewpoints. This was done in the title of the questionnaire, the covering letter and the title of each subsection of the questionnaire.

4. Getting the right person to answer the questionnaire was achieved by:

- Mailing to named individuals at the Principal grade within the college.
- Direct mailing the questionnaire from the University of Nottingham Business School's Institute for Enterprise and Innovation, rather than under the researcher's own letterhead, reinforcing levity of the request from a fellow peer head of a college/institute.
- Constructing the opening group of questions so as to reinforce that the responder should be the Principal of the college, not someone junior to them. Succeeding questions reinforce the message that the Principal is the only responder that can answer the questions.
- Providing a confidential feedback service to Principals' e-mail addresses for them to compare their answers to averaged answers of fellow responders.

5. Ensuring that the responder's objectivity and confidentiality was achieved by:

- Ensuring that the question sequencing was reviewed in both the design and piloting phases. The phrasing of the questions was reviewed to ensure that language was both suitable for the target group and courteous. As Oppenheim (1992, p121) commented, each question must elicit a suitable response, yet still ensure that the respondent continues to co-operate.
- Numbering questions using an alpha numeric scheme so as to avoid emphasising that 75 pieces of information were being collected, thereby minimising the scope for refusal to participate based on perceived length of time that it will take to complete.

- Confidentiality was reinforced in the covering letter and the questionnaire itself. Specific assurances were made to preserve anonymity of responders from agencies such as the FEFC, DfEE and the new LSC, as well as from their own colleges.

The questionnaire uses Likert rating scales that facilitate qualitative analysis using SPSS. However, there are a number of caveats with the use of rating scales, namely:

- There is no assumption of equal intervals between the proposed categories.
- It is difficult to check that the respondent is telling the truth. However, the use of the FEFC Inspection data to triangulate the responses of Principals will help to ameliorate this problem, but it will not totally overcome this issue.
- Some do not want to be extremist when answering a rating scale and this was detected in the pilot. The solution could be to adopt a seven-point scale thereby providing a greater range of 'non-extreme' choices, however the use of a five-point evaluation scale is the norm in FE (being the accepted grading scale of the FEFC Inspectorate). Upon further investigation with the pilot Principals, it was concluded that knowing the interviewer may have an influence on how candid the responder may be, especially on the more contentious 'personal management style' questions. The piloting work reinforced the case against face-to-face interviews with Principals.
- The use of odd number scales allows respondents to select neutral answers, whereas an even number scale requires respondents to make a definitive choice. Both approaches have their advantages and disadvantages. The final questionnaire used a five-point scale for semantic differential questions and a six-point scale for single sided questions with a 'do not know' box for the reasons already proposed. The use of 5-point scale for differential questions allowed the responder to answer neutrally, whereas the 6-point scale for single sided questions was designed to stimulate a net positive or negative answer.
- The use of scales that presented dichotomous answers on subjective issues was avoided. Wilson (1971) advocates that no ordinal measure that involves the notion of pairs (or triplets) can have fully desirable properties. During regression analysis it is theoretically weak to argue that a change in X (a dichotomous independent variable in a subjective

measurement area) will have an either or step change in the dependent variable Y, to which it has related.

An informal review of Principals' in trays as part of the piloting phase indicated that as individuals, Principals tend to have few surveys to answer as they often delegate completion to another manager. Those research questionnaires they do receive which are aimed at them as individuals and hence should not be delegated, are typically from masters students and are not always answered due to poor questionnaire construction, inappropriate timing or naivety of the questions. The pilot phase for this thesis also indicated that the questionnaire would take on average approximately 20 minutes to complete and due to its personalisation as well as opportune timing alongside the birth of the LSC, it should expect to be answered by approximately 50%+ of the population. The questionnaire was posted in late July 2000, at the start of the summer recess. This time of year was chosen due to it being relatively the quietest period in the Principals' diary and hence the most likely period in the year in which they could be most reflective. The first follow up was made in late October 2000, just after half term week of the autumn term.

In conclusion, although the postal survey approach has its problems, it allows for superior data coding for analytical purposes due to its qualitative responses, it copes well with the volume of propositions to be tested and the anticipated response volumes. It also provides a degree of confidentiality to responders due to the anonymity of responding by questionnaire, as opposed to carrying out an interview with a researcher who works in the sector. In addition the use of the Inspection data set for triangulation would provide a credibility check on the reliability and robustness of the Principal's responses.

6.4 The identification of the population to be sampled

The English FE college population was identified from the list of colleges held by their funding agency, the Further Education Funding Council (FEFC). The population was composed of designated institutions as listed in the relevant schedule of the Further & Higher Education Act 1992, updated for mergers and dissolutions as at 31 July 2000, the end of the 1999/2000 financial and academic years (FEFC, 2000a, p71). No new colleges joined the population since 1992, other than by consolidation of

original institutions, e.g. the merger of Clarendon and Basford Hall Colleges to create New College Nottingham in 1997.

The communications team of the FEFC supplied the mailing list in August 2000 and it was cross-checked for completeness to the list held by the Principal's Trade Union, Association of Principals (APC). The APC list also included honours and titles to be included in the accompanying letters' addresses. Principal's names and college postcodes were cross-checked to the 1999-year book of education institutions to eliminate any clerical errors in the preparation and extraction of the FEFC supplied list of colleges. Where necessary, individual colleges were telephoned to confirm mailing list details.

Table 6.4: Numbers of English FE colleges as at August 2000: Source FEFC

	Numbers		%
[A] General and Tertiary Colleges		284	67.6
[B] Sixth Form Colleges		103	24.5
[C] Mono Subject (Specialist) Colleges/Institutions			
<i>Land Based Industries (Agricultural) Colleges</i>	23		
<i>Art & Design Colleges</i>	7		
<i>Specialist Colleges</i>	3		
		33	7.9
Total		420	100.0

The ten colleges that solely cater for adults have been included in the general/tertiary grouping of colleges, in common with normal FEFC statistical analysis reporting. However the three special residential colleges (which are financially very small) have been included in group C. These 420 colleges educate some 3.84 million students in 1999/2000 (FEFC, 2000a, p71). The FEFC also funds some 72,000 students in 53 English Universities and 301,000 students in 224 LEA departments and equivalent (FEFC, 2000a, p71). However these two groups of institutions are not covered by the theory developed by the literature review and hence are outside of consideration in this thesis.

With a small absolute population with three sub populations, there is a danger of generating too small a sample to use powerful multivariate statistics (Kish, 1965, p25). There is a trade-off between sample size and cost, but with a relatively small population of 420 college Principals and the use of a postal survey, it is relatively cost effective to survey the entire population and conduct follow up procedures for non-replies. Sudman (1976, p102-104) advocates that sampling should only occur in small populations where it is either too expensive to survey the entire population or the sample can be

proved to be statistically defensible (i.e. representative of the population) during data analysis. By surveying the entire population, there is an equal and random chance of reply or non-reply by an individual college Principal. Therefore the responses will form a randomly selected data set, free from researcher bias. Blalock (1979, p573) comments that even very meticulously designed samples will still be subject to certain non-sampling errors. Probability theory enables the researcher to evaluate the risk of sampling errors, whereas non-sampling errors are errors of measurement and are not able to be factored away. Critically, Blalock (1979, p572) advocates the need to follow through non-replies at least once as those individuals not responding in reality do not have an equal chance of being selected in the sample due to their self selection not to participate. It also reduces the non-sampling error of non-receipt or loss of the questionnaire by the sampled respondent.

The key data set, Principals attitudes and opinions, was collected by postal survey in the summer of 2000. All 420 colleges in the population were sampled. The statistical data set was extracted from the FEFC's web site and covered all responding colleges. The financial data set was constructed from source data for all college responders. The Inspection reports data set was extracted from responding college's inspection reports and coded. All of the data was collated into a relational database (MS Access 2000) for data preparation and transfer to SPSS. The chapter 7 deals with quantitative data analysis and chapter 8 provides a critique of the quantitative approach to analysis.

7 Data analysis

7.1 Introduction

The data sets were collected during the last six months of the year 2000. This chapter sets out the methods by which the collected data is prepared for analysis and then examined. The chapter is organised into four sections as follows:

- 1 scale building and reliability testing,
- 2 validation assessments,
- 3 hypothesis testing, and
- 4 moving beyond initial analysis using multivariate analysis.

Chapter 8 deals with the discussion arising from the quantitative findings and moves on to the qualitative case studies that are used to explore the results of this chapter. Chapter 9 deals with the implications and conclusions arising from the research findings.

7.2 Scale building, validation and initial analysis

This section deals with the construction of scales, validation and initial analysis. The postal survey generated 250 replies by the cut-off date. One further reply was received during the data analysis phase and has been excluded from the analysis. A further 12 replies were received stating that they would not be participating in the survey. The overall response rate was 62.6% (263 replies from 420 colleges), of which 250 returns were usable. This represents a usable response rate of 59.5% from an absolute population size of 420 colleges.

7.2.1 Data coding and credibility checks

The data collected from college Principals and the other sources require coding into a form suitable for quantitative analysis. Coding was achieved by using a coding book established prior to data collection. Coding was incorporated into the questionnaire with code '0' being used for 'do not know' or 'missing answer'. All other codes on opinions and attitudes were in the range of 1 to 6 and were discrete intervals. Where questions were phrased in a reverse manner to overcome responder bias, the data coding was reversed to ensure that answer polarity was maintained through out the questionnaire.

Other data was imported in numerical form, typically representing percentages, rather than absolute numbers.

Data was entered into a MS Access 2000 database, which had predetermined parameters for acceptable answer ranges. The use of MS Access 2000 allowed crosstabs, frequency counts and ranges to be prepared for data completeness and credibility checks. Checks included:

- range checks to ensure that the coded answer was within the valid range of responses,
- filter checks to ensure those answers between different parts of the data sets are internally consistent with one another, and
- logical checks to ensure that illogical coding is detected, e.g. no qualifications, expected gender against actual gender of Principal.

Another person checked a random 5% sample of coded questionnaires that data entry was both valid and correctly entered into the data matrix. A number of steps were taken to produce valid and uni-dimensional data prior to validity testing. Those steps were as follows:

1. Each item had to be scored in the same direction, therefore reverse coded items had to have their scores reversed to achieve an uni-dimensional scoring methodology.
2. In common with compulsory and FE education in the UK, the FEFC inspection grading methodology was used. This scoring methodology uses low scores to equate to high acceptance of the proposition except for risk, where a low score equates to low risk adversity. The definition of high score was determined that a low numerical score was the equivalent of high agreement and a high score as disagreement or low acceptance.
3. Missing data was analysed to determine the magnitude of the problem and its resultant implication for data analysis. The 250 returned surveys were usable. Of the 16,500 data points from the 250 usable returned surveys, there were 122 missing data points. This missing data represents 0.74% of the total population of data points and is scattered across numerous responders. There are no obvious or replicating patterns to non-response. Therefore, as proposed by Hertel (1976), the mean values (to 6 decimal places) for the item could be used to replace the missing value. This proposed method would ensure that the missing values do

not distort the standard distribution of the sample set of returns to be fully included in the analysis. The disadvantage of this method is the potential exaggeration of group homogeneity for the overall sample and in extreme cases can distort correlations. However the absolutely low number of values (0.74%) make this problem effectively immaterial.

4. Each of the items in the antecedent's scale has to contribute equally to the final scale as the hypothesis is based on a balanced model of independent variables composed of balanced scale contributions. To achieve equity in contribution, standard deviations and Z-scores were calculated. Each data point was restated as a Z-score for each item (question) that contributes to the antecedent's scale.

With the data collated and prepared for analysis, SPSS Version 9.1 was used for statistical reliability analysis testing. Having prepared the data for analysis, the next step is to test the item responses to see if the proposed scale is uni-dimensional and if it is reliable.

7.2.2 Scale building and reliability analysis

To ensure that the final sample was not atypical of the underlying population, non-response bias time trend extrapolation testing was conducted as recommended by Armstrong and Overton (1977). This testing split the final sample into two groups; those returns made as a result of the initial mailing and those returns made after the first reminder. The relative sample sizes were 150 (60%) colleges and 100 (40%) colleges respectively. For degree of representation of the underlying population, frequency analyses were prepared as follows:

Table 7.1: Frequency analysis of sample and population

Combined Sample	Sample <i>n_s</i> =250		Population <i>n_p</i> =420		Variance*	
	Nos.	%	Nos.	%	Nos.	%
Female Principals	59	23.6%	85	20.2%	+8	+3.4%
Male Principals	191	76.4%	335	79.8%	-8	-3.4%
General/Tertiary FE Colleges	163	65.2%	284	67.6%	-5	-2.4%
Sixth Form Colleges	65	26.0%	103	24.5%	+3	+1.5%
Mono-subject Colleges	22	8.8%	33	7.9%	+2	+0.9%
City & Urban	109	43.6%	190	45.2%	-4	-1.4%
Semi-Urban & Rural	141	56.4%	230	54.8%	+4	+1.4%
Split Samples	Sample 1 <i>n_{s1}</i> =150		Sample 2 <i>n_{s2}</i> =100		Variance %**	
Female Principals	34	22.7%	25	25.0%	+2.3%	
Male Principals	116	77.3%	75	75.0%	-2.3%	
General/Tertiary FE Colleges	96	64.0%	67	67.0%	+3.0%	
Sixth Form Colleges	42	28.0%	23	23.0%	-5.0%	
Mono-subject Colleges	12	8.0%	10	10.0%	+2.0%	
City & Urban	67	44.7%	41	41.0%	-3.7%	
Semi-Urban & Rural	83	55.3%	59	59.0%	+3.7%	

Notes: * Expressed as number of colleges different in the sample vis-à-vis the standard proportion in the underlying population. % variance expressed as the difference between sample 2 and sample 1
 ** Expressed as the percentage difference between the relative change in proportions between samples

The usable response rate of 59.5% (250 out of 420 absolute population) is very good and analogous with comparable market orientation research studies as follows:

- Narver and Slater's 1990 USA study (81% response rate from n=440 sample drawn from one company with active help of company on follow up of non-replies);
- Deng and Dart's 1994 Canadian study (49.6% response rate from n=500 sample of Canadian companies);
- Gray, Matear, Boshoff and Matheson's 1998 New Zealand private sector study (45% response rate from n=1,099 sample of NZ companies);
- Kohli, Jaworski and Kumar's 1993 MARKOR study (47.2% from n=500 sample of US companies), and
- Balabanis, Stables and Phillips' 1997 study of the top 200 British charities (29% from n=200 top British charities).

The above figures are stated for usable replies. From the above frequency analyses of the returned questionnaires and bench marking against comparable research studies, it can be concluded that the combined sample is prima facie representative of the underlying population for gender, institution type and geographical location factor. In addition, the split samples, based on timing of response, are fundamentally similar in their composition as defined by these three categories. This analysis of the pattern of replies lessens the concern regarding possible non-response bias as identified by Oppenheim (1992).

As proposed by Churchill (1979), the sample was split randomly. The method to achieve this was the timing of the returns. 150 college Principals replied in response to the first request and a further 100 replied in response to the follow up request. Reliability testing was conducted on the time based split samples referred to above and construct validity was conducted on the combined sample thereafter. Using the SPSS programme, the scale reliability values and item-to-total correlations for the split samples were obtained. The results are set out in the following tables:

Table 7.2: Reliability analysis for the model’s antecedents by time based split sample

Antecedent		Sample 1 <i>n₁=150</i> <i>Alpha</i>	Sample 2 <i>n₂=100</i> <i>Alpha</i>
Pe1	Innovative Leadership	.6496	.4841
Pe2	Environmental Awareness	.1473	.1520
Pe3	Clarity of goals & defining measurable outcomes	.7629	.7578
Pm4	Generate Market Intelligence	.6704	.6555
Pm5	Dissemination of Market Intelligence	.7481	.8013
Pm6	Responsiveness to Customers	.7414	.6852
Pm7	Inclusive Internal Approach	.6999	.7819
Px8	Personal Risk	.4858	.5441
Px9	Policy Dissonance	.6151	.4971

The results of the tests on the time based split samples supports the contention that there are no material variations between the two samples. The final sample is therefore not atypical of the underlying population using the approach to non-response bias time trend extrapolation testing as recommended by Armstrong and Overton (1977).

Having demonstrated sample reliability, the next step is to test the sub-populations for uni-dimensional responses and scale construction. Nunnally (1978, p245) developed the widely adopted methodology

for evaluating the assignment of items to scale. Using the SPSS programme, the three sub-populations were tested for scale construction. The antecedent validity threshold was set at 0.7 as recommended by Cronbach (1970) and Nunnally's work (1978) set the individual item validity threshold at 0.3. Table 7.3a and 7.3b set out the testing relating to entrepreneurial and risk taking constructs respectively. Table 7.4 sets out the results of testing on the market orientation constructs.

Table 7.3a: Reliability analysis for entrepreneurial leadership antecedents

Antecedent and Items	General FE Type 1		Sixth Form Type 2		Specialist Type 3	
	Alpha	Item to Total	Alpha	Item to Total	Alpha	Item to Total
Pe1 Innovative Leadership	.6261	<i>n=163</i>	.4195	<i>n=65</i>	.6864	<i>n=22</i>
1a - Value derived by the Principal and SMT		.3185		.1293		.5334
1b - Principal communicates the values		.3367		.1510		.4529
1c - Business rather than academic leadership		.1302		-.1009		.1960
1e - Principal active in promoting college's goals		.4377		.0841		.2274
1f - Create excitement in work and develop choices		.4222		.3290		.5353
1g - I have high empathy of implications for SMT		.3447		.2849		.3025
1h - I develop the college in innovative leaps		.3628		.3403		.2489
1j - Pls stimulate superior performance		.2329		.2480		.6136
Final Alpha (retaining Items in bold)	Not significant		Not significant		.7222	
Pe2 Environmental Awareness	.1958	<i>n=162</i>	.1347	<i>n=65</i>	-.4158	<i>n=21</i>
2a - College to be placed in inequitable positions		-.0289		-0.114		-.2509
2b - College to respond positively despite inequity		.3377		.2289		-.0737
2c - New initiatives represent opportunities		.1841		.0939		-.0638
2d - Just enough resources to meet new ideas		.0891		.0020		.1145
2e - Winning strategies from my leadership acts [R]		-.0792		-.0394		-.3178
Final Alpha	Not significant		Not significant		Not significant	
Pe3 Clarity of goals & measurable outcomes	.7879	<i>n=163</i>	.6942	<i>n=65</i>	.6707	<i>n=22</i>
3a - Managers quickly identify opportunities		.6612		.7106		.4865
3b - Managers quickly interpret and take decisions		.6422		.5211		.6645
3c - Our systems allow us to identify opportunities		.6399		.4197		.3396
3d - College goals are understood and tracked		.5397		.4219		.5740
3f - Managers define priorities without senior staff		.4401		.3663		.2917
3g - Customer's complaints viewed constructively		.3191		.1652		.1173
Final Alpha (retaining Items in bold)	.8067		.7423		.7466	

Note: All items to total correlations are stated on the initial iteration of the scale. The items to total correlations change as part of the final solution and are represented in table 7.5. [R] indicates a reverse coded question in the questionnaire.

The above results are interesting as they demonstrate that the entrepreneurial environmental awareness construct (Pe2) does not generate valid alpha scores and hence is not a demonstrably true construct for English FE. This contradicts the expectation derived from the theory, which was based on the premise that the leader (entrepreneur) pays attention to the operating environment and the problems that stem from a regulated politicised public sector (Austin, 1979). The non-convergent

responses of the respondents for all three sub sectors is consistent. This implies that either the construct is not valid for English FE and hence contradicts the theorised expectation, or that the measurement tool fails to measure accurately the underlying concepts that define the construct. Likewise, the non-convergent responses of General FE and Sixth Form college Principals to innovative leadership (Pe1), is interesting. General FE colleges are just sub optimal, whereas Sixth Forms are not valid. This implies that the leadership of the Principal (Chief Executive) and/or his/her top team is not a significant factor for these types of colleges. Alternatively, the measurement tool fails to measure accurately the underlying concepts that define the construct. The reasons for the failure of this construct to generate valid results in five of the nine cases is explored further in chapter 8.

Table 7.3b: Reliability analysis for risk antecedents

Antecedent and Items	General FE Type 1		Sixth Form Type 2		Specialist Type 3	
	Alpha	Item to Total	Alpha	Item to Total	Alpha	Item to Total
Px8 Personal Risk	.6741	<i>n=163</i>	.3756	<i>n=65</i>	.6864	<i>n=22</i>
8a - Take risks in implementing innovation		.1588		.1424		.2209
8b - Rewards of risk taking to exceed the downside		.2421		.3293		.0408
8c - Managers are motivated by non-financial rewards [R]		.1469		-.1743		-.0160
8d - Funding agencies are reasonable when things go wrong		.1317		.0501		.5899
8e - I can reconcile the politics with risk taking		.4236		.3214		.6304
8f - I can deal with frustration of a regulated FE environment		.3639		.4273		.5069
8g - Senior staff form their own views about risk		.1019		.1344		.0629
Final Alpha (retaining items in bold)	<i>Not significant</i>		.7531 BUT rejected*		.9002 BUT rejected*	
Px9 Policy Dissonance	.6284	<i>n=163</i>	.6418	<i>n=65</i>	.4692	<i>n=22</i>
8h - I have an ability to influence policy & priorities		.3823		.4075		-.0623
8i - Active in local policy groups & influence outcomes		.2767		.4145		.1116
8j - Able to apply Government initiatives		.2609		.3363		.3680
8k - Innovation nearly always improves effectiveness		.3908		.2801		.2253
8l - Personally one of the first to adopt innovation		.2938		.1308		.5010
8m - LSC will be a positive impact on my college		.4568		.5904		.4402
8n - The LSC will be a better environment than		.3576		.3859		.0209
8o - I spend more time on planning than doing		.1801		.1441		.1061
Final Alpha (retaining items in bold)	<i>Not significant</i>		.7090 BUT rejected*		<i>Not significant</i>	

Note: All items to total correlations are stated on the initial iteration of the scale. The items to total correlations change as part of the final solution and are represented in table 7.5. [R] indicates a reverse coded question in the questionnaire. * For Px8, see next paragraph for the explanation for the star annotation.

The Personal Risk antecedent (Px8) generates valid alpha coefficients as a result of dropping low inter-item as recommended by Nunnally (1978). Although the Cronbach Alphas are comfortably over

the 0.7 threshold, the rationale for the conclusion is not supportable. The Alpha score is only achieved by deleting five of the seven constructs and the remaining two (8e and 8f) are effectively measuring similar concepts. In conclusion, the Personal Risk construct (Px8) is rejected as de Vauss (1985, p249) proposes that complex social science constructs should be based on multiple measures for construct validity purposes.

The Policy Dissonance antecedent (Px9) generates a marginally valid alpha coefficient for Sixth Form colleges (0.709). However two constructs, (8m and 8n) are effectively measuring the same issue, namely perception of past versus future performance under the Government’s funding systems. If the lowest item is removed (8n) so as to reduce the artificial homogenisation of results, the Cronbach alpha reduces to 0.689. Therefore the Policy Dissonance antecedent (Px9) is not robust and is dropped from the final scale. The reasons for the failure of these two antecedents to generate valid results in five of the nine cases is explored further in chapter 8.

Table 7.4: Reliability analysis for market orientation antecedents

Antecedent and Items	General FE Type 1		Sixth Form Type 2		Specialist Type 3	
	Alpha	Item to Total	Alpha	Item to Total	Alpha	Item to Total
Pm4						
Generate Market Intelligence	.6492	<i>n=163</i>	.7139	<i>n=65</i>	.6314	<i>n=22</i>
4a - Meet customers regularly to ascertain needs		.4398		.3543		.3853
4b - Teaching teams liase directly with customers		.2689		.4937		.7182
4c - Slow to detect change in customer needs [R]		.5153		.5622		.3089
4d - We survey customer needs termly		.3153		.3607		.6586
4e - Meet and plan with agencies twice a year		.2924		.3328		-.1801
4f - We use informal means to collect intelligence		.3739		.5725		.0792
4g - Teaching teams involved in data collection		.1611		.2789		.3660
4h - Slow to detect fundamental changes [R]		.3696		.3525		.2722
4i - Periodically review customer's environment		.2618		.2398		.3924
Final Alpha (retaining items in bold)	<i>Not significant</i>		.7708		.7535	

Table 7.4: Reliability analysis for market orientation antecedents continued

Antecedent and Items	General FE Type 1		Sixth Form Type 2		Specialist Type 3	
	Alpha	Item to Total	Alpha	Item to Total	Alpha	Item to Total
Pm5						
Dissemination of Market Intelligence	.7680	<i>n=163</i>	.7248	<i>n=65</i>	.8773	<i>n=22</i>
5a - Informal sharing of information in the college		.5346		.2677		.7666
5b - Regular cross team meetings on marketing		.4018		.4183		.4616
5c - Marketing & teaching discuss customer needs		.5704		.5524		.6008
5d - Delivery teams circulate market intelligence		.4059		.4987		.7053
5e - Major customers issues are shared quickly		.5794		.5234		.7185
5f - Customer satisfaction data is shared regularly		.3010		.3653		.5327
5g - Regular contact between teams [R]		.4546		.4224		.7813
5h - Teams share key market information [R]		.5109		.2764		.6069
Final Alpha (retaining items in bold)	.7725		.7312		.8803	
Pm6						
Responsiveness to Customers	.7303	<i>n=163</i>	.7015	<i>n=65</i>	.7731	<i>n=22</i>
6a - We respond quickly to competitor actions [R]		.5337		.3801		.6335
6b - Market segmentation drives development		.2133		.2617		.5320
6c - Do not overlook customer needs changes [R]		.5704		.3006		.3375
6d - Product development relates to customers		.3006		.5652		.4508
6e - Plans driven by customer not product [R]		.3978		.5467		.1658
6f - Our plans are not based on history/politics [R]		.4623		.4103		.4210
6g - Make product modifications for our customer		.4468		.4486		.4871
6h - We respond quickly and positively to problems		.4536		.2237		.6700
Final Alpha (retaining items in bold)	.7481		.7029		.8319	
Pm7						
Inclusive Internal Approach	.7554	<i>n=163</i>	.6771	<i>n=65</i>	.7760	<i>n=22</i>
7a - Respond quickly to direct competitive threats		.4189		.4408		.2473
7b - Teams are well co-ordinated to meet demands		.6212		.4470		.4613
7c - Can not implement market plans [R]		.4713		.1659		.5803
7d - Quick to implement new initiatives		.3345		.4997		.4459
7e - Teachers perceive they are providing a service		.4867		.2883		.5632
7f - Teachers conduct customer research		.4343		.2728		.5113
7g - Teachers perceive they do not need to recruit customers [R]		.4640		.4428		.6715
7h - New initiatives are hived off to marketing		.3774		.3801		.4102
Final Alpha (retaining items in bold)	.7554		<i>Not significant</i>		.7904	

Note: All items to total correlations are stated on the initial iteration of the scale. The items to total correlations change as part of the final solution and are represented in table 7.5. [R] indicates a reverse coded question in the questionnaire.

Reliability for the number of the constructs exceeds the 0.7 Alpha threshold proposed by Cronbach (1970) and Nunnally (1978) for valid exploratory research. The items to scale correlation factors exceed 0.3 for all items that remain in the scale. Table 7.5 sets out the selected items and includes the final Alpha and item-to-total correlation factors for the antecedents and items selected.

Table 7.5: Final items used to construct scales and the variables' names

Antecedent and Items	General FE Type 1		Sixth Form Type 2		Specialist Type 3	
	Alpha	Item to Total	Alpha	Item to Total	Alpha	Item to Total
Pe1 - INVLRSP Innovative Leadership					.7222	n=22
1a - Value derived by the Principal and SMT						.5823
1b - Principal communicates the values						.4993
1f - Create excitement in work and develop choices						.4390
1j - Pls stimulate superior performance						.5655
Pe3 - GOALCLRT Clarity of goals & measurable outcomes	.8067	n=163	.7423	n=65	.7466	n=22
3a - Managers quickly identify opportunities		.7701		.7463		.6333
3b - Managers quickly interpret and take decisions		.6853		.5858		.6757
3c - Our systems allow us to identify opportunities		.6146		.4749		.4651
3d - College goals are understood and tracked		.4901		.3670		.4883
Pm4 - GENINTEL Generate Market Intelligence			.7708	n=65	.7535	n=22
4a - Meet customers regularly to ascertain needs						.4074
4b - Teaching teams liase directly with customers				.5570		.8453
4c - Slow to detect change in customer needs [R]				.7005		.4110
4d - We survey customer needs termly						.5708
4h - Slow to detect fundamental changes [R]				.5850		
4i - Periodically review customer's environment						.5094
Pm5 - DISINTEL Dissemination of Market Intelligence	.7725	n=163	.7312	n=65	.8803	n=22
5a - Informal sharing of information in the college		.5603				.7366
5b - Regular cross team meetings on marketing		.3968		.3934		
5c - Marketing & teaching discuss customer needs		.5944		.5346		.6032
5d - Delivery teams circulate market intelligence		.4277		.5270		.6858
5e - Major customers issues are shared quickly		.5573		.5560		.6849
5f - Customer satisfaction data is shared regularly				.3884		.5722
5g - Regular contact between teams [R]		.4410		.3982		.7982
5h - Teams share key market information [R]		.4888				.6292
Pm6 - RESPONSV Responsiveness to Customers	.7481	n=163	.7029	n=65	.8319	n=22
6a - We respond quickly to competitor actions [R]		.5303		.4360		.6633
6b - Market segmentation drives development						.6378
6c - Do not overlook customer needs changes [R]		.5693		.3106		
6d - Product development relates to customers				.5011		.6364
6e - Plans driven by customer not product [R]		.4379		.5661		
6f - Our plans are not based on history/politics [R]		.4412		.4191		
6g - Make product modifications for our customer		.4673		.3844		.7301
6h - We respond quickly and positively to problems		.4713				.5545

Table 7.5: Final items used to construct scales and the variables' names continued

Pm7 - INCLVAPP			
Inclusive Internal Approach	.7554	n=163	.7904
7a - Respond quickly to direct competitive threats		.4189	
7b - Teams are well co-ordinated to meet demands		.6212	.3818
7c - Can not implement market plans [R]		.4713	.5858
7d - Quick to implement new initiatives		.3345	.4051
7e - Teachers perceive they are providing a service		.4867	.5911
7f - Teachers conduct customer research		.4343	.5227
7g - Teachers perceive they do not need to recruit customers [R]		.4640	.7032
7h - New initiatives are hived off to marketing		.3774	.4658

Note: [R] = reverse coded items in the original questionnaire.

As the magnitude of the effect of every antecedent within each construct is hypothesised to be of equal importance, the final scales were constructed by simply summing each group of items. This is valid, as the questionnaire's responses had already been recomputed as z-scores. To derive the combined construct, it was noted that each component antecedent had a different number of items composing its scale. Therefore, the final scale score varied considerably. To make scores comparable and logically consistent with the underlying five-point scale used in the English FE sector by the FEFC Inspectorate, the scales were constructed as follows:

- The entrepreneurial antecedents are summed to create an aggregated entrepreneurial leadership variable labeled ENTREPRN,
- The three market orientation antecedents are summed to create an aggregated market orientation variable, labeled MKTORNTN.
- The entrepreneurial leadership (ENTREPRN) and market orientation variable (MKTORNTN) are combined in equal portions to form a composite measure, business orientation (BUSORNTN).

The results of this process are summarised in table 7.6 and relate to the construct model proposed in figure 5.1.

Table 7.6: Final antecedent scores: Means, Min and Max values, excluding RISKVIEW

Antecedent		General FE Type 1 n=163			Sixth Form Type 2 n=65			Specialist Type 3 n=22		
		Low	High	Mean	Low	High	Mean	Low	High	Mean
Pe1	INVLD RSP							2.296	5.550	3.789
Pe3	GOAL CLR	1.126	5.837	3.376	1.520	5.475	2.260	1.512	5.633	3.567
EL	ENTLDRSP	1.126	5.837	3.376	1.520	5.475	2.260	3.808	3.573	3.678
Pm4	GENINTEL				1.027	5.475	2.620	1.325	5.798	3.663
Pm5	DISINTEL	1.325	5.798	3.663	1.192	6.178	3.333	1.493	5.260	2.709
Pm6	RESPONSV	1.495	6.195	3.772	2.142	6.779	4.161	2.425	6.068	3.906
Pm7	INCLUSV	1.861	7.290	4.228				2.702	6.220	4.348
MO	MKTORNTN	1.693	5.914	3.760	1.660	5.128	3.472	2.185	4.823	3.513
CP	BUSORNTN	1.586	5.703	3.568	1.934	4.924	3.543	2.419	4.644	3.582

Note: Lower scores = most positive relationship. Standard deviation is 1.0 for all P scales as the values are Z-scores

As the detailed analyses of scale construction are satisfactory, the combined item scales are now the subjects of various validity assessments.

7.3 Validity assessments

Valid measures are those that measure what they are intended to measure. The construction of reliable scales in itself is not sufficient if they fail to measure validly the measure they purport to represent. Gronlund (1981) reminds researchers that validity should be seen as a matter of degree, not as an absolute state. Therefore, the validity testing seeks to demonstrate that the measures are maximised to measure what they purport to measure and minimise non-relevant variable measurement. Validity testing has three principal components; content, construct and criterion validity.

7.3.1 Content validity

Content validity evaluates the effectiveness of the measures to embrace the different aspects of the domain of the variable being measured, Nunnally (1978). The questionnaire was derived from grounded theory developed via a comprehensive literature review in the fields of entrepreneurial leadership and market orientation. Two review panels, composed of senior managers in the sector and academics at the University of Nottingham were consulted as part of the theory development and questionnaire design. The market orientation dimensions are also derived from previous empirical research in the field, notably Narver and Slater (1990 and 1994), Kohli and Jaworski (1990 and 1993), Deng and Dart (1994) and Sui and Wilson (1998).

7.3.2 Construct validity

Construct validity evaluates a measure by how well it conforms to theoretical expectations, Kerlinger (1973, p463) and Cronbach (1970, p143). Construct validity can be demonstrated by assessing the degree of convergence of the measures with theory and in turn, its divergence from theory. From the foregoing literature review, there are two propositions that are developed that are proposed to demonstrate construct validity. The first is convergent validity as follows:

V₁ Convergent Validity: There is a strong correlation among the components of entrepreneurial leadership, the three components of market orientation and in turn, the three constructs of entrepreneurial leadership, risk perceptions and market orientation.

To test for convergent analysis, the inter-item correlations are computed in SPSS using Spearman's rho. Spearman's rho was selected, as the scales are ordinal to ordinal comparisons. The following correlation analysis tables demonstrate convergent validity:

Table 7.7a: Correlation analysis for convergent validity: general FE colleges type 1

Market Orientation	DISINTEL	RESPONSV	INCLVAPP
DISINTEL	1.000		
RESPONSV	.537 ^a	1.000	
INCLVAPP	.632 ^a	.636 ^a	1.000

Note: Significance level a = p<. 001 (2-tailed): Spearman's rho

Table 7.7b: Correlation analysis for convergent validity: sixth form colleges type 2

Market Orientation	GENINTEL	DISINTEL	RESPONSV
GENINTEL	1.000		
DISINTEL	.465 ^a	1.000	
RESPONSV	.531 ^a	.420 ^a	1.000

Note: Significance level a = p<. 001 (2-tailed): Spearman's rho

Table 7.7c: Correlation analysis for convergent validity: specialist colleges type 3

Market Orientation	GENINTEL	DISINTEL	RESPONSV	INCLVAPP
GENINTEL	1.000			
DISINTEL	.614 ^b	1.000		
RESPONSV	n/s	.729 ^a	1.000	
INCLVAPP	n/s	.546 ^b	.504 ^c	1.000

Note: Significance level a = p<. 001, b = p< .01 c = p<. 05, (2-tailed): Spearman's rho

A strong correlation among the 3 or 4 components indicates that they are converging on a common construct, thereby providing evidence that there is convergent validity. The two risk factors for type 2 colleges (sixth form) have a correlation coefficient of 0.272 at the 0.05 significance level. Interestingly,

there is no significant correlation between the two entrepreneurial constructs for type 3 colleges (specialist). Convergent validity is also suggested by the high Cronbach alphas when all the relevant antecedents are combined together into one scale of business orientation (BUSORNTN), as follows:

- 0.8219 for type 1 colleges.
- 0.7000 for type 2 colleges.
- 0.7875 for type 3 colleges.

All item to total correlations exceed 0.3886, with the highest correlation being 0.8241. When the three constructs, entrepreneurial leadership, risk moderator and market orientation are correlated; items are summated into one overarching scale as set out in table 7.8 below:

Table 7.8: Reliability testing of combined scale for convergent validity

	ENTREPRN	RISKVIEW	MKTORNTN
Type 1: General FE			
ENTREPRN	1.000		
MKTORNTN	.796 ^a		1.000
Type 2: Sixth Form			
ENTREPRN	1.000		
RISKVIEW	.249 ^c	1.000	
MKTORNTN	.666 ^a	.245 ^c	1.000
Type 3: Specialist			
ENTREPRN	1.000		
RISKVIEW	Not significant	1.000	
MKTORNTN	.671 ^a	.645 ^a	1.000

Note: Significance level a = p<. 001, b = p< .01 c = p<. 05, (2-tailed): Spearman's rho

The correlations between market orientation (MKTORNTN) and entrepreneurial leadership (ENTREPRN) are strong. Borg (1963) proposes that correlations in the range 0.65 to 0.85 make group predications possible. In contrast, the correlation between RISKVIEW and entrepreneurial leadership is very low, indicating that it has limited value for predication studies, and very limited use for exploratory studies. The relationship with market orientation is very weak for Sixth Form colleges, but strong for Specialist colleges. In conclusion, RISKVIEW is unreliable and its constituent Px₈ personal risk is derived from only two factors, which in turn have low correlation with the other two principal antecedents, entrepreneurship and market orientation. Therefore RISKVIEW is dropped from the model, despite Cronbach Alphas in excess of 0.7 being achieved.

Returning to the testing for convergent validity, validity is also suggested by the one factor solution in an exploratory factor analysis as proposed by Kim and Mueller (1978), with:

- A one-factor solution with an Eigenvalue of 1.80 with 90.13% of the variance explained for Type 1 (general FE) colleges.
- A one-factor solution with an Eigenvalue of 1.86 with 61.95% of the variance explained for Type 2 (sixth form) colleges.
- A one-factor solution with an Eigenvalue of 2.12 with 70.80% of the variance explained for Type 3 (specialist) colleges.

In summary, convergent validity (V_1) has been demonstrated and the risk antecedents (RISKVIEW) have been dropped from the scales as being unreliable.

The second proposition designed to test construct validity is based on discriminant validity as follows:

V_2 Discriminant Validity: The correlation between the Market Orientation (MKTORNTN) construct and the market orientation business philosophy is higher than the correlation with the alternative business philosophy of product orientation.

To assess discriminant validity, the constructs will need to be assessed against alternative measures to demonstrate lower correlations. For such testing, the work Peterson (1989, p9) has been used to derive four business philosophies for private sector firms, namely:

- production orientation,
- sales orientation,
- marketing orientation., and
- societal (political) orientation.

Deng and Dart (1994, p737) applied this method of discriminant testing in their work and it has typically been used henceforth by other researchers. Deng and Dart used a single question to calibrate the firm's business philosophy. This approach of using a single measure is theoretically weak, particularly in complex environments (Stinchcombe, 1968, p18-20). In addition, Drucker (1985, p129

and p167-171) advocated that it is too simplistic to define a not-for profit organisation's goals in private sector terms without extra interpretation for their complex business orientation.

Field testing of the questionnaire demonstrated that the use of a single item would result in interpretation problems, especially amongst mono-client and mono-product institutions. Typically these institutions do not use the language of the marketing discipline (especially as it is couched in language more commonly associated with the private sector) to describe their work. Amongst general FE colleges, the field work trial suggested that responders would not necessarily provide consistent answers between their perception and the underlying actions of the college, e.g. they would (like to) say market philosophy is the driving paradigm, whereas the rest of the college would actually be production orientated. Further piloting work indicted that all colleges are by their very nature, societal in orientation, being politically influenced organisations controlled by the politically controlled FEFC and DfEE. Furthermore, pricing was not a key issue in driving new business, as fees are not charged to a significant proportion of consumers of FE due to either Statute (e.g. under 19s not charged by law) or through competition or policy not to charge for retired customers etc. Furthermore the dominant philosophy in the provision of state goods as advocated by Drucker and Casson is whether the allocation of public services are client led (i.e. market orientated) or supplier led (i.e. product or producer led).

As leaders of public firms, Principals will not necessarily use the language of the private sector to describe their work or business philosophy. To overcome responder bias, the constructs were incorporated into the main body of questions (items) used to test market orientation and extracted to construct the two business philosophies. These philosophies are market orientation and product orientated. In conclusion, to measure discriminant validity, the questionnaire used items drawn from the market orientation scales to measure two alternative business philosophies and they are represented as follows:

(1) Market Philosophy

- (a) Responsiveness:** (Question 6a) – Speed of response to competitor changes
- (b) Market Needs:** (Question 6f) – Offering driven by identified market need [Reverse coded question]

(2) *Product Philosophy*

(c) *Product Changes*: (Question 6d) – Product development is reviewed periodically to customer needs.

(d) *Technological/Curriculum Change*: (Question 6e) – Business Plans driven by technological/curriculum changes not market needs per se [Reverse coded].

To measure discriminant validity, correlation coefficients are calculated. As recommended by Nie et al (1975, p289), Kendal's tau_b correlation coefficient has been selected as the transformation of scales has resulted in a large number of variables with potentially tied scores. Such scenarios decrease the statistical accuracy of Pearson and Spearman correlation coefficients (Blalock, 1979, p445). Spearman correlation coefficients are more suitable when the ratio of cases to categories is smaller and hence has been used for Type 2 and Type 3 colleges due to their smaller sample sizes. The correlation analyses for the three groups of colleges are set out in the tables 7.9a to 7.9c:

Table 7.9a: Correlation analysis for discriminant validity - type 1 colleges

General FE Colleges <i>n</i> =163		Market Philosophy		Product Philosophy	
		<i>Responsive</i>	<i>Market Needs</i>	<i>Product Changes</i>	<i>Technology</i>
ENTLDRSP	Entrepreneurial Leadership	.304 ^a	.228 ^a	.255 ^a	.247 ^a
MKTORNTN	Market Orientation	.458 ^a	.389 ^a	.360 ^a	.365 ^a
BUSORNTN	Business Orientation	.390 ^a	.314 ^a	.307 ^a	.319 ^a

Note: Significance level a = p<. 001 (2-tailed); Kendal's tau_b

Table 7.9b: Correlation analysis for discriminant validity - type 2 colleges

Sixth Form Colleges <i>n</i> =65		Market Philosophy		Product Philosophy	
		<i>Responsive</i>	<i>Market Needs</i>	<i>Product Changes</i>	<i>Technology</i>
ENTLDRSP	Entrepreneurial Leadership	.296 ^c	.409 ^a	Not significant	.249 ^c
MKTORNTN	Market Orientation	.525 ^a	.512 ^a	.562 ^a	.456 ^a
BUSORNTN	Business Orientation	.455 ^a	.514 ^a	.404 ^a	.408 ^a

Note: Significance level a = p<. 001, b = p< .01 c = p<. 05, (2-tailed); Spearman's rho

Table 7.9c: Correlation analysis for discriminant validity - type 3 colleges

Specialist Colleges <i>n</i> =22		Market Philosophy		Product Philosophy	
		<i>Responsive</i>	<i>Market Needs</i>	<i>Product Changes</i>	<i>Technology</i>
ENTLDRSP	Entrepreneurial Leadership	.673 ^a	Not significant	.617 ^b	Not significant
MKTORNTN	Market Orientation	.753 ^a	Not significant	.584 ^b	Not significant
BUSORNTN	Business Orientation	.768 ^a	Not significant	.600 ^b	Not significant

Note: Significance level a = p<. 001, b = p< .01, (2-tailed); Spearman's rho

The correlation coefficients suggest that it is the case that stronger correlations exist between market orientation and entrepreneurial leadership with the marketing philosophy than the production philosophy. The coefficients have a 0.01 significance level. Therefore the matrix confirms hypothesis V_2 and discriminant validity has been demonstrated. In conclusion, construct validity has been demonstrated.

7.3.3 Criterion validity

Criterion validity, also known as predictive or external validity, evaluates how well the measure conforms to the theoretical expectations and hence can be generalised to the rest of the population.

As the antecedents purport to measure business performance, criterion validity would be demonstrated if there is a positive correlation between the antecedents and business performance.

The criterion validity can be expressed as follows:

V_3 Criterion Validity: Leadership and market orientation measures should be positively related to business performance measures.

To test for criterion analysis on the independent variables, it is necessary examine their relationship with the three output (dependent) variables proposed in the model in figure 5.1. The dependent variables are:

- O_1 - Generate Trading Volumes (TRADVOL).
- O_2 - Innovative and adaptive (INVADPT).
- O_3 - Long Term Financial Stability (LTSTABLE).

The fourth dependent variable represented in figure 5.1 (O_4 superior teaching grades), is a qualitative performance effectiveness measure, rather than a financial business performance measure. This fourth dependent variable is considered as part of the advanced causal relationship modelling of section 7.4.

Attempts to derive a single measure for each dependent variable failed the Cronbach Alpha tests. As Balabanis et al (1997) discovered, identifying robust and testable performance criteria for not-for profits (in their case the top 200 British charities) is hard. As theorised in section 5.8, the dependent variables are unlikely to be an individual variable. Various studies (Deng & Dart 1994, Narver & Slater

1990) have called upon the participant to self-assess the dependent variable, typically one measure. This has two obvious weaknesses, namely the lack of autonomous measurement of the dependent variable (i.e. potential responder bias) and excessive reliance being placed upon a single measure. The curriculum performance dependent variable (O₄) is not used in this part of the testing, being a function of the LISREL modelling in section 7.5.4. For this study, the dependent variables (O₁, O₂ and O₃) are drawn from a range of independently generated values and are set out in table 7.10.

Table 7.10: Output performance measures

Ref	Dependent Variable and source	Variable Name
O ₁	Generate Trading Volumes TRADVOL	
	S Average achievement of FEFC unit target over two years	ACHFUND
	S Retention rate of FT students	RETFT
	S Retention rate of PT students	RETPT
O ₂	Innovative and adaptive INVADPT	
	I Average Curriculum Grade	CURGRADE
	I Support for Students Grade	SSPGRADE
	I Quality Assurance Grade	QAGRADE
	I Governance Grade	GOVGRADE
	I Management Grade	MANGRADE
O ₃	Long Term Financial Stability LTSTABLE	
	I Average class size	AVGNOS
	F Total Income in 1998	TNOVER98
	F Surplus in 1998	SURPLUS
	F Average cash generated from operations over two years (1997 & 1998)	AVGCASH
	F Income net of staff costs: Decision space for investment	NONPAY

Data Source: F = Financial data set, I = Latest FEFC Inspection, S = FEFC Statistical data set

To measure criterion validity, correlation coefficients are calculated. As recommended by Nie et al (ibid.1975), Spearman's rho correlation coefficients have been used as per table 7.9a-c. The correlation analyses for discriminant validity testing are set out in tables 7.11a-c. Only significant correlations are reported.

Table 7.11a: Correlation analysis for discriminant validity – type 1 colleges

Dependent Variable		Independent Variables			
		GOALCLRT	DISINTEL	RESPNSV	INCLVAPP
O ₁	ACHFUND	.092 ^d			.096 ^d
	RETFT				
	RETPT				
O ₂	CURGRADE	.122 ^c	.133 ^c	.168 ^b	.235 ^a
	SSPGRADE	.152 ^c	.156 ^c	.191 ^b	.208 ^a
	QAGRADE	.127 ^c	.133 ^c	.156 ^a	.187 ^b
	GOVGRADE	.203 ^a	.106 ^d	.135 ^a	.181 ^b
	MANGRADE	.210 ^a	.138 ^c	.160 ^b	.229 ^a
	CLASSOBV			.095 ^d	.128 ^c
O ₃	TNOVER98				
	SURPLUS				
	AVGCASH	.106 ^d			
	NONPAY				

Note: Significance level a= p<. 001, b = p<. 01, c = p<. 05, d = < .10, (2-tailed): Kendal's tau_b

Table 7.11b: Correlation analysis for discriminant validity – type 2 colleges

Dependent Variable		Independent Variables					
		GOALCLRT	GENINTEL	DISINTEL	RESPNSV	PERSRISK	POLCYDIS
O ₁	ACHFUND						
	RETFT						
	RETPT						
O ₂	CURGRADE						
	SSPGRADE	.247 ^c					
	QAGRADE	.311 ^c					
	GOVGRADE						
O ₃	MANGRADE	.255 ^c					
	AVGNOS						
	TNOVER98						
	SURPLUS		.246 ^d				.230 ^d
	AVGCASH						
	NONPAY						

Note: Significance level b = p<. 01, c = p<. 05, d = < .10, (2-tailed): Spearman's rho

Table 7.11c: Correlation analysis for discriminant validity – type 3 colleges

Dependent Variable		Independent Variables						
		INVLD RSP	GOALCLRT	GENINTEL	DISINTEL	RESPNSV	INCLVAPP	PERSRISK
O ₁	ACHFUND							
	RETFT							
	RETPT							
O ₂	CURGRADE		.521 ^c		.469 ^c	.543 ^b	.422 ^d	
	SSPGRADE							
	QAGRADE		.441 ^c					
	GOVGRADE							
O ₃	MANGRADE		.404 ^d					
	AVGNOS							
	TNOVER98							
	SURPLUS							
	AVGCASH							
	NONPAY							

Note: Significance level a = p<. 001, b = p<. 01, c = p<. 05 (2-tailed): Spearman's rho

The Spearman's rho correlation coefficients suggest that it is the case that significant correlations exist between the certain components of the independent variables and the dependent variables.

Interestingly, no sub-population of colleges has any significant correlation with the long-term stability output variable, O₃. The implications and causes of this observation are dealt with in the next chapter.

The next step is to review the correlation coefficients with the composite scales of business performance, (composed of risk, entrepreneurial leadership and market orientation) and the relevant variables identified as displaying significant correlations with the sub-components of the constructs. The sample is treated as sub-populations and Table 7.12 sets out the results of this correlation work and only significant correlations are shown.

Table 7.12: Correlation analysis for discriminant validity by composite scales

Dependent Variable		Independent Variable		
		ENTLDRSP	MKTORNTN	BUSORNTN
Type 1 Colleges: General FE				
CURGRADE	Curriculum Grade (Average)	.179 ^c	.200 ^a	.166 ^b
SSPGRADE	Student Support Grade	.190 ^c	.211 ^a	.186 ^b
QAGRADE	Quality Assurance Grade	.161 ^c	.186 ^b	.158 ^b
GOVGRADE	Governance Grade	.254 ^a	.190 ^b	.203 ^a
MANGRADE	Management Grade	.265 ^a	.219 ^a	.223 ^a
AVGCASH	Cash Generated over two years	.158 ^d		
Type 2 Colleges: Sixth Form				
RETPT	Retention of PT Students	.212 ^d		
ACHFUND	Achievement of FEFC funding	.276 ^c	.298 ^c	.320 ^c
QAGRADE	Quality Assurance Grade		.222 ^d	.236 ^d
SURPLUS98	Surplus (Historical 1998)	.225 ^d		.228 ^d
Type 3 Colleges: Specialist				
CURGRADE	Curriculum Grade (Average)	.489 ^c	.638 ^a	.582 ^b

Note: Significance level a = p<. 001, b = p<. 01, c = p<. 05, d = p <. 10, (2-tailed): Spearman's rho.

The correlations are weak to modest, in common with the previously cited market orientation research studies. Researchers must be aware of four caveats when undertaking correlation analysis, namely:

1. A correlation factor does not automatically imply a causal relationship, (Mouly, 1978).
2. Type I errors (rejecting the null hypothesis in error) can occur where the significance is not set high enough, e.g. at p =< 0.001 (Rose and Sullivan, 1993, p1968).

3. Type II errors (accepting the null hypothesis in error) can occur where the significance level is too high, e.g. at $p \leq 0.100$. Therefore caution is required when interpreting results when higher levels of significance are used.
4. Statistical significance must be accompanied by an indication of effect size.

The use of statistical significance on its own has been the subject of much criticism (Thompson and Snyder, 1997), as the test statistics are driven by sample size. Small samples require higher test statistics to avoid elimination of material sample error, whereas large samples can generate statistically significant results on very weak data. To avoid Type II errors, the significance level has been set at a factor of $p \leq .10$, so as to identify weaker correlations. This is valid, as the samples used for the test statistics, although small in absolute terms, are actually large when compared to the underlying sub-populations, typically 50% -65% of the entire population. In raising the significance level, the probability of Type I errors rises, but not to an unacceptable level.

The correlation analysis work would suggest that business performance is a function of other independent variables in addition to market orientation, entrepreneurial leadership and risk aversion. Slater and Narver (1994, p52) identified that other factors may affect profitability. However, this does not in itself negate the benefits of adopting a positive market orientation per se in an English FE college.

In conclusion, the correlation matrix confirms validity testing hypothesis V_3 and therefore criterion validity has been appropriately demonstrated.

7.3.4 Conclusions on validity testing and key hypothesis of the thesis

The risk of invalidity has been systematically addressed at each stage of the research design. This approach to minimising invalidity is summarised below:

- a theoretical grounding of the research via a broad theoretical literature review based on prime sources, empirical studies and alternative theoretical approaches to the area of research,
- panel review by the researcher's supervisors and panel review by FE sector senior managers on criterion validity,

- adoption of suitable methodology to collect data on the subjects under research, together with the piloting of the instrument prior to full scale usage,
- systematic attention to performance detail of the research instrument to obtain high response rates and minimise missing data values,
- obtaining a representative sample of the population of FE colleges and the avoidance of deleting cases of data due to missing values during the analysis phase,
- ensuring reliability of scales by use of split tests, Cronbach alpha testing and correlation analysis,
- minimising Type I errors (rejecting the null hypothesis when it is in fact true) by setting rigorous levels of significance in correlation analysis,
- minimising Type II errors (accepting the null hypothesis when in fact it is false) by being aware of the implications of using high levels of significance in correlation coefficients to minimise Type I errors, and
- demonstration of content, construct and criterion validity.

In conclusion, suitable evidence that supports content, convergent, discriminant and criterion validity has been collated and demonstrated.

This evidence supports the proposition that the scales are valid, measuring the variables that they purport to measure. The thesis hypothesised that the greater a college's business orientation (the summated constructs of market orientation and entrepreneurial leadership), the superior its business performance. The core hypothesis of the thesis as set out in section 5.4 was proved during the reliability and validity testing phase of the analysis, namely that:

H₁ Colleges with higher levels of entrepreneurial leadership with lower levels of risk adversity and a more positive market orientation do have superior business performance.

However based on the previous testing alone, this relationship may not be concluded to be uniform across the English FE sector. This relationship is inevitably moderated by other factors in common with other business systems. The following sections go beyond this initial analysis to explore the nature and strength of these relationships between market orientation, entrepreneurial leadership, and

the proposed alternative independent variables with business performance. The next stage is to test the secondary hypotheses set out in section 5.4. These secondary hypotheses propose differentials in the nature of the relationship that have already been explored in the FE sector. Moving beyond initial analysis, the multivariate analysis tools of partial correlation and LISREL are used to explore the complex interactions that are implicit within the model in figure 5.1.

7.4 Differential performance within the FE sector

Having established that there is a relationship between market orientation, entrepreneurial leadership and risk aversion across the English FE sector with business performance, the sub hypotheses are now subject of testing. Section 5.4 proposed a series of hypotheses derived from the model based on the observations and propositions set out in section 1.3.

7.4.1 Differential market orientation

As proposed by Kohli and Jaworski (1990, p 14), moderators have an effect on the impact of the market orientation factor in terms of its impact on business performance. Subsequent researchers (Slater & Narver 1994; Deng & Dart 1994; Kohli et al 1993; Gray et al 1998 and Balabanis et al 1997) have explored the nature of this relationship and found differential results. These moderators include organisational size, cost differentials, specialism and environmental factors, such as competitor intensity and for education providers, social deprivation of the clients.

Relative organisational size has been proposed as being an inhibitor of the adoption of the market orientation construct, (Scherer, 1980). The first hypothesis is:

H₂ Larger colleges have a lower market orientation than smaller colleges.

The relative size (RELSIZE) of institutions has been determined by comparing cross sector total income in 1998, the latest year available and restating them as z-scores. The use of total income recognises that FE colleges have alternative sources of income, which can be substantial (circa 50%) for some institutions. As colleges market orientation is independent from each other, the independent samples are divided into three groups based on relative size of turnovers in 1998 and the T-test statistic will be used. Therefore the relative size variable has been trichotomised by number of

institutions (RELSIZE1) to measure different groups of colleges and their market orientation score (MKTORNTN, with lower scores being more positive). The smallest third of colleges are compared with the largest third and the results are set out in table 7.13:

Table 7.13: Market orientation and relative college size

RELSIZE1	n	Mean	Std Deviation	SE of Mean
1: Smallest Third	71	3.496	.707	.0084
3: Largest Third	71	3.808	.778	.0092

MKTORNTN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	140	.013 ^c	-.312	.125	-.559	-.0065
Unequal Variances	138.7	.013	-.312	.125	-.559	-.0065

Note: c = p < .05

The significance level of the test statistic of 0.013 is lower than the 0.05 confidence level, therefore the null hypothesis (H_0) that there is no significant association is rejected. Therefore the differences in means are significant and are unlikely to be Type I errors. Therefore, smaller colleges do have higher market orientation scores than their larger peers. However the difference between the two means is not large being 0.312 and the standard deviation of larger colleges of market orientation is larger than those of smaller colleges. This implies that the variability of the market orientation scores of smaller colleges is lower than larger colleges and is represented in the following histograms in figure 7.1:

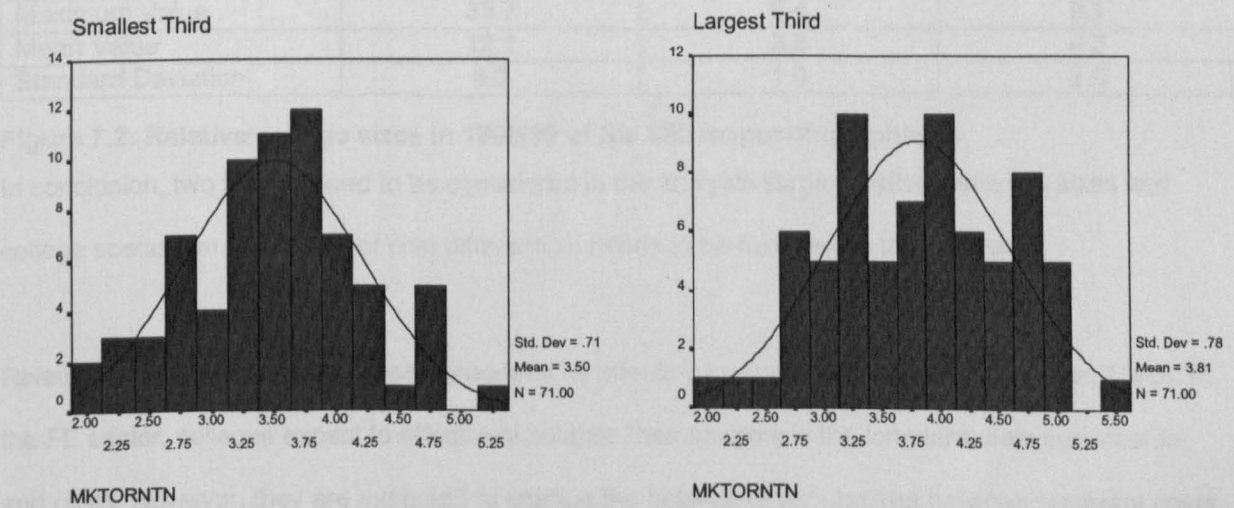
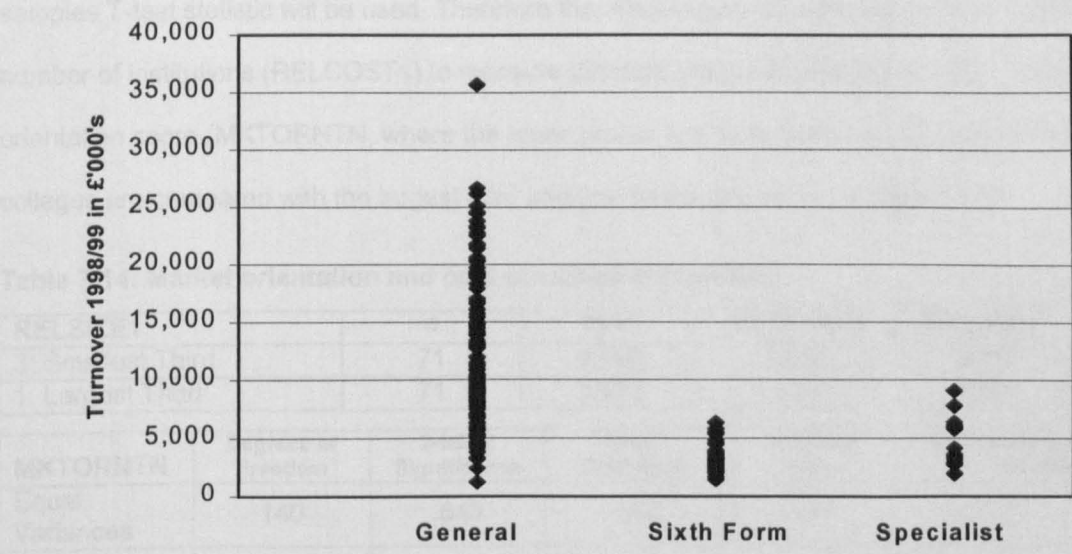


Figure 7.1: Relative distribution of market orientation for small and large colleges

In conclusion, relative size will have a moderation effect on market orientation. In the multivariate analysis investigation, this factor (RELSIZE) will need to be reviewed. The causality of this difference

could be due to the superior performance of the smallest specialist colleges' vis-à-vis their larger general FE college peers. These colleges tend to be focused on client orientation having a narrower range of product to market and sell.

The NAO (2001, p42) study on student achievement in English FE demonstrated that specialist and sixth form colleges have superior student performance than their general FE peers. Typically, general FE colleges are larger than their specialist peers, as per the analysis of 241 colleges from the sample in figure 7.2:



Turnover in 1997/98 £m	General FE Colleges	Sixth Form Colleges	Specialist Colleges
Minimum Value	1.2	1.4	1.9
Maximum Value	35.7	6.4	9.1
Mean Value	12.1	3.3	4.5
Standard Deviation	6.3	1.0	2.0

Figure 7.2: Relative college sizes in 1998/99 of the 250 responding colleges

In conclusion, two factors need to be considered in the analysis stage, relative institution sizes and college specialism. The issue of cost differentials needs to be reviewed in the next test.

Relative cost differentials have been proposed as affecting business performance, (Scherer, 1980). In the FE sector, colleges expect to effectively balance their budgets in the long term between income and costs. However, they are expected to change the balance of expenditure between recurrent costs and investment activities, especially in technology and customer service. Therefore, colleges that spend less on payroll are perceived as having a better costs structure as their management have more

resources (income net of payroll costs) to deploy on indirect costs, investment and development activities and capital investment. The second hypothesis to be considered is:

H₃ Colleges with a superior cost differential have a superior market orientation.

Therefore colleges' relative cost structures (RELCOST) are computed as the balance of income left after the deduction of payroll costs. Higher values equate to more resources being available for deployment to indirect costs, surpluses and investment activities. Z scores are computed in common. As each college's market orientation is independently established from other colleges, the independent samples T-test statistic will be used. Therefore the relative cost variable has been trichotomised by number of institutions (RELCOST1) to measure different groups of colleges and their market orientation score (MKTORNTN, where the lower scores are more positive). The smallest third of colleges are compared with the largest third and the results are set out in table 7.14:

Table 7.14: Market orientation and cost structure differentials

RELsize1	n	Mean	Std Deviation	SE of Mean
3: Smallest Third	71	3.568	.732	.0087
1: Largest Third	71	3.623	.825	.0098

MKTORNTN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	140	.643	-.006	.131	-.320	-.198
Unequal Variances	138.0	.643	-.006	.131	-.320	-.198

The test statistic fails the significance test and therefore the null hypothesis is accepted; there is no significant difference between the market orientation scores between the highest and least costs groups of colleges.

Slater & Narver (1994) have proposed that the firm's approach to the market in terms of its offering of specialism vis-à-vis generalisation has relevance. Two hypotheses are proposed:

H₄ Specialist product colleges (art & design and LBI/ agricultural colleges) will have a lower market orientation than general FE colleges and Sixth Form Colleges.

H₅ Sixth Form Colleges (homogenous client group) will have a higher market orientation than general FE colleges

The analysis of variance (ANOVA) statistic tool is used, as each college is independent from other colleges and the variances of the groups are equal. The null hypothesis of the test is that all three subgroups, on average, have an equal market orientation score. Table 7.15 sets out the results of the tests:

Table 7.15: ANOVA tests: Differential market orientation levels due to specialism

Type	n	Mean	Std Deviation	SE of Mean
1: General FE	163	3.760	.827	.0065
2: Sixth Form	65	3.472	.745	.0092
3: Specialist	22	3.513	.736	.1568
Totals	250	3.663	.806	.0051

ANOVA	Sum of Sqs.	df	Mean Square	F	Sig.
Between Groups	4.4	2	2.201	3.447	.033 ^c
Within Groups	157.7	247	.639		
Total	163.1	249			

Note: c = p < .05

The test statistic (F) is significant at the 0.05 level; therefore there are differential levels of market orientation between the groups and the null hypothesis (i.e. there are no significant differences) is rejected. However, this statistic does not indicate which groups are different to one another. The post-hoc Turkey HSD test provide this information and the results are set out in table 7.16 below:

Table 7.16: Post hoc Tests: Differential levels due to specialism

(I) College Type	(J) College Type	Mean Diff. (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1: General	1: Sixth Form	.288	.117	.037 ^c	.001	.563
	3: Specialist	.247	.182	.363	-.179	.672
2: Sixth Form	1: General	-.288	.117	.037 ^c	-.563	.001
	3: Specialist	-.004	.197	.976	-.503	.421
3: Specialist	1: General	-.247	.182	.363	-.672	.179
	2: Sixth Form	-.004	.197	.976	-.421	.503

Note: c = p < .05

In conclusion, Specialist colleges (Type 3) do not have a statistically different market orientation score than general FE or Sixth Form colleges. Therefore, H4 is not proved. In contrast, hypotheses H5 is proved and Sixth Form Colleges (Type 2) have a statistically significant higher market orientation than general FE colleges (Type 1). In summary SFC colleges are market orientated than their general FE college peers. There are no significant differentials in market orientation between specialist colleges and either general or sixth form colleges.

The National Audit Office review (2000) of college's financial health and its causation concluded that the geographical location appeared to be important determinants of college financial performance. They proposed that city and urban colleges faced more intense competition than semi-urban and rural peers did due to the proximity of alternative providers and a more mobile client population due to superior and cheaper transport infrastructures. This conclusion is summarised into the following hypothesis:

- H₆** General FE and Sixth Form colleges in city/urban areas have a higher level of market orientation and entrepreneurial leadership than those colleges operating in small-town and rural environments.

The state, via the DfEE and the FEFC has prioritised social exclusion as a priority policy area in the period 1998-2001 for new funding in FE, it is proposed that:

- H₇** General FE and Sixth Form colleges that serve clients with higher levels of social deprivation funding factors have a higher market orientation than their peers serving clients with relatively lower levels of social deprivation.

Using the FEFC classifications, the city/urban variable was compiled (CITYURBA) and designation is a dichotomy. The FEFC deprivation designation (DEPRVD) groups colleges into 4 groups. The results for geographical location (CITYURBA) is set out in table 7.17 (T-test):

Table 7.17: Market orientation, entrepreneurial leadership and competition concentration

CITYURBA	N	Mean	Std Deviation	SE of Mean
0: Rural and semi-urban	122	3.576	.800	.0072
1: City and Urban	106	3.794	.819	.0080

MKTORNTN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	226	.043 ^c	-.218	.107	-.430	-.001
Unequal Variances	219.9	.043	-.218	.107	-.430	-.001

Note: c = p < .05

CITYURBA	N	Mean	Std Deviation	SE of Mean
0: Rural and semi-urban	122	3.457	1.006	.0091
1: City and Urban	106	3.526	1.026	.0100

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	226	.609	-.0069	.135	-.335	.197
Unequal Variances	220.3	.610	-.0069	.135	-.335	.197

For market orientation (MKTORNTN), the significance level of the test statistic (0.043) is lower than the 0.05 confidence level, albeit not by much. Therefore the differences in means are significant and are unlikely to be Type I errors. However, the result is contradictory to that proposed by the literature namely that rural colleges are proposed to have lower higher market orientation than their city peers do. However the difference between the two means is not large being 0.218. This implies that the variability of the market orientation scores of rural and small town colleges is marginally lower than colleges in the larger city and urban areas. This is represented in the following histograms:

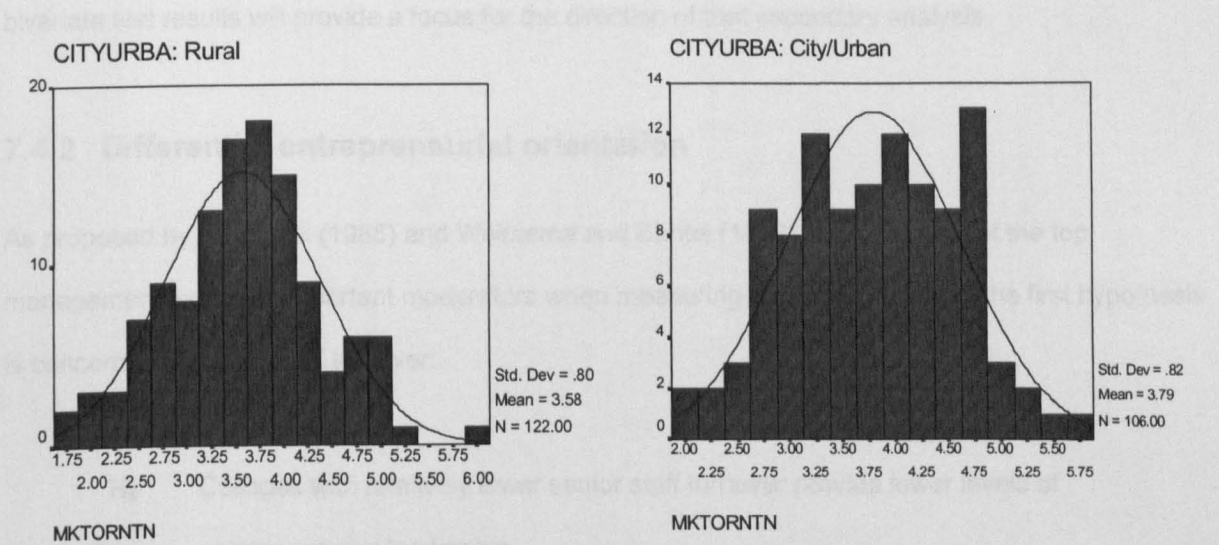


Figure 7.3: Relative distribution of market orientation for urban and non-urban colleges

For entrepreneurial leadership, the null hypothesis (H_0) is not rejected and there is no significant difference between the two groups as demonstrated by the test statistic.

For testing deprivation, the DEPRVD variable is classified into four discrete groups. The ANOVA test statistics is used and the results are summarised in table 7.18 as follows:

Table 7.18: ANOVA Tests: Market orientation and deprivation factor of clients

DEPRVD	N	Mean	Std Deviation	SE of Mean
0: None - Low	98	3.752	.805	.008
1: Medium	82	3.575	.831	.009
2: High	25	3.577	.711	.142
3: Severe	23	3.834	.881	.184
Totals	228	3.678	.814	.005

ANOVA	Sum of Sqs.	df	Mean Square	F	Sig.
Between Groups	2.2	2	.747	1.130	.383
Within Groups	148.0	224	.661		
Total	150.2	227			

In conclusion, the different deprivation groups do not result in statistically significant levels of market orientation and the null hypothesis (H_0) is not rejected and hypothesis H7 is not accepted.

In summary, college type, relative size and their geographical location appear to relate to market orientation. This analysis isolates the two variables in the test statistics but it does not measure the true scenario, whereby the various variables interact simultaneously. The more powerful multivariate tool of multiple regression will be used to measure this multiple interaction scenario and these results bivariate test results will provide a focus for the direction of that secondary analysis.

7.4.2 Differential entrepreneurial orientation

As proposed by Hambrick (1985) and Weirsema and Bantel (1992), the dynamics of the top management team are important moderators when measuring leadership affects. The first hypothesis is concerned with top team turnover:

H₈ Colleges with relatively lower senior staff turnover provide lower levels of entrepreneurial leadership.

The turnover of senior staff in the two years prior to 1 August 2000 has been split into four groups and ANOVA test statistic has been used. The results are set out in table 7.19:

Table 7.19: ANOVA tests: Entrepreneurial leadership and top team turnover

SMTCHNG	N	Mean	Std Deviation	SE of Mean
0: None	82	3.412	1.036	.115
1: Low (1% - 33%)	92	3.549	.926	.010
2: Medium (34% - 66%)	63	6.543	.875	.124
3: High (67%-100%)	13	3.611	1.187	.329
Totals	250	3.506	.989	.006

ANOVA	Sum of Sqs.	df	Mean Square	F	Sig.
Between Groups	1.1	3	.376	.9872	.766
Within Groups	242.3	246	.985		
Total	243.4	249			

The test statistic fails the significance target of 0.05 hence the null hypothesis (H_0) is not rejected. Therefore the level of top team change does not have a statistically significant impact on entrepreneurial leadership (ENTREPRN).

The second propositions is that Principals appointed prior to or during the Local Education Authority control period (i.e. prior to 1 January 1991) are more risk adverse and display lower levels of leadership. This is proposed as follows:

H9 Principals that were appointed prior to the Incorporation of colleges (pre 1992) are more risk adverse (RISKVIEW) and have lower levels of entrepreneurial leadership (ENTRPRN) than their peers appointed post incorporation.

Independent T-Tests are used as the test statistic and the results are set in table 7.20 as follows:

Table 7.20: Longevity of the Principal, entrepreneurial leadership and risk view.

STARTERA	n	Mean	Std Deviation	SE of Mean
0: With the LEA	69	3.293	1.019	.123
1: Post LEA era	181	3.586	.967	.007

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	248	.035 ^c	.295	.139	.002	.568
Unequal Variances	117.4	.040	.295	.142	.001	.576

Note: c = p < .05

STARTERA	n	Mean	Std Deviation	SE of Mean
0: With the LEA	24	3.497	.844	.172
1: Post LEA era	63	3.498	.863	.109

RISKVIEW	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	85	.997	.009	.205	-.408	.410
Unequal Variances	12.5	.997	.009	.204	-.409	.412

Note: General FE colleges do not score on the risk dimension (see table 7.6), hence only type 2 and 3 colleges are included in the test statistic.

For entrepreneurial leadership, the significance level of the test statistic (0.035) is lower than the 0.05 confidence level, albeit not by much. Therefore the differences in means are significant and are unlikely to be Type I errors; the null hypothesis (H_0) is therefore rejected. However, the result is contradictory to that proposed by the literature namely that Principals appointed in the pre FEFC era are more entrepreneurial than their more recently appointed peers. Although there is a difference, the magnitude of the variation between the two means is not large, being 0.295. For risk aversion, there is no significance between the two groups. It should be noted that no reliable scale for general FE principals was obtained hence the test statistic reports on sixth form and specialist colleges only.

As proposed by Casson (1982) and Bhide (1994), the qualities of entrepreneurship are not related to education, gender or professional background per se. Although education and experience is important, the construct measures entrepreneurship not managerial skills per se. Therefore two hypotheses are proposed, namely:

- H₁₀

Principals that come from a traditional curriculum background are no more entrepreneurial than those from other backgrounds, and
- H₁₁

Gender, age, educational background and the Principal's last job are irrelevant for the determination of entrepreneurial leadership.

From the questionnaire, biographical data was obtained from the respondents. The influence of a Principal's background was tested using the T-Test statistic. Those responders from a curriculum background were coded into one group and those from other or hybrid (curriculum and other) backgrounds were coded into another group. The results of the test are set out in table 7.21:

Table 7.21: Principal's professional background in post and entrepreneurial leadership

BACKGROUND	n	Mean	Std Deviation	SE of Mean
0: Curriculum Background	150	3.451	.989	.008
1: Other/Hybrid Background	100	3.586	.986	.009

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	248	.290	.135	.128	-.116	.387
Unequal Variances	212.7	.290	.135	.128	-.116	.387

The test statistic does no exceed the significance threshold and hence the null hypothesis (H₀) is not rejected. Therefore the background of the Principal does not have a statistically significant influence on the entrepreneurial leadership of the Principal as proposed by hypothesis H10.

To test for the personal factors relating to the principal as proposed in hypothesis H11, the T-test statistic was used for gender, education level and the ANOVA statistic was used for age group analysis. The three tables (7.22 to 7.24) are set out in below:

Table 7.22: Principal's gender and entrepreneurial leadership

GENDER	n	Mean	Std Deviation	SE of Mean
0: Female	59	3.699	1.134	.147
1: Male	191	3.446	.935	.007

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	248	.086	.253	.147	-.004	.542
Unequal Variances	83.78	.123	.253	.162	-.007	.576

The test statistic for gender does not exceed the significance level and hence the null hypothesis (H_0) is not rejected. Therefore gender does not moderate the entrepreneurial leadership characteristics of college Principals.

Table 7.23: ANOVA tests: Entrepreneurial leadership and Principals' age

AGE	N	Mean	Std Deviation	SE of Mean
36-40	6	3.885	.948	.387
41-45	23	3.636	1.209	.252
46-50	77	3.600	.884	.101
51-55	92	3.433	1.036	.108
56-65	52	3.369	.956	.132
Total	250	3.506	.989	.006

ANOVA	Sum of Sqs.	df	Mean Square	F	Sig.
Between Groups	3.1	4	.778	.893	.531
Within Groups	240.3	245	.981		
Total	243.4	249			

The test statistic fails the significance target of 0.05 and hence the null hypothesis (H_0) is not rejected. It can be concluded that age does not have a statistically significant impact on entrepreneurial leadership of Principals.

Table 7.24: Principal's highest education and entrepreneurial leadership

EDUCTN	n	Mean	Std Deviation	SE of Mean
5: First Degree	76	3.457	.840	.010
6: Higher Degree, PhD	173	3.459	.949	.007

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	247	.984	.0003	.126	-.251	.246
Unequal Variances	160.7	.983	.0003	.120	-.240	.235

The test statistic for highest education level does not exceed the significance level and hence the null hypothesis (H_0) is not rejected. Therefore the highest education level achieved does not moderate the entrepreneurial leadership of Principals.

The education dimensions is investigated further. Business qualifications have been coded from the questionnaire and include MBAs, management second degrees and qualified accountants. No statistical significance is expected in line with the previous analysis of general education levels. The test statistics are set out in table 7.25 as follows:

Table 7.25: Business education and entrepreneurial leadership

BUSQUAL		n	Mean	Std Deviation	SE of Mean	
0: No business Qualification		206	3.491	.898	.006	
1: Business Qualification		44	3.324	.995	.150	

ENTREPRN	Degrees of Freedom	2-tailed Significance	Mean Difference	Standard Error	95% confidence interval of the difference	
Equal Variances	248	.275	.166	.152	-.133	.466
Unequal Variances	58.9	.310	.166	.13	-.159	.491

The test statistic for business education does not exceed the significance level and hence the null hypothesis (H_0) is not rejected. Therefore having a business education does not moderate the entrepreneurial leadership of Principals.

In summary, the start era of the Principal relates to market orientation. The other proposed variables do not appear to have an impact on market orientation. However, this analysis isolates the variables in the test statistics but it does not measure the true scenario, whereby the various variables interact simultaneously. The more powerful multivariate tool of multiple regression will be used to measure this multiple interaction scenario. These bivariate test results will provide a focus for the direction of that secondary analysis.

The above test completes the hypothesis testing as proposed in section 5.4. The results are summarised in table 7.26 as follows:

Table 7.26: Summarised results from the hypothesis testing

Hypothesis	Conclusion	Comments
H ₁ Colleges with higher levels of entrepreneurial leadership and a more positive market orientation with lower levels of risk adversity will have superior business performance	Accepted	General acceptance at whole sector level
H ₂ Larger colleges have a lower market orientation than smaller colleges	Accepted	BUT no major variability
H ₃ Colleges with a superior cost differential have a superior market orientation	<i>Rejected</i>	No significant variation
H ₄ Specialist product colleges (art & design and agricultural colleges) will have a lower market orientation than general FE colleges and sixth form colleges due to the greater product stability in the sub population	<i>Rejected</i>	No demonstrable differences
H ₅ Sixth form colleges will have a higher market orientation than general FE colleges due to the homogenous client group	Accepted	
H ₆ General FE and sixth form colleges in city/urban areas have a higher level of market orientation and entrepreneurial leadership than those colleges operating in small-town and rural environments	<i>Rejected</i>	No demonstrable variation in market orientation scores
H ₇ General FE and sixth form colleges that serve clients in areas with higher levels of social deprivation have a higher market orientation than those colleges serving clients with relatively lower levels of social deprivation	<i>Rejected</i>	Social deprivation factors limited in scope hence test has structural limitations
H ₈ Colleges with relatively lower levels of senior staff turnover provide lower levels of entrepreneurial leadership	<i>Rejected</i>	No evidence to support hypothesis
H ₉ Principals that were appointed prior to college incorporation (pre-1992) are more risk adverse and have lower levels of entrepreneurial leadership than their peers appointed post incorporation	<i>Rejected</i>	
H ₁₀ Principals that come from a traditional curriculum background are no more entrepreneurial than those from other backgrounds	Accepted	
H ₁₁ Gender, age, educational background and the Principal's last job are not relevant for the determination of entrepreneurial leadership	Accepted	

7.5 Exploring college business performance issues

The relatively low correlation coefficients identified in Table 7.12 suggest that the proposed independent variables of this study are not the sole dominant determinants of FE college business performance. In common with other studies of non-profits (Balabanis, 1997), this study has demonstrated that it is difficult to obtain significant relationships between independent and dependent variables. This finding confirms Drucker's contention (1989, p89), where he proposed that non-profits

do not base their strategies on money (or its equivalent measures), but performance of their mission. Gerald's work (1993) on British charities identified that the value based nature of their work (outputs) and the constraining of management by law has a tendency to hinder the adoption and hence effectiveness of market orientation. These moderators are also present in public sector firms such as FE colleges. Industrial organisation and marketing strategy literature as proposed by Aaker (1988), Bain (1989) and Scherer (1980), place significant emphasis on a series of situational scenarios that may affect business performance. Although these academic writers were theorising about private firms, the same proposed scenarios are as applicable to the non profit firm.

7.5.1 Multiple regression analysis and its inappropriateness

As researched by Narver and Slater (1994, p47), a series of moderators may influence the degree of relationship between market orientation and business performance. With respect to entrepreneurial leadership and business performance, other influences on leadership style and the adoption of a market orientation will need to be reviewed, so as to avoid the artificial measurement of a halo effect of leadership being assessed and attributed to the proposed performance model for FE. In common with other researchers investigating market orientation, it is proposed that the same form of relationship between business orientation and performance will not occur for all types of colleges. Further analysis will be required to calibrate the magnitude of the effect that entrepreneurial leadership and market orientation has on business performance.

The traditional analysis tools used to explore this relationship utilise ordinary least squares (OLS) linear regression. The underpinning axiom of the analysis tool is the requirement that the dependent variable varies in a linear relationship to the independent variable, although some models acknowledge curvilinear relationships. Before conducting any linear regression analysis, scatter plots of dependent and independent variables are created to ascertain if there are any relationships. Figure 7.4 sets out scatter plots for the one of the key dependent variables as follows:

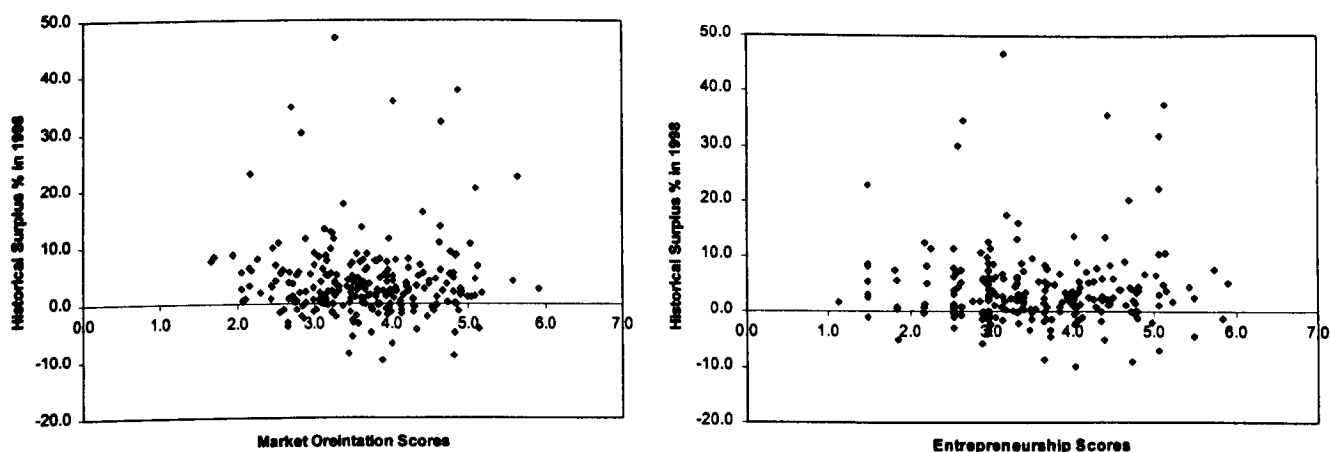


Figure 7.4: Scatter diagram of market orientation, entrepreneurship and historical surplus

The exploratory scatter diagram demonstrates that there is a poor linear relationship between market orientation and entrepreneurial leadership with the dependent variables. Therefore we can conclude that there is either no relationship or that there is an indirect causal relationship which is measured by intervening variables. Therefore the linear regression analysis tool can not be used, as there is no direct linear causal relationship to be analysed.

The findings of Narver and Slater (1994) and other academics indicate that there is a relationship between business performance and market orientation. The inability to detect a direct relationship in English FE is not unsurprising, as the system being described is a complex social science system with difficult to describe relationships between inputs and outputs. They are not easily reduced to simple input-output relationships suitable for analysis by linear regression. Production functions in education have been extensively researched in the UK and the USA. Hanushek's (1986 and 1989) comprehensive review of quantitative studies of education production functions in the USA revealed that there is a general failure to systematically link student outcomes with various input measures, e.g. pupil expenditures, teacher education, salary costs etc. In conclusion, the FE college business system represented by the box in figure 5.1 needs to be explored further and the complexity of mapping the relationship between inputs and outputs in the not-for profit sector needs to be addressed. The two issues of defining a measurable output and then relating it to causal variables are dealt with in the next two sections.

7.5.2 Output variables and Data Envelopment Analysis

Linear regression models are typically based on the analysis of one dependent variable at a time. This is a suitable assumption for firms that can express their outputs in one key dependent variable, such as profits, cash flow or share price. Typically such firms are commercial in nature and are operated to create profit and/or shareholder value. However this assumption of dominant output variable is not true with not for profit firms as proposed by Kotler (2000) from a marketing perspective. Likewise, from an entrepreneurship dimension, Casson (1992) and Drucker (1986) argue that determining the relevant goals and hence output of the not for profit firm is difficult and prone to measurement problems. Linear regression techniques attempt to develop a best-fit line to which data can be 'fitted to', effectively creating an average firm model of performance. The computed regression line may actually have few of the observed values lying upon it, as it is by definition a 'best-fit' line. The technique of computing a regression line is sensitive to statistical outliers and quantitative specialists have developed techniques to eliminate these outlying observations so as to improve the fit of the calculated regression line. As Lewin (1992, p15) comments, there are alternative explanations for these data points which should not be described away as simply being inconvenient. This thesis has a sample that represents 60% of the absolute population of colleges and hence a regression line that has few of the observations lying upon it, is academically a weak descriptive model of English FE college performance. The concept of 'best-fit' regression line is therefore subject to challenge when the line has few observations upon it.

The development of a production function in education has occupied much effort by researchers on both sides of the Atlantic. Lovell et al. (1993, p331) commented that many studies are fundamentally flawed as the defined production function fails to adequately accommodate the multidimensional nature of the educational process, a proposition advanced by many qualitative researchers. Lovell et al's (1993) secondary school research works in the USA used Data Envelopment Analysis to develop a model that acknowledges the complex relationship between inputs and outputs. Drawing upon the microeconomic theoretical construct of efficiency frontiers, the observed data can be used to describe the input-output relationship in terms of relative efficiency compared to the family of most efficient institutions. This line (which is not necessarily straight) is described as a frontier of the most efficient

education institutions of converting inputs (staffing, non-pay and capital resources) into outputs (academic achievements, retention of students etc). Data Envelopment Analysis (DEA) methodology was initially developed as a response to the call for improvement in the evaluation and controlling of public sector activities (Charnes et al, 1993, p16). Seiford and Thrall (1990, p8) observe that DEA is particularly adept at uncovering relationships that remain hidden from traditional (linear) regression analysis. Stolf (1990, p104) proposed that DEA's advantage over linear regression is that DEA uses the weaker assumption that the relationship between the production inputs and outputs is merely monotonic and concave. In addition, you do not need to assume a functional form of the relationship. The corollary from this is that DEA precludes any statistical inference of significance. DEA analysis therefore concentrates on maximising each individual observation, in contrast to the fitting of observations to a single (straight) regression line.

In the English further education sector, it can be argued that the key driver for performance is to maximise outputs for a given set of inputs, in common with other public sector firms. This objective was encapsulated in the National Audit Office (2001) study of improving student performance in English FE colleges on the birth of the new Learning and Skills Council in March 2001. For this thesis, DEA will be used to map a coefficient of relative efficiency for each sampled college vis-à-vis the most efficient college(s) in the sample, which in turn represents 60% of the English FE population of colleges. These coefficients will then be used as a proxy for outputs in the LISREL causal relationship model. The LISREL causal model is explored in the next section.

The methodology for using DEA is that proposed by Charnes et al (1993, p426-427). One of the key issues that need to be resolved for the successful use of DEA is the determination of outputs that should be assessed. The outputs model is derived from a review of the FEFC (1997) Inspection framework, which provides the guide for defining college non-financial outputs. The NAO (2001) investigation of how English FE colleges can improve student performance also provides a basis for determining the outputs. In summary, the DEA model is an output maximisation model with constant returns to scale. The outputs determined from the review of FEFC circular 97/13 and the NAO study and the inputs deployed to obtain those outputs is summarised in table 7.27:

Table 7.27: FE college performance - inputs and outputs for DEA

Outputs	Measurement Units	Sign
Student Achievement Rates	%	Higher = better
Student Retention Rates - Full Time	%	Higher = better
Student Retention Rates - Part Time	%	Higher = better
Curriculum Inspection Grade	Score 1.0 - 5.0	Lower = better
Turnover as proxy for Learner Volumes	£000	Higher = more output

Inputs	Measurement Units	Sign
Payroll Costs (excluding restructure costs)	£'000	Higher = more inputs
Non Pay Costs (includes depreciation charge for use of capital resources)	£'000	Higher = more inputs

The curriculum grade is constructed from a range of FEFC inspector factors, including student retention, achievement and classroom teaching observations. Capital inputs are typically included as DEA input. In the FE sector leasing and renting of capital facilities is regularly used. To overcome distortions of a college that leases instead of owns a building, the capital charge as represented by the annual depreciation charge is used. This proxy is already included in the non-pay costs input data.

The Warwick University DEA software (version 1.02) was used to calculate the relative efficiency of each college vis-à-vis the efficiency frontier. The college observations were analysed as one population, although only 219 out of 250 colleges had complete data. Colleges with missing data were excluded from the analysis, as the DEA tool can not compensate for missing values, unlike the scale building methodology used in SPSS. A best-fit curve can be calculated for the data using polynomial algebra, as initially proposed by Grätzer (1968). The theory underpinning this methodology goes beyond the scope of this thesis and is covered by algebra mathematics texts (Lausch and Nöbauer, 1973). Therefore the method is left to the mathematical software package, Curve Fitter Version 1.3 to address. A fourth level polynomial curve is fitted to the data, with a standard error of 6.48 and a covariance (r) of 0.75. This is a very good fit to the data and a review of residuals indicates that the fit curve is not unreasonable in terms of actual DEA scores. This efficiency frontier of inputs to outputs and best fit curve is expressed in figure 7.5 (note the outlier general FE college with a turnover of £35.7m has been excluded to avoid distorting the polynomial best fit curve):

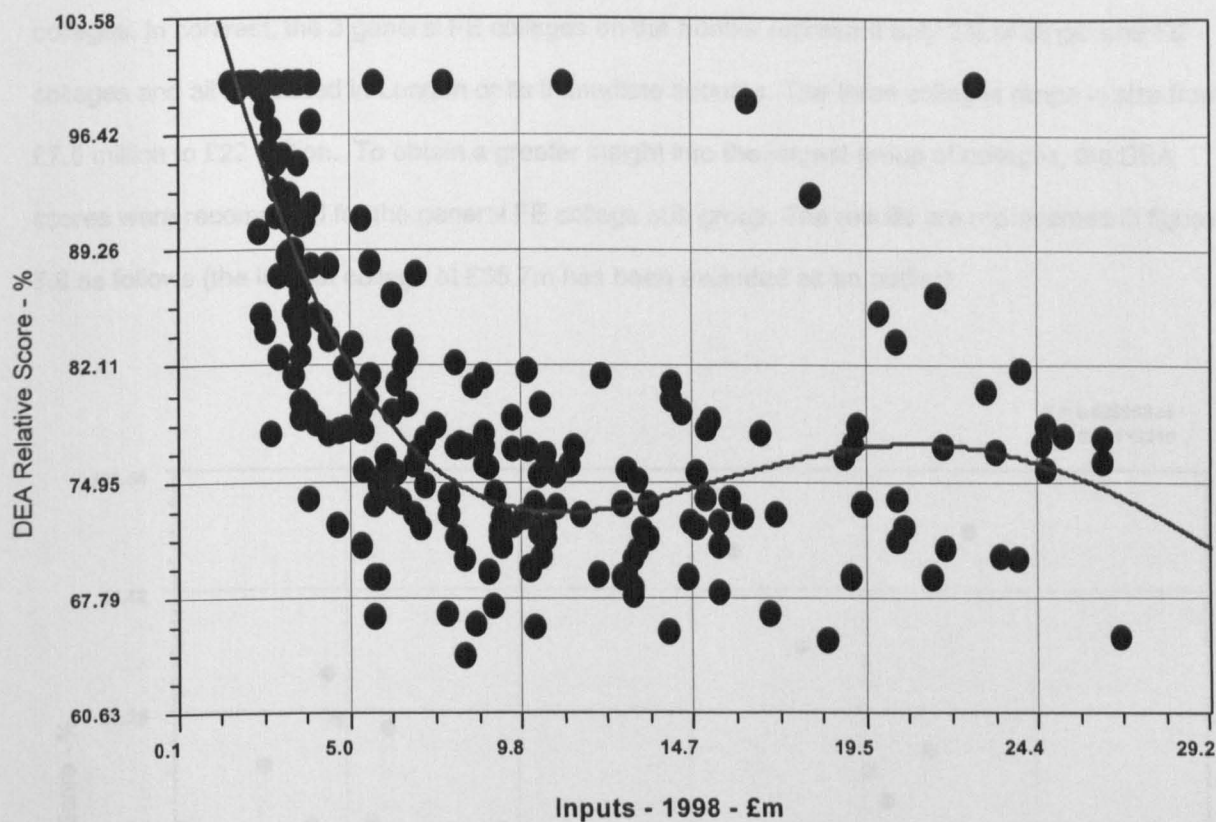


Figure 7.5: DEA scores and best-fit curve for English FE/Sixth Form/Specialist Colleges in sample (n=219)

Small colleges, typically sixth form and specialist institutions dominate the frontier. From the work of other studies (NAO, 2001) this position is not unexpected. The relative frequencies of DEA scores are distributed differently across the three subgroups as follows:

Table 7.28: DEA and turnover descriptive statistics by sub-group of colleges

DEA Scores %	General FE Colleges	Sixth Form Colleges	Specialist Colleges
Minimum Value	64.2	74.8	69.2
Maximum Value	100.0	100	100
Mean Value	75.8	91.4	83.1
Standard Deviation	6.7	7.0	9.0

Turnover in 1997/98 £m	General FE Colleges	Sixth Form Colleges	Specialist Colleges
Minimum Value	1.2	1.4	1.9
Maximum Value	35.7	6.4	9.1
Mean Value	12.1	3.3	4.5
Standard Deviation	6.3	1.0	2.0

The above statistics indicate that the specialist client (sixth form) and specialist subject colleges achieve greater output efficiency scores for their given input vis-à-vis general FE colleges. The efficiency frontier (where DEA score = 100%) is dominated by these two sub groups of colleges. The average size of these 15 colleges is £2.7 million and comprises 15% of the total sub population of

colleges. In contrast, the 3 general FE colleges on the frontier represent only 2% of all general FE colleges and all are based in London or its immediate suburbs. The three colleges range in size from £7.5 million to £22 million. To obtain a greater insight into the largest group of colleges, the DEA scores were recomputed for the general FE college sub group. The results are represented in figure 7.6 as follows (the largest college at £35.7m has been excluded as an outlier):

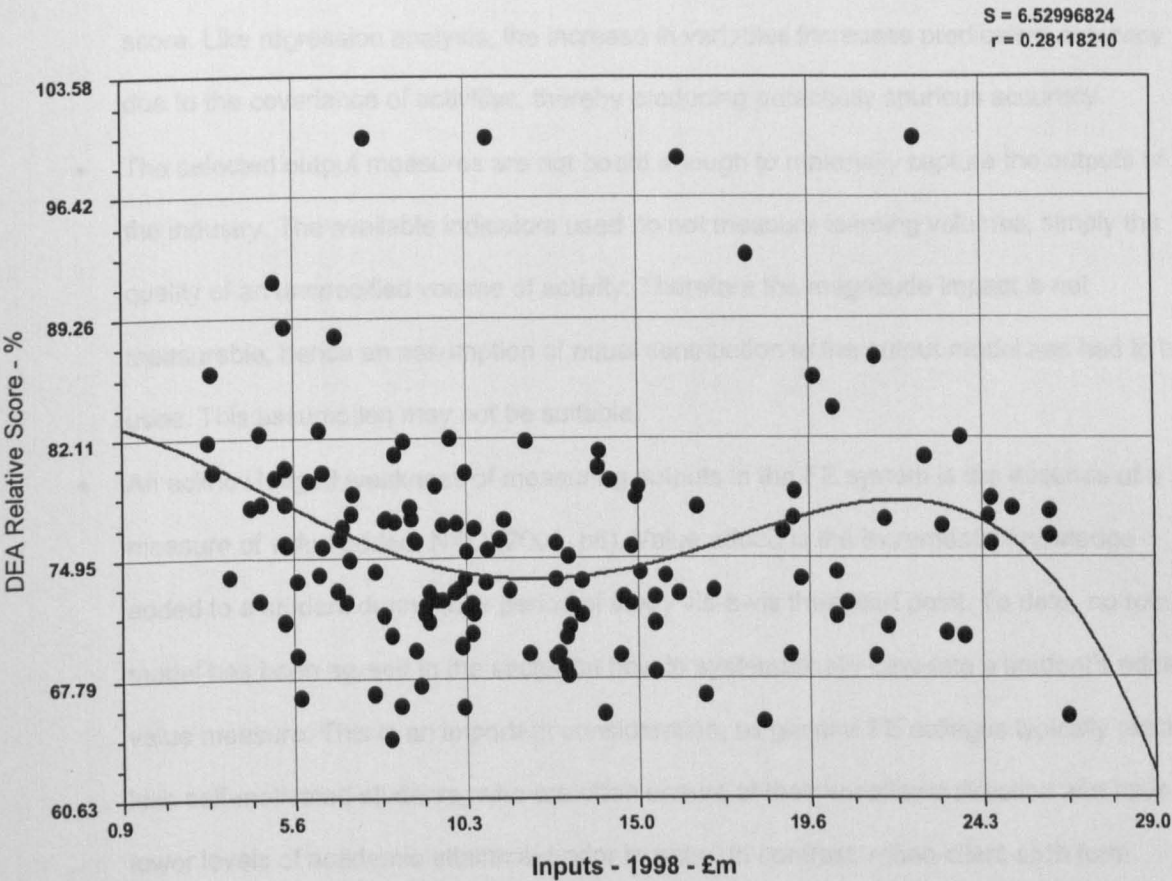


Figure 7.6: Efficiency frontier for general FE colleges in sample (n=142)

The best-fit curves for the whole FE population of colleges demonstrates that DEA efficiency effectively drops significantly as institution size increases from circa £3m to £10m although the r coefficient is low at 0.281. After this volume of turnover, DEA scores improve by circa 5% to a new plateau of approximately 80% of the frontier score. Larger colleges beyond the £20m size then have (marginal) diminishing DEA scores. The managerial implication is therefore to keep the college small (in terms of turnover) so as to maximise the DEA score, however beyond approximately £6m turnover, the relative size of the college is of marginal relevance. In stating this, there are a number of caveats in the use of DEA. The analysis for the sub group of general FE colleges, indicates that DEA scores do

not vary significantly with size of the college. There is a small (5%) drop in DEA scores between £5m and £10m turnover, but effectively it is level thereafter.

There are weaknesses in the DEA approach to efficiency measurement In general and in this study in particular, namely:

- The more output variables used to describe the firms' output, the less reliable is the DEA score. Like regression analysis, the increase in variables increases predicative accuracy due to the covariance of activities, thereby producing potentially spurious accuracy.
- The selected output measures are not board enough to materially capture the outputs of the industry. The available indicators used do not measure learning volumes, simply the quality of an unspecified volume of activity. Therefore the magnitude impact is not measurable, hence an assumption of equal contribution to the output model has had to be used. This assumption may not be suitable.
- An acknowledged weakness of measuring outputs in the FE system is the absence of a measure of value added, NAO (2001, p6). Value added is the incremental knowledge added to a student during their period of study vis-à-vis their start point. To date, no robust model has been agreed in the sector on how to systematically calculate a student's added value measure. This is an important consideration, as general FE colleges typically teach less self-motivated students, who are often unsure of their vocational direction and have lower levels of academic attainment prior to entry. In contrast, mono-client sixth form colleges are delivering a simplified yet rigorous product (A levels) to a highly motivated client group who are seeking university progression. Likewise, specialist colleges screen students on entry for suitability to their specialist product orientation.
- There is a cause and effect delay in education as many courses are competed over two years especially in sixth form work. Hence the outputs in 1998 are a combination of inputs in 1997 and 1998. This has not been moderated for, as it goes beyond the scope of the available data.
- Spot measures of DEA productivity may not be representative of ongoing efficiency of the college. A linear study would be required to ensure that computed DEA scores were reliable over time. A retrospective study would not produce useful comparisons per se, as

the 1997/8 year saw a change in government policy (with the new Labour government of May 1997) and funding volumes. The 1997/98 year marks the start of a new period of performance.

Despite these weaknesses, the results of the DEA analysis are useful for global analysis of the sector. However, due to the above critique, further use of the DEA technique would require more detailed review and adjustment. This review goes beyond the requirements of this thesis vis-a-vis the research question raised in chapter 1 and represents the first sector wide use of DEA analysis in English FE sector. In conclusion, the definition of an efficiency frontier for an homogenous FE sector of 420 colleges is conceptually weak. The sub-sectors start from different groups of inputs (students) and apply their resources (financial inputs) towards different goals. Therefore the LISREL model will need to acknowledge that institutional type will have an impact on the correlation coefficient between curriculum grades and the DEA efficiency score, and in turn, the r^2 factor will be low for this component of the model.

7.5.3 Causal relationship models and LISREL

Linear structural equation technique (LISREL) is a statistical analysis methodology that allows hypothetical constructs to be measured from observed data. The technique involves the development of a causal path framework as originally proposed by Wright (1934). LISREL techniques describe the measurement properties of the observed variables in terms of reliabilities and validities and have been championed by Jöreskog and Sörbom (1982). The LISREL method estimates the unknown coefficients of a set of linear structural equations and is particularly suitable for measuring interdependency of variables. LISREL works by analysing the causal model that has been derived from a theoretical review of the order of relationships and specifying the various pathways of the model. The fundamental difference between linear regression and linear structural equations is that in the latter, the dependent variables can become independent variables for other dependent variables and the whole series of equations are resolved as one whole model. The LISREL model does not assume that the independent variables have exact deterministic properties for the dependent variables (Jöreskog and Sörbom, 1993, p112).

The aggregation of all the omitted variables in the model is represented by a set of stochastic error terms. There is an error term for each variable that is independent in one of the structural equations that define the model. The fundamental assumption underpinning LISREL is that these error terms are independently correlated from each other. As proposed by Jöreskog and Sörbom (1993), a causal model is developed from the theory and the LISREL model elaborates the College Performance processes' box of figure 5.1. The key factors that need to be incorporated into the second-generation model are developed from the t-tests and ANOVA results of the secondary hypotheses and further reviews of the literature. These factors are summarised below:

- Relative size of an institution appears to moderate market orientation (hypothesis H₂). The DEA frontier analysis indicates that smaller colleges achieve closer fit to the frontier.
- Sixth Form college specialism affects market orientation (hypothesis H₅).
- Deprivation factors are not a significant determinant on market orientation. However, educational performance literature confirms that deprivation has an impact on student achievement (Kennedy, 1997). Therefore client deprivation is theorised to have a direct affect on curriculum grades, but not market orientation.
- Financial stability as proposed by Casson (1992) and Drucker (1985) is an important precursor to business performance. Non-profit firms are at their most effective when they are operating from a stable financial platform. Resource constraints may limit a not for profit firm in becoming market orientated and then from using its market orientation to improve its performance (Kumar et al, 1998, p227). The NAO's study of student achievement in FE (2001, p43) proposed that a college's financial instability has an adverse impact on student achievement, although the test statistics were low and only provided a r^2 of 0.31. The corollary of this finding is that a college with poor financial health has to compromise on its investment decisions in the teaching and learning process.

The revised model therefore has a number of important changes vis-à-vis the first proposed model represented in figure 5.1, namely:

1. Entrepreneurial leadership is now a causal variable for market orientation. In the original model represented in figure 5.1, the two variables were assumed to be

independent of one another. As proposed by Slater and Casson (1995, p63) entrepreneurial leadership and support systems must compliment the market orientation process.

2. Curriculum, as defined by the teaching and learning processes of the college is the key output of the independent variables. In turn, the curriculum variable is the principal driver of the DEA efficiency ratio, alongside client deprivation factors, institution type and financial stability of the operating environment.
3. Fiscal stability now becomes an independent variable, measuring the financial stability of the environment in which the individual college operates. Fiscal instability is now hypothesized to have a causal relationship on curriculum and in turn, the relative efficiency of the institution (NAO, 2001, p43).

Each pathway must be clearly articulated in terms of dependent and independent relationships as proposed by Costner (1969). The revised causal model is represented in figure 7.7:

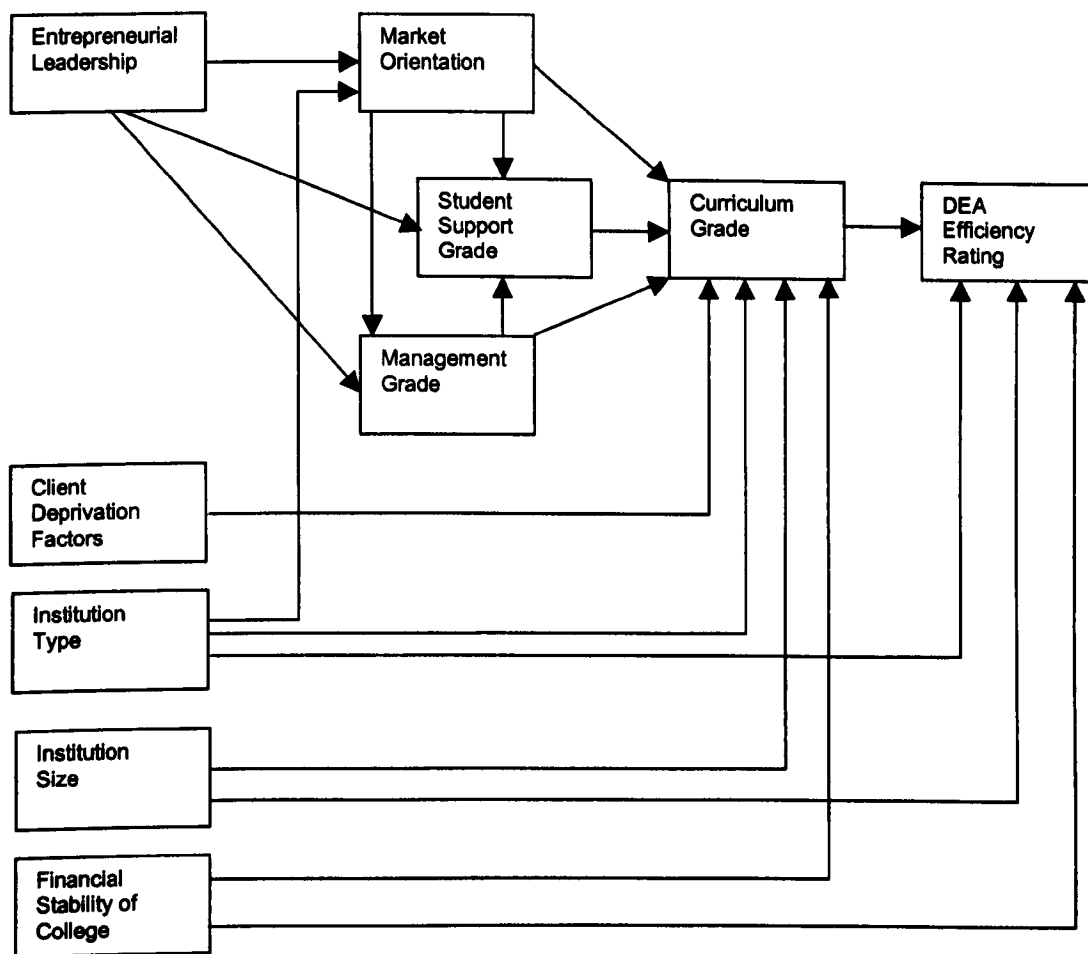


Figure 7.7: Proposed initial path diagram model of causal relationships in FE colleges

The LISREL 8.0 software package was used to model the structural equations proposed in figure 7.7. The college observations were analysed as one population, although only 241 out of 250 colleges had complete data to the curriculum grade stage, and only 219 colleges had DEA coefficients. The colleges with missing data were excluded from the analysis, as the LISREL tool can not compensate for missing values, unlike the scale building methodology used in SPSS. The LISREL modelling evaluates the effectiveness of the proposed model to explain the underlying variation of the dependent variables (Bollen, 1989, p179-184). The model is proposed to hold true prior to testing, but its appropriateness may not be fully specified. The approach adopted is to test the original model proposed in figure 7.7 and re-specify it to improve the fit. The data-driven changes are reviewed against the theory developed in the literature review prior to acceptance of any changes. The final model must therefore have good statistical fit, but critically must also be have a meaningful explanation. The evaluation of the model is not just a statistical matter. The model must be judged to fit with the qualitative interpretation of the system. In this respect, the first model in figure 7.7 has

drawn upon the literature review and the first round of secondary hypothesis testing. The model is evaluated in three ways, namely:

- Examination of the solution in terms of r^2 , a measure of the tightness of fit of the linear regression equation. The lower the r^2 , the lower the fit and hence the less credible the model.
- Examination of the measure of overall fit of the model based on the test statistic chi-square, together with the examination of residuals, standardised residuals and modification indices.

The following relationships are expected:

- Entrepreneurial leadership and market orientation should have a positive affect on dependent variables.
- Relative size will vary inversely with the dependent variables, i.e. the larger the college, the lower the impact on the dependent variables. It is proposed from other studies that smaller firms can communicate client and staff orientation issues more easily than their larger peers.
- Specialist and sixth form colleges will have a more positive impact on the dependant variables than their general FE college peers.
- Negative financial reserves will have an adverse impact on dependent variables due to the distractive requirement of managing college solvency in preference to concentrating on managing the non-financial outcomes of the college.

The next section reports the evaluation of the causal model as represented in figure 7.7.

7.5.4 LISREL model evaluation

The LISREL modelling could not compute a model of good fit to embrace the structural causal relationships that led from the curriculum grade to the DEA efficiency factor variable. This final step of causal relationships was deleted by adjusting the model in figure 7.7 to terminate at the curriculum grade dependent variable. The LISREL model proposed a number of modification indices, which were considered for theoretical robustness. These included causal links from the relative size variable to market orientation, student support grades and curriculum grade. This is a logical link as Narver and Slater (1994) proposed that a firm's size might moderate performance. Post changes, the final model produced a statistically significant causal relationship model to be developed. The final adopted model is represented by the LISREL equations in figure 7.8.

Dependent Variable	Causal Factors
Market Orientation	= <ul style="list-style-type: none"> • Entrepreneurial Leadership + <ul style="list-style-type: none"> • Institution Type + • Relative Size of College + • Error Factor
Curriculum Grade	= <ul style="list-style-type: none"> • Entrepreneurial Leadership + • Institution Type + • Relative Size of College + • Student Support + <ul style="list-style-type: none"> • Deprivation Factor + • Management Grade + • Balance Sheet Reserves + • Error Factor
Management Grade	= <ul style="list-style-type: none"> • Entrepreneurial Leadership + • Institution Type + • Relative Size of College + • Error Factor
Student Support Grade	= <ul style="list-style-type: none"> • Entrepreneurial Leadership + • Relative Size of College + • Management Grade + <ul style="list-style-type: none"> • Market Orientation + • Error Factor

Figure 7.8: LISREL equations of final model

The first evaluation criterion is the magnitude of r^2 . The r^2 indices are high for social science models, with 51% of the variation of the curriculum grade being determined by the variation of the independent variables. The result is comparable with Narver and Slater's 1994 study, which obtained an R^2 value of 34%. The structural relationships are summarised in table 7.29.

Table 7.29: Structural relationships in final LISREL model (post deletion of the DEA variable)

Dependent Variable	Constant	Market Orientation	Entrepreneurial Leadership	Student Support Grade	Management Grade	Deprivation of Clients	College Type	Relative Size of College	Reserves of College	Error Value (Other Factors)	R ² Value
Curriculum	+1.44 (0.13)	+0.13 (0.037)	+0.083 (0.033)	+0.17 (0.037)	+0.21 (0.031)	+0.08 (0.023)	+0.092 (0.036)	-0.035 (0.023)	-0.003 (0.001)	+0.099 (0.009)	51%
Market Orientation	+1.93 (0.15)		+0.64 (0.039)				-.036 (0.006)	-0.004 (0.01)		+0.31 (0.029)	58%
Student Support	+0.73 (0.18)	+0.14 (0.06)	Not Significant		+0.42 (0.046)			+0.048 (0.01)		+0.031 (0.029)	36%
Management	+1.83 (0.24)	Not Significant	+0.15 (0.071)					+0.15 (0.071)	-0.014 (0.003)	+0.58 (0.053)	14%

Note: All t values indicate that the results are significant, with the exception of two factors as annotated in the table. Standardised errors are in brackets.

The second evaluation criterion is the overall measures of model fit. The initial model in figure 7.8 obtained high r^2 indices, but had very poor fit indices. The final model with the extra causal links from college relative size variable to the core independent/dependant variables of curriculum, student support and management, produced good measures of fit as follows:

- The Chi-square $\chi^2_{(241)}$ measure of fit statistic was 8.91, with 7 degrees of freedom and a p value of 0.26. This indicates that the fit is good from a statistical perspective.
- Steiger (1990) proposed that the Root Mean Square Error of Approximation should be used to measure goodness of fit. As proposed by Browne and Cudeck (1993), the RMSEA statistic of up to 0.05 indicated a close fit and those values up to 0.08 represent reasonable errors of approximation. A 90 percent confidence interval is also reviewed. Specifically the final model has a RMSEA value of 0.034 and a 90 percent confidence interval of 0.00 to 0.091. RMSEA spot value is below the 0.05 limit, although the upper 90 percent value is just beyond the 0.08 level. However, this is not a fundamental problem, as the P value for the closeness of fit of the RMSEA is 0.61, a relatively high value. In summary the statistic indicates that the model is a good fit.
- The Goodness of Fit Index and the Adjusted Goodness of Fit Index are 0.99 and 0.95 respectively. Against a possible 1.00, the indexes indicate that the model is a good fit.

In conclusion, the model is based on a sample of 241 colleges (60% of the total population) and the global model fits well. It can be said that the model represents a reasonably close approximation to the population.

7.6 Conclusions on data analysis

This chapter has concentrated on the analysis and provided a developmental interpretation of the data against the research model proposed in chapter 5. The survey produced an excellent response rate, representing some 60% of the entire population. However, two limitations of this data set are its self-reported nature in terms of Principals' perceptions of their organisations and the cross sectional analysis being about a level in a point in time, rather than a longitudinal study about changes in level over time. None the less, the robustness of the sample size has allowed the study to move beyond ANOVA and t tests and explore causal relationships using sophisticated multivariate techniques. The key problem with the initial proposed model as represented in figure 5.1 has been identifying the link between the independent variables and financial performance. This is was not unexpected due to the public sector nature of FE colleges as proposed by Drucker (1995).

The DEA analysis was used to explore this financial dependent variable further, producing a relative ranking of college efficiencies. The index measured the relationship between input and outputs. However, the use of this index rating failed to produce reliable results. Once financial performance was restated from being a dependent variable to an independent variable, in common with the NAO study, (2001) the reliability of the causal model dramatically improved. The revised relationship model was restated in figure 7.1 and the results are summarised in table 7.28.

The chapter has concentrated heavily upon a quantitative approach, using advanced statistics to explore causal relationships. Given the magnitude of the sample vis-à-vis the total population, this emphasis on using advanced statistics is appropriate. However, the study is an exploratory model, not a predictive model of FE college business performance. The next chapter therefore concentrates on the managerial issues arising from this chapter and reconciles the typically qualitative literature review with the quantitative results derived in this chapter.

8 Interpretation of the results: Moving beyond quantitative analysis

8.1 Introduction

This chapter reviews and reflects upon the quantitative results of chapter 2 and in particular the implications of the r^2 coefficient generated from the LISREL analysis. The chapter proceeds with a discussion on alternative explanations of variation of business performance when the results move from sector to individual college led. This is explored by way of qualitative interviews, going beyond the scope of the quantitative instrument. The chapter deals with the confirmatory qualitative research methodology and results. The qualitative technique selected is that of 'elite interviewing', with three college principals being selected from a sampling matrix.

8.2 Key findings from the quantitative research

The market orientation and entrepreneurial constructs developed through the quantitative study have potential for both managerial and academic application. Although specifically designed for use in the further education sector, however it has application to other parts of the UK public sector and laterally to the not for profit voluntary sector. The findings support the propositions that:

1. A valid instrument for measuring the market orientation and entrepreneurial leadership of English FE colleges and their Principals has been developed, and
2. That there is a positive effect on business performance (as defined by curriculum grades) from adopting a positive market orientation and applying entrepreneurial leadership in the English FE environment.

The results of this study extend the findings of Narver and Slater (1990), Deng and Dart (1994) and Gray et al (1998) of a positive relationship between market orientation and performance. The results of this study support the theoretical propositions of Casson (1982, p35) and Drucker (1985, p167-171) that entrepreneurial leadership and calculated risk taking improves (public sector) business performance. In contrast to other studies such as those of Narver and Slater (1994) and Jaworski and Kohli (1992), this study has found support for the proposition that the competitive environment has an effect on the strength and nature of the market orientation, together with the entrepreneurial leadership and business performance relationship. In particular, deprivation factors, physical location, relative

institutional size and longevity of the top management team have varying influences on the strength of the proposed constructs. The LISREL modelling generates a r^2 coefficient of 51% for the curriculum grade, a relatively high coefficient for social science analysis. However the LISREL model was unable to compute a reliable causal model between the proposed independent variables and the DEA efficiency scores. This is not unsurprising, as the scatter plot of the two variables in figure 8.1 indicates no obvious relationships.

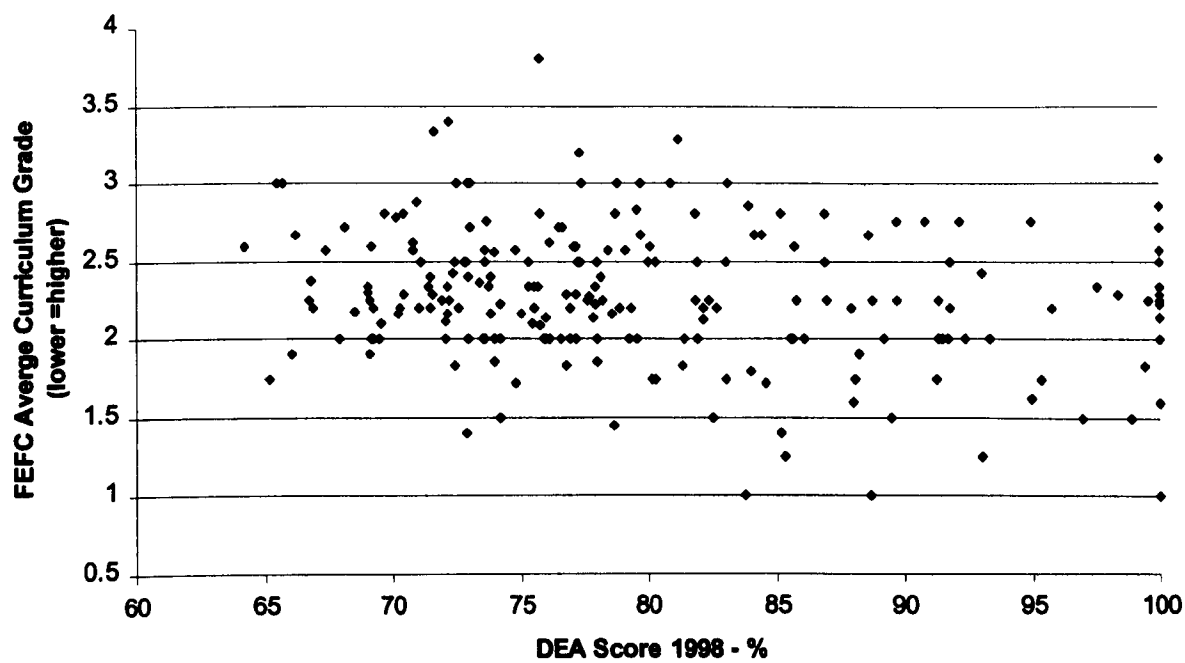


Figure 8.1: Scatter plot of DEA score and average curriculum grade from the last inspection (n=241)

The quantitative data modelling therefore presents the following two conclusions on FE performance:

1. There is a relationship between the independent variables market orientation and entrepreneurship and the dependent variable, curriculum grade.
2. There is no obvious relationship between business efficiency in terms of cost effective use of resources (as defined by the DEA model) and the curriculum grade variable.

The summarised quantitative findings are set out in the following sections.

8.2.1 The FE sector wide findings

The response rate from the FE sector was very good (59.5%) and is comparable with other similar studies. The key findings are summarised as follows:

- The data analysis supports the prime hypothesis of the thesis that the adoption of market orientation and entrepreneurial leadership has a positive impact on business performance of English FE colleges, as defined by the curriculum grade variable (O₄ in figure 5.1).
- The analysis of the secondary hypothesis supports the proposition that large colleges have lower levels of market orientation.
- In contrast to the proposed hypothesis, the relative cost structures and the deprivation factors associated with their students have little significant differential impact on the quality of educational performance. (There are differences in absolute student achievement levels by student deprivation factors, however the FEFC curriculum grades reflect a range of outputs, not simply the pass rates of students who sit the examinations).
- Contrary to the propositions developed from the literature review, rural and semi-urban colleges display higher levels of market orientation than city/urban colleges, however the college geographical location has no differential effect on the college's entrepreneurial leadership.
- The FE sector has differential performance between its sub-populations, with sixth form colleges having superior market orientation scores vis-à-vis general FE colleges. The market orientation scores between specialist colleges and either of the other two sub groups were not statistically significant.
- Entrepreneurial leadership scores of colleges are positively affected by the longevity of the principal in post, in contrast to the findings of Hambrick (1995). The box plot diagram in figure 8.2, represents these relationships (note that higher scores equal higher orientation. The data set has been reversed coded for this figure).

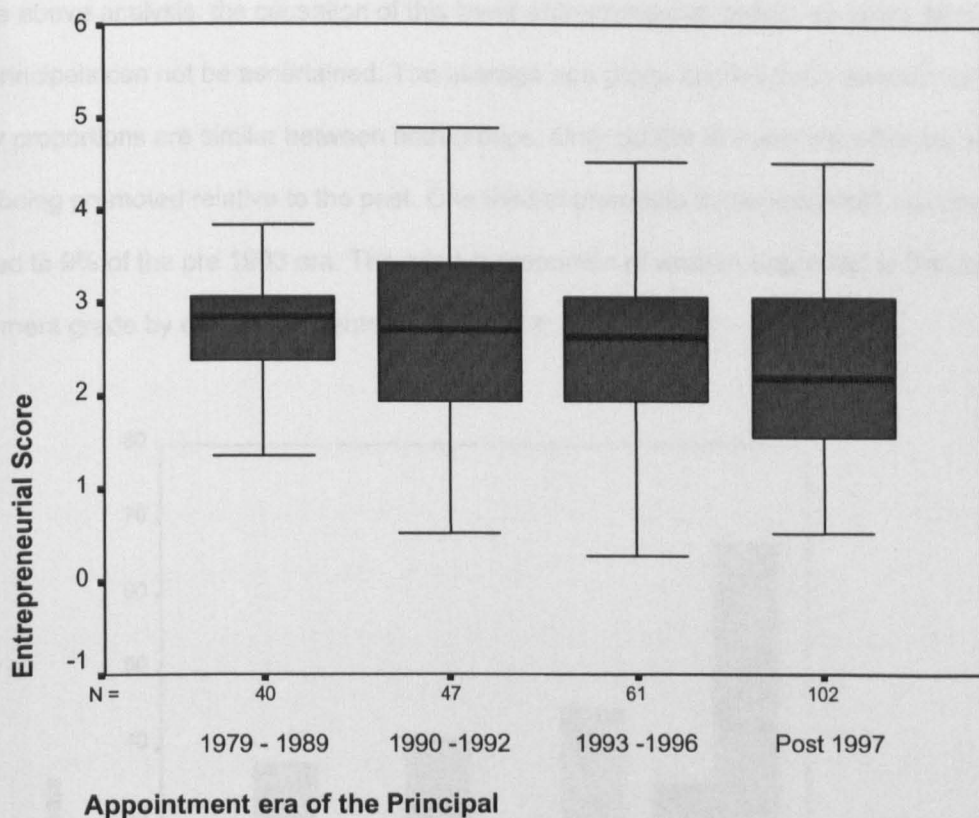


Figure 8.2: Principal's tenure and entrepreneurial leadership (n=250)

The four eras represent the watersheds between organisational paradigms and are taken from figure 1.1. The pre 1990 Principals were appointed by the LEA before the concept of college incorporation had been proposed. The 1990-1992 era represents the time period that the LEA had legal control, but operational direction had to be delegated to the college in preparation for full independence in April 1993. The 1993-1996 era represents the period of unfettered and (relatively) unregulated competition. The post-1997 period represents the tightening of central control from an indirect model of control to an interventionist model by April 2001. ANOVA test statistics indicate that there is a significant difference between the latest group of Principals (post 1997) and the two earliest groups, the 1979 to 1992 groups. When the Principals are analysed by type of college, the statistics suggest that the same relationship holds true for general FE colleges. Sixth form college principals in contrast show no significant variation in entrepreneurial leadership scores irrespective of their appointment date. The small number of specialist colleges make the use of significance level statistics misleading as the four sub classes have an average of four individuals in them.

From the above analysis, the causation of this lower entrepreneurial leadership score for the more recent principals can not be ascertained. The average age group last job held, educational level and rural/city proportions are similar between both groups. Only gender is materially different, with more women being promoted relative to the past. One third of principals in the post 1997 era are women, compared to 9% of the pre 1993 era. The relative proportion of women appointed to the top management grade by era is represented in figure 8.3:

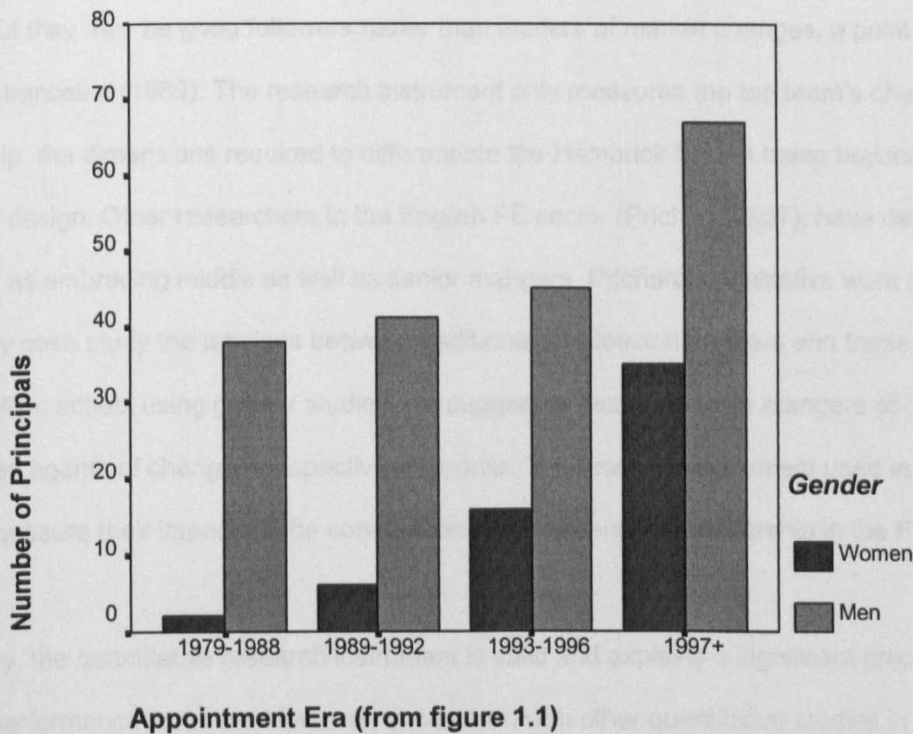


Figure 8.3: Gender of Principals by appointment era

However, table 7.22 demonstrates that although women led colleges have a lower entrepreneurial leadership score, this is only statistically significantly at the $p < 0.1$ significance level, but not at the more critical $p < 0.05$ level. Therefore, using the more typical significance level of $p < 0.05$, women are not statistically speaking, leaders of less entrepreneurial colleges than their male peers. In conclusion, the difference in entrepreneurial leadership scores of colleges could be a function of experience, as measured in years in post or due to change in the environment between the two periods. Alternatively it may be a function of gender. The instrument is not able to detect differentials based on gender. A longitudinal time study of the 102 Principals in the post 1997 era would be the only effective way to determine whether experience is the causation and a review of the instrument for gender differentials

is the only way to account for potential differences between male and female management styles. This issue will need to be considered in the qualitative interview research design.

Entrepreneurial leadership scores are not affected by the tenure of the top team. This is contrary to the findings of Hambrick (1995). However, the research instrument does not measure the fragmentation dimensions of the top team per se as proposed by Hambrick. These issues relate to the more intimate factors of top team dysfunctional behaviour. As Hambrick comments (1995), long-lived teams can perform, but they may be good followers rather than leaders of market changes, a point made by John Major as Chancellor (1989). The research instrument only measures the top team's change in membership, the dimensions required to differentiate the Hambrick factors being beyond the scope of instrument design. Other researchers in the English FE sector (Prichard 1997), have defined 'senior managers' as embracing middle as well as senior managers. Prichard's qualitative work (1997, p415) explored by case study the tensions between traditional academic managers and those of the new managerialism school using gender studies. He suggested that the middle managers of the delivery staff are key agents of change, irrespective of gender. The research instrument used in this thesis does not measure their impact on the contribution to entrepreneurial leadership in the FE college.

In summary, the quantitative research instrument is valid and explains a significant proportion of FE business performance variation. However, in common with other quantitative studies in the social sciences, there remains a considerable amount of unexplained variation in the dependant variables.

8.2.2 General FE college findings

General FE colleges (Type 1) are the largest sub group of colleges in the FE sector, representing 68% of institutions by number and 78% by total budget (in 1998 spending power). General FE colleges that have a superior market orientation and higher entrepreneurial scores, achieve better curriculum grades. However, there are no statistically significant correlations between either institution size or relative cost structures and student achievement rates or any of the other Inspection derived dependent variables.

The typical general FE college is approximately twice the size of sixth form and specialist colleges, with a mean turnover in 1997/1998 of £12.1 million (standard deviation of £6.3 million). Larger general FE colleges have lower market orientation, with a greater standard deviation of market orientation scores amongst the largest third of colleges compared to the smallest third (figure 7.1). Larger colleges are more able to generate larger (absolute) cash surpluses in 1996 - 1998 (figure 8.4) than their smaller peers. However, despite this advantage to deploy the cash surplus to fund front line delivery activities, they do not have superior market orientation (figure 7.14).

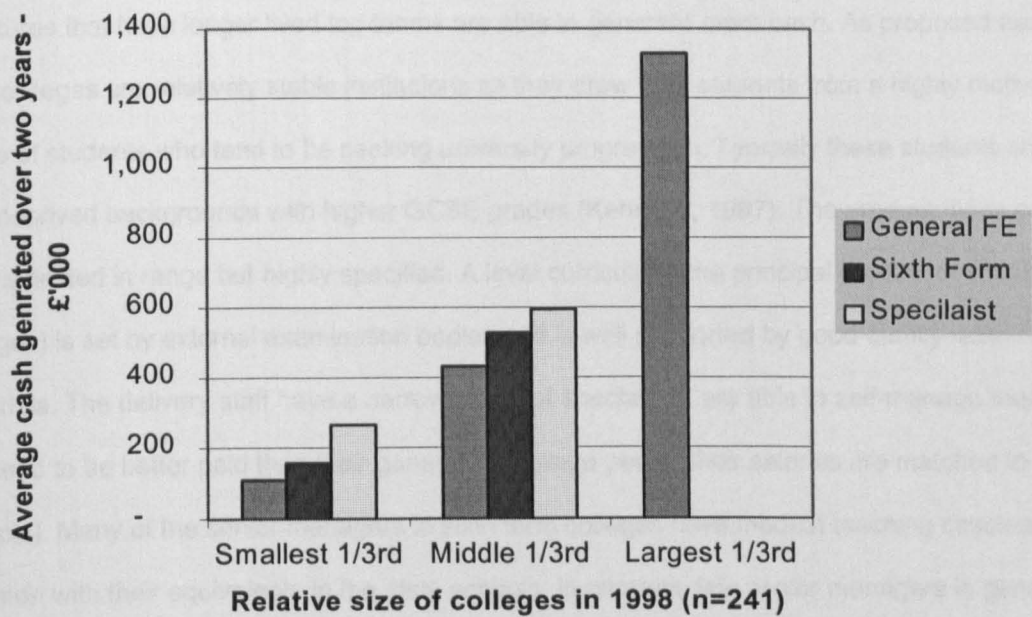


Figure 8.4: Relative average cash generation by size of colleges in 1996/97 to 1997/98

Specialist and sixth form colleges are also able to generate better cash surpluses than general FE colleges (figure 8.4). General FE colleges have lower market orientation scores than sixth form colleges, but equivalent scores to specialist colleges.

When DEA efficiency scores are reviewed, larger general FE colleges (in excess of £5 million) have lower efficiency rankings than smaller general FE colleges (figure 7.6), indicating that they are less efficient, albeit only by approximately 5% to 10%. There are some theoretical weaknesses in the compilation of the DEA metric, but the relative positioning of colleges within the index is none the less relevant. In conclusion, there is a paradox between larger colleges being able to generate bigger

volumes of surplus cash for use in teaching and their inability to generate superior Inspection grades, despite the extra cash being generated and hence available for inspection in the teaching process.

8.2.3 Sixth form college findings

Sixth form colleges (SFC: Type 2) are characterised by performance that is influenced by other components not proposed by this model. Entrepreneurial leadership is not a significant factor for this sub group in any of the regression models set out in table 7.30. Average cash generation is a factor of relative size, cost structures and top team stability. Larger sixth form colleges with superior cost structures that have longer lived top teams are able to generate more cash. As proposed earlier, sixth form colleges are relatively stable institutions as they draw their students from a highly motivated group of students who tend to be seeking university progression. Typically these students come from less deprived backgrounds with higher GCSE grades (Kennedy, 1997). The product these colleges offer is limited in range but highly specified. A level curriculum (the principal product of sixth form colleges) is set by external examination bodies and is well supported by good quality learning materials. The delivery staff have a narrow range of specialism, are able to self-manage their portfolios and tend to be better paid than their general FE college peers (their salaries are matched to state schools). Many of the senior managers in sixth form colleges have modest teaching caseloads, in common with their equivalents in the state schools. In contrast, few senior managers in general FE colleges have teaching contact with students.

In summary, sixth form colleges that have a superior market orientation and higher entrepreneurial scores, achieve better curriculum grades. However, there are no statistically significant correlations between either institution size or relative costs and student achievement rates or any of the other Inspection derived dependent variables To an extent, the different *raison d'être* of sixth form colleges vis-à-vis general FE colleges explains the lower significance of entrepreneurial leadership. This difference is illustrated by the answers provided by Principals when they were asked to cite examples of innovative behaviour as part of the quantitative questionnaire instrument. General FE Principals typically cited examples of new business initiatives, partnership working with private and voluntary sectors, expansion into new vocational skill areas and attitudinal change programmes amongst their teaching staff. In contrast, over 50% of Sixth Form Principals cited the introduction of the new

Curriculum 2000 programme (the move from 3 A levels to 4/5 subjects in year 1, with 3 subjects in the second year) as innovation. Their examples relate to fundamental changes in the product imposed upon them by the DfEE, whereas the general FE college examples typically relate to fundamental changes initiated by the college in response to more abstract signals for change from their operating environments. One sixth form college Principal commented in his survey return that effectively he was a head teacher of a very large sixth form, having more in common with 11-18 state schools than general FE colleges. DEA efficiency scores were very tightly distributed for this sub-group, with a mean value of 91.4% and a standard deviation of 7% (table 7.27). The sixth form college group of colleges performs very well against the traditional performance benchmarks of educational performance. However, in terms of scale of operations, the colleges had 115,000 full time students in 1997/98 against 546,000 full time students in general FE colleges, reflecting the former's concentration on part of the 16-19 education market, namely university entrance via A levels.

In summary, sixth form colleges that have a superior market orientation obtain better achievement rates. Market orientation is the second largest factor that influences achievement rate, although the largest influencing factor, deprivation of students, is to an extent artificially overstated due to the variables' artificial truncation into four groups (by the FEFC). Stronger entrepreneurial leadership does not have a material impact on any of the dependent variables for sixth form colleges. In common with general FE colleges, there is no statistically significant correlation between either institution size or relative costs and student achievement rates or any of the other FEFC Inspection derived dependent variables.

8.2.4 Specialist college findings

Specialist colleges (Type 3) are characterised by stronger forms of entrepreneurial leadership than their general or sixth form peers. The innovative leadership (Pe_1) antecedent was a significant construct for specialist colleges (table 7.3a). Innovative leadership proposes that the Principal provides clear leadership for goal setting and communication, leadership for the senior staff and effective use of performance indicators for monitoring performance. This differential can be linked to institutional size and their product specialism. Specialist colleges are smaller than their FE peers with an average turnover in 1997/1998 of £4.6m compared to £12.1m for general FE, but they are larger than their sixth

form college peers, who have an average turnover of £3.2m. In contrast to sixth form colleges, their products are more complex and typically their activities include operating a farm business in addition to running a FE establishment. Perhaps not unsurprisingly, specialist colleges (20 of the 22 in the responding sample are agricultural colleges) have more distinct forms of chief executive leadership. An explanation for this could concern the nature of the role of principal in these institutions. The college is small enough for the leader to manage their interactions with front line staff (average professional staff circa 40-60 people), yet the operational portfolio is too complicated for the leader to manage in the same manner that a mono-product sixth form college principal does. In summary, specialist colleges that have a superior market orientation achieve better curriculum grades. Specialist colleges also demonstrate stronger entrepreneurial leadership scores than their two peer groups, but do not obtain better curriculum grades as a result of this.

8.2.5 Quantitative survey limitations

The qualitative study in chapter 7 has numerous strengths based on sample size, (relatively) high r^2 coefficients derived from the LISREL modelling and the representative nature of the samples vis-à-vis the underlying population. However, the generic findings do not sit easily with some of the FEFC Inspection evidence and other studies that conclude that educational performance is as much about the background of the learner as it is about the process of learning (Kennedy, 1997). The key unexplained elements produced by this study are as follows:

- the firm's culture is not adequately measured or described by a quantitative survey instrument.
- the nature of the learner is not adequately explained by the FEFC's deprivation factor, the variable used in the modelling, and
- entrepreneurial leadership has focused on the Principal and to a limited extent, their top team, but has not necessarily measured the contribution of middle and junior management.

The basic aim of survey research is to describe and explain using statistical methods certain features of the sector under study (Marshall and Rossman, 1994). A cross-sectional study taken at one point in time will, in itself, be of restricted value, but the greatest critique of survey studies is their limited value

in measuring complex social systems. As commented by Schein (1985, p311), an organisation's culture must be considered both as cause and as a way of explaining organisational phenomenon. The next section explores further this critique of limitation of scope of the quantitative technique, before progressing to the qualitative case studies.

8.3 Moving from sector to college level analysis

The market orientation construct has become well established in the last ten years and this study has quantitatively demonstrated (for the first time) its application to the English FE sector. However there are numerous critics of the construct in the philosophical differences between marketing theorists and culture theorists. These differences are summarised in table 8.1:

Table 8.1: Conceptual differences between marketing and culture organisational theorists (after Harris and Ogbonna, 1999).

Dimension	Marketing Theorists	Culture Theorists
Culture: Pluralism vs. Unitary	Prescribes concept of cultural unity, typically firm wide. <i>(Deng and Dart, 1994)</i> <i>(Kohli and Jaworski, 1990)</i>	Pluralistic cultures, no unity per se. <i>(Martin, 1992)</i> <i>(Knights et al, 1994)</i>
Family of Concepts	Concentration on lower levels of culture theory, e.g. artefacts and behaviours. <i>(Narver and Slater, 1990)</i> <i>(Harris, 1996)</i>	Culture is typically a family of concepts. <i>(Pettigrew, 1979)</i>
Cultural Dominance	Emphasis on organisational wide belief led by management. <i>(Deng and Dart, 1994)</i> <i>(Kohli and Jaworski, 1990)</i>	Dominance not solely about management, but many factors that must also be addressed. <i>(Harris, 1998)</i>
Management of Culture	Assumes culture can be managed and controlled. <i>(Narver and Slater, 1995)</i> <i>(Day, 1994)</i>	Not purely top team's issue and argued by some academics to be impossible to manage. <i>(Knights and Wilmott, 1987)</i>
Culture entrenchment	Narrow definition of entrenchment of organisational culture. <i>(Deal and Kennedy, 1982)</i>	Entrenchment is firm wide issue and multi faceted in nature. <i>(Harris and Ogbonna, 1999)</i>

These differences require addressing to provide a balance to the obvious strength of the quantitative analysis in chapter 7, especially as the study has drawn heavily upon marketing theorists for model design in chapter 5. To address Harris and Ogbonna's (1999) critique of quantitative investigations, a limited qualitative study will be used to explore the issues raised in section 8.2.5. The thesis therefore concludes by adopting a limited multi method, triangulation approach to achieve a broader range of

perspectives with the objective of overcoming the paradigmatic quantitative versus qualitative trade off in social research (Denzin, 1998).

8.3.1 Qualitative methodology

In designing an appropriate qualitative research strategy, Yin (1984, pp13-20) proposes three questions that need to be addressed, namely:

1. What is the nature of the research question? In this thesis, it is exploratory being a little understood phenomenon.
2. Does the research require control over the behaviour? No, it seeks to describe the naturally occurring events.
3. Is the phenomenon under study contemporary or historical? The phenomenon is contemporary, drawing upon a historical base of culture.

As proposed by Marshall and Rossman (1994, p41), the most suitable research strategy is that of case studies and in turn, the most appropriate tool is elite interviewing, i.e. interviewing college principals. The objective is to explore the qualitative observations and short-comings with a representative sample of principals as part of feeding back the results of the Doctoral of Business Administration degree and to identify new areas for research to improve the understanding of this thesis. Interviews are more practical than observation in this scenario as the opportunity for effective observation is limited both in terms of time and access to the subject in an operational context (Sommer and Sommer, 1997, p107). Elite interviewing is a specialised form of interview that focuses on the top person in the firm. Elite individuals are by definition influential, knowledgeable, have an overview of the firm, its future direction and are experts in their field of work. The group was selected for the following reasons:

- The quantitative instrument was completed before the interviews were conducted. The qualitative interviews are therefore confirmatory in nature, being used to explore the veracity of some of the conclusions of the quantitative analysis against the backdrop of the Harris and Ogbonna critique.

- The quantitative research instrument was specifically designed for measuring the attitudes and perceptions for the Principal as chief executive and no one else (Section 6.3),
- The Principal's were being interviewed to review their opinions and attitudes of the FE sector in general, drawing upon their own operational experience of the sector from their own career, including their current college.

The elite subject has significant relative power in presenting their organisation due to their skill, knowledge and control of access to (typically) confidential information hence a key problem with elite interviews is that of validity of the subject's assertions. A method of overcoming this validity issue in an organisational case study interview is to conduct corroborating interviews at various levels within the same organisation, thereby allowing triangulation of the various opinions. The use of corroborative interviews has the apparent advantage of overcoming this problem, however this is not easy to achieve when dealing with elite subjects. There are five problems with the use of corroborative interviews with subordinates, namely:

1. Being granted access to the appropriate subordinates by the elite subject.
2. The elite interviewee may not participate fully in their interview, as they perceive that the interviewer is conducting an audit of their 'honesty' and/or 'integrity'. They may not be willing to have certain topics discussed with subordinates.
3. The junior managers may not have the knowledge to comment on the elite subject's information, as the subordinate interviewee does not have an adequate knowledge base or political experience to understand the context of the comments. This is very pertinent vis-à-vis issues that the Principal raise about the sector rather than their own institution.
4. The subordinate manager may not be willing to comment on their superior for various reasons that the interviewer can not overcome.
5. By definition, there are not many senior people in an organisation that have an overview of the firm and therefore the researcher may not be able to 'interpret' the information provided by the few interviews that the elite subject may allow for triangulating data. A long field study is often not practical.

Positivist critics such as Scheurich (1997, p73), have argued that interview interactions are fundamentally indeterminate, there being no stable 'reality' or 'meaning' that can be represented. He argues that the interview will result in a construct of reality being developed by the researcher from an early point in the process. In turn, prolonged research techniques such as multiple interviews will not per se, result in a more 'correct' interpretation being derived because an indeterminate ambiguity, which he labels as a 'wild profusion', lies at the heart of the interview interaction. Scheurich (1997, p74) argues that the interviewer brings to the interview their own baggage and hence their final interpretation is tainted with that viewpoint, which starts to form early on in the interview process. Having a very powerful the subject of an interview with the aim of seeking triangulation data potentially exacerbates this problem.

The critic of qualitative interviews and interviewer objectivity is well documented but does not in itself, undermine the technique. Therefore the issue of validity for elite interviews needs to be addressed. For the purpose of this thesis, triangulation as a form of data validity will occur in two ways, namely:

1. The data collected from the quantitative questionnaire, which is based on a detailed typically qualitative based literature review will be cross checked to the interview data, and
2. The FEFC inspection report will be used to act as an externally derived and hence internally validated data source.

The FEFC inspection process is derived from a 60-person day inspection that involves a standardised qualitative data collection tool and is in the public domain. The Inspectorate is independent of the college and has a statutory right of access; they techniques include corroborative interviews and observations at various levels within the college. In conclusion, elite individuals are typically political operatives, being well practised in providing the information that they want to provide as leaders of their organisations. This potential respondent bias will need to be actively addressed by the researcher, but as Hitchcock and Hughes argues (1989), interviews are personal interactions and hence by their very nature, bias will occur, however meticulous the preparation and planning.

The proposed approach is that of a semi-structured interview. Patton (1980, p206) proposes that this form of interview allows topics and issues to be covered in a systematic manner. The semi structured nature allows the interviewer to identify areas that require amplification, whilst maintaining a conversational style, even if the interviewer spends a minimal amount of time talking. The disadvantage of this approach is that salient topics can be omitted and the flexibility in question asking could result in a different question actually being asked of different interviewees. The alternative approaches were judged to be less effective. The informal conversation interview would not guarantee the breadth of coverage of the small sample to address the issues raised from the quantitative analysis chapter. A closed standardised form interview would be too rigid and could potentially irritate the elite interviewee, as the rigidity of the interview structure fails to address the unique context of their organisation (Kerlinger, 1973). The issue of potential interviewer bias will need to be actively addressed when conducting the interview, but as Denscombe comments (1995) interviewer neutrality is a chimera.

8.3.2 Sampling approach

It is difficult to generalise from single cases (Kennedy, M, 1979) therefore a stratified purposeful typology was adopted as recommended by Miles and Huberman (1984). This method illustrates subgroups, allows comparison and addresses issues of generalisation. The quantitative LISREL model indicates that college type and relative size are important determinants on performance. Location of the college was determined by the NAO (2001) to be a determinant of performance, although this study did not support this conclusion per se. The sampling matrix was therefore constructed using three dimensions, college size, location and institutional type, as set out in table 8.2:

Table 8.2: Group analysis of sample by categories

Location and college type		Relative Size		
		Smallest Third	Middle Third	Largest Third
City and Urban	General FE	2 1%	24 10%	48 20%
	Sixth Form	25 10%	2 1%	
	Art, Design & Agriculture	3 1%	1 <1%	
	Sub Total	30 12%	27 11%	48 20%
Small Town and Rural	General FE	10 4%	40 17%	32 13%
	Sixth Form	33 15%	4 2%	
	Art, Design & Agriculture	8 3%	9 4%	
	Sub Total	51 22%	53 22%	32 13%
College Totals		81 34%	80 33%	80 33%

NB: Grey cells are those that are selected for 'elite interview' case studies
Sample size n=241

The qualitative case studies are confirmatory in nature, seeking to explore the issues raised by the Harris and Ogbonna critique and the determined limitations of the quantitative analysis chapter. It was determined that three case studies selected from the above sampling frame would be representative of at potentially at least 40% plus of the sample and underlying populations.

Three case studies were selected, one from each sub-group by size, at least one from each geographical location factor and at least one from each type of college, with the exclusion of specialist colleges. As a group the three sampled colleges are drawn from 47% of the sampled population. A fourth case study from the specialist college grouping was not selected, as their dominant type are agricultural colleges. The foot and mouth disease (FMD) epidemic of early 2001 that occurred after the completion of the quantitative survey adversely affected these colleges. Informal contact with senior staff at an East Midlands agricultural college indicated that the fundamental threat represented by FMD was such that management's perspectives on the college's future were significantly affected. Due to this significant event, specialist colleges were excluded from the case study review as the material nature of FMD was judged to be such that it would provider responder bias that could not be moderated for. This is not a significant hurdle to the validity of the study as the sub population is small (7.9% of total population) and is getting smaller as specialist colleges are merged with larger general

FE colleges. The case studies were selected by accessibility to the interviewee and by ‘institutional and individual interest’, namely individuals drawn from different appointment periods, age groups, college financial health categories and differing profiles of FEFC Inspection grades. To explore the gender issues raised in section 8.2.1, a female Principal was included in the sampling matrix. Each of the individuals operates at regional/national level in terms of sector representation; therefore they are able to comment on activities and behaviours that are ‘typical’ of their sector, not just their own college. Having selected the three cells for sampling, the selected colleges were a function of the sub-sampling matrix referred to earlier and, critically willingness of Principals to participate. The three college principals who agreed to participate are summarised in table 8.3:

Table 8.3: Summary of colleges selected for elite interviewing

	College A	College B	College C
College Type	Tertiary/General FE	Sixth Form College	General FE
Size	Middle 1/3 rd	Smallest 1/3 rd	Largest 1/3 rd
Location	Small Town, Semi-Rural	Inner City	Inner City
Gender	Male	Male	Female
Age Group	51-55	46-50	56+
Appointment Era	Jan 1992	Aug 1997	Apr 1995
Turnover (1998)	£8.0m	£3.5m	£22.5m
Revenue Reserves (1998)	-£0.1m	£0.7m	£0.75m
Curriculum Grade (Average)	2.6	2.3	3.0
Quality Assurance	3	3	3
Management Grade	2	2	3
Governance	2	3	3
Top Team (TT) Size	5	6	16
TT Starters in last 2 Years	0	0	2
DEA Score (whole sector %'s)	77.2%	85.5%	100.0%
Mean DEA for college type	75.8%	91.4%	75.8%

The three colleges are profiled as follows:

College A: Medium sized, small town, semi-rural general FE college

This tertiary/general FE college is located in a multiple small market town, semi rural area of the Midlands. It is located near two city conurbations, but does not form part of those cities. It was created by a series of mergers in 1974 and inherited above average revenue funding in 1992/3. It is located in

the fifth decile in terms of turnover size in 1997/98. The college was developed by the LEA as part of its tertiary strategy, whereby sixth formers went on to FE colleges for study. The part-time student volumes of tertiary colleges are typically lower than those in general FE colleges. The last eight years has seen the break up of this tertiary feeder system, requiring the college to compete for students. This competition has been made fiercer by the Conservative government policy (1992-1997) of opening state school sixth forms with their inherent advantages of retaining pupils through student inertia. The college's financial stability has been subject to considerable volatility, having a fragile financial health in every year since incorporation. The college has reviewed merger options on three occasions, but no merger proposal overcame the poor fit with the proposed partners (who were typically city centric) and the weak commercial rationale.

College B: Small, city centre sixth form college

This sixth form college is located in the centre of a large city. It is a small college by general FE standards, but medium sized by sixth form standards. The college is successful, drawing students from a range of cultural and educational backgrounds. Results are generally very good, with areas of good national practice. It was created in the mid 1970s and inherited significant above sector average revenue funding in 1992/3. The college has developed post incorporation to include adult education and special needs, two less typical areas of diversification for sixth form colleges. The college faces stiff local competition yet is has achieved a very stable financial position, exceeding its funding targets in recent years. The Principal has a career background in schools and sixth form colleges, with two years spent in a general FE college.

College C: Very large, city based general FE college

This general FE college is located in a very large metropolitan area and was created by a series of mergers in the years leading up to incorporation. Typically these mergers were completed quickly with many cultural and managerial issues not being adequately addressed at the point of merger. This has resulted in the creation of a very large college (top decile by turnover in 1998) with multiple sub-cultures, reflecting the history of the constituent parties of the merged college. On appointment in 1995 (from one of the merged colleges), the new Principal was presented by an unforeseen fundamental financial crisis. The previous year's audited income was found to have been overstated by some £1.5 million with the corollary that the current budget projections were grossly over optimistic. Due to the

magnitude of the financial problems, the Principal was faced with a series of fundamental issues centred on finance, strategic direction of the college and the underlying culture issues of the college

8.3.3 Interview processes, validity and reliability

Walford (1994, p225) and Gummesson (2000, p99) propose that when interviewing powerful people, the interviewer should prepare for the interview by reviewing the background of the firm and industry, so as to be able to contextualise interviewee responses. The history of each college was reviewed before interviewing the Principal so as to provide familiarisation with the interviewee's operating environment. This was achieved by reviewing the last FEFC inspection report of each college prior to the interview and again post interview to cross check FEFC findings with interviewee assertions. The independently produced report allowed the interviewer to triangulate interviewee responses.

The semi-structured case study interviews presents reoccurring themes for investigation. Miles and Huberman (1984, p152) proposed the use of meta-matrices to collate the data into a standard format using categories (clusters) of observations extracted from the qualitative data. Therefore the interview data requires conceptualising and coding to support the thesis' research. There are three steps to this form of analysis:

1. Open coding, used to examine raw data and identify categories of concepts that are central to the data.
2. Axial coding, where subcategories are linked to categories at the level of properties (i.e. characteristics) and dimensions (i.e. range) that varies properties from one another.
3. The interpretation of the information.

The first step is the use of open coding as proposed by Strauss and Corbin (1998) to examine data to identify concepts and their properties and dimensions. The first step has already been determined as part of the interview instrument design, namely the dimensions of culture, entrepreneurship and market orientation. These open codes were developed from the literature review and theory development in chapters 2 to 5. Having related the categories to the broad propositions, it is necessary through the use of axial coding as proposed by Strauss and Corbin (1998, p124-127) to relate sub-

categories to individual antecedents within each proposition. To achieve this the model developed in chapter 5, augmented by the culture literature was analysed using Strauss's (1987, p147) balancing matrix construct. The balancing matrix is a grid, with actions on the vertical axis and resultant consequences (outcomes) on the horizontal axis. The matrix is balancing as it represents dimensions that crosscut, or balance each other. The summary analysis grid is set out in table 8.4 and the resulting research instrument is appendix 2.

Table 8.4: Balancing matrix of interview data, after Strauss and Corbin (1998)

Axial Codes: Sub categories	Open Codes: Conceptual Groups		
	Culture & Climate	Entrepreneurial Leadership	Market Orientation
• College history and formation	√		
• Role of the Principal - past/present	√	√	
• Organisational structures and roles	√	√	
• Leadership style	√	√	
• Organisational structure in the college	√		√
• New Managerialism vs. Professionalism	√	√	
• Gender issues	√	√	
• Innovation - role and source	√	√	√
• Environmental awareness		√	√
• Goal clarity		√	√
• Risk as a break on innovation	√	√	
• Performance indicators		√	
• Students as consumers or customers	√		√
• Generation of market intelligence		√	√
• Sharing market intelligence		√	√
• Responsiveness	√		√
• Inclusiveness of responses	√	√	√
• Sharing of quantitative conclusions	√	√	√

The three case study interviews were carried out in late May and early June 2001 using a semi-structured questionnaire (appendix 2) devised from the theoretical propositions developed in chapters 2 to 4 and summarised in table 8.4. The flexible design allows the researcher to explore issues raised during the interview, seeking clarification and probing as necessary to understand issues raised by the interviewee, (Rubin and Rubin, 1995, p44). This flexibility allows new ideas and themes to be tested and explored. The Principals are within Spradley's definition of the 'encultured informants' (1979, p47), individuals who know the culture well and take it as their responsibility to explain what it means. To encourage openness in addressing the issues, the data obtained was sought from the perspectives of

the Principal as a participant in the FE sector, rather than as a case study of their own college per se. Obviously, the Principal cited examples from their own experience, but not necessarily from their current college. One major goal of the design of the qualitative research is to obtain depth, detail and the pertinent nuances of the FE case studies. Cohen et al (2000, p279) comment that it is crucial that the interview is a social, interpersonal encounter that is not merely a data collection exercise. As proposed by Kvale (1996, p147), the interview structure was planned by the interviewer, rehearsing the areas that had to be covered and the areas that may cause problems, thereby ensuring that the interview could be managed carefully and sensitively. The issue of validity arises in interviews and in some respects the issue is more persistent a problem than in quantitative techniques, (Cannell and Kahn, 1968). To make the studies credible, the interviews were designed to provide transparency, consistency, coherence and communicability.

Transparency was achieved by taking detailed notes of the interview. Two interviews were recorded, the third was not, reflecting the lack of comfort with the medium with one interviewee. Regrettably the recordings were of poor quality reflecting acoustic problems, but were useful back-ups to the written notes. A transcript was prepared from interview notes within 24 hours and used for the basis of preparing the information included in this thesis. The interview record was agreed within five days with the interviewer and changes agreed to reflect different interpretations of the interview. This process was completed before the next interview was conducted. The information included in this thesis was agreed with the interviewee as being a true and fair record of their interview. All three subjects have retained the word document of the interview and are using it for managerial purposes, in one case to illustrate to the Principal's governing body the cultural history of the college.

Consistency was achieved by adopting a three-stage framework (appendix 2), exploring the unifying theme of culture first, before moving onto entrepreneurship and market orientation respectively. To obtain coherence, probes were asked to explore ambiguous responses and amplifications were sought for limited responses. Detailed working examples were put forward by each interviewee of a 'problem area' which is being resolved and have been included as vignettes. In each case, the assertions were verifiable to other written documentation, typically the FEFC Inspection report. There is consistency between cases, with common constructs being used to explain issues. Disagreements between

interviewees occurred in one area, risk perception and are consistent with the quantitative scale building findings in chapter 7.

Communicability is achieved by presenting the interview in a series of construct groupings. The data blocks are paraphrased in narrative form and include a vignette of a key issue identified by one of the Principals. The interviewees talked about their first hand experiences as both leader and as a middle manager during their career. The accounts provided are first hand and reflect the 'encultured informant' status of the individual.

To understand the nature of the points raised by the interviewees, it is necessary to understand the culture of the sector. The researcher is a participant in the FE sector and hence has crossed the cultural boundary identified by Rubin and Rubin (1995, p171). The advantage of this approach is the interviewer's 'cultural awareness' of the issues being raised by the interviewees. This participation by the researcher (as a senior manager in the FE sector) does however present its own problem, namely potential observer bias. As the researcher is already immersed within the culture of FE, the interviewer brings his personal history, viewpoints and interpretations to the interview (Greenhouse, 1985, p261). In summary the interviewer is likely to have a lower adverse impact on the elite interviewee (Singer et al 1983) in terms of being viewed as an 'uninformed observer', however the interviewer may be viewed with suspicion because of that 'informed' nature. It is therefore important that the research process creates a critical awareness of matters that have a deep and blinding familiarity to the researcher (Marcus and Fischer (1986, p137).

To address this issue of potentially being too close to the subject, distance needed to be created between the interviewer and the subjects. This was achieved as follows:

- College A is known to the researcher. Therefore the emphasis for the elite interviewee was on their experiences external to college A, using college A to illustrate the externally focused points that the principal covered. College A's principal was a senior member of the Association of Principals of Colleges (APC) and hence was extremely informed on external matters that were unknown to the researcher.

- Colleges B and C are unknown to the researcher and the University of Nottingham; hence no pre-existing expectations exist about these institutions. The researcher comes from College A, which is fundamentally different to Colleges B and C; hence the experiences of the researcher are limited in terms of application to these two environments.
- The DBA training emphasised detachment and techniques to be adopted to avoid over familiarity with elite interview subjects.
- The researcher has experience (over 15 years) of working with senior staff from a range of backgrounds (public, private, voluntary and political) and hence was comfortable with the 'power dimension' and its use by elite subjects to present their opinions.
- Drawing upon the quantitative data returns and FEFC inspection reports prior to the interview to ensure that the researcher had a reference frame against which the subject's statements could be checked against and the interviewer's interpretation could be calibrated against.
- Particular attention was paid to ensure that the interview process had minimal input from the researcher other than to ask questions and that the quantitative feedback from this thesis was made after the conclusion of the interview.

In conclusion, as McCrackern argues (1988, p19), the researcher will always be subject to challenge as by definition the researcher becomes the research instrument and being human is subject to inherent bias. As long as adequate steps are taken to minimise observer bias and ensure that the account is objective, defensible and accepted, then others should accept the account as valid data.

Data was analysed manually, the small number of cases making the use of NUD*IST or NVivo an unnecessary complication. The three case studies are presented in the following sections. The themes from the interviews are collated and summarised in section 8.4.4.

8.4 Results of case studies

8.4.1 Operational context

The three college principals were very open, finding the opportunity to discuss the leadership issues of chief executives useful and informative. From a review of their interviews, it is clear that the three principals shared common challenges, which in turn, they believed were similar to those faced by their local peers. The issues centred on running a notionally independent organisation that was tightly controlled by a funding agency (via funding agreements) and limited scope for short term change due to strong employment contracts and staff unions. Financial problems reoccurred throughout the interviews as inhibitors to change, requiring careful handling and lots of time, a commodity that can be in short supply.

College C's financial crisis in 1995 presented the Principal with significant personal challenges as the leader, as she described her prior college as being intimate and 'collegiate orientated', with her previous experiences as having been 'a charmed career'. The new role provided her with a 'very uncomfortable two years', re-establishing basic managerial control systems in finance, developing communication protocols, promoting acceptance of responsibility amongst management and teaching staff, tackling conservative and revisionist trade unions and focusing the college on identifying its clients and therefore its institutional mission. This experience of dealing with the stark consequences of poor financial performance are echoed by college A's principal. His college has had poor financial health in every year since incorporation (in 1993) which has been exacerbated by the absence of the concept of actively competing for students, underlying culture issues of staff conservatism and resistance to change. He ascribed this to the result of a benign LEA funding regime that had created a very stable operating environment for the 10 years prior to incorporation, above average levels of funding and a large and unfocused senior top team. His appointment in 1992 provided him with a new problem, how to promote dynamism in a workforce that has little experience of risk taking, competing for students and little experience of being self critical about non-performance.

The principal of college B also cited financial issues as being a key moderator on performance, but principally from the basis that the absolute size of his sixth form college means that a relatively small

financial change has a disproportionate affect on smaller colleges than their typically larger (by a factor of 100%) general FE cousins.

8.4.2 Cultural issues

The three principals agree that the modern Principal has expanded his/her role to embrace business leadership, with a focus on financial solvency in the 1990s. The traditional leading professional role of the LEA era has been de-emphasised, with the locus of control for this function moving to the next two tiers of management (i.e. senior and middle). In the LSC era (post 2001), colleges will be required to place an increasing importance on curriculum issues, an area upon which the FEFC placed low emphasis. This will not mean the principal will become the leading academic (in general FE colleges), more that the Chief Executive Officer function will be broadened to embrace product/mission direction, not just financial leadership. The principal is the leader of the college's mission and ultimately its culture. College C's principal emphasised that the principal is not the chief executives in the same manner as those of private commercial firms, but leaders of public organisations. This change in emphasis during the 1990's has not come from a uniform management control model pre-incorporation.

Sixth form Principals were very dominated by the LEA in the pre-incorporation era. The LEA was very 'big brother' in its control, leaving the principal to focus on academic issues, with little emphasis on financial solvency issues. Incorporation saw the promotion of a new breed of sixth form college (SFC) principal. The new generation of sixth-form principals has been drawn from a mixed background of (academic) disciplines and they typically perceive themselves as leader of a small 'company' in terms of operational autonomy, but critically they have a very high public service ethos. The change in emphasis can be expressed as moving from a 'School/College' culture to a 'College/Business' culture. Modern SFC principals do not want to return to the LEA control environment, being confident with the autonomy that incorporation has brought along with the difficulties that this brings.

The role of the principal in stimulating dynamism amongst senior and middle managers was agreed by all three case studies; the method however varies, reflecting the different absolute sizes of the institutions. College A argued that dynamism has to come from middle management and below. It can

not be effectively led from the top. The top management tiers must create the climate for dynamism with a culture and values that reinforce behaviour. However dynamism from the top is not sustainable in the long term according to principal A. Senior managers should mediate dynamism from the middle management (and below) tiers, providing a buffer to the college's governors. Effectively this is the tempering of dynamism within a corporate strategy framework agreed with the governors. SFC principals are very 'hands-on', reflecting the small size of the college and the traditional involvement of the principal in student affairs. The role in small colleges can be very 'isolated' as top teams are relatively small and management structures are fairly flat. The principal of college B is often criticised by the teaching staff as being too 'money orientated' due to the delivering FEFC unit convergence, with the resulting need to implement a couple of redundancies. In contrast, college C's experience was that organisational structures in larger colleges typically lack flexibility and in very large colleges they are more inflexible still. Leadership is required from the top, which then has to be explained so as to promote ownership and set institutional priorities at 'front line' levels. This can be a very painful process (see vignette 8.1) but necessary if the cycle of mediocrity is to be broken.

Vignette 8.1: Culture: A level course delivery in college C

College C is based in a very large metropolitan city with relatively high deprivation factors, high proportion of ethnic minority clients (40% of all students), significant numbers of asylum seekers (500+ per annum), low levels of prior educational achievement and significant levels of local competition. Only 20% of its students are at academic level 3 (i.e. A level standard) and only 12% of students are aged 16-18. A level provision is a relatively minor area of work for the college and there are alternative local providers who offer at least a good a service as the college, if not better.

Over the last three years, the number of A level enrolments has been steadily decreasing accompanied by a steady decline in pass rates across the whole offering. The unit delivery costs have steadily risen and in the recent FEFC inspection, the inspectors concurred with the delivery team that the teaching process was good (i.e. the product was good) but the student achievement pass rates were below the national average, indicating that the course was inappropriate for the student. The work graded 4 (very poor).

The A level teaching staff initially accused 'the management' of 'dumbing down' the college and implementing a poor marketing strategy that failed to recruit the appropriate calibre of students, who

are typically white and middle class. The staff refused to accept that their area was no longer part of the core work in terms of mission and standards of achievement. In addition, they did not perceive that their high unit cost of delivery was being subsidised by other programmes designed to promote social inclusion. The staff perceived themselves to be the 'academic elite' of the college, yet they were also some of the least flexible and innovative staff in the college. Typically, communications with the group are conducted via their staff trade union, they interpret their employment contracts in the most mechanistic and restrictive manner and require management to adopt a policing and verification style of management to ensure the staff comply with their obligations.

The area of work is therefore typified by an over supply of less flexible staff, who deliver good product to a body of students for whom the product has low suitability. Effectively, the staff deliver good products, but (effectively) achieve mediocre educational results at a high cost. In turn, they seek to displace this performance issue onto others.

This change process takes time and patience and can be a long process in very large colleges. The three interviewees concur that leadership style and techniques needs to reflect the operational size of the business unit and must be delegated where possible. In small colleges, the leader can personally reinforce this cultural approach, whereas in very large colleges the leader is very remote from 'front-line' staff and hence it is very difficult to achieve this quickly without the active support of other key managers.

The role of governors was viewed consistently between the three case studies. Governors are not really involved in the operations of an effective college. They are too remote, part-time in commitment and rely upon management to provide information and direction. Good governors act as a sounding board for good management. College A and C offered the view that where governors are too strong, it is a sign of weak management. The management is failing to provide leadership, hence forcing governors to lead, or the leadership is weak, allowing a small group of part-time governors to dictate policy based on political/power motives. In a smaller college, governors have more opportunity to grasp the issues and hence are more able to contribute, but they need to be made aware of the boundary between the role of governors and the executive.

Structures are necessary in all organisations. The more complex and/or larger the organisation, the more formal the structures. FE is regulated and has strong trade unions therefore structures tend to be formal. The repeated problem with FE structures is their fixation with systems and procedures, rather than outcomes. The principal of college A has been in structures that are very bureaucratic, where the response to new ideas is to form a committee that has meetings without real purpose, calls for research into the problem before finally deciding that something needs to be done. This problem of 'forming formal groups' to reach decisions 'after long process' is a key inhibitor to dynamism in modern FE. The principal believed that in his current college (A), the period 1986-1992 was a very busy time for typists. Lots of paper, policy and files were created and countless flipcharts used to little avail. This process orientated culture failed to understand the impact of the college on the end consumers. It is too easy for informal processes to be taken over by formal committees, procedures and policies. There is a balance to be achieved, but typically it is in favour of formal and inflexible, rather than the more creative informal and flexible; this needs to be challenged by the principal to ensure that dynamism occurs. Organisational structures exist in the sixth form college environment, but tend to be informal. Lines of communication are short, staff interactions are informal and regularly involve senior staff and the principal. This informality is not replicated in larger FE colleges as interactions are more complex and often involve multiple sites.

In terms of leadership style, the sixth form college adopts a more interventionist model of management, reflecting the SFC principal's role as being perceived as the pre-eminent academic by teaching staff and students. Therefore the SFC principal is regularly involved with parent and student issues, especially those involving discipline. Typically parents refer to the principal as 'the Head' (as in head master) and the teaching staff perceive the principal's role as this with respect to these matters. Most senior staff have a small teaching caseload, including the principal, whereas in general FE college this is very rare. Staff have the cultural value that the principal can only lead if he/she is also an active teacher, even if it only for a few hours a week. Leadership is typically very direct, involving a democratic and pace setting style. The small college principal can be working on macro issues one moment and then involved in minor details the next.

The interviewees were familiar with the new managerialism versus professionalism debate. The teaching staff and many managers often deride new managerialism, but the introduction of targets and

benchmarks has moved colleges towards outcomes, rather than just processes. Target setting in itself is a goal, but the ramifications of how the goal will be achieved are just as important. In setting targets people now have to consider the how and by when, not just the process of carrying out the activity. IN all three colleges, the majority of teaching staff still perceive their role as being the traditional academic, looking towards the principal and their senior managers to provide leadership. New managerialism tends to be confined to senior staff (directors and middle managers) with delivery staff still focused on the 'independent professional' role. Some teaching team leaders (junior management grade) are uncomfortable with the role of staff management, which involves requiring co-workers to implement policy. These managers still have allegiances to 'the staff room' and are uncomfortable with perceiving themselves as being outside of this 'safe and prescribed' environment. This problem was experienced in all three colleges and new management posts occasionally required external appointments to 'break the cycle' of reluctant candidates being drawn from staff rooms.

Top team dynamics are very important for all three principals and institution size was identified as a key factor. Principal C stated that it is difficult to develop a collegiate, inclusive approach in a very large institution compared to smaller colleges. Developing a positive team culture is made difficult by a climate of large-scale redundancies, a union led culture of confrontation with management and the inherent conservative nature of the teaching profession to change as experienced in college C. Innovation is difficult to stimulate when staff are anxious about the financial health of the college. Leadership styles need to be responsive and adaptive, effectively management need to be 'light on its feet' according to principal A's experiences. Senior managers need to allow staff to test ideas, be alert to changes and have the confidence to stand back from detailed supervision of front line staff, acknowledging that mistakes can and do occur. The pool of staff in sixth form colleges is relatively small. Labour mobility is low and many teaching staff members are very long lived in post. There has been a need to 'buy-in' staff to meet new areas of development. Those that join, especially from general FE, find the environment a 'nice life', whereas many staff inside the SFC sub-sector offer the view that the environment has changed 'for the worse'. Collage B's principal has brought in two general FE managers into teaching teams to provide a 'fresh perspective', as he was unable to promote internally or recruit from within the SFC sub-sector.

Gender issues are relatively low profile in sixth form colleges. There has been a long tradition of women in management posts in the schools and sixth form college sectors. The Principal perceived there was more of an issue with the ethnic balance of managers in the sixth form sector, with very few non-white managers being present in the system. Gender issues in management performance are only now emerging. There is no real discernible difference between men and women as principal, according to College C's woman principal especially as many women have been promoted against a 'male styled' framework established by a typically male dominated selection panel. The feminisation of middle management is having more of a visible impact in hers and other colleges. In college C, women now hold the majority (11 women out of 16 posts) of management posts, in line with the gender balance of the college's workforce. However, it is probably too early to tell if women dominated teams have a different performance impact, if any, then their historically male dominated predecessors.

8.4.3 Entrepreneurship and Innovation

All three subjects were interested in the entrepreneurship dimensions of the interview. There was some difficulties with the word 'entrepreneur', primarily as the word has a corrupted meaning in the FE sector, having become an euphemism for 'sharp management'. However, all interviewees argued that entrepreneurial endeavour, namely leadership, innovation and insight was important for modern management. Environmental awareness must embrace all levels of management and include delivery staff. No individual operates in a vacuum and everyone must understand the ramifications of their actions or inactions. The danger of not understanding the environment can result in managers being turned in to obsessive 'bean counters' with no 'eye on the future', a point passionately made by principal C.

There was consensus that most politicians and leading civil servants do not really understand the role of the general FE college, with the role of the sixth-form and agricultural college the most readily understood part of the sector. Despite this relative ignorance, the sector continues to grow, 'filling in the gaps' that HE and schools do not fill according to colleges A and C. The principal of college A was not sure whether in the minds of the DfEE, the role of FE was to remedy the deficiencies in other education sectors or to adopt some other role? As this (political) role is ambiguous, there is a fundamental need for the FE sector to innovate and be dynamic to meet this evolving agenda.

Culture is a function of senior managers and the principal. It is slow to change and in his view, can take up to ten years to fundamentally alter in the opinion of college A's principal. There is a vested interest of 'longer lived' managers and staff in the status quo, as this provides stability, clarity and lower levels of personal risk. New managers (including those who have been here a long time, but 'have come on board') are prepared to challenge the traditional orthodox behaviours and modernise the college. Such managers recognise that step changes are required to 'keep up' with the modern environment. For long-lived staff (and managers) there is a need to innovate to keep them interested. Bored managers become complacent and ultimately a brake on dynamism. To break the cycle, intervention may be required from the principal to break the cycle of mediocrity. Vignette 8.2 illustrates this point:

Vignette 8.2: Entrepreneurship and risk taking: Sports academies In college A

Change agents from outside the curriculum typically develop new growth areas. Few ideas were being developed from within the curriculum, the staff having a culture of expecting marketing opportunities to be developed by a centralised team. In early 2000, a middle manager proposed creating a sports academy, picking up the government steer of developing sporting excellence combined with education. The Principal had an interest in sports development and this allowed the middle manager to raise the issue directly with him, effectively by passing the senior manager and the curriculum structures that 'vetted ideas'.

The timing was auspicious, being the year of the Euro 2000 football competition and the Sydney 2000 Olympics. The Principal promoted the consideration of the proposal, calling for position papers and pushing the debate along where necessary. The front line staff were provided with a small amount of resource to develop the idea. The Academy was set up within six months and 30 students (£90,000 of income) were recruited in September 2000 and it is scheduled to double in size by September 2001. The Principal was conscious that the development of the Football Academy concept might fail and the costs would extend beyond the development time, i.e. it would involve the opportunity cost of ideas that were not taken up in preference to the Academy. Critically, the Principal had to intervene to release management and front line staff to explore the idea, test solutions and develop the business model. The Principal could not guarantee that the 'traditional structures' would consider and deliver the concept, hence the need to intervene.

The Principal had to intervene to provide reassurance to the middle manager to explore the idea, thereby lowering the personal risk element. The junior member of staff working for the middle manager developing the new area was not a permanent post holder. Therefore he was keen to 'prove' that the proposal was both sound and achievable. The Principal felt that the current management model did not promote 'controlled risk taking' and entrepreneurial activity. In late 2000, the Principal started a restructure of the curriculum leadership with the specific aim of 'removing the blocks' to dynamic thinking. The objective was to break the cycle of innovative mediocrity by a step change in the mature organisational structures. Incrementalism alone would not achieve the change in performance levels that the Principal was seeking.

In smaller colleges, especially specialist colleges such as sixth-forms, the principal has a high cognitive awareness of the operating environment, as do most of their senior staff, but this is not shared with middle managers. Typically these staff have low awareness, reflecting their low job mobility, stability of the product/service and location within the 'staff room' rather than 'management' station in the college. The top team in any college therefore has to challenge this 'traditional thinking' by explaining the consequences of external policies on the internal actions of the staff, typically in terms of ramifications upon the student's learning. Principal C argues that the drive for innovation (a metaphor for entrepreneurial endeavour) must come from the top by way of a shared sense of vision and the provision of tools to allow managers to make change work. The change in turn must come from the front line. Course leaders (the most junior level of teaching manager in a college) must imagine change and conceive of doing their work in different ways according to principals A and C. Old areas of work (engineering and A levels in college C) are typified by historical patterns of work and conservative thinking. This is reinforced by the teaching staff's emphasis on unionisation, job contract compliance and a preference for being led by management, backed up by a process of monitoring, compliance and control. In contrast, new areas (basic skills and asylum seekers) are typified by flexible thinking managers, who interpret their employment contracts constructively so as to meet client needs. Such managers seek low levels of management supervision and are prepared to embrace new methods of work.

The three principals concurred that professional staff should have an awareness of the environment and that senior staff must have an excellent 'grip' on the environment, as they often are the guide for other staff. There is a need for good communication skills to share the implications of the environment on the operations of the college, especially when it comes to meditating dynamic ideas against the priorities of the environment. Middle managers need this insight to avoid 'going up blind allies' and to develop their own career opportunities. In college A, many of the teaching managers had reached the zenith of their careers and hence were stagnating, dampening down dynamism. To break this cycle of stagnation and mediocrity, a restructure was completed in early 2001 that introduced new (some external) curriculum managers into new refocused posts. In contrast, innovation is typically led from the centre in sixth form colleges, reflecting the historical style of sixth form colleges, namely the LEA and 'Head' lead, staff follow. It also reflects the SFC sub-sector's relatively stable environment; the product is well defined, the mission is typically clear and staff are long lived and highly experienced in executing their roles. To stimulate 'grass roots' innovation, the driver for idea creation has to be pushed into the core of the college. To achieve this, resources have to be delegated and staff supported. This may take a few years to move people from the comfort zone of 'being led' to 'proposing ideas' and 'taking risks'. The scale of budgets in the sixth form colleges environment is very small, making risk taking difficult. A £20,000 loss in a general FE college is often unnoticed, in a sixth form college it can be dramatic. The provision of Standards Funds by the FEFC and LSC to adopt project work allows risk taking to be externalised outside of the core budget. Change can be tested and tried without the fear of compromising core financial stability of the college.

Goal clarity is achieved by written and verbal methods. Internal communications are very important in multi-site and multi-team colleges. (College A is based on four major and four minor sites over 255 square miles and embraces different types of students). Too much emphasis has been placed in the past on processes, rather than outcomes. Goal clarity is achieved by a mixture of techniques, written and informal in all three colleges. Critically, the top team must understand the mission of the college and in turn be able to articulate it in clear and understandable language to the rest of the staff. Summaries of the mission into bullet points are fine, but the reinforcing of behaviour (i.e. the values embraced in the mission) is more critical. Action is the purpose of colleges, not the writing of policies and procedures. With performance indicators and the new Learning and Skills Council, the political emphasis is on effectiveness, not the process. Excellent teaching which has low impact (in terms of

students taught and/or passing the course) will be hard to defend in the future. Performance indicators are typically too simplistic to describe the work of a sixth form college. Much work has been done on more inclusive indicators in the SFC sub-sector, namely value added, but there are still problems. Where an indicator is not perceived as being credible, its effectiveness as a management tool decreases. Target setting combined with benchmarking is a powerful tool for accountability and performance improvement. The professionalism construct of teachers promotes self-reliance and conservatism, which can present managerial challenges when seeking changes. Performance indicators and benchmarks allow managers to challenge the status quo with delivery staff. The argument is not necessarily about superior performance but 'achieving average (i.e. sector norm) performance'.

The Principal of college C has used the inspection evidence of spring 2001 along with the academic performance data of the last three years as the rational starting point for redefining the mission of the college with respect to A level provision. It is becoming accepted that the college is not a centre of excellence for A level work and that its skills lay elsewhere. The battles go on, but the construct has been acknowledged by the relevant staff that performance mediocrity, irrespective of how good the product/service, is not accepted.

The area of disagreement between the subjects came in the area of risk. All three subjects agreed that the environment was hostile to chief executives, but colleges B and C perceived it no more risky than being chief executive of any other agency in the public sector. College A's leaders (possibly from his support work for 'at risk' principals as part of his role for the Association of Principals of Colleges) had a more negative view. College C's principal argued that risk is not the real issue, as all jobs in life have risk. Cavalier principals are justifiably dismissed, especially as to be sacked, you have to lose control to such an extent that your board (of part-time Governors) is forced to act to overcome their lack of managerial skills. The real issue is stress, as not all colleges are equal. Stress is not a function of size, but of complexity, competition, and cultural intransigence of the college and the strength of your managers to implement change. Sometimes it is like 'pushing lead up a hill'.

8.4.4 Market orientation

Senior and middle managers perceive students as customers but this is not so far shared by the majority of teachers in general or sixth-form colleges. College A's principal cited that his monitoring of student complaints about the curriculum supported this proposition, on the basis that if staff thought about good service delivery to customers, then often the complaint would not have occurred in the majority of cases. He believed that this was the case as the locus of power often rests with the teacher, not the consumer in the educational process. Therefore the teacher does not perceive the consumer as a customer. The new inspection framework challenges this traditional approach by asking teaching teams to address service delivery issues. This will be a shock to some teachers in the near future according to all three interviewees.

Front line teachers are the closest to the market place. Good teachers are aware of changes in their field of work, the nature of student engagement and the reasons why they study. This level of client/industry knowledge can not be replicated at the centre, especially in larger colleges according to principals A and C. Managers need to translate this 'front line' knowledge against the framework of the operating environment, thereby setting the market direction of the college. Where the front line teacher does not engage, they (the teacher) will be less effective and ultimately they may see the marginalisation of their area of work. This was best illustrated by college C's principal, who explained that students are perceived as customers in 'new areas' of the college (basic skills, asylum seekers) and as the consumer of product in older, more traditional areas (A level and Engineering - see vignette 8.1). There is a divide in the way these two groups of staff perceive college marketing to be organised. The former group typically lead the marketing approach, having active and close contact with their students (customers), a rapport of understanding and use organisational learning to drive innovation and product/service adaptation. This group requires a limited amount of specialist support, typically on formal market intelligence issues and interpretation of environment data, however, they still 'own the process'. In contrast the old areas perceive the recruitment of the student as being the responsibility of others, the low levels of student recruitment as being the fault of others and not a function of product quality, design or service delivery.

Students are not perceived as customers by the teaching staff in sixth form colleges in particular. Students are perceived as consumers, reflecting the relative position of student and teacher in the relationship. However, the product is very well defined and it is continuously benchmarked for best practice. Therefore the student experience is typically very good. Responsiveness is typically about product innovation and was reflected in the sixth form principals' citing of product change as examples of innovation in the quantitative research instrument.

Modern teachers and managers should perceive the role of teaching to embrace an understanding of the needs of the student, the customer. Those that describe teaching as 'delivery of a subject' at a 'timetable slot' are demonstrating a naive and restricted definition of their role. The college B (like many colleges whether general or sixth-form) has a culture of long-lived personnel, low staff turnover and a pedigree of traditional academic professional staff. The principal of college B appointment occurred during a period of financial challenges, requiring some small-scale (two) redundancies. A key challenge was how to promote dynamism in a 'static' workforce that has little experience of new ideas, risk-taking and little cash to experiment. Vignette 8.3 illustrates these points:

Vignette 8.3: Market orientation: Developing new orientation behaviours in college B

Sixth form curriculum is relatively well defined, being a combination of GCSEs and A levels. The college's approach was to offer individual learning programmes to students built up from courses, allowing students to study a modular programme based on their needs, rather than the requirements of the curriculum offer. Students are blocked by subjects rather than year groups, offering students flexibility and choice, meeting their diverse client needs.

The college identified an opportunity to expand the college's operating base to deal with the convergence (unit cost reduction) problem. Educationally, the proposal met the needs of an under represented client group by developing the work of a special needs teaching unit as part of the college's core work. This has created client diversification and new unit learning volumes, allowing the college to meet its punitive unit cost reduction targets. The Principal was faced with a significant operational problem in that although there was interest, there were no skills to develop the work within the college. Consequently he created a relatively well paid new post to lead this area of work. The recruitment came from outside the college from a general FE college background. The Principal has supported the new appointment's progress in developing systems across the college to integrate this work. The unit is now well established and is recognised by the college as a core value of the culture.

Inter team working is important, especially in very large colleges such as C's. Organisationally, colleges have to construct organisation and function charts to manage the complexities of a modern college. Some staff seek this structure to provide order and discipline to their work loads, others perceive it as a brake on co-operation, dynamism and interaction between people. The principal observed that wherever these boundaries are placed, 'they are always wrong'. The key issue is to get staff to perceive and operate as though the boundaries are semi permeable and do not prohibit cross boundary working.

8.4.5 Business performance

The principal of college A agreed with the quantitative conclusions and in particular the importance of non-fiscal measures of outputs being used to describe institutional effectiveness (DEA work). The

Principal believed that the importance of culture as a break on the climate of dynamism could well contribute to the unexplained components of the performance model.

The principal of college B (who has an economics background) agreed with the broad quantitative conclusions developed in chapter 7. One key theme was identified of particular importance, namely the weakness of the sector's generic output performance indicators to adequately reflect the social diversity of the students. Value added indicators are in development but are still problematic and the thesis' study confirmed operational difficulties with development of such performance models in the FE sector. This has an implication for the Data Envelopment Analysis modelling. The Principal believed that the importance of culture at college and sector level as a break on the entrepreneurial dynamism could well contribute to the unexplained components of the performance model.

The principal of college C agreed with the quantitative conclusions developed in chapter 7 and in particular the limitations of the approach in terms of culture inhibitors inside the college that makes the development of general explanatory factors at a sector level difficult to achieve. She believed that operational size was a significant variable and could defeat even very strong leaders to make significant changes in short time spans.

8.4.6 The case studies reconciled with Schein's model of cultural change

The three case studies illustrate how three different colleges have responded to new challenges. The colleges are, in common with the other 247 sampled colleges all in the third stage of Schein's life-cycle model (figure 4.4) and the three principals have adopted different strategies suitable for their college's cultural maturity and their own individual management style. All three principals are seeking changes in college culture to meet future orientation needs.

College A's principal relied upon unfreezing myths of operation as set out in vignette 8.2. As Schein comments (1992, p325), organisations mature and develop a set of myths about how they operate. Argyris and Schön (1974 and 1978) describe 'myths' as 'espoused theories' that become established work patterns. In this case, the college's curriculum management had developed a vetting process that effectively screened out 'problem areas', establishing the myth that innovative action has to come from

outside the teaching workforce. A serious shortfall in student recruitment in the previous academic year, coupled with a development opportunity raised by a manager, allowed the principal to explode this myth. The principal believed that the 'underlying motivation' of the middle manager was to 'whistle-blow' on the system of mediocrity that he (the middle manager) had been forced to participate in for a number of years.

College B, a sixth form college, has relied upon changing culture via the infusion of outsiders. Schein (1992, p323) proposed that shared assumptions can be changed by changing the composition of the organisation's dominant groups. This typically starts with the introduction of a new chief executive, which is followed by new appointments. These appointees are not necessarily from outside the firm, but tend to be so. Dyer's studies of this change mechanism (1985 and 1986) found that this adopts a cycle as follows:

- The firm develops a sense of crisis because of declining performance. In this case study, it is the problem of a rapidly declining unit of resource and poor plans to meet the challenge. The previous leader leaves (as he did at college B).
- Confidence is lost in the existing values, beliefs and systems of the firm. The governors identified that there was a problem and sought to recruit a change agent.
- A new external leader is appointed with new beliefs and values. In this case, the appointee was technically internal (having joined a few months earlier as deputy principal), however he had come via a general FE college environment, a fundamentally different culture to that of college B. New staff were appointed to the management structure (see vignette 8.3) to deliver new and innovative programmes.
- Conflict develops between the embedded culture and the new ideas advanced by the leader. The principal and his newly appointed senior team had to make two redundancies from a small academic staff of 50 people. They also diversified into new areas of work.
- If the new leader delivers the change successfully, the new assumptions start to be embedded. The unit costs were reduced, reserves were created and the work was diversified. The Principal and his managers were seen to have successfully delivered

change and these new methods of working have started to be accepted as the new performance norms.

Dyer (1985 and 1986) and Kuanda (1991) comment that the change in 'ownership' of the firm weakens the historical cultural drives of performance. In college B, the appointment of a new principal was accompanied by a large change in the composition of the board of governors. The principal influenced the new governor appointments, although it would be wrong to infer that they are under his control. They are however supportive of his cultural change plans, thereby reinforcing the change programme from the very top of the college. This cultural change is reinforced by the appointment of 'like minded' individuals at the next tiers of management. The appointment of an external special needs manager in 1997 (see vignette 8.3) saw a high achieving, assertive individual bring in radical permanent change, reshaping part of the culture of the hitherto 'conservative' college.

In contrast, the Principal of college C had to rely upon coercive persuasion to challenge out dated thinking as set out in vignette 8.1. In common with Schein's studies (1992, p328), the subject of this challenge by the leader vehemently denies that there is a problem, seeking to displace the blame on to others. After months of pressure, the principal has relied upon published examination results and Inspection findings to 'prove' her point. The objective was to isolate the problem area and escalate discomforting forces to a level whereby the team is forced to address the problem. The principal is retiring in late 2001, but she has created a change momentum that will outlive her. As Schein (1992, p329) comments, the turnaround manager has prevented team members from developing a strategy of waiting until she has retired.

In summary the principals have described a dominant style of unfreezing cultural intransigence in their colleges. As observed by Schein (1992, p332), these styles are complimentary. Typically the myth exploding of used by college A is useful to initially unfreeze the blocks to change. Once achieved, a different mechanism is needed to move forward change as represented by the examples of colleges B and C. The conclusions for management are clear. As advocated by Schein, Drucker (1989) and Casson (1995), the leader starts the change process, a process that is difficult, threatening to many staff and is subject to risk to both the leader and the firm. To obtain effective and sustained change, the leader must provide enough psychological safety to promote risk taking by employees and be

prepared to adapt the change to learning points that are developed as change occurs. As Schein comments, (1992, p333) clarity is not always important, especially in the early stages of change, however it is important that a pathway is developed and organisational learning occurs.

8.5 Limitations and conclusions

The interview approach has limitations. Elite interviewing by definition causes problems with data validation as the researcher has to rely upon alternative techniques to demonstrate robustness of the data. To analyse the data, the analysis framework of Strauss and Corbin (1990) has been used. This method has its critics, especially from those who argue that such frameworks desensitise the interview's language and context, ignoring the subtleties of the discourse (Mischler, 1991, p260). Having acknowledged this critique, the interviews used for thesis study are confirmatory and are used to explore the boundaries of the quantitative research instrument. As such the qualitative case studies have limitations, but none the less are valid for this purpose.

The case studies have demonstrated that the organisational size, structure and cultural aspects of their workforces are important factors influencing institutional performance. These factors have only been addressed tangentially by the traditional quantitative research instrument, the questionnaire. In summary the case studies have reinforced the validity of the quantitative findings at the firm level and have confirmed that culture and climate are key factors in the determination of individual college performance. These factors probably substantially explain the 49% of business performance that is not accounted for by the LISREL model of figures 7.7 and 7.8. The further exploration of these factors goes beyond the scope of this thesis, offering an area for future research.

9 Summary and Conclusions

9.1 Introduction

This final chapter draws the thesis to a close, reiterating the main findings and conclusions. It reflects upon the research methodology, its advantages and limitations. The chapter is organised into four sections:

1. conclusions and observations
2. research process and methodology; reflections and critique
3. future research opportunities, and
4. concluding remarks and final observations

9.2 Conclusions and observations

This thesis has examined and explored the relationship between entrepreneurship, market orientation and business performance in the English Further Education sector. The conclusions are presented in three thematic groupings, namely:

1. policy based conclusions concerning the organisation at the sector level,
2. managerial based conclusions concerning the organisation at the institution level, and
3. organisational behavioural conclusions concerning the conduct of the individual leader.

9.2.1 Policy issues and conclusions at the sector (industry) level

The background to the paradigm shifts in political control and managerial philosophy of the sector were outlined in chapters 1 and 2, and were represented graphically in figure 1.1. In summary, the political emphasis was the desire of the Central State to affect the political orientation of the sector to meet its policy aims. To obtain the organisational change necessary to meet this policy aim, colleges needed to be removed from the effective political control of local government and the professional teaching unions as critiqued by the labour Secretary of State for Education, Shirley Williams in the 1970's (Ball, 1990, p105). This change was created by the development of four policy actions:

- the removal of colleges from direct local government (LEA) to direct central government control between 1992 and 2001,
- the removal of the safety net of the LEA, making colleges financially independent and more critically exposed to the consequence of financial business risks, including business failure,
- creation of financial instability of the sector by increasing student volumes by 35% and decreasing the average cost per student by 25% reduction of unit costs over a period of six years. This budget resource turbulence included the removal of national pay bargaining mediated by the Central State, resulting in significant staff re-structuring, college mergers and, at times, unregulated competition in an effort at the institution level to 'balance the books', and
- the development of market responsiveness that embraces increased customer choice and service consumption satisfaction, awareness of the importance of organisational mission and role, together with competitive bidding for increasingly significant proportions of college income.

After ten years of central state management, has the state improved competitiveness and responsiveness of the FE sector vis-à-vis its policy aims?

The FE sector has been transformed vis-à-vis the start point of 1992. There are:

- 10% fewer individual colleges,
- teaching 35% more students,
- at 25% less funding per capita than in 1992.
- The colleges are inspected on a regular basis,
- have their educational performance published in league tables,
- are made to appoint their senior staff from national advertisements,
- controlled by detailed instruction by a central government bureaucracy (the FEFC, now LSC) and
- are audited on a regular basis.

The thesis identified that the 420 corporations which composed the FE college sector in August 2000 were actually clustered in three distinct sub-populations, namely:

- 284 general and tertiary colleges,
- 103 sixth form colleges, and
- 33 subject specialist colleges.

The different client groups' foci imply different cultures and operational climates. However all 420 colleges share a similar governance framework of control operated by the Further Education Funding Council for England in the period 1993-2001.

The thesis demonstrated that at the sub-sector level, sixth form colleges have consistently superior market orientation than their general FE college peers. Interestingly, specialist colleges that are product homogenous do not display higher or lower levels of market orientation than their general FE peers, implying that it is not product specialisation, but client type specialisation that generates higher levels of market orientation. For the new Learning & Skills Council (which replaced the FEFC in 2001), this is an interesting finding, as the current policy (in 2001/02) is for 50% of general FE colleges to generate a subject specialism in a vocational area by the year 2004. The findings of this thesis would suggest that this development of a vocational specialism as opposed to client group specialism may not generate superior market orientation and hence improved business performance per se amongst general FE colleges.

The rationalisation of colleges into large business units does not create superior business performance in terms of curriculum results or inspection grades. Indeed, larger colleges are demonstrated by this thesis to have a poorer market (i.e. client) orientation than their smaller FE college peers. This is an interesting finding as the implied *modus operandi* of the FEFC as proposed in their 2000 report, 'Mergers in the Further Education Sector', was that college mergers offered improved business performance due to the rationalisation of resources. As explored as part of the Data Envelopment Analysis work (figures 7.5 and 7.6), small colleges (circa £5m income in 1998 prices) have superior DEA scores to medium (circa £10million income) and large (circa £20m income) colleges. In turn, very large colleges (income in excess of £29m in 1998 prices) have significantly lower DEA performance

scores than their smaller peers. From the case studies, the principal of the very large college (college C) compared her role to that of being the chief education officer of the local education officer, rather than the academic and business leader of an educational institution. In contrast college B's principal (medium sized) cited his ability to be able to still intervene at micro level as necessary to free up cultural blocks, something he believed his large college peers were unable to do.

The development of performance output measures to define college effectiveness requires considerable development. The DEA measures are theoretically weak, in that the available output measures that describe the outputs of FE colleges are very limited, failing to reflect the different aspects of the college's outputs. As already considered, the subtle complexities of the learner are not described adequately by the deprivation factor used by the FEFC and the output measures, namely learning completion rates etc, do not adequately measure the distance travelled by a learner. Sixth form colleges have high completion and examination success rates in general than their general FE college peers, principally as the academic grade profile of the average sixth form student is significantly superior to that of a general FE college, (Kennedy 1997). Traditional output measures are geared towards academic qualifications, whereas adult learning can be judged to be a success if the learner leaves a programme early and obtains a job due to the training implied in the learning activity. In summary, comparing the outputs of a sixth form college and a general FE college is potentially flawed. To make DEA work, the inputs and outputs of the FE service would need to be more adequately described and then measured. Such DEA information should include client (i.e. learner) deprivation factors, non-learning outcomes, (e.g. jobs obtained) and prior education achievement (on entry to a study programme) vis-à-vis the educational level on exit by the learner, effectively the 'educational distance travelled'.

In summary, the central state has destabilised the power base of the local political structures and college staff unions to dictate policy, but there is a question about how effective the further education sector is managed at a local level to meet the imperatives of the central state. As commented by Neave (1998, p11-12), the Evaluation State exercises control whilst leaving the operating detail to the periphery. The Learning & Skills Council was created in 2001 and is effectively an extension of the Department for Education & Skills. The national LSC has a massive budget and span of responsibility, controlling all post age 16, sub-degree state funding, with resources in excess of £6 billion in 2002/03.

The LSC operates at shire and city level via 45 local offices. These local LSC offices have a staff of circa 100 civil servants who 'micro mange' providers, the new euphemism for FE colleges, state school sixth forms and private sector training providers. The LSC arm of the central state with its micro-interventionist local branch structure goes far beyond this political model of control established by the conservative governments of the 1980's. This policy development of micro-intervention control in terms of its effectiveness and the effective acceptance of political responsibility for local actions orchestrated by a national agency represents an area for future research.

9.2.2 Institutional organisational issues and conclusions

The thesis has explored the causal model of business performance in terms of entrepreneurial leadership and market orientation. As set out in table 7.5, three factors are important at the institution level in terms of promoting enhanced performance, namely:

1. Entrepreneurial leadership in terms of providing goal clarity and the setting of measurable outcomes, specifically:
 - Management quickly identifying opportunities,
 - Management being able to interpret issues quickly and take decisions,
 - Systems inside the college allow opportunities to be identified, and
 - College goals are understood and tracked.
2. Market orientation in terms of dissemination market knowledge/intelligence within the college, specifically:
 - Regular contact between teams within the college, including formal and informal sharing of information and knowledge about students, customers and the operating environment,
 - Delivery teams engage in market intelligence gathering and information sharing, and
 - Specialist marketing teams regularly share information with delivery teams.
3. Market orientation responsiveness to the needs of customers, specially:
 - Swift responses to the actions of competitors or other providers actions,
 - Readiness to adapt the product to meet the needs of the customer,
 - Responsiveness to criticisms by customers and act in a positive manner to resolve such issues, and

- Plans driven by customer needs, rather than the desires and aspirations of the college.

The generation of market intelligence is an issue for specialist colleges and sixth form colleges, but is not a critical aspect of market orientation for general FE colleges.

General FE and specialist colleges have identified the importance of promoting inclusive internal approaches to the market orientation as being important. This managerial dimension includes responsiveness to direct competitive threats, co-ordination actions to meet new demands and initiatives, ability to implement marketing plans and critically, the importance of teachers perceiving themselves as part of the marketing role of the college. Interestingly this managerial dimension, inclusive internal approach is not important per se for sixth form colleges. Many sixth form colleges have roots in the grammar school education system of the 1950s and 1960s and sixth form colleges have a strong brand image in the minds of 16-19 years olds for academic study. In contrast, general FE colleges have confused identities in the minds of many consumers.

The issue of the roles of the funding agencies vis-à-vis the business of education in the FE college was identified by the survey respondents and case studies as being a key issue to be addressed. The obsession with short-term goals and solvency was highlighted as a key distraction by all three case study principals. This obsession with short-term goals can inhibit controlled risk taking, with managers pursuing low risks policies to avoid the fear of failure. All three case study principals cited cultural inhibitions to experiment for fear of failure as a debilitating break on innovation and developments inside their colleges. The solution was cited as being able to create the 'safe operating zone' inside the college, buffered from 'retribution' as a way forward for traditionally cautious delivery teams. As surmised by Hambrick (1995), the typical cautionary philosophy of the top team is a brake on innovation and principals have to actively manage the conservatism of actions of their top team.

The key conclusions for colleges as proposed by this thesis are:

- Avoid being too big a college. The bigger the college, the less influential the leader is and the more bureaucratic the systems become and typically the poorer the financial and education performance of the college,

- Very large colleges have poorer efficiency and effectiveness than their smaller peers
- Goal clarity and swift speed of interpreting and making decisions enhance leadership issues within the college,
- The generation of market intelligence is important for specialist and sixth form colleges, but not necessarily so important for general FE colleges,
- The internal dissemination and in turn, the responsiveness to that market knowledge is important for the effective development of market orientation,
- Marketing is a whole college affair in the more successful colleges. Teaching teams perceive that they have a role in the marketing of the college and the sharing of information about their clients needs,
- The inherent conservatism of top teams stifles innovation inside colleges and encourages other managers to act cautiously, although long lived senior teams are not less entrepreneurial than their shorter lived peers and
- Market orientation of the college is not a function of cost differentials, client deprivation or location in an urban or rural area. This implies that responsiveness is a function of the staff employed by the college, not the non-people based factors that the college inherits.

9.2.3 Principal level issues and conclusions

The entrepreneurship literature in chapter 2 explored the definition of entrepreneurship and in particular trait theory. The thesis has demonstrated that the entrepreneurial leadership scores on the English FE sector are independent of age, gender and educational background, supporting the contention of Casson and Drucker that many leadership traits are innate to an individual, rather than age, social class, or gender. An unexpected finding was that of long lived principals being more entrepreneurial than their more recently appointed peers (figure 8.2). This could imply that entrepreneurial leadership is as much about 'knowing your patch' as described by case study A as it is about innate qualities. With familiarity of the political environment as advocated by the principal in case study B, comes the confidence to take risks as you know how politically your board of governors will respond to 'failure'. New principals may be very unfamiliar with the political will of their board of governors and hence exhibit the lowest levels of entrepreneurial leadership as suggested by the results set out in figure 8.2. In turn, once that rapport develops and mutual trust is created, the

principal is more comfortable with risk taking and hence provides an environment for their managers to experiment within. From a skill development aspect, this raises issues about the effectiveness of 'leadership development programmes' in the sector. With only 420 colleges, in contrast to 20,000+ secondary, junior and primary schools, the ability to develop a universal skill development programme for principals has to be open to challenge. This aspect of skill development of leaders of FE colleges is an area of future research.

The issues which principals may wish to consider when leading their college with the aim of improving business performance are as follows:

- Personal leadership style is important, but strong charismatic leadership is not required per se, to be a successful college leader,
- Using performance indicators to motivate others is not an effective style per se. Tracking goals and progress to targets is important but PIs in themselves are not,
- Managers, especially senior staff, are motivated by many issues not to do with personal financial reward. As commented by one questionnaire responder, 'any manager who is motivated by money left years ago',
- Goal clarity is very important, especially in complex and fast changing operating environments,
- Having strong but flexible systems that allows new ideas to be promoted are important, as is the delegated authority to implement new ideas, within reason,
- It is important to view the consumer of the service as a customer that is becoming increasingly sophisticated and discerning over their needs. A failure of delivery teams to acknowledge and respond to the rise in customer (learner) sovereignty will create business problems for that team in the medium term, and
- Cultural change in the sector is a function of the maturity of the organisation as proposed by Schein (1992, p304) in figure 4.1. The colleges in the FE sector in general are at different states of development and this will inevitably apply within an individual college as proposed in case study C. Therefore different techniques may well be needed for different parts of the same college.

One of the original group of antecedents to the performance model proposed in figure 5.1 was the external environment moderator. In this study, no reliable scales were developed to codify and measure this dimension of entrepreneurial leadership. The case study work indicates that 'risk' is an issue and the failure to develop a scale could well be more to do with 'asking the wrong questions' than 'not being able to measure' the dimension. In conclusion, the development of robust and measurable risk dimensions of entrepreneurship is a future area for research.

9.2.4 The thesis' contribution to knowledge

The thesis is concerned with business performance and the drivers of differential institutional performance. This concern needs to be put into the political context that has driven the above changes. The political rationale for the effective privatisation of the FE sector in 1992 was the political right's desire to see the hitherto stagnant and unresponsive LEA organised colleges respond to the rigours of the market place, (Kedney and Jeans, 1993, p345). Against this political rationale for college incorporation, the thesis has explored the impact of two tenets of faith of the political right on the performance of former public sector agencies, namely that 'independence' will:

- improve the client (i.e. market) orientation of public sector institutions by making their state funding responsive to market signals, in common with USA experiences (Hebert and Callender, 1997, p23), and
- removal of the 'dead hand' of planning by local government (LEA) and change the business philosophy from administration to managerialism (Major, 1989), providing public sector managers with the scope to be innovative and entrepreneurial.

To explore the impact of these two dimensions on business performance, market orientation and entrepreneurial leadership, a quantitative approach has been used. The exploratory research question is constructed on the premise that colleges with higher levels of market orientation and entrepreneurial leadership will in turn have superior business performance. This performance relationship is set out in figures 4.1 and 4.2. There is some evidence that public sector firms are becoming client focused (Graham, 1995), but there is no empirical evidence to date of this occurring in the English FE sector.

The market orientation construct has become well established in the last ten years. However there are numerous critics of the construct in the philosophical differences between marketing theorists and culture theorists. These differences are summarised in table 8.1. The implications arising from these paradoxical stances on market orientated culture for the thesis are as follows:

1. Coherent advances in market orientation applications should include a broad understanding of the organisational culture theory, (Deshpande and Webster, 1989, p15).
2. Adapt collaborative approaches between market and cultural research, and
3. Use an inductive approach to develop conceptually sound, yet empirically grounded conceptualisations of market oriented culture (Harris and Ogbonna, 1999, p191).

Against this framework, the thesis has adopted the following methodological approach:

1. A literature review of the qualitative dimensions of entrepreneurship is developed and translated for the English FE environment, (chapter 2).
2. A literature review of the predominantly quantitative dimensions of market orientation is developed with an emphasis on cultural dimensions, (chapter 3).
3. A conceptual framework of the interactions between entrepreneurship and market orientation is developed in chapter 4. The role of culture and climate is explored and the caveats of generalising findings are acknowledged in chapter 5, which also then develops the conceptualised model to be tested.
4. A quantitative research approach is adopted as the thesis is exploring the political rationale that 'freeing' the FE sector and exposing it to market focus results in improved business performance. The thesis is exploring broad aggregates at the 'industry' by constituent firms. The thesis is not looking at operational issues at firm level that can then be aggregated upwards to the sectoral level. The research instrument is constructed in chapter 6 from the propositions developed in chapter 5. The results of the survey are evaluated in chapter 7.
5. The quantitative findings are critiqued in chapter 8. The raised issues are then reviewed at a firm level by the use of qualitative case study to cross-verify that the generalised conclusions

at the sectoral level from the quantitative work are essentially valid at the individual firm level.

Chapter 8 explores the qualitative methodology and evaluates the case study results.

This thesis concludes that colleges at the generic FE 'industry' (sector) level do not have homogenous business performance. The performance is different for each of the three sub-populations, as are the main drivers of that performance. In summary, there is a positive relationship between entrepreneurship and market orientation and, in turn, business performance for all three sub-groups. Type and size of college, financial instability and client social factors moderate this relationship to varying degrees.

The thesis has not measured different cultural approaches between individual colleges, nor has it sought to prescribe a solution for poorer performing colleges. The three case studies have highlighted the general acceptance of the quantitative findings of this study by college principals, together with a consensus that firm cultures at the local level are significant determinants of business performance - factors that are not directly addressed by the research instrument. The study concludes that the senior staff led processes of market orientation and a 'can-do' entrepreneurial leadership approach alone will not be enough for a college to maximise its full potential. The college will need to address the culture adopted by its personnel, together with the operational climate that is deployed. Although the personal risk constructs were quantitatively unproven from a statistical perspective, 10% of the sample (i.e. 6% of the entire sector) cited personal risk as a break on innovation.

The principal contribution that this thesis makes to the development of entrepreneurship and market orientation theory is its focus on a significant part of the UK public sector, namely English Further Education. Employing some 250,000 people, spending £4 billion per annum and educating 3.75 million students, the scale of the sector makes it important from a social policy perspective. Previous work has tended to focus on the private sector application of market orientation, adopted a narrow perspective of organisational culture and marginalised the role of public sector entrepreneurship. This study has adopted a multi-disciplinary approach using a statistically important sample data set of colleges at the sector level, and then triangulates the results at the firm level by qualitative elite subject interviews of case study colleges.

The study has clarified the transferability of the market orientation construct to the UK public sector, examined the nature of entrepreneurial leadership in determining the culture of the firm and used three methods of data collection: survey, document review and case study. Previous studies have tended to be confined to the private sector or, when applied to public sector, been limited in the range of data collection techniques. The following section offers a review and critique of the research methodology employed in this study.

9.3 Research process and methodology: Reflections and critique

The thesis study was conducted in the period 1998 – 2001. During this time the FEFC has been abolished and replaced by a larger, more inclusive and powerful agency, the centrally organised Learning and Skills Council. The operational emphasis has changed from unit cost reduction to raising standards with cost control. During the period of study, 20 colleges (5%) disappeared as independent corporations (by way of merger), four high profile scandals occurred and the business failure of the largest FE college in Europe is resulting in its break-up into four separate colleges. The area of study is dynamic and presented numerous challenges at each stage of the thesis. The sector continues to change and evolve, as does the body of academic knowledge covering market orientation and entrepreneurship theory.

9.3.1 Research methodology issues

The research methodology employed was a significant full-scale quantitative survey with a small-scale qualitative follow up. As proposed earlier, the thesis has sought to evaluate the contention that incorporation of FE colleges improved their entrepreneurial innovation and market orientation, thereby increasing business performance. Market orientation studies at the industry level lend themselves to quantitative analysis techniques. As critiqued earlier by Knight et al (1994) and Harris and Ogbonna (1999), culture theory cannot be effectively investigated by 'broad brush' quantitative techniques. This study has sought to address this issue by reviewing the qualitative literature of entrepreneurial leadership and derive a quantitative measurement framework. In itself, this approach is new in the UK public sector and hence subject to critique. However, the thesis is seeking to measure if the proposed contentions are positively related to business performance, not if the colleges have the appropriate

culture per se for market orientation and entrepreneurial leadership. The strengths of this approach are summarised as follows:

- use of qualitative literature studies to derive entrepreneurial leadership dimensions, combined with panel review of the research instrument to ensure content and construct validity,
- generalisability of findings achieved by statistical sampling procedures. This allowing confidence in the representativeness of the sample and hence, the ability to make broader inferences (Silverman, 2000, p102),
- the use of externally produced performance data and its correlation with proposed performance drivers,
- isolation and identification of causal and dependent variables,
- use of data envelopment analysis to analyse non-fiscal performance measures. This analysis was then regressed using polynomial algebraic techniques,
- the use of structured linear equations (LISREL) to move beyond the epistemologically weak ordinary least squares (OLS) multiple regression technique, and
- the use of three qualitative case studies, to cross check outcomes 'in situ', ie to revalidate content validity.

There are four key weaknesses of this methodological approach, namely:

1. The adjusted r^2 in the causal model is low, in common with other market orientation studies. This implies that the explanation aspect of the model proposed in figure 5.1 is low, with other unknown variables contributing significantly to the causal model. In summary, the reliability of the causal model is low in absolute terms, but high relative to other market orientation studies.
2. The quantitative approach oversimplifies the cultural aspects at firm (i.e. college) level. The low r^2 implies that firm level factors, i.e. culture, is important, as are extra-firm factors, i.e. firm size, location etc, which already have been moderated for in the LISREL model.

3. The use of the measure of client deprivation availability to the study over simplifies the complexity of consumer (student) background. As financial business performance is as much a function of student ability and hence their academic achievements as it is of managerial / teacher competence, this issue needs to be addressed. However, the study has not been able to address client diversity as there is only one reliable measure for analysis, namely the FEFC deprivation weighting, which is publicly available. However the measure is only grouped into four broad categories. This measure is acknowledged by educational theorists as being both too simplistic to accurately calibrate the 'complexity' of a key input to colleges, namely the student population (Kennedy, 1997).
4. The cause and effect cannot necessarily be demonstrated. The study is based on self-reported data and is cross sectional in nature at one point in time. This is the first study of the constructs in FE and was conducted in summer 2000. The performance data relates to the period 1997-1999. Therefore the study has attempted to measure the existing underlying cultural and climate dimensions that have been in use during the period to summer 2000.

These shortcomings can only be addressed by the use of a more detailed investigation of firm level issues using qualitative techniques coupled with longitudinal studies. In addition, student issues will need to be considered as the current measures are inadequate to evaluate this complex input to the performance of colleges. Finally, a longitudinal study would be necessary to ensure that the results of this study are consistent over time.

9.3.2 Research study process issues

The response rate of 59.5%, 250 colleges out of a population of 420, is very good. The responding sample is judged to be representative of the underlying population, as per table 7.1. The response rates are comparable with the private sector survey response rates obtained by Narver and Slater (1990) of 81% and Deng and Dart (1994) of 49.6%. The response rate exceeds the UK charity sector response rate of 29% achieved by Balabanis et al (1997). The 60% to 40% split between the respective waves of responses is in line with the prediction made by Cohen et al (2000, p263). Due to the long lead-time in generating the requests for information, a second follow up letter was not produced, as this would have been too close to the Christmas period and would have breached the

promise of providing feedback in late January 2001. In addition, the second request generated ten letters (2.4% of the total population in addition to the 59.5% of useable responses) from Principals who declined to participate. The survey generated a high response rate and a low no-answer rate of 0.74% for the following reasons.

1. Good questionnaire presentation to named individuals on quality paper, in white C3 envelopes with postage paid (freepost) return envelopes.
2. Questionnaires were sent from the University Centre for Innovation under the name of the Centre's Director. The personalised letter was topical and appealed to the altruism of the individual. Follow up letters, especially for sixth form college (SFC) principals, picked up emerging topical issues of Ofsted area wide inspections (the first three reports were published during the summer of 2000) and acknowledged that the questionnaire's language may be less familiar to SFC Principals.
3. The questionnaire was 'long' in the sense that it asked a lot of questions, but it was relatively quick to complete. Sophisticated responders expect the subject matter to be dealt with in a thorough manner and not by short 'trivial' questionnaires.
4. Guarantee of confidentiality and confirmation that the University could identify the individuals, but that the institute's director would not breach this confidentiality. Only summated results would be published that could not identify individuals or their colleges.
5. The offer of aggregated feedback of averaged results to the responders in January 2001.

The covering letter made it clear that the work was being undertaken by a post graduate doctoral researcher on behalf of the institute as part of a DBA thesis. Principals that made telephone or written enquiries, were referred to the researcher by the director's personal assistant. Four such referrals were made and all four Principals subsequently participated in the survey. No incentives were used as it was judged during the pilot phase that their use would be perceived negatively by the subjects.

The 'other comments' box contained few criticism of the questionnaire, other than sixth form college (SFC) principals commenting that they found the use of 'private sector' language to describe their work an anachronism with the philosophy that underpins their work. One SFC principal even commented

that the instrument was contextually a 'dire questionnaire', but none the less completed the survey. Two SFC principals commented that students are not customers and that other colleges are not competitors but alternative providers. However they acknowledged that they were still able to answer the questionnaire objectively. These comments suggest that the responders are sufficiently experienced and sophisticated to overcome interpretation problems. Therefore the probability of misstated answers due to comprehension problems is low.

The pre-questionnaire pilot phase was a limited two-college test and involved other senior managers to cross check the questionnaire for content and construct validity. This approach was necessary as the whole population of colleges is small (420) and a more qualitative review of the questionnaire was judged to be more effective than the quantitative piloting of say 30 colleges. A small-scale pilot survey would have caused sampling problems as the pilot sample would then have to be excluded from the mainstream survey due to the unwillingness of the responder to participate in the second, main survey. This would compromise the final sample size. In conclusion, the survey process was effective and produced good data for quantitative analysis.

The cases selected for study were chosen to reflect the parameters identified by the quantitative analysis, in line with the typology technique proposed by Stake (1994, p243). The quantitative conclusions indicate that there are differential performances based on institutional type and relative college size. Therefore college cases were selected as follows:

- Large general FE College
- Medium sized general FE College
- Sixth form college

A specialist institution was not selected for review as the dominant college type is agricultural and the Foot and Mouth Disease (FMD) epidemic of early 2001 hit these colleges. The qualitative technique employed was semi-structured interviews. The exploratory interviews were heuristic, seeking to develop the researcher's understanding of the relevancy of the quantitative findings developed at sectoral level to the college at the individual firm level. In summary, the selection technique is valid for ex-post follow up of the quantitative results.

The selection of elite interviewing as the qualitative technique is subject to critique on the basis of triangulation of data. In this study, triangulation was achieved using the FEFC Inspection report and the earlier quantitative research instrument. The case studies demonstrated that the generalisation of individual cases into a quantitative questionnaire will 'lost' the richness of individual data, however the case studies did confirm that the key thrusts of entrepreneurial and market orientation culture have been explored in the questionnaire. The richness lost in creating generalised questions is best illustrated by the relatively low r^2 LISREL variable, which implies that performance is a function of other variables or variables that have been reviewed as part of the thesis but not explored in enough detail. This low r^2 factor from the quantitative data analysis is not untypical of social science studies.

9.4 Future research opportunities

This research study has focused on the colleges that make up the English FE sector. There are a number of avenues for further research opportunities as follows:

1. qualitative study of the sector to identify the nature of culture and climate required to improve business performance, specifically the policies and strategies that have the greatest operational impact,
2. longitudinal quantitative extension study to measure the cause and effect aspects of market orientation and entrepreneurial leadership on FE college business performance, over say a two to three year period,
3. extension of the study within the education public sector to embrace higher education and compulsory schooling (i.e. pre-16).
4. transfer of the study to other parts of the public sector, e.g. NHS trusts, council services,
5. targeted development of the quantitative scales relating to entrepreneurship by a more detailed, qualitative grounded theory approach,

6. exploration of the risk inhibitor constructs to determine whether the propositions developed in section 6.3.2 are either incomplete or if the constructs are not valid. This will typically require a qualitative grounded theory development approach, and
7. exploration of gender study with the increasing feminisation of English FE college leadership.
8. Development of input and output performance measures to allow effective data envelopment analysis (DEA) to occur.

The data sets developed from this study will provide a useful reference set for comparative purposes.

9.5 Concluding remarks and final observations

This thesis is the research product of the Doctoral in Business Administration research degree, rather than the hitherto more common Doctor of Philosophy research degree. This 'practitioners doctoral' is more applied in nature than its traditional peer and hence is a pertinent research focus for both the researcher and the subject matter. The challenge for business leaders, (Principals, Governors and senior staff) is improving business performance, developing the college's orientation and securing fiscal stability. The removal of the traditional safety net of the Local Education Authority has compelled college leaders to review their roles.

This study has explored the impact of two important managerial science themes, market orientation and entrepreneurship on business performance. The thesis clearly addresses these two constructs, providing important knowledge and data sets to the academic understanding in these fields of study. The introduction identified a shortfall in research in this strategically important public service area, and this study has provided new knowledge and understanding about the sector. The magnitude of the data set, 60% of the total population, speaks volumes. The study is certainly not exhaustive, providing further questions and themes that need pursuing. Some of these areas have been set out in the previous section.

A final point concerns the first citation in the introduction by a Conservative Secretary of State for Education, Kenneth Baker (1989). He described the sector as the Cinderella service, having low

profile, low comprehension and low political standing in the eyes of the public and policy makers. Incorporation in 1992 has certainly raised the profile, but not necessarily for the right reasons. Spectacular financial scandals at Cricklade, Halton and Bilston Colleges, together with the business failure of the largest FE college, Sheffield in 2000, in the home constituency of the first Labour Secretary of State for Education for 18 years, David Blunkett, has done the sector few favours. Based on such 'public information', casual observers could be forgiven for thinking that the sector was led by ineffective managers and governed by weak governors. This would be unfair.

The response rate to the thesis' questionnaire and the volunteering of time by review panels and the college case study demonstrates a commitment by Principals to competent, imaginative, efficient and effective management. Most Principals have entered the sector via various routes, not seeking a career per se in FE management. The fiscal rewards are good, but not spectacular, whereas the risk of being 'fired' is on par with high-risk private sector firms. The FE sector is economically important and the positive approach of college leaders to this study offers enormous potential for future research, especially research that has an applied dimension that will improve the effectiveness of college leadership. This challenge is relevant to both academic researchers and the new funding agency, the Learning and Skills Council for England.

Final thought

"Water shapes its course according to the nature of the ground over which it flows; the soldier works out his victory in relation to the foe whom he is facing.

Thus we may know that there are five essentials for victory:

- 1. He will win who knows when to fight and when not to fight.**
- 2. He will win who knows how to handle both superior and inferior forces.**
- 3. He will win whose army is animated by the same spirit throughout all its ranks.**
- 4. He will win who, prepared himself, waits to take the enemy unprepared.**
- 5. He will win who has military capacity and is not interfered with by the sovereign.**

If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

**Sun Tzu (circa 400 BC) on the Art of War
Translated by Y Shihing and edited by Han-Chang (1990)**

Appendix 1: Quantitative Questionnaire and Covering Letters

College Principals: FE/VIth

lix.mbjf@nottingham.ac.uk

26th July 2000

Common Initial covering letter
to all 420 surveyed principals
26 July 2000

<Principal>
<College Name>
<Line 1>
<Line 2>
<Line 3>
<Post Code>



Dear <Title/Surname>

Survey of Principals of Further Education and Sixth Form Colleges Attitudes and opinions on Leadership, Market Orientation and Risk

I am writing to request your help in collecting information on the views of College Principals to the operating environment faced by English FE and Sixth Form Colleges. As you are more than aware, FE and Sixth Form Colleges are key players under the new LSC arrangements, the delivery of curriculum 2000 and the Connexions strategy. Despite these important roles in the delivery of government policy, relatively little is known about the role of leadership and management of Colleges outside the FEFC sector.

A postgraduate doctoral researcher under my supervision is conducting this research. We are collecting information on the views and opinions of Principals on the role of entrepreneurship, market orientation and government regulation in the determination of leadership styles and actions. This is a national survey, the confidential to the University's *Institute for Enterprise and Innovation*. Only aggregated information will be published which ensures that no individual or college can be identified.

The questionnaire should take approximately 15-20 minutes to complete. In the era of benchmarking in public services, we offer a feedback service for those completing the questionnaire. As there are no correct answers, the feedback will provide a confidential reference point of your peers' perspectives vis-à-vis your own. If you provide us with your email address, we will send you a copy of the national average values for comparison.

Will you please send the completed questionnaires back to the above address in the enclosed FREEPOST envelope by 30 September 2000. We suggest you retain a photocopy for reference and comparison to the feedback data that we will send you in January 2001.

Finally, thank you for your time in helping us to collate the first national data set of Principal's viewpoints in this field. For further information on the research, please contact the above email address.

Yours sincerely,

Kind Regards,

Professor Martin Binks
Director: Institute for Enterprise and Innovation

Enc.

Principals English FE Colleges

lix.mbjf@nottingham.ac.uk

Friday 3 November 2000

First follow up letter to general and
specialist FE colleges on headed paper
3 November 2000



<Principal>
<College Name>
<Line 1>
<Line 2>
<Line 3>
<Post Code>

Dear <Title/Surname>

FE/Tertiary/Specialist College Principals Survey

I wrote to you in late July about participating in the above survey. My records show that I do not appear to have had a response? Since writing to you in the summer, much has happened, making the timing of the survey of Principals more auspicious. No doubt you will have read with interest the appointment of Sir William Stubbs of the QCA to review the 16-19 provision in Lambeth post the Ofsted area wide inspection. You will also have noted the domination of Local LSC Executive Director appointments by people with a non FE sector background? As you are more than aware, FE colleges are key players in the new LSC with the Government's commitment to raising standards, curriculum 2000, widening participation and the delivery of workforce skills. Despite these important roles in the delivery of government policy, relatively little is known about the role of leadership and management of FE/Tertiary colleges at a policy level within the DfEE or potentially in the new LSC.

This national research survey is being conducted by a post graduate doctoral researcher under my supervision and the response rates have been very high amongst the FE Principals in particular. However, I would like to include the views of <college name>. Those responding to date have been able to complete the questionnaire within 15-20 minutes. This survey is the first of its kind to be conducted by an agency independent of the DfEE or FEFC. Your views are absolutely confidential to the University's *Institute for Enterprise and Innovation*. Only aggregated information will be published, ensuring that no individual or college can be identified.

If you provide us with your email address, we will send you a copy of the national mean responses for comparison with your own views. Please note there are no correct answers, therefore the feedback will provide a confidential reference point of your peers' perspectives vis-à-vis your own. Will you please send the completed questionnaire back to the above address in the enclosed FREEPOST envelope by **Monday 27 November 2000**? We suggest you retain a photocopy for reference and comparison to the feedback data that we will send you in January 2001 and cross referencing to the Principals INSET programme information.

Finally, thank you for your time in helping us to collate the first national data set of FE/tertiary college Principal's viewpoints in this field of work.

Yours sincerely,

Kind Regards,

Professor Martin Binks
Director: Institute for Enterprise and Innovation

Enc.

Principals English SFC Colleges

lix.mbjf@nottingham.ac.uk

Friday 3 November 2000

First follow up letter to sixth form
colleges on headed paper
3 November 2000



<Principal>
<College Name>
<Line 1>
<Line 2>
<Line 3>
<Post Code>

Dear <Title/Surname>

Sixth Form College Principals Survey

I wrote to you in late July about participating in the above survey. My records show that I do not appear to have had a response from your college? Since writing to you in the summer, much has happened, making the timing of the survey of Principals more auspicious. No doubt you will have read with interest the appointment of Sir William Stubbs of the QCA to review the 16-19 provision in Lambeth following the Ofsted area wide inspection. You will also have noted the domination of Local LSC Executive Director appointments by people with a training rather than a sixth form education background? As you are more than aware, sixth form colleges are key players in the new LSC with the Government's commitment to raising standards, curriculum 2000 and the Connexions strategy. Despite these important roles in the delivery of government policy, relatively little is known about the role of leadership and management of sixth form colleges at a policy level within the DfEE or potentially in the new LSC. What evidence there is, is to an extent drawn from a limited knowledge base.

This national research survey is being conducted by a post graduate doctoral researcher under my supervision and the response rates have been very high amongst the FE college sector in general and sixth form Principals in particular. However, I would like to include the views of <college name>. I appreciate some of the language used to describe your students and their parents/guardians may not reflect the traditional language of sixth form colleges, but those responding to date have none the less been able to complete the questionnaire within 15-20 minutes. This survey is the first of its kind to be conducted by an agency independent of the DfEE or FEFC. Your views are absolutely confidential to the University's *Institute for Enterprise and Innovation*. Only aggregated information will be published, ensuring that no individual or college can be identified.

If you provide us with your email address, we will send you a copy of the national mean responses for comparison with your own views. Please note there are no correct answers, therefore the feedback will provide a confidential reference point of your peers' perspectives vis-à-vis your own. May I ask you to complete questionnaire and return it in the enclosed FREEPOST envelop by **Monday 27 November 2000**? We suggest you retain a photocopy for reference and comparison to the feedback data that we will send you in January 2001. This should be useful for comparison to the Principal's Programme data that you have or will receive.

Finally, thank you for your time in helping us to collate the first national data set of sixth form college Principal's viewpoints in this field of work.

Yours sincerely,

Kind Regards,

Professor Martin Binks
Director: Institute for Enterprise and Innovation

Enc.



The University of Nottingham Business School
INSTITUTE *for* ENTERPRISE & INNOVATION

Survey of Principals of English Further Education Colleges

**Attitudes and Opinions on Leadership,
Market Orientation and Risk**

Summer 2000





Survey of Principals of English Further Education Colleges
Attitudes and Opinions on Leadership, Market Orientation and Risk

This survey is confidential to the University of Nottingham Institute for Enterprise & Innovation. Aggregated data that will not identify any particular individual or college will be published at a later date.

This first section provides a 'thumb-nail' sketch of you the leader of the college.

Section A: Principal's background

0a

College's Name

0b

What month and year did you become Principal of your college?

M

M

Y

Y

Y

Y

E.G. 08 1985

0c

What was your last job title before being appointed Principal of your college?

0d

How many senior managers are in your Senior Management Team, including yourself, but excluding the Clerk to the Board of Governors?

0e

How many of your senior managers joined the team in the last two years, excluding yourself if applicable?

0f

Which age group are you in?

Up to 30 Years Old

31-35 Years old

36-40 Years old

41-45 Years old

46-50 Years old

51-55 Years old

56+ Years old

0g

What qualifications do you hold?

HND [or equivalent NVQ4 qual.]

First Degree

MA/MSc/MPhil

MEd

MBA

PhD or DBA

Cert. Ed. or PGCE

ICAEW/CIMA/CIPFA/ACCA etc.

Other Professional Qualification NVQ4

Other Professional Qualification NVQ5

FENTO Principals' Qualification

0h

What was your background prior to becoming Principal (of this college or another if this is your second or more Principalship)?

Curriculum Leadership, Head of Department or equivalent

Library & Learning Resources

Student Services

Quality/Inspection

Finance/Resources/MIS/Estates

Outside the FE Sector – if so please specify below your job title

0i

What is your gender?

Female

Male

Section B: Principal's attitude towards Leadership Issues

Please answer the following questions with reference to YOUR college. Please tick the number on the scale that corresponds best to your views. If you agree with the left-hand statement then please tick 1 or 2. If you agree with the right-hand statement, then tick either 4 or 5. Please note that 1 and 5 represent strong agreement with the corresponding statement, with 3 being neutral.

Innovation

1a	The values of the College are derived by the Senior Staff in consultation with the Governors	1	2	3	4	5	The values of the College are derived by a plethora of routes and typically reflect the history of the college
1b	I regularly communicate the values of the College to managers and staff within the College	1	2	3	4	5	I leave the communication of values to the managers of the college by the most appropriate means
1c	I perceive my role as providing business leadership rather than academic leadership	1	2	3	4	5	I perceive my role as providing academic leadership, rather than business leadership
1e	I am active in leading and promoting the college's goals	1	2	3	4	5	I require SMT rather than me, to lead the promotion of the college's goals
1f	I seek to create excitement in my work of meeting college goals and develop choices for my senior managers	1	2	3	4	5	I expect senior managers to create their own job satisfaction and choices in meeting the college's goals and targets
1g	I have a high level of empathy with my senior staff and the ramifications of my decisions upon their own portfolios and caseloads	1	2	3	4	5	I expect my senior staff to self manage and understand the ramifications on their caseloads. I expect them to and keep me appraised of relevant issues
1h	I seek to lead and develop the College in innovative leaps of development	1	2	3	4	5	I seek to nurture the College and develop the college in an incremental manner
1j	I believe Performance Indicators stimulate staff to create superior business performance	1	2	3	4	5	I believe Performance Indicators do not in themselves create superior performance

Environment

2a	I expect the College to be put in inequitable situations by Government agencies	1	2	3	4	5	I do not expect the College to be put in inequitable situations by Government agencies
2b	I expect my College to respond positively to Government agencies demands, irrespective of how unfair they are perceived by my management teams	1	2	3	4	5	I do not expect my College to automatically respond positively to Government agency inspired demands, especially if the staff perceive the initiative to be unfair and/or unworkable
2c	New Government initiatives represent opportunities for us	1	2	3	4	5	New Government initiatives represent burdens on my College that have to be responded to
2d	I have just enough resources to respond to most new ideas and initiatives	1	2	3	4	5	I never have enough resources to be able to respond to most new ideas and initiatives
2e	I expect winning strategies to come from Senior Managers leadership actions/acts	1	2	3	4	5	I expect winning strategies to come from my own leadership actions/acts

Mission

3a	Senior & Middle Managers approach to new business allows us to systematically identify new opportunities quickly	1	2	3	4	5	Senior & Middle Managers approach to new work does NOT allow us to quickly identify new opportunities on a systematic basis
3b	Senior & Middle Managers are quick to interpret information AND make judgements on how to best respond	1	2	3	4	5	Senior & Middle Managers are slow to interpret information AND make judgements on how to best respond
3c	We have systems and methods of working that systematically identify new opportunities	1	2	3	4	5	Our systems are either too formal or too ad-hoc to systematically identify new opportunities
3d	College goals are understood by managers and they are systematically implemented and tracked	1	2	3	4	5	College goals are not clearly articulated to managers in quantitative or qualitative forms and are not tracked by their line managers
3f	Middle managers are able to prioritise effectively between competing new opportunities without undue intervention of senior managers	1	2	3	4	5	Senior managers have to regularly prioritise competing opportunities on behalf of middle managers
3g	We encourage customers to complain about the college and we perceive the complaints objectively	1	2	3	4	5	Customer complaints are typically perceived as a 'problem' by the staff and are dealt with so as to comply with Charter requirements

Section C: Principal's perception of the College's attitude towards Market Orientation

Please answer the following questions with reference to *YOUR* college. Please circle the number on the scale that corresponds best to your circumstances.

Generating customer information for the college

Definition:

Customers are defined as learners, their sponsors (employers/parents) and where relevant, market intermediaries (Careers Service, TEC, Employer Organisations, LEA and Voluntary Groups)

- 1 = Strong Agreement
2 = Agreement
3 = Mild Agreement
- 4 = Mild Disagreement
5 = Disagreement
6 = Strong Disagreement

4a	We meet with customers on a termly basis to find out what courses and services they will need in the future	1	2	3	4	5	6	Do not Know
4b	Staff from our teaching teams liaise directly with customers and other agencies to learn how to serve them better	1	2	3	4	5	6	Do not Know
4c	We are slow to detect changes in our customers needs and expectations	1	2	3	4	5	6	Do not Know
4d	We survey customers on a regular basis to assess the quality of our courses and services	1	2	3	4	5	6	Do not Know
4e	We meet and plan at least twice a year with market intermediaries, e.g. LEA, TEC, Careers, Voluntary Sector	1	2	3	4	5	6	Do not Know
4f	We use informal means to collect information about our customers, e.g. focus groups, complaints systems	1	2	3	4	5	6	Do not Know
4g	Intelligence on our competitors is collected by teaching teams, rather than exclusively by marketing/publicity teams	1	2	3	4	5	6	Do not Know
4h	The college is slow to detect fundamental changes and structural shifts in our sector and devise response plans before the challenges become problems	1	2	3	4	5	6	Do not Know
4i	We periodically review the likely impact of changes in our business environment (e.g. regulations) on our customers	1	2	3	4	5	6	Do not Know

Dissemination of customer information within the college

5a	We have a lot of informal sharing of market data in our teaching and business development teams	1	2	3	4	5	6	Do not Know
5b	We have interdepartmental meetings at least once a term to discuss market trends developments	1	2	3	4	5	6	Do not Know
5c	Marketing personnel in our business teams spend time discussing customer's future needs with other functional departments, especially delivery teams	1	2	3	4	5	6	Do not Know
5d	Curriculum delivery teams periodically circulate documents e.g. reports, newsletters, press cuttings, that provide information on our customers and market intermediaries	1	2	3	4	5	6	Do not Know
5e	When something important happens to a major customer or vocational sector, the whole teaching team is made aware of within a short period of time	1	2	3	4	5	6	Do not Know
5f	Data on customer satisfaction is shared at all levels in delivery teams on a regular and systematic basis	1	2	3	4	5	6	Do not Know
5g	There is minimal contact between marketing and teaching teams concerning marketing developments	1	2	3	4	5	6	Do not Know
5h	When one team finds out something important about competitors, it is slow to alert other teams with the information	1	2	3	4	5	6	Do not Know

Section C continued...

Responding to customer and learner demands

1 = Strong Agreement

2 = Agreement

3 = Mild Agreement

4 = Mild Disagreement

5 = Disagreement

6 = Strong Disagreement

Definition:

Customers are defined as learners, their sponsors (employers/parents) and where relevant, market intermediaries (Careers Service, TEC, Employer Organisations, LEA and Voluntary Groups)

6a	It takes for ever to decide how to respond to our competitor's changes in price, product offering or delivery location	1	2	3	4	5	6	Do not Know
6b	Principles of market segmentation drive new product development efforts in teaching teams	1	2	3	4	5	6	Do not Know
6c	For various reasons, we tend to overlook changes in our customers product or service needs	1	2	3	4	5	6	Do not Know
6d	We periodically review our product development efforts to ensure that they are in line with what our customers want	1	2	3	4	5	6	Do not Know
6e	Our business plans are driven by technological advances (e.g. ICT) or changes in teaching and learning (e.g. Curriculum 2000) rather than market research of customer needs	1	2	3	4	5	6	Do not Know
6f	The courses and location we deliver in depend more on internal politics and/or history than identified market needs	1	2	3	4	5	6	Do not Know
6g	When we find that our customers would like us to modify a product or service, the teams involved make concerted efforts to do so within a reasonable time span	1	2	3	4	5	6	Do not Know
6h	When we find that our customers are unhappy about service quality, we take action quickly, if not immediately	1	2	3	4	5	6	Do not Know

Responding to competitors and Government initiatives

1 = Strong Agreement

2 = Agreement

3 = Mild Agreement

4 = Mild Disagreement

5 = Disagreement

6 = Strong Disagreement

7a	If a major competitor were to respond to a new initiative targeted at our customers, we would implement a response either immediately or very quickly	1	2	3	4	5	6	Do not Know
7b	The activities of different teams in the college are well co-ordinated, integrated and coherent so as to respond effectively to new funding initiatives	1	2	3	4	5	6	Do not Know
7c	Even if we came up with a great marketing plan to meet planning priorities, we probably would not be able to implement it in a timely fashion.	1	2	3	4	5	6	Do not Know
7d	We are quick to respond to significant changes in Government initiative funding (ESF, SRB, New Deal, Standards Funds, Growth targets, Curriculum 2000 etc)	1	2	3	4	5	6	Do not Know
7e	Lecturers and instructors perceive that they are providing a service to customers, rather than a product that is consumed by learners because it is there	1	2	3	4	5	6	Do not Know
7f	Our teaching teams conduct market intelligence reviews within their own units about the needs of customers, thereby having an insight into the customers' need for the team's work	1	2	3	4	5	6	Do not Know
7g	Curriculum delivery teams perceive the marketing team as being responsible for recruiting their students, rather than themselves	1	2	3	4	5	6	Do not Know
7h	New initiatives are perceived as the responsibility of specialist departments/teams to lead and implement	1	2	3	4	5	6	Do not Know

Section D: Principal's attitude towards Environment

Please answer the following questions with reference to YOUR college. Please tick the number on the scale that corresponds best to your views. If you agree with the left-hand statement then please tick 1 or 2. If you agree with the right-hand statement, then tick either 4 or 5. Please note that 1 and 5 represent strong agreement with the corresponding statement, with 3 being neutral.

8a	I am prepared to take operational risks to implement innovation in the college	1	2	3	4	5	I am not prepared to take operational risks to implement innovation in the college
8b	I perceive the rewards of risk taking in the College to exceed the adverse aspects of taking the risks	1	2	3	4	5	I perceive the adverse aspects of taking the risks in the College to exceed the rewards of risk taking
8c	My senior and middle managers are more motivated by the total salary package than the non-financial aspects of the job	1	2	3	4	5	My senior and middle managers are more motivated by the non-financial aspects of the job than the financial aspects, (i.e. not the salary, pension etc.)
8d	I believe that when things go wrong at the college level, the Funding Agencies are supportive and reasonable in their approach	1	2	3	4	5	I find the approach of the funding agency to be negative and anti-college management when things go wrong for the college/sector
8e	I find it straight forward to reconcile operationally innovative actions and risk taking with the central Government's focus on accountability and evidence collection for every decision taken	1	2	3	4	5	I find it difficult to reconcile operationally innovative actions and risk taking with the central Government's obsession with accountability and evidence collection for every decision taken
8f	I find it relatively straight forward to address the frustration of working in a regulated and inspected/audited FE sector	1	2	3	4	5	I find it is hard to overcome the frustration of working in a regulated and heavily audited/inspected FE sector
8g	I believe that my senior staff form their own views on risk taking vs. innovation in the college	1	2	3	4	5	I believe that my Senior Managers are affected by my perception of personal professional risk when taking decisions in the college
8h	I believe that I have the ability to materially influence local policy actions and the outcomes of consultation circulars on new policy published by the Funding Councils (FEFC/LSC)	1	2	3	4	5	I believe that I do NOT have the ability to materially influence local policy actions and the outcomes of consultation circulars on new policy published by the Funding Councils (FEFC/LSC)
8i	I am active within my local learning partnerships/community AND I am able to make my points heard and have them considered when decisions are made about local priorities	1	2	3	4	5	I am either not active within my local learning partnerships OR I am not able to make my points heard and have them considered when decisions are made about local priorities
8j	I believe that I am able to effectively apply the majority of Government initiatives (e.g. New Deal, Curriculum 2000, Widening Participation, ESF) in my college	1	2	3	4	5	I believe that I am NOT able to effectively implement the majority of Government initiatives (e.g. New Deal, Curriculum 2000, Widening Participation factors, ESF) in my college
8k	Innovation nearly always improves the effectiveness of education	1	2	3	4	5	Innovation very seldom, if ever, improves the effectiveness of education
8l	I personally am one of the first to adopt innovative approaches to college development, assuming there are no financial or structural reasons for not doing so	1	2	3	4	5	I personally would NOT adopt innovative approaches to college development until they had been proven elsewhere, irrespective of whether there are no financial or structural reasons for not doing so
8m	The Local Learning Skills Council (LLSC) will have a positive impact on my College in the next 3 years	1	2	3	4	5	The Local Learning Skills Council (LLSC) will have a detrimental impact on my College in the next 3 years
8n	The new LSC will offer better opportunities for FE colleges in general to meet their mission than the FEFC	1	2	3	4	5	The FEFC offered better scope for the FE college sector to meet their mission than the new LSC will do
8o	How much time do you spend reading, analysing and interpreting the political environment in which your college operates					%	Please express as a percentage (%), rounded down to the nearest 5%, e.g. 25%, 50% etc.

Section E: Further information

Will you please give an example of innovation in your College? It can be drawn from any area of your College's work?

If you wish to write any comments about any of the points, please use the following space.

The survey information will be analysed and aggregated extracts will be made available to you. This information will be made available as a word document by email early in 2001.

Do you wish to receive a copy?

Yes / No

If yes, please provide your email address:

For further information about this survey and/or the research, please contact us via email on lixmbjf@nottingham.ac.uk

Thank you for your time and co-operation.

Return To:

Freepost
University of Nottingham
Institute for Enterprise and Innovation
Jubilee Campus
Wollaton Road
NOTTINGHAM
NG8 1BB

The provisions of the Data Protection Act 1998 cover the information in this questionnaire, which will be held in electronic form. Copyright of this questionnaire rests exclusively with the author and the University of Nottingham Institute for Innovation & Enterprise.

Appendix 2: Qualitative Questionnaire Framework

Interview Instrument Structure

[A] Introduction

1. Personal introduction
2. Confidentiality issue

[B] Culture

3. Outline of college, history and range of courses - unique factors - pedigree etc
4. Role of Principal as you perceive it - at Incorporation and now
5. Organisational structure
 - Role of SMT in decision making processes and for providing leadership
 - Role of MMT in decision making processes and for providing leadership
 - Role of Governors in decision making processes and for providing leadership
6. Leadership styles adopted by you and the college
7. Structure in large organisation and in decision making processes
8. New managerialism vs. professional 'teacher' constructs
9. Gender issues in management
 - Mix change in Principals (and senior staff) - differences?
 - Mix change in middle management - differences?

[C] Entrepreneurship

10. Innovation - its role in the college
11. Innovative leadership
 - Where is the source
 - How promoted
12. Environmental awareness
 - In senior managers
 - In middle managers
13. Goal clarity

- How achieved
- Written vs. informal

14. Risk

- How risky is the environment for Principals
- For senior management team
- For middle management team
- For (junior) team leaders

15. Joined up policy - obtaining it in the college

16. Internal performance indicators - how used?

[D] Market Orientation

17. Students - consumers, customers - the perception of the teachers

18. Generation of knowledge of students - how

19. Sharing of intelligence/knowledge

- How
- Whose responsibility

20. Responsiveness

- Segmentation issues
- Speed of response - who authorises what
- Historical customers - ability to redefine or bound to history
- Innovation - product led or customer/service led

21. Inclusive Issues

- Change in other providers actions that affect your college - what happens
- Inter team co-operation issues
- Front line staff orientation - service provider or quality product provider
- Teaching teams win new business - are specialists employed/used or do the teams do the work themselves

[E] Sign off

- Agree clearance of case study for content validity with interviewee
- Explain information obtained from quantitative study

References

- Aaker, D A, (1988), *Strategic Market Management*, 2nd Edition, New York, John Wiley & Sons Inc
- Aaker, D A, (1989), *Managing Assets and Skills: The Key to Sustainable Competitive Advantage*, California Management Review
- Alderfer, C, (1972), *Existence, Relatedness and Growth*, New York, Collier Macmillan
- Anderson, P F, (1982), *Marketing, Strategic Planning and the Theory of the Firm*, Journal of Marketing
- Ardley, B, (1994), *College Marketing and the Marketing of Change*, Journal of Further and Higher Education, Volume 18 (1), Spring pp3-13
- Argyris, C and Schön, D A, (1974), *Theory in Practice: Increasing Professional Effectiveness*, San Francisco, Jossey-Bass
- Argyris, C and Schön, D A, (1978), *Organisational Learning*, Reading MA, Addison-Wesley.
- Argyris, C, (1994), *Good Communication that Blocks Learning*, Harvard Business Review, Volume 72, July/August, pp77-86
- Armstrong, J S and Overton T S, (1977), *Estimating Non-Response Bias in Mail Surveys*, Journal of Marketing Research, Volume 14, August, pp196-402
- Austin, D, (1979), *Equity Theory and Social Comparison Process*, in Suds, J (Ed.), *Social Comparison Theory: Theoretical & Empirical Perspectives*, Washington DC, Hemisphere Publications
- Avis, J, (1998), *(Im)possible Dream; post-Fordism, Stakeholding and Post Compulsory Education*, Journal of Education Policy, March/April, Volume 13 (2), pp251-263
- Avlonitis, G J and Gounaris, S P, (1997), *Market Orientation and Company Performance: Industrial vs. Consumer Goods Companies*, Industrial Marketing Management, Volume 26, pp385-402
- Bain, J S, (1959), *Industrial Organisation*, New York, Wiley & Sons Inc
- Baker, K, (1989), *Further Education: A New Strategy*. Address to the Association of Colleges for Further & Higher Education 15 February 1989, London, Department for Education and Science
- Balabanis, G, Stables, R E and Philips, H C, (1997), *Market Orientation in the top 200 British Charity Organisations and its Impact on their Performance*, European Journal of Marketing, Volume 31 (8), pp583-603
- Ball, S, J, (1990), *Politics and Policy Making in Education: Explorations in Policy Sociology*, London, Routledge
- Baringer, B R and Bluedorn A C, (1999), *Corporate Entrepreneurship and Strategic Management*, Strategic Management Journal, Volume 20, pp421-444
- Barksdale, H C and Darden, B, (1971), *Marketers' Attitude Toward the Marketing Concept*, Journal of Marketing, Volume 35 (October), pp29-36
- Basset-Jones, N and Brewer, R, *Strategic Management and Competitive Advantage*, in Leviac T and Glatter R (Editors), *The Strategic Management of Change in Further Education*, London, FEDA
- Beckert, J, (1999), *Agency Entrepreneurs and Institutional Change: The Role of Strategic Choice and Institutional Practices*, Organisations (Journal), Volume 20 (5), pp777-799
- Bedelian, A G and Zammuto, R F, (1991), *Organisations: Theory and Design*, London, Dryden
- Bennis, W, (1989), *On Becoming a Leader*, London, Prentice-Hall Ltd
- Berger, P and Luckman, T, (1967), *The Social Construction of Reality*, Harmondsworth, Allen Lane
- Bhide, A, (1994), *How Entrepreneurs Craft Strategies that Work*, Harvard Business Review, March - April 1994, pp150-161
- Binks, M and Vale, P, (1990), *Entrepreneurship and Economic Change*, Maidenhead, McGraw-Hill
- Blalock, H M, (1979), *Social Statistics*, 2nd Edition, New York, McGraw-Hill Inc

- Boal, K B and Bryson, J M, (1987), Representation, Testing and Policy Implications of Planning Processes, *Strategic Management Journal*, Volume 8 (May-June), p211-231
- Bollen, K A, (1989), *Structural Equations with Latent Variables*, New York, Wiley
- Borg, W R, (1963), *Educational Research: An Introduction*, London, Longman
- Bowden, D E and Lawler, E E, (1992), The Empowerment of Service Workers: What, Why, How and When, *Sloan Management Review*, Volume 33, pp31-39
- Boyett, I, (1997), The Public Sector Entrepreneur: A Definition, *International Journal of Entrepreneurial Behaviour & Research*, Volume 3 (2), pp77-92
- Brown, A, (1998), *Organisational Culture*, 2nd Edition, London, Financial Times Management
- Browne, M W and Cudeck, R, (1993), Alternative Ways of Assessing Model Fit, in Bollen, K A (ed.), *Testing Structural Equation Models*, London, Sage Publications
- Burgelman, R A, (1991), Intraorganisational Ecology of Strategy Making and Organisational Adaptation: Theory and Field Research, *Organisational Science*, Volume 2, pp239-262
- Burnes, B, (1992), *Managing Change: A Strategic Approach to Organisational Development and Renewal*, London, Pitman
- Burns, T and Stalker, G M, (1961), *Management of Innovation*, Tavistock Publishing, London
- Burton, S, (1994), Factors Affecting Quality in the New FE: Principals' Views, *Combe Lodge Report*, Volume 24 (5)
- Bush, T, (1995), *Theories of Educational Management*, 2nd Edition, London, Chapman
- Cannell, C F and Kahn, R L, (1968), Interviewing, in Lindzey G (editor), *The Handbook of Social Psychology*, Volume 2, Research Methods, New York, Addison Wesley, pp526-595
- Cantillon, R (1755), *Essai sur la Nature du Commerce en General*, Paris, Institut National D'Etudes Demographics 1952
- Cantor, L et al, (1986), *Further Education Today*, 2nd Edition, London, Routledge
- Cantor, L et al, (1995), *A Guide to Further Education in England and Wales*, London, Cassel
- Casson, M C, (1982), *The Entrepreneur: An Economic Theory*, Oxford, Martin Robertson
- Casson, M C, (1990), *Enterprise and Competitiveness: A Systems View of International Business*, Oxford, Clarendon Press
- Casson, M C, (1991), *The Economics of Business Culture*, Oxford, Clarendon Press
- Casson, M C, (1995), *Entrepreneurship and Business Culture*, Aldershot, Edward Elgar
- Chapman, D and Cowdell, T, (1988), *New Public Sector Marketing*, London, Financial Times Management
- Charnes A, Cooper, W W, Lewin, A Y and Seiford, L M, (1993), *Data Envelopment Analysis: Theory, Methodology and Application*, London, Kluwer Academic Publishers
- Chell, E, (1991), *The Entrepreneurial Personality*, Editor, London, Routledge
- Churchill, G A Jnr, (1979), *Applied Multiple Regression and Correlation Analysis for the Behavioural Sciences*, Hillsdale NJ, Lawrence Erlbaum Associates
- Cohen, W M and Levinthal, D A, (1990), Absorptive Capacity: A New Perspective on Learning and Innovation, *Administrative Science Quarterly*, Volume 35, March, pp128-152
- Collins (1985), *Collins English Dictionary*, London, Collins
- Cooper, A C and Artz, K, (1993), Determination of Satisfaction for Entrepreneurs, *Frontiers of Entrepreneurship Enterprise*, Special Volume
- Costner, H L, (1989), Theory, Deduction and Rules of Correspondence, *American Journal of Sociology*, Volume 75, pp245-263

- Covin, J G, and Slevin, D P, (1986), The Influence of Organisational Structure on the Utility of an Entrepreneurial Top Management Style, *Journal of Management Studies*, Volume 25 (3), pp217-234
- Covin, J G, and Slevin, D P, (1989), The Strategic Management of Small Firms in Hostile and Benign Environments, *Strategic Management Journal*, Volume 10, pp75-87
- Cronbach, L, (1970), *Essentials of Psychological Testing*, 3rd Edition, New York, Harper & Row Publishers Inc
- Daft, R L, (1989), *Organisation Theory and Design* (3rd Edition), St Paul ME, West Bay Company
- Dale, R, (1979), The Politicisation of School Deviance, in *School Pupils and Deviance*, London, Barton Driffield
- Davey, G, (1980), Consumer Choice, in *Social Welfare: Why and How?*, Ed. Tims N, London, Routledge & Kegan Paul, pp94-102
- Day, G S and Wensley, R, (1988), Assessing Advantage: A Framework for Diagnosing Competitive Superiority, *Journal of Marketing*, Volume 52 (2), pp1-20
- Day, G S, (1994), The Capabilities of Market-Driven Organisations, *Journal of Marketing*, Volume 58 October, pp37-52
- Day, G S, (1994a), Continuous Learning about Markets, *California Management Review*, Volume 36, Summer, pp9-31
- de Geus, A P, (1988), Planning as Learning, *Harvard Business Review*, Volume 66, March/April, pp70-74
- de Vauss, D A, (1996), *Surveys in Social Research*, 4th Edition, London, UCL Press Ltd
- Deal, T E and Kennedy, A A, (1982), *Corporate Cultures: The Rites and Corporate Life*, Reading MA, Addison-Wesley
- Dearing, R, (1986), *The Commercial Public Sector: A Changing Face*, London, Post Office Briefing Service
- Deng, S and Dart, J, (1994), Measuring Market Orientation: A Multi-Factor, Multi-Item Approach, *Journal of Marketing Management*, Volume 10, pp725-742
- Denscombe, M, (1995), Explorations in Group Interviews: An Evaluation of a Reflexive and Partisan Approach, *British Educational Research Journal*, Volume 21 (2), pp131-148
- Denzin, N K, (1989), *The Research Act: A Theoretical Introduction to Sociological Methods*, 3rd Edition, Englewood Cliffs, Prentice Hall
- Department for Education & Employment, (1995), *Labour Market Information for Further Information Colleges: A Handbook for Practitioners*, Sheffield, Department for Employment and Education
- Department for Education & Employment, (1999), *Learning to Succeed White Paper a New Framework for Post 16 learning*, London, Department for Employment and Education
- Department for Education & Employment, (2000), *Departmental Report: The Government's Expenditure Plans 2000-01 to 2001-02*, London, Department for Education and Employment
- Derber, C, (1983), Managing Professionals: Ideological Proletarianisation and Post Industrial Labour, *Theory and Society* Volume 12 (2), p335
- Deshpande, R and Webster, FE, (1989), Organisational Culture and Marketing: Defining the research Agenda, *Journal of Marketing*, Volume 53, January, pp3-15
- Deshpande, R, Farley, J U and Webster, F E, (1993), Corporate Culture, Customer Orientation and Innovativeness in Japanese Firms: A Quadrant Analysis, *Journal of Marketing*, Volume 57, January, pp23-37
- Dess, G G and Robinson, R B, (1984), Measuring Organisational Performance in the Absence of Objective Measures: The Case Study of the Privately Held Firms and Conglomerate Business Units, *Strategic Management Journal*, Volume 5, pp265-273
- Dickson, P R, (1992), Toward a General Theory of Competitive Rationality, *Journal of Marketing*, Volume 56, January, pp69-83

- Dickson, P R, (1996), The Static and Dynamic Mechanics of Competition: A Comment on Hunt and Morgan's Comparative Advantage Theory, *Journal of Marketing*, Volume 60, October, pp102-106
- Dillman, A, (1978), *Mail and Telephone Surveys: The Total Design Method*, New York, Wiley
- DiMaggio, P J, (1988), Intent and Agency in Institutional Theory, I Institutional Patterns and Organisations, Editor Zucker, L, Cambridge MA, Ballinger, pp3-32
- Donaldson, B and Runciman, F (1995), Service Quality and further Education: An Insight into Management Perceptions of Service Quality and those of the Actual Service Provider, *Journal of Marketing Management*, Volume 11, pp243-256
- Doyle, P, (1994), *Marketing Management and Strategy*, Prentice Hall Publishing, London
- Drucker, P F, (1985), *Innovation and Enterprise: Practice and Principles*, London, Heinemann
- Drucker, P F, (1989), *The Practice of Management*, London, Heinemann Professional
- Drucker, P F, (1989a), What Business can Learn from Non Profits, *Harvard Business Review*, July-August, pp88-93
- Dyer, W G Jnr, (1985), The Cycle of Cultural Evolution in Organisations, in *Gaining Control of the Corporate Climate*, Kilmann, R H, Editor, San Francisco, Jossey Bass
- Dyer, W G Jnr, (1986), *Integrating Change in Family Firms*, San Francisco, Jossey Bass
- Ebbutt, K and Brown, R, (1978), The Structure of Power in the Further Education College, *Journal of Further & Higher Education*, Volume 2 (3), Autumn, pp3-17
- Fine, S H, (1990), *Social Marketing: Promoting the Causes of Public and Non Profit Agencies*, Needham Heights MA, Allyn & Bacon
- Finkelstein, S & Boyd, BK, (1998), How Much Does the CEO Matter? The Role of Managerial Discretion in the Setting of CEO Compensation, *Academy of Management Journal*, April 1998, Volume 41 (2), pp179-199
- Finlay, I, (1995), The Evaluation of a Process Designed to Improve Communication on Managerial Performance in a College of Further Education, *Education Management and Administration*, Volume 23 (1), January, pp39-46
- Fiske, S T and Taylor, S E, (1991), *Social Cognition*, New York, McGraw Hill
- Flynn, N, (1993), *Public Sector Management*, 2nd Edition, London, Harvester Wheatcheaf
- Foss, N J, (1997), *Resources Firms and Strategies: A Reader in the Resource Based Perspective*, Oxford, Oxford University Press
- Fottler, M D and Lanning, J A, (1986), A Comprehensive Incentive Approach to Employee Health Care Cost Containment, *California Management Review*, Volume 29 (1), p75-94
- Fullam, M G, (1991), *The New Meaning of Educational Change*, 2nd Edition, London Cassell
- Further Education Funding Council, (1997), *Inspection Framework*, Circular 97/13, Coventry, Further Education Funding Council for England
- Further Education Funding Council, (1997a), Circular 97/12: *Inspection Framework*, Annex B, Coventry, Further Education Funding Council for England
- Further Education Funding Council, (1999), *Annual Report 1998/99*, Coventry, Further Education Funding Council for England
- Further Education Funding Council, (1999a), *Bilston Community College: A Report Into its Future*, Coventry, Further Education Funding Council for England
- Further Education Funding Council, (2000), *Mergers in the Further Education Sector: Summary Report*, Coventry, Further Education Funding Council
- Further Education Funding Council, (2000a), *Quality and Standards in Further Education in England 1999-2000: Chief Inspector's Annual Report*, Coventry, Further Education Funding Council
- Gagliardi, P, (1986), The Creation and Change of Organisational Cultures: A Conceptual Framework, *Organisational Studies*, Volume 7, (2), pp117-134

- Garvin, D A, (1993), Building a Learning Organisation, Harvard Business Review, Volume 71, July/August, pp78-91
- Gerald, D, (1993), Charities in Britain: Conservation or Change. London, Bedford Square Press
- Geroski, P and Machin, S, (1994), Market Structure, Corporate Performance and Innovative Activity, Oxford, Clarendon Press
- Glazer, R, (1991), Marketing in an Information Intensive Environment: Strategic Implications of Knowledge as an Asset, Journal of Marketing, Volume 55, October, pp1-19
- Graham, P, (1995), Are Public Sector Organisations Becoming Customer Orientated? Marketing Intelligence and Planning, Volume 13, (1), pp35-47
- Grätzer, G, (1968), Universal Algebra, Princeton, Von Nostrand
- Gray, B, Matear, S, Boshoff, C and Matheson, P, (1998), Developing a Better Measure of Market Orientation, European Journal of Marketing, Volume 32 (9/10), pp884-903
- Greenhouse, C J, (1985), Anthropology at Home: Whose Home?, Human Organisation, Volume 44 (3), pp261-264
- Greenly, G E, (1995), Market Orientation and Company Performance: Empirical Evidence from UK Companies, British Journal of Management, Volume 6 (1), pp1-14
- Greenwood, R and Hinings, C R, (1996), Understanding Radical Organisational Change: Bringing Together the Old and the New Institutions, The Academy of Management Review, Oct 1996, Volume 21 (4), pp1022-1054
- Gretton, I, (1995), Taking the Lead in Leadership, Professional Manager, January 1995, pp20-22
- Gronlund, N E, (1981), Measurement and Evaluation in Teaching, 4th Edition, New York, Macmillan
- Grönroos, C, (1981), Internal Marketing: An Integral Part of Marketing Theory, in JH Donnelly and W George (Eds.), Marketing of Services, Proceedings Series, Chicago IL, American Marketing Association, pp236-238
- Grönroos, C, (1982), Strategic Management and Marketing in the Service Sector, Helsinki, Swedish School of Economics and Business Administration
- Grönroos, C, (1990), Relationship Approach to Marketing in Service Contexts: The Marketing and Organisational Behaviour Interface, Journal of Business Research, Volume 20, pp3-11
- Gummesson, E, (1987), The New Marketing - Developing Long Term Interactive Relationships, Long Range Planning, Volume 20, 4, pp10-20
- Gummesson, E, (1991), Marketing Orientation Revisited: The Crucial Role of the Part-Time Marketer, European Journal of Marketing, Volume 25 (2), pp60-75
- Gummesson, E, (1998), Implementation Requires a Relationship Paradigm, Journal of Academy of Marketing Science, Volume 26 (3), pp242-249
- Gummesson, E, (2000), Qualitative Methods in Management Research, 2nd Edition, London, Sage Publications
- Gupta, A K and Govindarajan, V, (1991), Knowledge Flows and the Structure of Control Within Multinational Corporations, Academy of Management Review, Volume 16 (4), pp768-792
- Habermas, J, (1976), Legitimation Crisis, Translated by McCarthy T from the Original German, London, Heinemann Educational
- Hall, R, (1993), The Strategic Analysis of Intangible Resources, Strategic Management Journal, Volume 13, pp134-144
- Hall, W K, (1980), Survival Strategies in a Hostile Environment, Harvard Business Review, Volume 58 (5), pp75-85
- Hallinger, P and Heck, R H, (1998), Exploring the Principal's Contribution to School's Effectiveness: 1980-1995. School Effectiveness and School Improvement, Vol9 (2), pp157-191

- Hambrick, D C, (1994), Top Management Groups: A Conceptual Integration and Reconsideration of the 'Team' Label, in Shaw, B M et al, *Research in Organisational Behaviour*, Volume 16, pp171-213
- Hambrick, D C, (1995), Fragmentation and the Other Problems CEOs have with their Top Management Teams, *California Management Review*, Volume 37 (3) Spring, pp110-127
- Hamel, G and Prahalad, C K, (1991), Corporate Imagination and Expeditionary Marketing, *Harvard Business Review*, Volume 69, July/August, pp81-92
- Han, J K, Kim, N and Shrivastava, R K, (1998), Market Orientation and Organisational Performance: Is innovation a Missing Link?, *Journal of Marketing*, Volume 62, pp30-45
- Han-Chang, T, (1990), *Sun Tzu's Art of War: The Modern Chinese Interpretation*, New York, Sterling Publishing Company.
- Handy, C, (1991), *Gods of Management*, London, Arrow,
- Hanusek, E, (1986), The Economics of Schooling: Production and Efficiency in Public Schools, *Journal of Economic Literature*, Volume 24 (3), pp1141-1171
- Hanusek, E, (1989), The Impact of Differential Expenditures on School Performance, *Educational Research*, Volume 18 (4), pp45-62
- Harding, R, (1985), *Development Plans for Work Related Non-Advanced Further Education*, Volume 18 (4), pp163-219, London, Department of Education
- Harris, L C, (1996), Cultural Obstacles to Market Orientation, *Journal of Marketing Practice: Applied Marketing Science*, Volume 4, (2), pp36-52
- Harris, L C, (1998), Culture Domination: The Key to a Market Orientation? *European Journal of Marketing*, Volume 32, (3/4), pp354-373
- Harris, L C and Jackson, P, (1999), Management and the Spirit of Entrepreneurship, *Journal of General Management*, Volume 25 (2), Winter, pp31-43
- Harris, L C and Ogbonna, E, (1999), Developing a Market Orientated Culture: A critical Evaluation, Volume 36, (2) March, pp177-196
- Harris, L C and Piercy, N F, (1999), A Contingency Approach to Market Orientation: Distinguishing Behaviours, Systems, Structures, Strategies and Performance Characteristics, *Journal of Marketing Management*, Volume 15, pp617-646
- Hart, S L, (1992), An Integrative Framework for Strategy Making Processes, *Academy of Management Review*, Volume 17, April, pp327-351
- Hayek, F A (1949), *Individualism and Economic Order*, London, Routledge and Kegan Paul
- Heller, R, (1994), The Manager's Dilemma, *Management Today*, January 1994, pp42-47
- Henkel, R E, (1975), Part-Whole Correlations and the Treatment of Ordinal and Quasi-Interval Data as Interval Data, *Pacific Sociological Review*, Volume 18, pp3-26
- Herbert, A and Callender, C, (1997), *The Funding Lottery: Students Financial Support in FE and its Impact on Participation*, London, Policy Studies Institute
- Hertel, B, (1976), Minimising Error Variance Introduced by Missing Data Routines in the Survey Analysis, *Sociological Methods & Research*, Volume 4, pp459-474
- Hillman, J, (1998), The Learning Age: Agenda for Lifelong Learning, *The Political Quarterly*, Volume 69 (3), July-September, pp312-318
- Hitchcock, G and Hughes, D, (1989), *Research and the Teacher*, London, Routledge
- Hoggett, P, New Modes of Control in the Public Service, *Public Administration*, Volume 74 (1), pp9-32
- Hopkins, K D, Hopkins, B R and Glass, G V, (1996), *Basic Statistics for the Behavioural Sciences*, 3rd Edition, Boston, Allyn & Bacon
- Hughes, M, et al, (1985), Leadership in Professionally Staffed Organisations, pp262-290 in Hughes M, et al, (1985), *Managing Education: The Systems and the Institution*, London, Holt Rinehart & Winston

- Hunt, S D and Morgan, R M, (1995), The Comparative Advantage Theory of Competition, *Journal of Marketing*, Volume 59, April, pp1-15
- Hurley, R F, (1994), TQM and Marketing: How Marketing Operates in Quality Companies, *Quarterly Management Journal*, Volume 1, July, pp42-51
- Hurley, R F and Hult, G T M, (1998), Innovation, Market Orientation and Organisational Learning: An Integration and Empirical Examination, *Journal of Marketing*, Volume 62, July, pp45-54
- Inglis, F, (1993), So Farewell then Citizen Servant, *Times Higher Educational Supplement*, 6 August 1993
- Jacobson, R, (1992), The Austrian School of Strategy, *Academy of Management Review*, Volume 17 (4), pp782-807
- Jaworski, B J and Kohli, A K, (1993), Market Orientation: Antecedents and Consequences, *Journal of Marketing*, Volume 57, July, pp53-70
- Jaworski, B J and Kohli, A K, (1996), Market Orientation: Review, Refinement and Roadmap, *Journal of Market Focused Management*, Volume 1 (2), p119-135
- Jenkins, S, (1995), *Accountable to None: The Tory Nationalisation of Britain*, London, Penguin
- Johnson, G and Scholes, K, (1993), *Exploring Corporate Strategy*, Englewood Cliffs NJ, Prentice-Hall
- Jöreskog, K G and Sörbom, D, (1982), Recent developments in structural equation modelling, *Journal of Marketing Research*, Volume 19, pp404-416
- Jöreskog, K G and Sörbom, D, (1993), *LISREL 8: Structural Equation Modelling with the SIMPLIS Command Language*, London, Lawrence Erlbaum Associates Publishers
- Kao, J, (1989), *Entrepreneurship, Creativity and Organisation; Text, Cases and Readings*, New Jersey, Prentice Hall
- Kao, J and Stevenson H, (1984), *Entrepreneurship: What is it and How to Teach it*, Harvard Business School
- Kedney, B and Jeans, T, (1993), Funding and Valuing Further Education, *Combe Lodge Report*, 23, No4, pp271-357
- Kelly, S W, (1992), Developing Customer Orientation Amongst Service Employees, *Journal of The Academy of Marketing Science*, Volume 20 (Winter), pp27-36
- Kennedy, Baroness H, (1997), *Learning Works: Widening Participation in Further Education*, Coventry, Further Education Funding Council
- Kennedy, M M, (1979), Generalising from Single Case Studies, *Evaluation Quarterly*, Volume 12, pp661-678
- Kerlinger, F N, (1973), *Foundations of Behavioural Research*, 2nd Edition, New York, Holt, Reinhardt and Winston Inc
- Kim, J and Mueller, C W, (1978), *Factor Analysis: Statistical Methods and Practical Issues*, Beverly Hills, Sage University Papers
- Kirzner, I M (1973), *Competition and Entrepreneurship*, Chicago, University of Chicago Press
- Kish, L, (1965), *Survey Sampling*, New York, John Wiley & Sons Inc
- Knight, C, (1990), *The Making of Tory Educational Policy in Post War Britain 1950-1986*, London, Falmer
- Knight, F H, (1921), *Risk, Uncertainty and Profit*, Cambridge MA, Houghton Mifflin Company
- Knight, F H, (1935), *The Ethics of Competition and Other Essays*, London, Allen and Unwin
- Knight, F H, (1947), *Freedom and Reform: Essays in Economics and Social Philosophy*, New York, Harper & Brothers (reprinted 1982, Indianapolis, Liberty Press)
- Knight, F H, (1956), *On the History and Methods of Economics*, Chicago, University of Chicago Press

- Knights, D and Wilmott, H, (1987), *Organisational Culture as Management Strategy: A Critique and Illustration from the Financial Services Industry*, *International Studies of Management and Organisation*, Volume 17, (3), pp40-63
- Knights, D, Sturdy, A and Morgan, G, (1994), *The Consumer Rules? An Examination of the Rhetoric and "Reality" of Marketing in Financial Services*, *European Journal of Marketing*, Volume 28, (3), pp42-54
- Kohli, A K and Jaworski, B J, (1990), *Market Orientation: The Construct, research Propositions and Managerial Implications*, *Journal of Marketing*, Volume 54 (April), pp1-18
- Kohli, A K, Jaworski, B J and Kumar, A, (1993), *MARKOR: A Measure of Market Orientation*, *Journal of Marketing Research*, Volume 30 (November), pp467-477
- Kotler, P and Andreasen, A, (1991), *Strategic Marketing for Non Profit Organisations*, 4th Edition, Englewood Cliffs NJ, Prentice-Hall
- Kotler, P and Levy, S J, (1969), *Broadening the Concept of Marketing*, *Journal of Marketing*, Volume 33, January, pp10-15
- Kotler, P, (1977), *From Sales Obsession to Marketing Effectiveness*, *Business Review*, Volume 55 (6), November-December, pp67-75
- Kotler, P, (1992), *Megamarketing in Managing the External Environment*, Ed. Mercer, D, London, Sage Publications Ltd
- Kotler, P, (2000), *Marketing Management*, 9th Edition, Upper Saddle River NJ, Prentice-Hall Inc
- Kumar, K, Subramanian R and Yauger, C, (1998), *Examining the Market Orientation-Performance Relationship: A Context-Specific Study*, *Journal of Management*, Volume 24 (2), pp201-234
- Kuratko, D and Hodgetts, R, (1989), *Entrepreneurship A Contemporary Approach*, 4th Edition, Orlando, The Dryden Press
- Kuanda, G, (1992), *Engineering Culture*, Philadelphia, Temple University Press
- Kvale, S, (1996), *Interviews*, London, Sage Publications
- Labovitz, S, (1970), *The Assignment of Numbers to Rank Order Categories*, *American Sociological Review*, Volume 35 p515-524
- Lamb, C W and Crompton, J L, (1990), *Analysing Marketing Performance*, in Fine S H (Ed.) *Social Marketing: Promoting the Causes of Public and Non-Profit Agencies*, Needham Heights MA, Allyn & Bacon, pp173-185
- Lamb, C W, (1987), *Public Sector Marketing is Different*, *Business Horizons*, Volume 30 (4), July-August, pp56-60
- Lancaster, G and Waddelow, I, (1998), *An Empirical Investigation into the Process of Strategic Marketing Planning*, *Journal of Marketing Management*, Volume 14 (8), pp853-878
- Lane, J E, (1987), *Bureaucracy and Public Choice*, London, Sage Publications
- Laush, H and Nöbauer, W, (1973), *Algebra of Polynomials*, Volume 5, London, North-Holland Publishing Company Ltd
- Lawrence, B, (1972), *The Administration of Education in Britain*, London, Batsford
- Lazonick, W (1991), *Business Organisation and the Myth of the Market Economy*, Cambridge, Cambridge University Press
- Leibenstein, H, (1966), *Allocative Efficiency versus 'X-Efficiency'*, *American Economic Review*, No 56, pp392-415
- Leibenstein, H, (1968), *Entrepreneurship and Development*, *American Economic Review*, No 58, pp72-83
- Levacic, R, (1989), *Financial Management In Education*, Milton Keynes, Open University Press
- Levitt, T, (1960), *Marketing Myopia*, *Harvard Business Review*, July-August 1960, pp45-56
- Levitt, T, (1969), *The Marketing Mode*, New York, McGraw-Hill

- Lewin, A Y, (1992), On Learning from Outliers, in Philips F Y et al (Eds), Systems and Management Science by External Methods, Boston MA, Kluwer Academic Publishers, pp11-17
- Likert, R, (1967), The Human Organisation: Its Management and Value, London, McGraw-Hill
- Lings, I A, (1999), Balancing Internal and External Market Orientations, Journal of Marketing Management, Volume 15 (4) May, pp239-263
- Loomis, C J, (1993), Dinosaurs?, Fortune, Volume 127, 9 May 1993, pp36-42
- Loughlin, M, (1996), Understanding Control - Local Government Relationships, Public Policy and Administration Journal, Volume 1 (2) Summer, pp48-65
- Lovell, S A K, Walters, L and Wood, L, (1993), Stratified Models of Education Production using Modified DEA and Regression Analysis, in DEA: Theory, Methodology and Applications (Ed. Charnes, A et al, London, Kluwer Academic Publishers, pp329-351
- Lovelock, C H and Weinberg, CB, (1989), Marketing for Public and Non Profit Managers, 2nd Edition, Redwood City CA, Scientific Press
- Lumpkin, G T and Dess, G G, (1996), Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance, Academy of Management Review, Volume 97, January, pp135-172
- Major, J, (1989), Public Service Management: The Revolution in Progress, London, The Audit Commission
- Maltz, E and Kohli, A K, (1996), Market Intelligence Dissemination Across Functional Boundaries, Journal of Marketing Research, Volume 13, February, pp47-61
- March, J G and Olsen, J P, (1972), A Garbage Can Model of Organisational Choice, Administrative Science Quarterly, March 1972, Volume 17 (1), pp1-25
- Marcus, G E and Fischer, M M J, (1986), Anthropology as Cultural Critique: An Experimental Moment in the Human Science, Chicago, University of Chicago Press
- Marshall, C and Rossman, G B, (1994), Designing Qualitative Research, 2nd Edition, London, Sage Publications Ltd
- Martin, J, (1992), Cultures in Three Organisations: Three Perspectives, London, Oxford University Press
- Maslow, A H, (1954), Motivation and Personality, 3rd Edition 1987, New York, Harper & Row
- Maslow, A H, (1962), Towards a Psychology of Being; Self Actualisation, Princetown, Van Nostrand Company
- Maslow, A H, (1968), Creativity in Self-Actualising People; Towards a Psychology of Being, 3rd Edition 1987, London, Van Nostrand Reinhold Company
- McCrackern, G D, (1988), The Long Interview, London, Sage Publications Ltd
- McDonald, M H B, (1989), Ten Barriers to Marketing Planning, Journal of Marketing Management, Volume 5 (1), pp1-18
- McDonald, M, (1992), Strategic Marketing Planning, London, Kogan Page
- McGill, M E and Wooten, L W, (1975), Management in the Third Sector, Public Administration Review, Volume 35, September-October, pp444-455
- McGinty, J and Fish, J, (1993), Further Education in the Market Place, London, Routledge
- Menon, A and Varadarajan, P R, (1992), A Model of Marketing Knowledge Use within Firms, Journal of Marketing, Volume 56, October, pp53-71
- Metcalfe, L and Richards, S, (1987), Improving Public Management, London, Sage
- Meziou, F, (1991), Areas of Strength and Weakness in the Adoption of the Marketing Concept by Small Manufacturing Firms, Journal of Small Business Management, October, pp72-78
- Miles, M B and Huberman, A M, (1984), Qualitative Data Analysis: A Sourcebook of New Methods, London, Sage Publications

- Miles, R E and Snow, C C, (1978), *Organisational Strategy, Structure and Process*, New York, McGraw-Hill
- Miller, D, (1983), The Correlates of Entrepreneurship in Three Types of Firms, *Managerial Science*, Volume 29 (7), pp770-791
- Miller, H, (1991), Academics and their Labour Process, in Smith C, Knights D et al (eds.), *White-Collar Work*, London, Macmillan Academic, pp109-37
- Mintzberg, H, (1983), *Power in and Around Organisations*, Eaglecliffs, Prentice Hall
- Mintzberg, H, (1989), *Mintzberg on Management: Inside our Strange World of Organisations*, New York, The Free Press
- Mintzberg, H, (1994), *The Rise and Fall of Strategic Planning*, New York, The Free Press
- Mischler, E G, (1991), *Research Interviewing: Context and Narrative*, Cambridge MA, Harvard University Press
- Mokwa, M P, (1990), The Policy Characteristics and Organisational Dynamics of Social Marketing, in Fine, S H (Ed.), *Social Marketing: Promoting the Causes of Public and Non Profit Agencies*, Needham Heights MA, Allyn & Bacon, pp43-45
- Montgomery, C A and Wilson, V A, (1986), Mergers that Last: A Predictable Pattern? *Strategic Management Journal*, Volume 7, (1), pp91-96
- Morgan, R E and Strong, C A, (1998), Market Orientation and Strategic Orientation, *European Journal of Marketing*, Volume 32 (11/12), pp1051-1073
- Mouly, G J, (1978), *Educational Research: The Art and Science of Investigation*, Boston MA, Allyn & Bacon
- Mullins, L J, (1996), *Management and Organisational Behaviour*, 4th Edition, London, Pitman Publishing
- Naman, J and Slevin, D, (1993), Entrepreneurship and the Concept of Fit: A Model and Empirical Tests, *Strategic Management Journal*, Volume 14 (2), pp137-153
- Narver, J C and Slater, S F, (1990), The Effect of Market Orientation on Business Profitability, *Marketing* Volume 54 (2), pp20-35
- Narver, J C, Slater, S F and Tietje, B, (1998), The Effect of a Market Orientation on Business Profitability, *Journal of Marketing*, Volume 54, October, pp20-35
- National Audit Office, (1999), *Investigation of Alleged Irregularities at Halton College*, London, The Stationery Office
- National Audit Office, (2000), *Managing Finances in English Further Education Colleges*, London, The Stationery Office
- National Audit Office, (2001), *Improving Student Performance: How English FE Colleges can Improve Student Retention and Achievement*, London, The Stationery Office
- Neave, G, (1988), On the Cultivation of Quality, Efficiency and Enterprise: An Overview of Recent Trends in Higher Education in Western Europe 1996-1988, *European Journal of Education*, Volume 23, (1/2), pp1-15
- Nie, N H, et al, (1997), *SPSS: Statistical Package for the Social Sciences*, 2nd Edition, New York, McGraw-Hill
- Noble Financial Services, (1999), *Nobel's Further Education Financial Yearbook 1999*, Volumes 1&2, Edinburgh, Noble's Financial Services
- Nove, A, (1992), *An Economic History of the USSR:1917-1991*, 3rd Edition, London, Penguin Books
- Nunnally, J C, (1978), *Psychometric Theory*, 2nd Edition, New York, McGraw-Hill Inc
- O'Reilly, C A, (1982), Variations in Decision Makers' Use of Information Sources: The Impact of Quality and Accessibility of Information, *Academy of Management Journal*, Volume 25 (4), pp756-771
- Oakland, J S, (1983), *Total Quality Management*, 2nd Edition, London, Butterworth Heinemann

- Offe, C, (1975), *Stress and Contradiction in Modern Capitalism* in Linberg et al, Lexington MA, Lexington Books
- Oppenheim, A N, (1992), *Questionnaire Design, Interviewing and Attitude Measurement*, London, Pinter Printers Ltd
- Packwood, T and Turner, C, (1990), *Hierarchy, Anarchy and Accountability: Contrasting Perspectives - An Exchange*, in Ed. Westboy, A, *Culture and Power in Educational Organisations*, Buckingham, Open University Press, pp74-86
- Parasurman, A, Zeithmal, V A and Berry, L, (1985), *A Conceptual Model of Service Quality and its Implications for Future Research*, *Journal of Marketing*, Volume 49 (Fall), pp41-50
- Park, C W and Zaltman, G, (1987), *Marketing Management*, Chicago, Dryden Press
- Parker, M and Jarry, D, (1995), *The McUniversity: Organisation, Management and Academic Subjectivity*, *Organisation Journal*, Volume 2 (2), pp319-338
- Patton, M Q, (1980), *Qualitative Evaluation and Research Methods*, 2nd Edition, London, Sage Publications
- Payne, A F, (1988), *Developing a Marketing Orientated Organisation*, *Horizons*, Volume 33 (3), pp46-53
- Pelham, A M, (1997), *Mediating Influences on the Relationship Between Market Orientation and Profitability in Small Industrial Firms*, *Journal of Marketing Theory and Practice*, Summer, pp55-76
- Peters, T J and Waterman, R H, (1982), *A Passion for Excellence*, New York, Random House Inc
- Peterson, R T, (1989), *Small Business Adoption of the Marketing Concept vs. Other Business Strategies*, *Journal of Marketing Research*, Volume 16, February, pp6-17
- Pettigrew, A M, (1979), *On Studying organisational Cultures*, *Administrative Science Quarterly*, Volume 24, pp570-581
- Piercy, N and Giles, W, (1989), *The Logic of Being Illogical in Strategic Marketing Planning*, *Journal of Marketing Management*, Volume 5 (1), pp67-82
- Piercy, N, (1989), *The Role of Marketing in UK Retailing Organisations*, *International Journal of Retailing*, Volume 4 (2), pp46-65
- Piercy, N, (1990), *Marketing Concepts and Actions: Implementing Marketing led Strategic change*, *European Journal of Marketing*, Volume 24 (2), pp24-42
- Pitts, R A, (1980), *Towards a Contingency Theory of Multibusiness Organisational Design*, *Academy of Management Review*, Volume 5, pp203-210
- Pollitt, C, (1990), *Managerialism and the Public Services: The Anglo-American Experience*, Oxford, Basil Blackwell
- Pollitt, C, Birchall, J and Putman, K, *Opting Out and the Experience of Self-Management*, Glasgow, ESRC
- Porter, M, (1980), *Competitive Strategy*, New York, The Free Press
- Porter, M, (1985), *Competitive Advantage*, London, The Free Press
- Quinn, J B, (1985), *Managing Innovation: Controlled Chaos*, *Harvard Business Review*, Volume 63, May/June, pp73-84
- Raison, T, (1976), *The Act and the Partnership; An Essay on Educational Administration in England*, London, Bedford Square Press
- Randle, K and Brandy, N, (1996), *Managerialism and Professionalism in the 'Cinderella' Sector: A Case Study from Further Education*, *Employment Studies Unit Paper 6, Working Paper Series*, University of Hertfordshire Business School
- Ranson, S, (1985), *Changing Relations between the Centre and Locality in Education* pp103-124, in McNay I & Ozga J, *Policy Making in Education: The Breakdown of Consensus*, London, Pergamon Press

- Reynoso, J F and Mores, B, (1996), Internal Relationships in Buttle F, Editor, Relationship Marketing: Theory and Practice, Paul Chapman Publishing, pp55-73
- Robinson, D, (1990), The Naked Entrepreneur, London, Kogan Page
- Rose, D and Sullivan, O, (1993), Introducing Data Analysis for Social Scientists, Buckingham, Open University Press
- Rubin, H J and Rubin, I S, (1995), Qualitative Interviewing: The Art of Hearing Data, London, Sage Publications Ltd
- Ruekert, R W and Walker, O C, (1987), Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence, Journal of Marketing, Volume 51, January, pp1-19
- Sawbridge, S J, (2001), Leadership in Further Education: A Summary Report for a review of the Literature, in Leadership Issues: Raising Achievement, Editor Horsfall C, London, Learning and Skills Development Agency
- Say, J B, (1803), A treatise on Political Economy; Or the Production, Distribution and Consumption of Wealth, New York: August M Kelley, 1964
- Schein, E H, (1985), Organisational Culture and Leadership, 1st Edition, San Francisco, Jossey-Bass
- Schein, E H, (1990), Organisational Culture, American Psychologist, Volume 45, February, pp109-119
- Schein, E H, (1992), Organisational Culture and Leadership, 2nd Edition, San Francisco, Jossey-Bass
- Schendel, D, (1990), Introduction to the Special issue on Corporate Entrepreneurship, Strategic Management Journal, Volume 11, Summer, pp1-3
- Scherer, F M, (1980), Industrial Market Structure and Economic Performance, Chicago, Rand McNally Inc
- Scheurich, J J, (1997), Research Methods in the Postmodern, London, The Falmer Press
- Schumpeter, J A (1934), The Theory of Economic Development, Cambridge MA, Harvard University Press
- Scott, S G and Bruce, R A, (1994), Determinants in Innovative Behaviour: A Path Model in Individual Innovation in the Workplace, Academy of Management Journal, Volume 37 (June), pp580-607
- Scott, W R, (1992), Organisations: Rationale, Natural and Open Systems, New Jersey, Prentice Hall
- Seiford, L M and Thrall, R M, (1990), Recent Developments in DEA: The Mathematical Programming Approach to Frontier Analysis, Journal of Econometrics. Volume 46 (1-2), pp7-38
- Senge, P M, (1990), The Fifth Discipline, Doubleday, New York
- Sheth, J N and Sisodia, R S, (1999), Revisiting Marketing's Lawlike Generalisations, Journal of the Academy of Marketing Science, Volume 27 (1), pp71-87
- Silverman, D, (2000), Doing Qualitative Research: A Practical Handbook, London, Sage
- Singer, E, Frankel, M and Glassman, M B, (1983), The Effect of Interview Characteristics and Expectations of Response, Public Opinion Quarterly, Volume 47, pp68-83
- Sinkula, J M, (1994), Market Information Processing and Organisational Learning, Journal of Marketing, Volume 58, January, pp35-45
- Sinkula, J M, Baker, W and Noordewier, T G, (1997), A Framework for Market-Based Organisational Learning: Linking Values, Knowledge and Behaviour, Journal of the Academy of Marketing Science, Volume 25, Fall, pp305-318
- Siu, N Y M and Wilson, R M S, (1998), Modelling Market Orientation: An Application in the Education Sector, Journal of Marketing Management, 1998, Volume 14, pp293-323
- Slater, S F and Narver, J C, (1994), Does Competitive Environment Moderate the Market Orientation-Performance Relationship? Journal of Marketing, Volume 58, January, pp46-55
- Slater, S F and Narver, J C, (1995), Market Orientation and the Learning Organisation, Journal of Marketing Volume 59, July, pp63-74

- Slater, S F, (1997), Developing a Customer Value-Based Theory of the Firm, *Journal of Academy of Marketing Science*, Volume 25 (Fall), pp305-318
- Sommer, B and Sommer, R, (1979), *A Practical Guide to Behavioural Research: Tools and techniques*, 4th Edition, Oxford, Oxford University Press
- Spradley, J P, (1979), *The Ethnographic Interview*, New York, Holt, Rinehart and Winston
- Stake, R, (1994), Case Studies, in *Handbook of Qualitative Research*, Eds. Denzin, N and Lincoln, Y, London Sage
- Steers, TM and Porter, L W, (1991), *Motivation and Work Behaviour*, 5th Edition, New York, McGraw-Hill
- Steiger, J H, (1990), Structural Model Evaluation and Modifications: An Interval Estimation Approach, *Multivariate Behavioural Research*, Volume 25, pp173-180
- Stevenson, H H, Roberts, M J and Grousbeck, H I, (1989), *New Business Ventures and the Entrepreneur*, 3rd Edition, Homewood IL, Irwin
- Stigler, G J, (1976), The Xistence of x-efficiency, *American Economic Review*, No 66, 1976, pp213-216
- Stinchcombe, A, (1968), *Constructing Social Theories*, New York, Harcourt Brace
- Stohl, C and Redding, W C, (1987), Messages and Message Communication Processes, in *Handbook of Organisational Communication: An Interdisciplinary Perspective*, Jablin, F M et al Ed. Beverley Hills, Sage Publications, pp451-502
- Stolph, C, (1990), Strengths and Weaknesses in Data Envelopment Analysis. An Urban and Regional Perspective, *Computers, Environment and Urban Systems*, Volume 14 (2), pp103-116
- Strauss, A L, (1987), *Qualitative Analysis for Social Scientists*, Cambridge, Cambridge University Press
- Strauss, A L and Corbin, J, (1998), *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2nd Edition, London, Sage
- Stubbs, W, (1986), The Metropolitan LEA, in Ranson S and Tomlinson J, *The Changing Government of Education*, London, Allen & Unwin, pp49-57
- Sudman, S, (1976), *Applied Sampling*, London, Academic Press Inc (London) Ltd
- Swindler, A, (1986), Culture in Action: Symbols and Strategies, *American Sociological Review*, Volume 51, pp273-286
- The Economist, (2001), Britain: The Trouble with Targets, 28 April 2001, pp31-32
- Theodossin, E, (1986), *In Search of the Responsive College*, Bristol, Further Education Staff College
- Thompson, B and Snyder, P A, (1997), Statistical Significance Testing Practices, *Journal of Experimental Education*, Volume 66, p75-83
- Thompson, J L, (1999), A Strategic Perspective of Entrepreneurship, *International Journal of Entrepreneurial Behaviour*, Volume 5 (6), pp279-96
- Thompson, V A, (1965), Bureaucracy and Innovation, *Administrative Science Quarterly*, Volume 5, June, pp1-20
- Tilles, S, (1969), Making Strategy Explicit, in Ansoff, H I Ed. *Business Strategy*, London, Penguin
- Timmons, J, et al, (1985), *New Venture Creation*, Homewood IL, Irwin
- Treacy, M and Wiersema, F, (1993), Customer Intimacy and Other Value Disciplines, *Harvard Business Review*, January/February 1993, pp84-93
- Vallance, E, (1999), Sleeping with the Enemy or Learning from Each Other?, *Sharing Ethical Experiences between Public and Private Sectors*, *Long Range Planning*, Volume 21 (2), April 1999, pp199-206
- Vanberg, V J, (1994), *Rules and Choice in Economics*, London, Routledge

- Verma, G K and Mallick, K, (1991), *Researching Education: Perspectives and Techniques*, London, Falmer
- Walford, G, (1994), *Researching the Powerful in Education*, London, UCL Press
- Watson, A, (1995), *Entrepreneurship and Professional Management: A Fatal Distinction*, *International Small Business Journal*, Volume 13, (2)
- Webster, F E, (1988), *Rediscovering the Marketing Concept*, *Business Horizons*, Volume 31, May-June, pp29-39
- Webster, F E, (1992), *The Changing Role of Marketing in the Corporation*, *Journal of Marketing*, Volume 56, October, pp1-17
- Webster, F E, (1994), *Executing the New Marketing Concept*, *Marketing Management*, Volume 3 (1), pp9-16
- Weiner, B et al, (1971), *Perceiving the Causes of Success and Failure*, Morristown NJ, General Learning
- Weirsema, M F and Bantel, K A, (1992), *TMT Demography and Corporate Strategic Change*, *Academy of Management Journal*, Volume 35, pp91-121
- Wilson, M and McLean, S (1994), *Questionnaire Design: A Practical Introduction*, Newton Abbey Co. Antrim, University of Ulster Press
- Wilson, T P, (1971), *A Critique of Ordinal Variables*, *Social Forces*, Volume 49, pp432- 444
- Wilson, T, (1991), *The Proletarianisation of Academic Labour*, *Industrial Relations Journal*, Volume 22
- Wind, Y and Robertson, T S, (1983), *Marketing Strategy: New Directions for Theory and Research*, *Journal of Marketing*, Volume 47, Spring, pp12-25
- Woodman, R W, Sawyer, J E and Griffin, R W, (1993), *Toward a Theory of Organisational Creativity*, *Academy of Management Review*, Volume 18 (2), pp293-321
- Wright, S, (1934), *The Method of Path Coefficients*, *Annals of Mathematical Statistics*, Volume 5, pp161-215
- Yin, R K, (1984), *Case Study Research, Design and Methods*, London, Sage Publications Ltd
- Youngman, M B, (1984), *Designing Questionnaires*, in Bell, J et al (Eds.), *Conducting Small-Scale Investigations in Educational Management*, London, Harper & Row, pp156-176
- Zahra, S A, (1991), *Predictors and Financial Outcomes of Corporate Entrepreneurship*, *Journal of Business Venturing*, Volume 6, pp259-285
- Zahra, S A, (1993), *Environment, Corporate Entrepreneurship and Financial Performance: A Taxonomic Approach*, *Journal of Business Venturing*, Volume 8, pp319-340
- Zaleznik, A, (1977), *Managers and Leaders: Are They Different?*, *Harvard Business Review*, May-June 1977, pp67-78
- Zaltman, G, Duncan, R and Holbek, J, (1973), *Innovations and Organisations*, New York, John Wiley & Sons Inc
- Zeithaml, C P and Zeithaml, V A, (1984), *Environmental Management: Revising the Marketing Perspective*, *Journal of Marketing*, Volume 47, Spring 1984

Glossary

AGFI	Adjusted Goodness of Fit Index (used in LISREL)
APC	Association of Principals of Colleges
CBP	College Business Performance
CEF	Colleges Employers' Forum
CEO	Chief Executive Officer (the Principal in a FE college)
DEA	Data Envelopment Analysis
DES	Department of Education and Science (subsequently DfEE)
DETR	Department of Environment, Transport and the Regions (now DLTR)
DfEE	Department for Education and Employment (previously DES, now DfES)
DfES	Department for Education and Skills (previously DfEE)
DLTR	Department for Local Government, Transport and the Regions (previously DETR)
DoE	Department of the Environment (subsequently DETR)
DV	Dependent Variable
ERA	Education Reform Act
ERG	Existence, Relatedness and Growth (model)
FE	Further Education
FEDA	Further Education Development Agency (previously FEU, subsequently LSDA)
FEFC(E)	The Further Education Funding Council England (1992-2001)
FENTO	Further Education National Training Organisation
FEU	Further Education Unit
GDP	Gross Domestic Product
GFI	Goodness of Fit Index (used in LISREL)
HEFCE	The Higher Education Funding Council England (1989 onwards)
HMI	Her Majesty's Inspectorate (of Education)
ICT	Information Communications Technologies
IST	Information Society Technology
IV	Independent Variable
LBI	Land Based Industries (also known as Agricultural colleges)

LEA	Local Education Authority
LISREL	Linear Structural Equations
LMC	Local Management of Colleges (scheme of budgetary delegation)
LSC	Learning Skills Council (2001 onwards)
LSDA	Learning Skills Development Agency (previously FEDA, from 2001)
MARKOR	Market Orientation Scales developed by Kohli, Jaworski and Kumar 1993
MIP	Market Information Processing (activities)
MSC	Manpower Services Commission (1984-1989)
NAO	National Audit Office
NVQ	National Vocational Qualification (competency level or examination)
OECD	Organisation for Economic Co-operation and Development
Ofsted	Office for Standards in Education
PI	Performance Indicator
RDA	(English) Regional Development Agency (1999 onwards)
RMSEA	Root Mean Square Error of Approximation (used in LISREL)
SBU	Strategic Business Units
SCA	Sustainable Competitive Advantage
SFC	Sixth Form College
SMT	Senior Management Team (top management team in FE Colleges)
SPSS	Statistical Processing for Social Scientists
TEC	Training & Education Council (1993-2001)
TMT	Top Management Team (more commonly known as SMT)
TQM	Total Quality Management

