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STRATEGY ADOPTED BY RESEARCH ASSOCIATIONS FOR SUCCESS

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PhD Thesis

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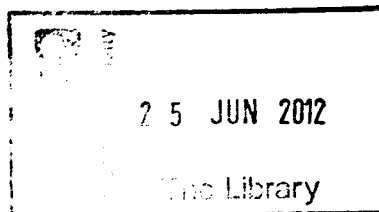
I am grateful to the CEOs of the case study research associations who willingly agreed to interviews and provided the data without which this thesis would not have been possible. I am also grateful to the non executive directors of the case study research associations who completed and returned my questionnaire.

My thanks are due to my supervisors Professor Joyce Fortune and Dr. Alison Bettley. Dr. Alison Bettley has given me continuing encouragement and constructive comments on my efforts.

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Abstract

This thesis presents results of a study of the strategy adopted by UK research associations which led to success. The success of research associations, being not for profit organisations, was measured in terms of sustainable growth.

Research associations were established as a result of a government initiative to improve the performance of sectors of British industry. Initially they were financed by way of membership subscriptions and a related government grant. With the decline in the size of the manufacturing sectors they served and the removal of government grant, research associations have had to make the transition from publicly supported co-operative research associations to independent privately financed research institutes.

The identification of the strategy was based on the analysis of documentary archival, interview and questionnaire data. A case study approach was adopted. The research associations were selected and evaluated in pairs to reduce the effect of the external environment, including the influence of the sector the research associations served.

Pilot interviews indicated the importance of governance as well as strategy to these organisations. The study therefore included consideration of research associations' governance. The data collected and analysed for case study research associations enabled both their strategy and governance to be classified

using the theoretical models of Whittington (2001) and Comforth (2003) respectively.

The more successful research associations were found to have adopted an evolutionary perspective on strategy and a partnership model of organisational governance. Size contributed to success, with the larger research associations exhibiting superior sustainable growth.

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List of Abbreviations

ACEVO	Association of Chief Executives of Voluntary Organisations
AMTRI	Advanced Manufacturing Technology Research Institute
AIRTO	Association of Independent Research and Technology Organisations
BBMRA	British Brush Manufacturers Research Association
BCC	British Coal Corporation
BCIRA	British Cast Iron Research Association
BCRA	British Coke Research Association
BCURA	British Coal Utilisation Research Association
BFIA	British Forging Industry Association
BIBRA	British Industrial Biological Research Association
BISRA	British Iron and Steel Research Association
BLRA	British Laundry Research Association
BNFMRA	British Non Ferrous Metals Research Association
BMT	British Maritime Technology (merged ship industries research associations)
BNF	British Non Ferrous Metals Research Association
BRI	Brewing Research International
BSIRA	British Scientific Instrument Research Association
BTTG	British Textile Technology Group
CATRA	Cutlery and Allied Trades Research Association
CCFRA	Campden and Chorleywood Food Research Association
CTI	Castings Technology International
CTRA	Coal Tar Research Association
CURL	Coal Utilisation Research Laboratories
DECC	Department of Energy and Climate Change
DFRA	Drop Forging Research Association
DSIR	Department of Scientific and Industrial Research
DTI	Department of Trade and Industry
ERA	Electrical Research Association
EU	European Union
FIRA	Furniture Industry Research Association
FRC	File Research Council
HATRA	Hosiery and Allied Trades Research Association
ICERA	Internal Combustion Engine Research Association
KIF	Knitting Industry Federation

LIRA	Lambeg Industrial Research Association
MINTEC	Ministry of Technology
MIRA	Motor Industry Research Association
MTIRA	Machine Tool Industry Research Association
MTTA	Machine Tool Trade Association
NCB	National Coal Board
NCC	National Computing Centre
NEL	National Engineering Laboratory
NMI Ltd.	(privatised government marine research establishment)
OGC	Office of Government Commerce
PAMETRADA	Parsons And Marine Engineering Turbine Research And Development Association
PERA	Production Engineering Research Association
PEST	Political, Economic, Social, and Technological analysis (technique used by organisations for environmental scanning)
PIRA	Printing Industries Research Association
PRA	Paint Research Association
RAPRA	Rubber And Plastic Research Association
RTI	Research and Technology Institute
SCRATA	Steel Castings Research And Trade Association
Shirley Institute	(name for Cotton Industries Research Association)
SIRA	(formerly British Scientific Instrument Research Association)
SME	Small and medium enterprises
SWOT analysis	Analysis of an organisation's Strengths, Weaknesses, Opportunities and Threats
TRADA	Timber Research And Development Association
TWI	The Welding Institute
USP	Unique selling point
WIRA	Wool Industry Research Association

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1. INTRODUCTION

1.1 Preamble

The purpose of this chapter is to present an overview of the research study and the chief factors which influenced its inception. The research topic is introduced together with a description of the academic and practical rationale for this work. The aims of this thesis and the scope of the research are set out. An overview of the research approach is given, followed by a brief introduction to the structure of the thesis document. This short preamble sets the scene for the research.

The researcher has spent most of his working life associated with UK research associations and has been closely aware of the considerable changes in research associations which have taken place over the recent past. Many have failed, some have merged or been taken over, others have grown or decreased in size.

The research associations originally set up with government funding have experienced a withdrawal of government funds and been exposed to a rapidly changing commercial environment. The research associations have needed to evolve and implement a strategy for the way ahead without government support.

This research is aimed at relating strategies developed by the research associations to the outcomes in terms of failure or growth as measured in terms of sustainable growth. Pilot interviews also identified the importance of governance. The research therefore includes an investigation of the nature of the governance

that might contribute to success. The research also investigates whether there is a link between size of the organisation and sustainable growth.

1.2 The research topic

Research Associations are the topic of this research. They are UK-based research organisations which were established to undertake co-operative research in sectors of industry producing similar products or using similar technologies. They were established as a result of a government initiative in 1918, when the government of the day set aside £1M to encourage, by way of grants, industrial sectors to set up such organisations, with the objective of stemming the decline in British manufacturing industry. The government could have been prescriptive in selecting sectors of industry for support but did not follow this course and instead invited sectors of industry to come forward with proposals. The research associations were therefore industry owned and controlled from the outset. The governance of the research associations and their duties and activities were laid down in a model memorandum and articles of association produced by the government of the day. They were companies limited by guarantee, controlled by a Council elected by the members, and as such were not for profit organisations. Unlike contract research organisations, UK research associations were established as membership-based organisations.

The early years of the research associations' history were ones of mixed success. For example between 1922 and 1928 more research associations were wound up than new ones formed. Industry was slow to realise the benefits that could be obtained from co-operative research; however some 20 research associations

managed to survive the depression years of the late 1920s and 1930s. The government's original intention was that after the £1M had been used up as a pump priming exercise the research associations would be self-sufficient without government financial support.

This proved not to be the case and the £1M was used up by 1932. However the government continued to augment industrial subscriptions by way of a grant with increasingly stringent grant terms and with no promise of continuing support. In 1943, as a reward for the contribution which the research associations had made to the war effort, the grant to research associations was established as a permanent feature and remained so until it was finally abandoned as one of the outcomes of the Rothschild report (1971).

The membership of the research associations was voluntary up until 1947 when a mechanism was established for industries to impose a statutory levy so that all firms in a defined industrial sector would have to pay a levy and membership of the research association was therefore compulsory. A number of research associations took advantage of the scheme as a way of securing industrial income. The statutory levy was abolished with severe consequences for the research associations which had opted for a statutory levy.

The government influenced the development of the research associations in ways other than financial. The research associations were established to stem the decline in British manufacturing; hence membership was only open to UK registered companies. The membership base was extended to all commonwealth companies in 1932 and in 1972 all restrictions on membership were removed, hence allowing the research associations to recruit members worldwide.

The activities of the research associations developed over the years from co-operative research to other activities. Contract research was permitted from 1918 but few research associations undertook such work as it was discouraged both by the government and by the research associations' councils. In post-war years the government changed its policy and single-client contract work was positively encouraged. The government also encouraged the research associations to diversify from co-operative research to such activities as management training, market research and operational research. The government also revised its policy on the co-operative research programmes, permitting them to become much more applied than was previously the case.

As can be seen from this brief history, the government influenced the strategies which the research associations developed. With changing government policy, strategies had to be adopted to meet these changing policies. However with the end of the partnership between the government and the research associations as a result of the Rothschild report in 1971 research associations had to develop entirely new strategies.

The topic for this research was identified largely on academic grounds and because the results of the research could be of practical value to similar organisations undergoing a period of uncertainty as a result of a change in government policy. As will be seen in Chapter 2, this topic has been relatively neglected in recent years, and hence the present study will lead to a better understanding of strategy formulation in non-profit organisations undergoing a rapid change in the external environment. The study will also consider the changes in governance which have taken place as a result of the changing

environment. The researcher's own career background and interests also formed an important factor in choosing and refining this research topic.

UK research associations were selected by the researcher as a topic for this research for the following reasons:

Academic rationale

Academia has largely neglected research associations since the publication of four substantial works in the late 1960s/early 70s, namely: Hammond et al. (1967), Jones (1972), Johnson (1973) and Bessborough (1973) , which provide a well documented starting point for this study.

The research associations present a rare opportunity to study a group of organisations with the same legal status and governance which were all established with the same objective (to improve the performance of a sector of British industry), as set out in their memorandum and articles of association.

Practical reasons

The practical reasons for undertaking the study were:

- to provide guidance for those UK-based research associations which have not achieved success, through analysing the strategies which the more successful research associations have devised and adopted.
- to assist research associations and research institutes in other countries where the reduction in government financial support took place at a

later date than in the UK and which are now facing a similar challenge to those of the research associations in the UK which have successfully made the transition from public to private funding.

- to assist other not for profit organisations which are having to make the transition from public to private funding in these and other sectors, such as the arts, museums, and universities.¹

Personal reasons

The researcher spent most of his working life in research associations as a manager in one and director (CEO) in another for nearly 20 years. Upon retirement he was appointed secretary general of the Association of Independent Research and Technology Organisations (AIRTO).

As secretary general of AIRTO the researcher visited all its members and collected archival material which forms background data to this research.

The researcher, a physicist by training, obtained an MBA degree with credit in 2001 which stimulated his interest in strategy.

¹ For instance as set out in 1 February 2010 HEFCE communication to HEFCE-funded universities and further education colleges: "There is a £449 million reduction in funding for the 2010-11 financial year compared with the previously announced plans see note 2 for that year (rather than compared with 2009-10)." HEFCE Circular letter number 02/2010, para 4. Accessed at http://www.hefce.ac.uk/pubs/circlets/2010/cl02_10/ on 11 February 2010.

1.3 The research question *What factors are important?*

What strategies have led to success in UK-based research associations?

1.4 The thesis structure

Having provided a rationale for undertaking this research and established the research question the following is an account of the research approach through a summary of the contents of each chapter.

Chapter 2

The literature review (Chapter 2) focuses on two areas in order to establish the background and basis for the framework for the study:

- Research associations, particularly the influence of government policy and funding
- Strategy and governance

Governance was included alongside strategy because during pilot interviews it became clear that the research association's governance was a significant factor in the success of a research association.

The literature review covering research associations will identify the important influence of government funding, the development of contract work, the move to overseas clients and the move away from research to technical services.

The literature review covers governance and strategy theory which could be applicable to research associations, with the emphasis on not for profit and

technology-based organisations. The literature review identifies factors which may influence the performance of research associations.

The literature review identifies and considers the theoretical approaches to the classification of governance and strategy which are adopted in this research. The theoretical model used for the classification of governance is that developed by Cornforth (2003) and the theoretical model for strategy is that developed by Whittington (2001).

Chapter3

Pilot interviews (Chapter 3) with the CEOs of three research associations were undertaken as exploratory research, in order to obtain additional understanding of the issues perceived by the CEOs at the time of the research (2006).

The pilot interviews identified threats, concerns and opportunities facing the research associations. The threats were pension scheme deficits and the removal of corporation tax exemption from the research associations.

The concerns raised were:

- governance- the need to modify the governance structure to meet the needs of the changes which had taken place in the research associations activities and customer base
- culture - the need to change the culture of the organisation from one of professional to market control. (Whittington 1991)
- size – is there an optimum size for a research association and is there a relationship between size and success?

Opportunities for business growth were identified including diversification and acquisitions.

Chapter 4

Following the literature review and pilot interviews a series of research questions are formulated in Chapter 4. The primary research question is addressed by first positioning the governance structure and strategy of the research associations under the theoretical models identified in Chapter 2.

The literature review and the pilot interviews identified a number of issues which were grouped under the headings:

- What is the effect of governance on research association performance?
- When did strategic planning start and who initiates the strategy?
- What is the strategy development process?
- How do research associations view their strategic competencies?
- What are the diversification strategies?
- What is the impact of the other important factors identified that may influence strategy?

These issues were developed into secondary research questions which were embodied in the semi structured questionnaire which formed the basis of case study interviews.

Chapter 5

This chapter develops the research methodology.

In order to answer the research question, it is first necessary to develop a method for measuring success and also an approach for a classification of strategy and governance.

The thesis examines in Chapter 5 how to measure success in research associations, as organisations which are neither commercial companies (whose success is traditionally measured by financial ratios such as return on capital) nor academic institutions, whose success can be measured by the number and citation of papers published, as suggested by Rush (2002). Hence, in the present work, success is measured in terms of sustainable growth. This follows the idea of Sainsbury (1991) who postulates growth as a measure of success, particularly in management-controlled organisations such as research associations. In this analysis, sustainable growth is determined from the increase in staff numbers employed over the period and the QuiScore. As will be seen in Chapter 5, QuiScore gives an indication of the likelihood of an organisation failing in the near future (Reid and Smith, 2003).

The research identifies an approach to classifying strategy and governance in research associations. Strategy is classified using concepts developed by Whittington (2001) and governance is classified using those of Cornforth (2003).

Case studies have been extensively used in business research and this encouraged the researcher to develop a case study approach in this research. In broad terms, this research follows the approach as set out by Butler and Wilson (1990) for analysing organisational strategy and structure by using case studies, based on structured data from interviews and documentary and archival data.

The researcher also followed the approach of Freeman (1974), in which pairs of case studies were used to minimise the influence of the external environment, in particular to eliminate the fortunes of the industrial sectors served by the research associations. Further, Freeman(1991, p.500) states “The most effective way to identify those factors which are important for success is by paired comparisons between those innovations which succeed and those which fail as in project SAPPHO.”

Eight pairs of research associations were selected:-

- Four pairs consist of organisations serving the same or similar industrial sectors. The approach of selecting pairs in the same or similar sectors was adopted to minimise the effect of external industrial environment, which could vary from one industrial sector to another. The first pair consists of two research associations in the food sector, the second pair the transport sector, the third pair the construction industry, and the fourth pair the clothing industry.
- A further pair is research associations which were technology- rather than industry-based. Technology based research associations are research associations which were set up to develop and encourage the use of a technology which was used across many industrial sectors, in contrast to industry based research associations which were established to improve the technological performance of a particular section of industry. Examples of technology based research associations are those concerned with production engineering, welding and computers. The technology based pair was selected to investigate whether technology-based research

associations were more successful than industry-based research associations.

- One pair consists of research associations which had been absorbed into large commercial organisations. This pair of research associations was no longer in the not-for profit-sector and was selected to compare the effect of commercial and not for profit governance.
- The last two pairs were selected to investigate the size effect (one pair consisting of medium sized research associations employing 30 to 40 staff and the second pair of very small research associations employing fewer than 20 staff). All the other pairs selected for case study were considerably larger.

The researcher carried out a semi-structured interview with the CEOs of each of the 16 case study research associations. The semi-structured interview questionnaire used in these interviews forms an important data collection tool for this research and is presented in Appendix 1. The researcher obtained a second opinion of some key points from one or more non-executive directors of each research association using the questionnaire presented in Appendix 2.

Chapter 6

Chapter 6 presents an overview of UK research associations. The chapter provides an analysis of the reasons for failure for those research associations that have ceased trading since 1990. Mergers were an option facing research associations and a number of intra research association mergers had taken place. These mergers were evaluated to see if intra research association mergers were a

strategic option for success. Similarly, research associations which had been absorbed into large commercial organisations were examined to determine if this strategic option was the way forward.

Chapter 7

Chapter 7 begins by determining which of each pair of research associations is the more successful in terms of sustainable growth. The chapter provides a description and analysis of the interview and archival data for each pair of research associations.

The analysis presented enables each case study research association's strategy to be categorised under one of the four approaches to strategy (classical, evolutionary, systemic and processual) defined by Whittington (2001).

The governance structure associated with success is also examined for each of the case study research associations, using the theoretical perspectives of organisational governance set out by Cornforth (2003).

Chapter 8

This chapter brings together and discusses the findings of the case studies in chapter 7 and addresses the primary and secondary research questions.

Combining the strategy and governance perspectives for all of the eight case study research association pairs is used to identify the governance and strategy which appear to contribute to organisational success, as measured in terms of sustainable growth.

Chapter 9

In this final chapter the thesis is reviewed to see if the research questions have been satisfactorily answered, the methodology followed in this thesis has provided a logical approach to tackling the research questions, and that the thesis has made both an original contribution to knowledge and has developed practical recommendations.

1.5 Summary

This chapter has presented a brief overview of the research study and the chief factors which influenced its inception. It has also set the scene for the research and the methodology employed, together with the aims of the thesis and the rationale for undertaking it. The literature review (Chapter 2) and the pilot interviews (Chapter 3) which led to the development of the research questions (Chapter 4) are introduced. The research methodology employed has been briefly described as has the approach to data collection and analysis. (Chapter 5).

A review of the history of failures and mergers was undertaken in order to explore the reasons for failures and the results of mergers (Chapter 6). Chapter 7 presents the analysis of the data for each of the eight case study pairs, identifying the more successful research association of the pair. An analysis of all the case studies is presented in Chapter 8. Conclusions are presented in Chapter 9.

The next chapter, Literature Review, will consider relevant academic work and will demonstrate a gap in the knowledge of research association strategy, which the present work seeks to address.

2. LITERATURE REVIEW

2.1 Introduction

The literature review covers research associations, and the literature on strategy and governance.

Following this introduction, this chapter consists of:

- Section 2.2 – review of literature on research associations
- Section 2.3 – review of literature on governance and strategy with particular applicability to research associations

Section 2.2 sets out a detailed account of the influence of government policy on research associations, since - as will become evident - it was the change in government policy that triggered the research associations to make major changes with respect to sources of finance, customer base and activities, and hence the need to formulate a strategy for survival, and a governance structure to meet their changing needs. This section commences with the analysis of the factors which led up to the government of the day in 1918 submitting proposals for the establishment of research associations. The section continues with a review of the fluctuating and uncertain government policy on grants to research associations. The section ends with an account of factors which finally terminated the partnership between government and research associations and thus brought about the need for research associations to change.

Section 2.3 reviews the literature on strategy and governance. Governance was included after the pilot interviews identified the importance of the governance of research associations. The literature review of the governance of not for profit organisations (a group of organisations which includes research associations) was conducted with the aim of identifying a theoretical model of governance which could be applicable to the findings of this research. The literature on strategy is reviewed with particular emphasis on strategy in not for profit organisations and also in technology-based organisations, with the aim of identifying a theoretical model or models of strategy which could be used to classify the strategic approaches used by research associations included in this research. The aim of Section 2.3 is to identify the research questions which are to be addressed in this research.

2.2 Influence of government policy on research associations

2.2.1 Raison d'être of research associations

Research associations were established to undertake co-operative research in sectors of industry producing similar products. They are industry-controlled but were established as a result of government initiative outlined in a document issued by the DSIR in June 1917 reproduced from the report of the committee of the Privy Council for Scientific and Industrial Research, Cd 8718 (1917, p. 49). In 1918 the government of the day set aside £1M to encourage industry to set up such organisations with the object of stemming the decline of British industry. Over the past 90 years the research associations have had a chequered history, with their numbers increasing to a maximum of 50 in the late 1960s but having declined to half that number today.

Examples of research associations include MIRA, the research association for the motor industry, and BMT, the research association for the ship building industry. Both these organisations have prospered in spite of the decline in the UK industries they were set up to serve. BTTG, the research association for the textile industry, has declined with its industry. The staffing level decreased from 735 in

1963 to fewer than 70 in 2007. However SIRA, the research association for measurement and control, has recently ceased trading in spite of the growing importance of increasing productivity based on control technology. Other examples of research associations are PIRA and RAPRA, both of which have recently been rescued from the receivers although the use of printing, packaging and plastics is now greater than ever.

The mixed fortunes of research associations have led to the researcher's interest in the question of why some research associations have been successful while others have failed, and what strategies the successful adopted to make their transitions from organisations undertaking co-operative research, with government financial support, to market-driven, self-supporting contract research organisations. The above examples indicate that the success of a research association is not a reflection of the success of the UK industry they were set up to serve – so one must explore other factors in depth, in order to shed light on the factors for success and determine a research methodology which minimises the impact of the industrial sectors they serve.

As stated above, research associations were established as a result of a government initiative of making £1M available for their establishment with the aim

of stemming the decline in British industry. Government policy has had an important influence on their subsequent development; hence, one important aspect of the strategy-making process of the research associations has been the need to consider government policy. Some government actions have been directed at the research associations whilst other policies, although not directed at them, have certainly had an effect on the strategy they had to develop.

In this review of the literature on these organisations, government research policy has been considered over four periods. The first concerns policy leading up to the formation of the research associations; the second, the inter-war period; the third, the end of the Second World War to the mid-1970s ('the period of promise' as Wilkie (1991) calls it) and lastly, post-publication of the Rothschild Report in 1971.

2.2.2 Factors leading up to the establishment of the research associations

As previously stated the Research Associations were established as a result of government policy to stem the decline in British manufacturing. This raises the following questions:

- Was there a decline in British industry immediately prior to 1918?
- Was research an effective way of stemming the decline?
- If so, was co-operative research a suitable approach?
- If so, was it necessary to create a substantial number of Research Institutes rather than one all-embracing one?

In relation to the first of these questions, Kealey (1996) states that the peak of British industrial dominance coincided with the 1851 Great Exhibition at the Crystal Palace. At the 1851 exhibition, Britain won most of the prizes which were awarded by an international committee. At the 1867 Paris Exhibition, 16 years later, Britain only won 10 out of 90 prizes. Even allowing for the fact that this event was 'an away fixture', it pointed to the end of British dominance. Kealey discusses absolute and relative industrial output; British output was not falling but that of other countries, particularly the USA and Germany, were catching up. Briggs (1987) places the peak a decade or so later, and states that: "The greatest Victorian boom had ended by 1875" (p. 231) and that: "None the less while the years up to 1875 cannot be labelled as years of great depression as they used to be, they were years of increasing uncertainty" (p. 232).

Of contemporary observers, Playfair (1867), was alarmed at British relative decline. Notice was taken of his concern and he was asked in 1868 to chair a select committee to examine the problem. The committee reported as quoted in Kealey (1996, p. 92):

"That although the presence of foreign competition where it exists, is considered by some witnesses, to be partly the result of superior scientific attainment of foreign manufacturers, yet the general result of the evidence proves that this is to be attributed mainly to artistic taste of fashion, to lower wages to the absence of trade disputes abroad and to the greater readiness with which craftsmen abroad in some trades adapt themselves to new requirements."

Briggs (1987) does not cite the lack of science for the industrial decline but highlights the export of capital, for example to Argentina Railways, rather than

investment in British industry which would have led to improved productivity.

Briggs lays some of the blame on workers and employers and goes on to cite not only inadequate secondary education but the classical bias in public schools and their neglect of science and their hostility to business. Bernal (1939 p. 27) states that “once the industrial revolution was well under way, the position of science as an integral part of civilisation was secure. In a thousand ways science was necessary both in measuring and standardising industry and in introducing economies and new processes. The fact that science was necessary to industry did not mean, however, that an industrial basis for science would arise of itself. Indeed, through the nineteenth century in spite of the persistent demand for more science there was scarcely any adequate financial support either for scientific research or science teaching”.

The evidence of Playfair (1867) and Briggs (1987) suggests that science was not the main reason for Britain’s relative industrial decline during the second half of the nineteenth century. Bernal (1939) states that there was a need for science to support manufacturing. However the lack of financial support meant that science was not available to support industry. The conclusion of these contemporary and retrospective opinions was that science was unable to play a part in supporting British industry in the second half of the nineteenth century.

In the period up to the First World War, science was not completely neglected, as evidenced by the creation of key elements of UK scientific infrastructure. The Laboratory of the Government Chemist was established in 1911 initially to analyse imported goods; Imperial College came into existence in 1907, partly financed from the profits of the 1851 Exhibition, with a stated objective as being “to give the highest specialised instruction and the most advanced training in science

especially in its application to industry” (Johnson, 1973, p. 17). In 1900 the National Physical Laboratory was created, initially to maintain and develop national standards.

However, matters were brought to a head with the outbreak of the 1914-18 War, which highlighted the shortcomings of the British manufacturers and in particular their inability to produce optical glass, dyestuffs, magnetos, pharmaceutical products, and their inability to process tungsten and smelt zinc (Johnson, 1973, p. 19). But - perhaps more importantly - the importance of industrial research had at last been realised, and the Department of Scientific and Industrial Research (DSIR) was established in 1916 to encourage industrial research. The Advisory Council of DSIR, according to Hammond (1963, p. 38), directed its attention to the serious gap that existed between scientific research and industrial practice, and decided to encourage industrial research with the promise of grants to “approved associations for research”. This encouragement took the form of £1M; however, by the time the money had been approved by the Treasury, the war was nearly over. To the credit of DSIR, as reported in Bernal (1939), the organisation took a long-term view and did not just address the shortcomings which the war had identified.

The Command document, (Cd 8718, 1917), which gave rise to the creation of the UK research associations, makes no mention of why attention was focussed on co-operative research. There was, however, according to Johnson (1973, p. 17) a developing history of co-operative research. Prior to the government scheme, the brewing industry sponsored work at two universities, and the textile industry sponsored work at Leeds University (which also undertook a programme of work for the gas industry). The Institution of Electrical Engineers organised a

programme of work for the electrical and generating industries. So co-operative research had been tested and found to be a good model; in addition, the alternative of giving money to individual firms would have been politically unacceptable. The government *could* have been prescriptive in selecting sectors of industry for support, but did not follow this course and instead invited sectors of industry to come forward with proposals. One reason for this course of action may have been the Haldane principle which emerged from the Haldane Report (1918) on the machinery of government which set out the principle that government ministers should not control or direct research.

An alternative to the setting up of new research laboratories could have been to encourage industries to sponsor programmes of co-operative research at universities or the recently established government laboratories, and in fact this was discussed in an early DSIR paper, in which it was stated that the government was adamant that industry should not only encourage firms to participate in research, but that it should be active in participation. To quote from the committee's report for 1919-1920:

"It is only when industries have done research for themselves that they can appreciate its difficulties and its worth" (cited in Johnson, 1973, p. 20).

The committee also stressed the importance of industry having control of the research programme, although the legal and administrative organisation of the research associations was defined in a model Memorandum and Articles of Association which stated that research associations should be governed by a Council elected by and from the members (DSIR, 1917). The research associations were to be companies limited by guarantee (as set out in Section 20

of the 1908 Companies Act for companies limited by guarantee) and hence were to be not for profit organisations.

The Command document 8718 (p.50) defined the activities of the research associations, reproduced below:

“It is anticipated that each firm subscribing to a research organisation will have the following privileges;

(1) It will receive a regular service of summarised technical information which will keep it abreast of the technical developments in the industry at home and abroad. To do as much for itself any firm would have to employ more than one man on its staff reading and translating the technical press.

(2) It will be able to obtain a translated copy of any, foreign article in which it may be especially interested and to which its attention will have been drawn by the periodical bulletin.

(3) It will have the right to put technical questions and to have them answered as fully as possible within the scope of the research organisation and its allied associations.

(4) It will have the right to recommend specific subjects for research, and if the Committee or Board of the research organisation of that industry consider the recommendation of sufficient general interest and importance, the research will be carried out without further cost to the firm making the recommendation, and the results will be available to all the firms in the organisation.

(5) It will have the right to the use of any patents or secret processes resulting from all researches undertaken either without payment for licences, or at any rate on only nominal payment as compared with firms outside the organisation.

(6) It will have the right to ask for a specific piece of research to be undertaken for its sole benefit at cost price, and, if the governing Committee or Board approve, the research will be undertaken.”

As research associations were established to stem the decline in British industry, membership was only open to British companies, and British companies who were not members would receive no benefits or information. Financial support given to the research associations would be by way of 'matching funding' - a grant initially equal to the industrial subscription obtained. It was stated that the government financial support would be limited to the initial commitment of £1M, after which the research associations would be self-supporting. The terms of grant for each research association would be reviewed on a five year basis.

2.2.3 The period 1920 to 1939

According to Jones (1972), there were 20 research associations formed by 1920, and that number was to remain the same until the end of the Second World War in 1945. During that period, four new research associations were formed in the early 1920s and four failed. After the First World War, Britain went through a period of depression and against this background companies and industries were fighting for survival. It is not surprising therefore that the research associations faced

problems in maintaining the minimum industrial support for grant. The £1M 'pump priming fund' had been used by 1932 and the government obtained on an annual basis a Parliamentary vote of about £70,000 to keep them going, but with no promise of long term support. The annual report of the Electrical Research Association (1930), for instance, outlines the difficulties that that organisation had qualifying for a grant, and the impression is given that the grant was the cement that held organisations together. This is contrary to Kealey's (1996) Economic Laws of Research, where he maintains that industrial finance displaces public expenditure; this does not appear to have been the case in the early years of research associations.

An event which marks a change in government policy was that in 1925 the rubber industry introduced a private Members' Bill in Parliament for a statutory levy for their industry. This Bill did not receive government support and was withdrawn.²

During the late 1930s Britain's economic situation improved, and the value of the grant in 1933 at £66,000 increased to £178,000 by 1939. Other events occurred during the inter-war period which indicated a changing government policy towards research associations. The first was the 1932 Commonwealth Conference held in Ottawa, at which it was decided that membership of Research Associations should be open to Commonwealth countries; this was the first move away from the research associations being for the sole benefit of British companies.³

2 However, the 1947 Industrial Organisation and Development Act empowered ministers to impose levies or set up Councils to impose levies and six research associations took advantage of this act, although the Cotton Research Association reverted to voluntary subscriptions in 1971. The Steel Castings Research Association was refused a levy a few years later and all levies were abolished by the Thatcher government.

3 This policy was extended in 1961 when all foreign companies were allowed to apply for membership, for reasons which the literature does not make clear. Foreign companies were admitted provided they paid a subscription equal to the British firms' subscription plus the grant it attracted and foreign members had no voting rights. These restrictions were withdrawn and

Varcoe (1981) reviews co-operative research associations over the period 1918 to 1934 and debates the reasons for success or failure and concludes as follows: “Competition” within an industry would thus appear to be a necessary condition for the establishment and persistence of a co-operative research association but it was not a sufficient one. More was required than simply favourable external factors. Research associations required the guidance of well-qualified energetic and resourceful directors of research and a well-qualified and interested staff of scientists. Research associations did not always receive outstanding leadership, and in these cases the reasons for failure are easily discerned. Similarly, most of them suffered from incomplete, insecure and ineffectively organised scientific staffs. Problems of attracting and retaining scientists and of providing them with good conditions for research were fairly common in the early years of the period. Nevertheless the qualities of the scientific staff cannot be held exclusively responsible for the variations in performance. The condition of the industry by affecting the magnitude of financial support for the co-operative research association and the intensity of its members’ interests did affect the quality of scientists appointed and retained. So did the quality of the director of research” (p.461).

He concludes his analysis by stating that:

“The co-operative research associations appear today stranded between the technologically advanced sections of industry, which do not need – and do not want- the limited services they can offer, and the older unregenerate industries which they have failed to make responsive to science; many small firms ignore research completely. Where events like war and industrial decline failed to arouse interest in research in such firms and industries, their present situation is not a

by 1972 the government positively encouraged foreign membership. This suggests that foreign companies at that time were seen as a useful source of income.

glittering one. They have been far surpassed by the research which has been provided by large firms for themselves. It was unlikely that co-operative research associations could succeed. Nevertheless, co-operative research associations have had a modest success in bringing into contact with science British industries and firms which otherwise would not have had such contact. They stand at one remove from the forefront of technological changes and their future is today as unclear as it was half a century ago (p.463).

2.2.4 The period 1940 to 1971

The annual report of DSIR for 1947-48 (no reports were published during the war) contains a glowing account of the research associations' wartime achievement, and cites examples of major contribution to the war effort.

The war effort had two major effects on research association policy, as cited by Johnson (1973, p. 31):

- Co-operation between research associations and government during the war was to have a lasting effect
- The nature of the research programmes became shorter term focussing on immediate issues

In 1943 the Industrial Grants Committee echoed this praise and as a result the government abandoned the policy of making the research associations self-supporting and the government grant became a permanent and an essential feature of the scheme.

Wilkie (1991) states that research associations' growth in post-war years was in some measure due to a change in taxation policy. He states that members' subscriptions to research associations became tax deductible. As far as the researcher can determine this tax benefit had always been there. Wilkie talks about the "period of promise", the experience of the 1939-45 war confirmed the lessons of the 1914-18 war that organised science was a pre-requisite of survival and eventual victory.

Twenty new research associations were formed between 1945 and 1950; a stimulus to their formation was the spirit of co-operation which the war had fostered. After the war this spirit remained and as there was virtually no market competition, demand for consumables and durable products well exceeded production and so firms could collaborate on methods of improving productivity.

In the early 1960s the Machine Tool Industry Research Association (MTIRA), the British Industrial Biological Research Association (BIBRA) and the National Computing Centre (NCC) were all formed after government enquiries into their respective industries. These research associations were therefore formed as a direct result of government action, and not a result of the original procedure of government responding to an industrial initiative.

In 1962 the Committee of Enquiry into the organisation of civil science under Sir Burke Trend separated the responsibilities of science and technology (Trend Report, 1963) and in 1966 the Science & Technology Act was responsible for winding up DSIR after 50 years of existence, with science responsibility being transferred to the Ministry of Education and Science, and Technology to the newly

formed Ministry of Technology (MINTEC). According to Johnson (1973) this change was welcomed by many research association directors who stated that their response to requests was dealt with more quickly by MINTEC than by DSIR. Perhaps the real reason was that between 1965 and 1968 the grant received by research associations increased by 30%, contrary to a government policy of stiffening grant terms.

In 1969 the government capped the grant to research associations at £4M per annum, which represented 25% of the total research association income.

MINTEC however encouraged the research associations to undertake more contract work for both industry and the government. Hence the reduction in grant aid was more than compensated by the growth in 'repayment work'. With regards to government contract work, it increased from 5.3% of total income in 1963 to 8.5% of total income in 1970 (Jones, 1972, p. 30 Table 10); a contributing factor could have been the closer relationship which existed between MINTEC and the research associations. During the same period, contract work from industry increased from 7.5% to 13.3% of total income (Jones, 1972 p. 30, Table 10). According to Jones, over the same period government grant decreased from 26.6% to "4.5% (1972, p. 32, Table 13), illustrating erosion in the importance of grant aid and the growing importance of contract work.

Although contract work for members was included in the activities of the research associations in the 1918 blueprint, it was neither encouraged by the DSIR nor the research associations themselves. "The general opinion in the 1950s was that there was little demand for it (sponsored work) in the UK and what work existed was better carried out by consultants than research associations". (Hammond et al., 1967, p. 48).

Jones, writing in 1972, immediately after the publication of the Rothschild Report, questions the policy behind the government grant and fails to find one, concluding that research associations were very different from the organisations which were created 50 years previously, and also that they were very different from each other. Jones points out “They are all things to all men and there is no generalisation to be made about them” (1972, p. 84). Hamilton (1971, p.192-193) summarised the research associations as having the following characteristics: “They are no longer only for the benefit of British industry. Membership was open to the Commonwealth firms in 1932 and to all comers 30 years later. Government policy has changed from discouraging to positively encouraging contract work. “

Wedgewood Benn (1968) encouraged research associations to diversify into education, training and in 1968 MINTEC formally abandoned an emphasis on long term research in Research Associations and proposed that Research Associations should be involved in management training, operation research, economics, inter-firm comparisons and market research.

Jones advocated a rethinking of government policy towards the research associations, believing that the policy of removal of grant altogether would force some of them to fold up, “should they survive” (1972, p. 85). The research associations were concerned about the withdrawal of grant and two letters to Nature in 1971 question the expectation for them to become commercially viable, Vaeck (1971, p. 433) stating: “It is completely wrong to want the research associations to be commercially viable.” and Jobling that “I view with wary scepticism the present push to make the research associations commercially viable.” (1971, p. 477)

Jones (1972) points out at that time the total value of government grant to research associations was less than 1% of total government expenditure on research and development. So it can be seen that, over 50 years, research associations have changed from organisations undertaking programmes of co-operative research with government support for the benefit of sectors of industry, to organisations working internationally with contract research replacing co-operative research as their range of activities widened to include management issues as well as technical ones.

2.2.5 Rothschild & change 1972 to 1988

Brown and Steel (1979) produced a summary of the Rothschild report as follows:

“In 1971 Lord Rothschild produced a report suggesting that government departments should fund only research which was relevant to their operational needs and whose results they could use: for each sponsored piece of research there should be a specific ‘customer’ in the relevant department. Other research should be left to the research councils. After some controversy these recommendations were in essence put into practice.” (p. 251).

Wilkie (1991) dismisses Lord Rothschild’s report as “ideological and destructive” (p. 81) and states that it was criticised by the scientific community, notably The Royal Society, and the research councils, on the basis that they had not been consulted (p.85). The main thrust of the report was the customer/contractor principle which in essence meant that government departments contracted for

scientific services, replacing the practice of open-ended funding to government laboratories. As Wilkie points out, this was contrary to the practice established in 1918 in the Haldane Report, which set out the principle that government ministers should not control or direct research (Wilkie, 1991) p.84).

The Bessborough report (1973) on research associations, which was published after the Rothschild report states, in its introduction:

“... while we generally endorse Lord Rothschild’s monograph, we none the less feel that in regard to Research Associations it is not wise to carry a general principle to an extreme” (Bessborough, 1973), p. 11).

The Bessborough report (1973) pointed out that Rothschild did not mention research associations in his report and that, if he had done so, he would have realised that the research associations had customers and were clearly working on the customer/contractor principle. The contract work they undertook had individual customers and the programme of co-operative research was for the benefit of the association’s members who were paying for the work by means of subscriptions.

Hence research associations were already operating on the customer/contractor principle - but this was not the way the government interpreted it, and research associations in the future would be exposed to the same contract bidding system as were government research establishments.

There was no outcry from the research associations that their councils were no longer in control of the co-operative research programme. Over the past 50 years the councils of the research associations had had the responsibility of directing the

co-operative research programme which the government supported by way of grant. In the future this would not be the case and the research associations would have to submit research proposals to the Requirements Boards (committees set up by the Ministry of Technology with the responsibility of scrutinising and awarding contracts). This fundamental policy shift was not foreseen by Rothschild and not commented upon by Bessborough - but this was in fact the end of government grants to research associations. In the event, the new system, at least initially, worked well for the research associations and they were successful at winning contracts in excess of the grant they had previously received. Factors contributing to this may have been that:

- The research associations were already experienced in negotiating contracts, other government laboratories were not
- Research associations being smaller than the Government Research Establishments sought contracts of lesser value which may have gone through the requirement boards with less scrutiny

The outcome was that reported by Kennedy (1985), namely that while in 1972 only four research associations received more money from government than from members, in 1982, 17 out of 23 research associations were in that position.

Kennedy concludes:

“It is then something of a paradox that the Research Associations became more dependent on government money following Rothschild than they had been before Rothschild.” (Kennedy, 1985, p. 2).

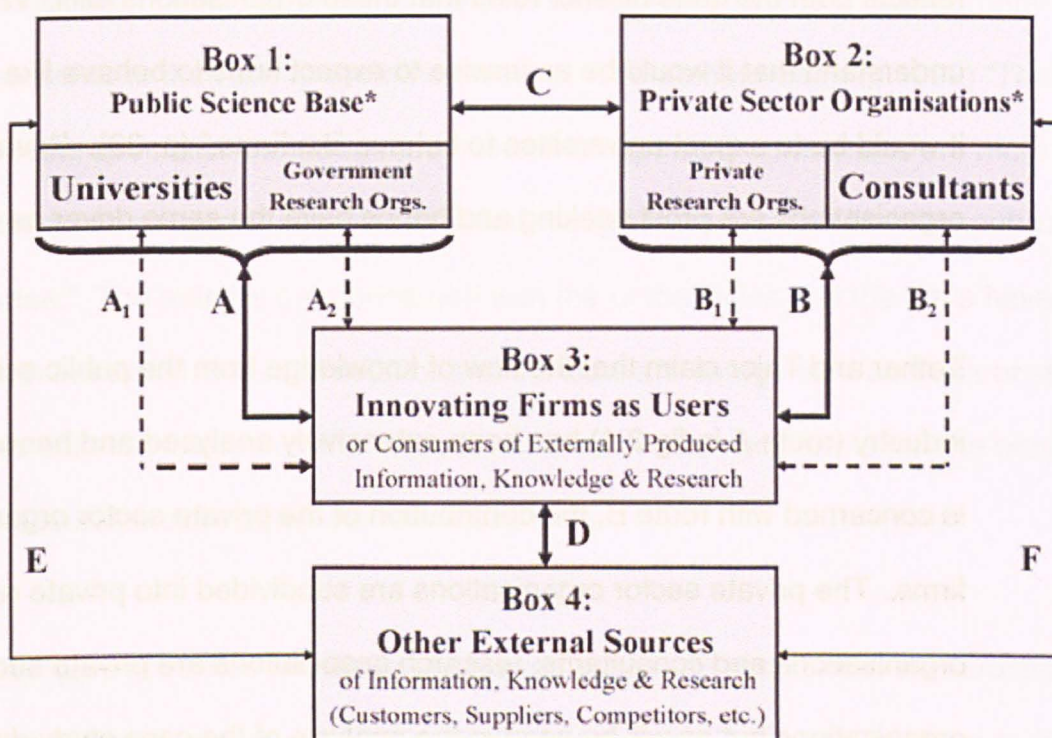
Some part of this effect, he postulated, might be attributed to a desire in government to assist research associations' transition to a new funding base. This may have been true, but it was not to last. In 1988 the Department of Trade & Industry's White Paper announced that the government would no longer fund near-market research but would concentrate on basic and strategic science (DTI White Paper, 1988) (Wilkie, 1991 p.136). Since the research associations' mission was to undertake near-market research, the 1988 White Paper effectively terminated the 60 year partnership between the UK government and industry.

2.2.6 The contribution of research associations to the UK system of innovation in the 21st century

The brief outline of the historical development of the research associations in chapter 2 has described their development from agencies of government set up to improve the performance of British industry to independent stand alone organisations who have had to establish a market driven position in the network of innovators. This section of the thesis attempts to identify their contemporary role and their perspective on knowledge management.

Freeman (1991) in discussing the role of the research associations states that the original expectation had been that research associations would serve to provide technical support to firms who were lacking their own internal research and development activities. According to the Federation of British Industries (1961) the research associations were actually used intensively by firms who were also doing their own research and development. The research associations had thus become an important ancillary and complimentary source of scientific and technical information rather than a substitute for indigenous innovation activity.

Research associations are not the only providers of scientific and technical information to industries, other providers being universities, government research organisations, private research organisations and consultants. Tether and Tajor (2008 p. 1080) provide a conceptual model of knowledge flows.



* As providers or producers of information, knowledge and research used by others in their innovation activities

Figure 2.1 A conceptual model of knowledge flows

Business university relationships are not new. Sanderson (1978) examines the role played by the professor as industrial consultant in the period 1900 to 1914 prior to the establishment of the research associations. His research focuses on the contribution that Professor Oliver Arnold of Sheffield University made to the Sheffield steel industry. The author stresses that the success of this partnership was due to “Arnold’s temperamental affinity with commercial interests and friendship with business men” (p.598) as well as with his knowledge of ferrous alloying technology and his understanding of the steel making process. Metcalfe

(2010) commenting on university and business relations with respect to direct knowledge transfer between university and business (route A in fig 2.1) makes the following comment “Critics of the role of universities and firms in respect to their performance in supporting wealth creation should reflect first on the fact that the division of labour between profit seeking business corporations and universities reflects both the quite distinct roles that these organisations fulfil. We can all understand that it would be as unwise to expect firms to behave like universities as it would be to expect universities to behave like firms.” (p. 30). Private sector organisations are profit seeking and hence have the same driver as firms.

Tether and Tajor claim that the flow of knowledge from the public science base to industry (route A in fig 2.1) has been extensively analysed and hence their paper is concerned with route B, the contribution of the private sector organisations to firms. The private sector organisations are subdivided into private research organisations and consultants: research associations are private sector research organisations but as will be seen in the analysis of the case study data in Chapter 7 many research associations also act as consultants. Coombs and Georghiou (2002) state that larger firms increasingly outsource research and development to specialist private-sector research houses and continue by stressing the rapid growth in collaborative research and development.

Tether and Tajor indicate that the links with specialised knowledge providers tend to complement firms’ sources of information from sources such as suppliers, customers and competitors and that the sourcing of information from different types of knowledge providers tends to complement rather than substitute for one another.

A survey carried out by Tether and Tajor obtained data on the estimated probabilities that firms have links with special knowledge providers. The survey was conducted across ten industrial sectors and the findings were that the links with consultants are greater than those with the public and private science base. This finding could be attributed to the fact that one of the ten industrial sectors considered in the paper is the financial sector which makes a much greater use of consultants than any of the other sectors. The authors claim (p.1092) "That private specialist knowledge providers and especially consultants are more widely used as a source of information or knowledge for innovation than the public sector base." The authors are concerned with the probabilities that the firms have links with individual industrial sectors and the links are categorised as weak or strong. No data is provided on the value of the links in monetary terms nor the benefits the industrial sectors obtained from these links.

Earl (2004) defines knowledge management as the acquisition, stewardship and use of knowledge and according to Davenport and Prusak (1998) knowledge management is often embedded not only in documents or repositories but also in organisational routines, processes, practice and norms and hence can be considered as part of an organisation's culture.

Bettley (2006) has examined knowledge management perspective in Elec-Co, an organisation which has its origin as the research association for the generation, distribution, and use of electricity. The organisation was privatised in 1993 and at the time of the research still had a range of products including collaborative and contract research, testing and training, which are activities typical of a research association. The paper develops the concept of knowledge dissemination to wider innovation networks as outlined by Smith (2003) and Tell (2004) and the

knowledge management process associated with client behaviour, Webb (2002), and the significance of the absorptive capacity in technology transfer, Zahra and George (2002), which is of particular significance to research associations providing technology to small craft based members. Bettley develops a useful enterprise knowledge management ideal model (2006 p.8)

Chesbrough (2003) views open innovation as the new imperative for creating and profiting from technology. Lichtenthaler (2011 p. 77) states that the open innovation “is defined as systematically performing knowledge exploration, retention and exploitation inside and outside an organization’s boundaries throughout the innovation process” and continues that open innovation is a growing trend in many firms across industries and goes on to postulate that open innovation seems to be a sustainable development rather than a management fashion.

The above analysis emphasises the importance of open innovation, that research associations have developed from supplying information to organisations that do not undertake their own research to becoming part of a network to complement rather than substitute the innovation activities of industry. The probability of firms using specialised knowledge providers has been determined by Tether and Tajor and their evidence suggests that firms make as much use of the private as of the public sector.

Howells (2006) identified 10 innovation intermediation functions in a survey of 22 organisations which act as intermediaries in innovation.

The participating organisations included the research associations AMTRI, CERAM, PERA, SIRA, CCFRA and NCC. Of the 10 innovation processes identified by Howells only 6 were identified as processes which involved research associations. The involvement of the research associations in innovative processes is shown in table 2.1.

Table 2.1 The involvement of the research associations in innovative processes

	AMTRI	CERAM	PERA	SIRA	CCFRA	NCC
Foresight and diagnostics		√	√	√		
Scanning and information processing			√			
Knowledge processing, generation and combination	√	√	√	√		
Testing, validation and training	√	√	√	√	√	
Accreditation and standards		√	√			
Assessment and evaluation		√	√			

Howells's report states that CERAM and SIRA diversified into new industries or technologies, BMT moved into new markets overseas and that TWI entered into a joint venture with CERAM. Since the publication of Howells's paper in 2006

AMTRI and SIRA have ceased trading (6.3.17, 6.3.18). Hence in these two cases the activities they engaged in did not lead to the success of the two research associations although they may have contributed to the transfer of technology and the innovation process.

Howells concludes (p. 726) that “the study has revealed that intermediaries provide a much wider more varied and holistic role for their clients in the innovation process than has generally been acknowledged. In addition the organisations providing intermediation functions do not solely or even wholly restrict themselves to intermediary functions but also cover more traditional contract research and technical services which involve no third party type collaboration.”

The Department for Business Innovation and Skills (2011 p. 53) concludes that “Although we need to be careful about the exaggerated claims of change this analytical review argues that the nature of innovation and that the challenge for policy is to strengthen the UK innovation system to significantly improve its overall coherence and competitiveness in the global economy. The proposed approach is built around four priorities:

- Strengthening the sharing and dissemination of knowledge
- Supporting a coherent and integrated knowledge infrastructure
- Encouraging business investment in all forms of innovation
- Improving the innovative capacity of the public sector.”

The paper does not enlarge on the mechanism for developing these priorities nor if additional funding will be made available to achieve the desired outcomes. The reaction of the private sector organisations to sharing and dissemination of

knowledge will be awaited with interest. Bettley (2006 p. 10) points out further research is needed - "How is the balance between effective knowledge transfer and the protection of knowledge assets best achieved?". The government determination to strengthen the UK innovation system will, the researcher feels sure, be welcomed by all.

2.3. Governance and strategy

2.3.1 Governance

The Office of Government Commerce (OGC), an independent office of HM Treasury, defines governance on its website thus:

"Governance is concerned with accountability and responsibilities; it describes how the organisation is directed and controlled. In particular, governance is concerned with:

- organisation - the organisational units and structures, groupings, and co-ordinating mechanisms (such as steering groups) established within the organisation and in partnership with external bodies, for the management of change.
- management - the roles and responsibilities established to manage business change and operational services, and the scope of the power and authority which they exercise.

- policies - the frameworks and boundaries established for making decisions about investment in business change, and the context and constraints within which decisions are taken.” (OGC, October 2009)

The governance of the research associations was precisely defined in the Model Memorandum and Articles of Association which were set out in Cd 8718, p. 52 at the time when public funds were made available for the establishment of the research associations. Each research association was governed by a Council. The Memorandum and Articles of Association clearly define the constitution and responsibilities of the Council, a body established to govern each research associations. Members of Council were elected by and from the membership and it is noteworthy that the Director of Research, the CEO in modern parlance, was not a member of the Council but was invited to attend Council meetings and had no voting rights. The control of the research association by the Council was appropriate in 1918 when the research associations' scheme was established, since the source of funds for the research associations was by way of membership subscription together with a grant from the government related to the subscription income. The principal activities of the research association were the provision of information and research results for the sole benefit of the membership. As can be seen from the section on the influence of government policy on research associations (Section 2.1), the customer base of the research association was expanded to contract work for non-members and services to overseas companies. In this way the breadth of stakeholder interest in the research association was expanded. The governance of the research associations was modified in many cases by the research associations themselves, in order to accommodate these changes, and in general over time there was a move towards a more commercial Board of Directors with a reduction in the power of the memberships' elected

members. Carver & Oliver (2002), in their discussion of corporate boards that create value, separate the roles of governance and management, stating that:

“.... governance is outside the phenomena of management and governance operates at a level that transcends current issues and specific company transactions”. (Carver & Oliver, Introduction, p. xxi). This view is contrary to that defined in the research association Memorandum and Articles of Association, where the role of the research association councils is very much hands-on.

Carver & Oliver (2002, p. 2-3) define the three roles of Board Members as:

- Giving expert advice – either pro-active or re-active
- Providing safe-guards – the Board provides security
- Useful connections – extending the networking of the organisation to potential sources of finance, potential clients and public relations

These three roles can be viewed as applicable to research associations and the thesis will endeavour to determine what role(s) were adopted by research association councils.

With reference to strategy, Carver and Oliver state that the Board has the task of vetting Strategy Plans, not originating them, and that: “Strategy Plans are not governance documents”. (Carver and Oliver, 2002, p. 73). This thesis will attempt to throw light on the role of the research association councils with respect to strategy formulation. Carver (2006) lists 62 types of non-profit organisations ranging from airport authorities to zoos. Research associations are not listed, as the book is written by an American primarily for the American market where

research associations do not exist. However, Carver's vision of governing boards should be worthy of consideration by research associations since Carver's vision is applicable to all not for profit organisations. He states that although public and non-profit management is not known for its vigour, it has advanced considerably in the past few years. In his view, governance on the other hand has scarcely moved at all and he likens management to a very mature child dealing skilfully with an immature parent.

This researcher's own experience of direct involvement in research associations supports this description, although many research association directors might not be prepared to voice it.

Carver (2006) recommends that boards of not for profit organisations should focus more on the world outside the organisation than the one inside it and states that the board's primary role is long-term planning. This view is contrary to Carver & Oliver (2002) who firmly state that it is not the role of boards to produce strategy documents. This apparent divergence of views on the board's role in strategy formulation could be due to the fact that Carver and Oliver were originally writing about boards in general, whilst Carver was focusing on not for profit and public organisations. Carver lists 14 characteristics which he expects of a good board in a not for profit organisation. These can be summarised as: forward thinking, evaluating and stimulating the external environment, addressing fundamental roles, and steering a line between rubber stamping and meddling. At the time when the research associations had to face up to a period of rapid change, owing to the decline in government support, McConkey (1975) wrote that the next major breakthrough in management will not occur in the world of business, but will probably take place in the not for profit sector.

Fama and Jensen (1983), in their analysis of the separation of ownership and control of organisations, highlight the 'agency problem', in which the board - the decision makers - are not risk takers since they have no financial stake in the organisation. This is the situation with research associations. Fama and Jensen conclude that in such an organisation the board ratifies and monitors important decisions and rewards important decision makers. Fama & Jensen therefore take the same view as Carver, where the board members are not the risk takers, their principal role rather being one of ratification and monitoring of decisions taken by others in the organisation. This role is in agreement with the original Memorandum and Articles of Association laid down for the research associations in 1918 - and perhaps in line with Carver's views that in non-profit organisations governance has hardly moved on. It will be interesting to see if the role of the research associations' governing body has changed to meet the needs of the research associations to become more like trading companies.

The role of the board and the relationship between the board and the Chief Executive can be different in profit and not for profit organisations. Oster (1995) states that boards of non-profit organisations tend to be larger with fewer insiders, and are more involved in operations than is the case with commercial boards. This observation could be pertinent to research associations, since she describes the chief tasks of a non-profit board as being to:

- Elect and evaluate the CEO
- Define and evaluate the mission of the organisation
- Develop a plan for the organisation
- Approve budgets

- Help get resources

Oster sums up by stating that effective boards have a shared vision, often developed by strategic planning efforts, a tolerance for conflict coupled with an ability to control it, a strong committee system to manage size, and a strong core working group. She notes that organisations have potential for change on an ongoing basis, in the sense that managers are faced every day with challenges involving whether to compete or co-operate with other organisation in their markets, how to motivate and control a highly professional, ideological work force, and how to adapt to a changing environment without abandoning the organisation's history. In facing these challenges, not for profit organisations, in Oster's view, are increasingly turning to models from the for profit sector - but the tasks of adapting these lessons to the non-profit sector is just beginning.

Cornforth (2003, p. 2), in his introduction to the governance of public and not for profit organisations, asks four questions:

1. Are Boards publicly accountable or is there a democratic deficient?
2. Are Boards able to exercise real power or does management run the show?
3. What do Boards do? Are they effective stewards of an organisation's resources? Can they play a meaningful role in setting organisational strategy?
4. What impact are regulatory and other changes, designed to improve Boards effectiveness, having?

Cornforth does not propose generic answers to these questions. It is proposed that in the present research an attempt will be made to throw some light on these

questions with respect to research associations. : Cornforth goes on to outline the six perspectives on organisational governance which are reproduced in table 2.2

Table 2.2 A comparison of theoretical perspectives on organisational governance

<i>Theory</i>	<i>Interests</i>	<i>Board members</i>	<i>Board role</i>	<i>Model</i>
Agency theory	Owners and managers have different interests	Owners' representatives	Compliance/conformance: safeguard owners' interests oversee management check compliance	Compliance model
Stewardship theory	Owners and managers share interests	Experts	Improve performance: add value to top decisions/strategy partner/support management	Partnership model
Democratic perspective	Members/the public contain different interests	Lay representatives	Political: represent constituents/members reconcile conflicts make policy control executive	Democratic model
Stakeholder theory	Stakeholders have different interests	Stakeholder representatives: elected or appointed by stakeholder groups	Balancing stakeholder needs: balance stakeholder needs make policy/strategy control management	Stakeholder model
Resource dependency theory	Stakeholders and organisation have different interests	Chosen for influence with key stakeholders	Boundary spanning: secure resources maintain stakeholder relations being external perspective	Co-option model
Managerial hegemony theory	Owners and managers have different interests	Owners' representatives	Largely symbolic: ratify decisions give legitimacy managers have real power	'Rubber-stamp' model

Source: Cornforth (2003, p. 12)

Cornforth (2003) summarises the role of his three theoretical perspectives on organisational governance for the three perspectives which could describe the governance of research associations as follows:

- Agency theory - compliance model: check on management
- Stewardship theory - partnership model : non executive directors bring expertise to the board
- Democratic model: represent members interests

In this research the governance structure will be classified in accordance with Cornforth's 2003 classification from information obtained from the CEO and non-executive directors.

Cornforth and Spear (2010) comment on the advantages and disadvantages of the democratic and partnership models. The democratic model is effective in reducing the conflict of interests between competing membership groups. However, it may deprive the organisation of support and resources with the focus of the board more on the benefits to members than with the organisation itself. The partnership model, where the board members are elected on the basis of the expertise the board members bring to the board, can lead to a self selecting board which may become self serving or subject to group think.

Mole (2003) investigated the question "What are chief executives' expectations of their boards?", focusing on 60 chief executives of small organisations (up to £5M turnover) in the not for profit voluntary sector. The organisations studied by Mole were similar to UK research associations, the main difference being that in general research associations have a larger turnover. The conclusions of Mole's research provide mixed messages concerning the state of board-chief executive relations

and insights into what boards and chief executives do. Mole suggests a 'horses for courses' approach whereby the forms and nature of board-chief executive working are carried out on a contingency basis with some effort to satisfy both parties. She also points out that of the 60 chief executives interviewed, 26 made no reference whatsoever to their relationship with their boards. She postulates that this could be the result of relations with the board working so well that they do not require a mention; on the other hand, it may reflect a situation where the board has become sidelined or ineffective to the extent that the chief executive can ignore it. It is planned that this present research will throw further light on the situation.

Kramer (1985) suggests that the board's relationship with management is constantly shifting between consent and dissension depending on the issues being faced and the current conditions. He continues that the question is more one of balance and how to manage the inevitable tensions that can arise in such complex relationships. This describes a shifting compromise between democratic and partnership models which could be one appropriately applied to research associations.

Whittington (1991, p. 44) distinguishes between professional control and market control. He states that professional control describes the industry research associations before the Bessborough Report (1971). He goes on to say the research association's funding was by a collectively determined membership fee which leaves significant scope for basic or speculative research and development according to the professional interests of research and development staff. With the reduction in government funding and the decreasing importance of the collaborative research programme the activities of the research association

become subject to market control and the research association must 'earn a profit as best it can'.

The CEO of the research association is an important figure in the governance and management of the association. Whittington (1991) discusses the management skills necessary to make the transition from a 'professional control' strategy to a 'market control' strategy and quotes an example of one research association who appointed an outside CEO with a purely marketing background where the appointment was felt not to have been a success. He concludes that "... even under market control, it seems it takes a professional to manage professionals." (1991, p. 52).

Chait et al. (2005) state that there has been in recent years a transformation in the governance of not for profit organisations with respect to the importance of the executive director who in the past was an administrator and has now been transformed into a leader. This trend will be examined with respect to research associations where in the past the 'research director' was very much a factotum of the council and has in many cases developed the role into that of a CEO and leader. Chait et al. (2005) go on to state that with managers developing the role of leaders, board members have tilted towards the role of management, becoming involved in such operational details as budgets, audits and facilitators of progress reviews.

Governance includes the characteristics of both management and leadership. Kotter (2008) argues that leadership is different from management. Management the author states is about coping with complexity. Leadership, by contrast, is about coping with change. Management develops the capacity to achieve its plan

by organisation and staffing – staffing the jobs with qualified individuals and delegating. Leadership achieves a vision requiring motivation and is inspiring.

Carlson and Donohoe (2003), writing about how executive directors can survive as leaders in not for profit organisations, conclude that:

“... we have found in our years of experience that the single most important factor in determining the success of the board is how well it partners with the executive director. If the relationship is healthy, the organisation thrives, if the relationship is unstable or poor the organisation suffers.” (p. 95).

They pose a number of questions for an effective partnership, including:

- How to differentiate between board and executive directors responsibilities?
- What information does the board need and how often?
- Who makes what decisions in a non-profit organisation?

The researcher suspects that in many research associations, answers to these questions are not well documented. This research should throw some light on the relationship between the executive directors of research associations and their boards.

2.3.2. Strategy

The literature review on strategy commences with an overview of strategy followed by a review of the literature on strategy in not for profit organisations and in research and technology organisations.

General review of strategy

The aim of this research is to investigate what strategies research associations adopted for success on the one hand and failure on the other.

Strategy is important; some leading researchers go as far as to say that a firm's strategy is the most important determinant of its performance (Bowman and Helfat, 1998), (McGahan and Porter, 1997). Some companies in very competitive industries consistently deliver higher performances than their competitors, and this is attributed by analysts to the particular strategies they adopt at global, corporate, business and functional level.

In reviewing the literature on strategy, the researcher has attempted to consider many approaches to strategy formulation and enactment, in order to be able to prioritise them and consider in detail those which would be most appropriate to the present research. Strategy appears to the researcher to have many starting points, which up to now, in spite of efforts by Mintzberg and others, has not resulted in a unified theory. The approach of Whittington (2001) to combine strategic aim and the strategy process in a two dimensional diagram provides an advance in unifying strategy theory.

Learned et al. (1965 - 9) from the Harvard Business School defined strategy as the pattern of objectives, purposes or goals and the major policies and plans for achieving these goals, stated in such a way as to define what business a company is in or is to be in and the kind of company it is or ought to be. This definition seems appropriate to organisations undergoing change, as was the case for research associations in the 1980s, which had to change from being essentially an agent of government to organisations which were capable of standing alone in a competitive environment.

In formulating strategy, Learned et al. proposed that managers should balance external market opportunities with the firm's internal competencies and resources, managers' personal values and obligations to stakeholders. Strategy should then be implemented through mobilising resources, exhibiting leadership and configuring the appropriate organisation structure, incentives and control systems. Ansoff (1965) argued that strategy is a 'common thread' for five interrelated issues, namely: product-market scope; growth vector; competitive advantage; internally generated synergy; and make or buy decisions – and stressed the need for mutual reinforcement among these choices. With respect to product-market scope he proposed the product/market matrix which in essence outlines the opportunity for existing products in potential markets, and new products and services to existing or new markets. This concept is applicable to research associations, which had to diversify from their membership base with government financial support to a wider client base with a revised set of services to meet the needs of the new client base, involving a move from co-operative research to contract research and market-related services.

In consideration of the product/service mix, the Boston Consulting Group Matrix as reviewed by Day (1977) analysed 'stars', 'cash cows', 'dogs' and 'question marks', all of which needed to be considered by every organisation's product/service portfolio. With respect to research associations, cash cows can be seen as the research programmes, since they were subsidised by way of government grant and hence isolated to some extent from market forces and competition. Stars were, or could be, consulting services, and the research associations were in a position to exploit this growing demand within their own areas of expertise. The dogs, in many cases, would be information services, for which the market is usually unwilling to pay, and the question marks were specialised equipment, computer services, software, etc. into which many research associations moved with varying outcomes.

Haberberg and Rieple (2001) identified a number of weaknesses in the Boston Consulting Group matrix, and the matrix was refined, as quoted in Haberberg and Rieple (2001, p. 64), for example by the McKinsey/GE Matrix, in which they address a larger number of relevant dimensions of industry attractiveness and business strength. The concept of business strength was developed by Hamel and Prahalad (1993) to a portfolio of core competencies.

Hall (2006), in "What Are Strategic Competencies", quotes Coyne (1986) who breaks down strategic competencies in R&D organisations into four components: regulatory, positional, functional, and cultural. The 'regulatory', Coyne states, include contracts, patents and licenses. The 'positional' include reputation, supply chain and external network. The 'functional' include the employee know-how and skills in research and development, operations, marketing and finance. The 'cultural' includes the ability to work in a team, a tradition of customer service and

the ability to manage change and innovation. He makes a distinction between tangible and intangible assets and argues from a survey of firms that it is the intangible resources that should contribute most. Hall's survey, on which his conclusions were based, and to which 95 CEOs responded, ranked company reputation as the most significant intangible asset. Company reputation came before employer know-how and personal network. This work also seems pertinent to the present research.

In this research it will be of interest to learn if research associations put the reputation of their organisation high on their priority list.

Regarding research associations as a group, what is their core competency? It could be considered to be an intimate knowledge of the sector of the industry they serve, being a not for profit organisation, not focused on short-term returns, and a reputation for integrity resulting from handling confidential information from members over a period of years.

Considering the UK research associations as an industry, Porter's 'Five Forces Framework' (Porter, 1980) is worth considering, in particular the threat of new entrants. The research associations, with their government grants and membership base, were in a strong position to resist new entrants. But with the removal of government grants in the 1980s, together with the government's encouragement for universities and government research establishments to sell services to industry, and with new consulting companies emerging, the research associations' position came under threat. Porter (1980) argues that the fundamental basis of above average performance in the long run is a sustainable competitive advantage, and that there are two types of competitive advantage which a firm can possess: 'low cost' or 'differentiation'. Low cost may not be an

option for research associations, with professionally qualified staff, - so for a successful strategy they should follow a policy of differentiation. This, for example, could be speed of response to customer enquiries and consultation based on an intimate knowledge of the industry they serve, on research associations' commercial independence and professional standing.

Most strategists would agree that a successful strategy takes into consideration the market and the resources of the firm. Wernerfelt (1984) more formally formulated the resources-based view of the firm, stating that there is a rich taxonomy of markets and substantial technical and empirical knowledge of market structures and that in contrast, resources remain an amorphous heap to most people.

Heracleous (2003) cites Rouse & Daellenbach (1999) as calling for more in-depth studies to capture the nature and function of intangible resources such as organisation culture and innovation capability.

Perhaps it is these intangible assets which separate the successful from the less successful firms including research associations. Hoskisson et al. (1999) state that strategic management research started inside the firm, it then swung outside the firm to the market, began to swing back towards the firm under the influence of organisational economics and has during the 1990s returned inside the firm, with the popular resource-based view.

Heracleous concludes that despite fragmentation of the strategy field there are some areas of agreement. Strategy concerns both the organisation and its environment, and effective strategy is important for the welfare of the organisation.

Berry & Taggart (1998), in their study of small hi-tech firms (which have similarities with research associations which are technology based and need to become commercial) conclude that as the firm grows and its technology matures, marketing considerations play an increasing part in ensuring the commercial success of the organisation, and technology strategy is determined within overall corporate strategy. EIRMA (2002) identifies three ways of achieving integration of technology and corporate strategy. They are:

- sequential strategy development, where technology strategy follows corporate strategy;
- concurrent, which is an integrated approach between technology and corporate strategy;
- self strategising, in which teams are formed to determine strategic opportunities.

Berry and Taggart (1998) cite Drucker (1974) who states that the two essential activities of business are innovation and marketing, and that one without the other cannot lead to long-term success.

The characteristics of the four perspectives of strategy as defined by Whittington (2001) are reproduced in table 2.3.

Table 2.3 Characteristics of the four strategy perspectives

	Classical	Processual	Evolutionary	Systemic
Strategy	Formal	Crafted	Efficient	Embedded
Rationale	Profit maximization	Vague	Survival	Local
Focus	Internal (plans)	Internal (politics/cognitions)	External (markets)	External (societies)
Processes	Analytical	Bargaining/learning	Darwinian	Social
Key Influences	Economics/military	Psychology	Economics/bio	Sociology
Key Authors	Chandler; Ansoff; Porter	Cyert & March; Mintzberg; Pettigrew	logy Hannan & Freeman;	Granovetter; Whiteley
Emergence	1960s	1970s	1980s	1990s

Source: Whittington (2001, p. 39)

Whittington (200, chapter 7) endeavours to present to managers the factors that they should consider when deciding upon which perspective of strategy is most suitable for their organisation, and which one they should feel most comfortable with. Whittington (2001, p. 120) summarises his guidance as follows:

“The classical approach is most relevant in mature, stable and relatively predictable environments. There at least plans stand a chance of capturing the future.”

He continues, “Where capital investments are large and lumpy, incremental wisdom is impractical and a planned strategy must be followed.” (Whittington, 2001, p. 120)

Evolutionists warn that markets are more prone to de-maturity as sudden bursts of innovation break out or new entrants break in, thus again reducing the applicability of the classical approach.

“The most reliable advice is the evolutionary focus, on low costs and spread bets - a survival policy”. (Whittington, 2001, p. 120)

The processual approach fits protected bureaucracies, especially public sector or quasi-privatised agencies, which often have both the size and the complexity of objectives to make the strategy a series of creeping but necessary compromises. This is not the situation encountered in general in research associations.

The systemic approach seems to cover the research associations' strategy prior to the 1970s and the publication of the Rothschild Report. Up to that stage these organisations were, to some extent, protected agencies of government with outcomes not defined in profit terms, but pluralistic with respect to services to industry, scientific kudos and financial survival.

Whittington (1991) also states that knowledge-based firms, with powerful professional or deeply embedded competencies are more effectively driven 'bottom up' rather than 'top down'. Such 'adhocracies' have the potential to muddle through over long periods of time. This again characterises the research associations in the first 50 years of their existence, and in some cases, as this research will reveal, lingers on.

Mintzberg et al. (1998) lay emphasis on the strategy process and in fact Mintzberg's ten schools all have the word “process” in his co-authored book “Strategy Safari”. This emphasis on process is at variance with Whittington, who

considers the process on one axis and the outcomes on the other. The present research will focus on the outcomes of the strategy process as well as on the process itself. It may be that a generalist work such as that by Mintzberg et al. (1998) has to concentrate on the process, and that the outcomes are more related to the industrial sectors and the consideration of the type of organisation being investigated.

With respect to research associations, the topic of this thesis, there are two distinct characteristics which should influence the strategies that they adopt. The first is that they are not for profit organisations, and in view of this, the literature on the strategy process in not for profit organisations will be relevant. As sustainable growth has been selected as the success criterion for this research (since research associations are not for profit organisations profit maximisation is not appropriate) the Whittington four approaches to strategy diagram has been modified for research associations and the outcome of profit maximisation has been replaced by 'maximising long term advantage', a term used by Whittington (2001, p. 3). A second consideration is that the research associations are concerned with technology generation and transfer. In relation to this, the work of Tidd (2006) on the links between knowledge management and strategic competence should provide some insight into strategy formulation in an research and development organisation.

Strategy in not for profit organisations

As stated in the Introduction, research associations are not for profit organisations. These organisations may make an operating surplus, which can be transferred to a reserve account for future business development, but they cannot distribute a

profit via dividends to shareholders, being companies limited by guarantee with no shareholders.

To put not for profit organisations into perspective, Ring and Perry (1985) compare not for profit organisations with for profit organisations operating in the private sector and public sector organisations, and contrast the performance goals of these three types of organisations. With reference to organisations in the public sector, they comment that the ill-defined nature of much of this sector creates conflict of public organisational goals, and that performance expectations in the public sector are often vague and in constant flux (Ring and Perry, 1985). By contrast, according to these authors private sector, organisational goals tend to be much clearer and more stable. Nutt and Backoff (1993) conclude that not for profit organisations often find themselves somewhere in between the extremes of public and private organisations. Bryson (1995) considers that non profit organisations typically serve a more diverse group of stakeholders than do private companies, and suggests that, as a result, it is more difficult for non profit organisations to identify strategic issues and to develop strategies to deal with them.

Ring and Perry (1985) state that not for profit organisations are dependent on government decisions and finance. It can be seen that this was very much the case with the research associations, as outlined in Section 2.2, which found they constantly needed to react to changing government policy and financial support.

Galaskiewicz and Bielefeld (1998) define the group of organisations which come under the non profit umbrella, and in particular distinguish the commercial types from charities. The commercial types of non profit organisations - which encompass research associations - provide goods and services directly to a

customer who is required to pay some fee or dues for the output. This type of non-profit organisation is more like a (for profit) commercial organisation than a charity. The important element that separates the commercial non-profit from the for profit company is the absence of shareholders and the existence of certain financial advantages, such as exemption from corporation tax.

According to Nutt and Backoff (1993), the incentives which influence individuals in the three sectors (i.e. public, private and not for profit) also differ. In the public sector, incentives encompass public service, job security, power and recognition. In the non-profit sector the predominant incentives are professional goals. In the private sector, financial incentives predominate.

Saloman (1992) sums up by stating that the non-profit sector is thus in a position to help address market failures and government failures, while also providing an independent institutional base for other activities.

As has been outlined in Section 2.1, which deals with the influence of government policy on research associations, the UK research associations were established to help rectify the market failure of industry to undertake research. At the same time the original scope of the research associations enabled them to establish commercial activities, such as contract research.

It can be concluded from the literature that, in the not for profit sector, the role, the drivers and the stakeholders are more diverse than in the private sector. In addition, the incentives which generally influence individuals in the not for profit sector are also different, not having the security of the public sector, nor the financial rewards of the private sector.

In terms of how to measure the success of non-profit organisations, the literature is not very specific. For example, Bryson (1995) states that a vision of success is defined as a description of what the organisation will look like after it successfully implements its strategies and achieves its full potential.

This seems to the researcher to be a 'cart before horse' situation since the strategy should be tailored to achieving success, and not a measure of success.

Courtney (2002), in considering the applicability of strategic management techniques to non-profit organisations, concludes that there was a time lag of some 15 years between the uptake of strategy managing techniques in the private and the not for profit sector, with the literature on strategic planning in the private sector having developed in the mid-1960s and equivalent literature in relation to the non-profit sector only beginning to appear in the late 1970s. This point of view is reinforced by Unterman and Davies (1984) in their study of 102 non-profit organisations in the US. They conclude that not only had not for profit organisations failed to reach the strategic management stage of development, but that many of them had failed to reach the strategy planning stages that for profit organisations had initiated some 20 years earlier.

Two reports produced in 1996 and 2008 by the Association of Chief Executives of Voluntary Organisations (ACEVO) produce information on the development of strategy in organisations which are similar to research associations. The first report is cited by Courtney (2002). The researcher was unable to verify Courtney's summary of this, 1996 ACEVO report since he was unable to locate a

copy even at the offices of ACEVO in London where the researcher met with Richard McKelvey Head of Corporate Partnerships (autumn 2010).

Courtney reports on the survey conducted by the Association of Chief Executives of Voluntary Organisations (ACEVO) in the UK in the 1990s (Courtney, 2002,).

This survey covered non-profit organisations having an annual turnover in excess of £1M and found that 82% of respondents had a Strategic, Corporate, or Business Plan, with another 15% intending to prepare one in the next 12 months.

The ACEVO report reveals that a new Chief Executive was the most common reason for preparing a strategic plan (40%), followed by 22% responding to requests from the Trustees, and a further 20% triggered by the organisations' financial situation. The report also states that the majority of the plans included strategic objectives, a mission statement, financial plans/implications, detailed objectives, strategic priorities and organisational values. About one-third of the plans included a vision statement, resource/skills needs, detailed action plans, competitive analysis and critical success factors.

The strategy planning techniques used, as reported by Courtney, were SWOT (by far the most used) followed by gap analysis and cost-benefit analysis and PEST. Other techniques used were zero-based budgeting, scenario planning, force field analysis, portfolio analysis, five force analysis, life cycle analysis and value analysis. The report also highlights that the strategy process was internally focussed, with only 13% having involvement of their customers, 11% with clients and 19% with users (ACEVO Report, cited in Courtney, 2002). The internal process was carried out with the trustees, directors and senior managers. The level of consultation with 'all staff' was low, at about 11%. Courtney points out that

the level of consultation and participation is lower than that reported in the private sector.

The ACEVO 2008 report distils the best practice followed by CEOs in the third sector in strategy development (Bolton, 2008). The study emphasises the importance of involving all stakeholders, including board members and staff in the strategy process, an aspect which was not emphasised in their earlier report. In particular the section on working with the board provides advice on how to involve board members and stating that:

“It is the CEOs’ job to ensure they can participate and contribute their expertise”.
(p. 34)

There were varying views on who should start the strategy process. The consensus appears to be that with small organisations the beginning could be the board’s input but for larger organisations the initial strategy should be developed by the CEO and senior staff. Two small research associations have been selected for case studies. This could throw some light on the strategy process in small organisations - who initiates the process? The ACEVO’s chief executive sums up the board’s involvement as “a dynamic tension with trustees (directors) pushing the boundaries but not further than the CEO thinks the organisation can sustain” (p. 14) – indicating a view that the CEO needs to be in control of the situation.

The report also lists circumstances which would trigger fundamental review of the strategy, as follows:

- A significant change in the operating environment

- A major gain or loss in income for the organisation
- A significant change in staff, trustees (directors) or stakeholders
- A significant change in relevant legislation or regulation
- A major risk event
- Sustained variation from budget or business plan (Bolton, 2008, p. 28)

This approach differentiates between a strategic review and ongoing planning. This list emphasises that a strategy review should be undertaken when these triggers occur and not just on a regular basis. This separates strategic review from ongoing planning and annual budgeting.

Butler and Wilson (1990) outline an interesting approach to strategy in voluntary and not for profit organisations. They consider competitive and co-operative organisations. The attitude of research associations to taking a competitive or co-operative stance is investigated to determine whether one approach or the other is more likely to contribute to success.

Butler and Wilson (1990) used a well structured questionnaire, which covered the main areas of input strategy, output strategy, lobbying, other players in the field, dependence on large clients, processing of outputs, selection of personnel, and staff organisation. Up to 30 questions were asked in each area, with a score of 0 to 5 allocated to each of the responses. Analysis of the data yielded an eigenvalue and a variance. Questions relating to lobbying, significance of competition, dependence on large organisations and internal structure are applicable to research associations as well as to charities. The conclusions of Butler and Wilson's study, which were derived from soft data as well as from the structured questionnaire, highlight the importance of effective and responsive

management, overall organisational design, and the ability of the organisation to respond to changes in the external environment. This is a somewhat universal statement, but the conclusion goes on to stress that charities have a dedicated staff who expect a great deal of personal space and autonomy; this is also true of research associations, in which the professional staff require the freedom to explore their own fields of interest. Hence, management in both types of organisations is faced with a conflict of control and freedom. The authors suggest a matrix management structure as a possible solution. The researcher considers the problem may be more deep-seated than merely a 'structure' issue, and could have a solution in a culture change.

Nutt & Backoff (1993) define a step-by-step approach to formulating and implementing strategy in not for profit organisations. They divide the approach into six stages:

- Understand History

Key staff and board members must learn about the organisation's origins and founding ideas. These educational efforts attempt to create shared interpretations of where the organisation has been. This step is essential before people can decide where the organisation should go in the future.

- Explore The Situation

An exploration of its history gives a strategic management group (e.g. the board) an understanding of the organisation's past. From its ideals it gains an appreciation of an idealised future. The next step is to explore factors that obstruct or enhance the prospects of reaching this desired future state.

- Uncover Issues

Historical and situational assessments help an organisation develop a shared view of core concerns that must be managed. Priority concerns shape an issue agenda. Issues capture tensions in the organisation that are pulling and pushing it away from its ideals.

- Identify Strategy

The issue agenda directs the search for strategic actions, beginning with the most important issue tension to be managed. Considering the SWOTs found to be crucial, a search is mounted to find ways to manage these issues tensions by building on strengths, overcoming weaknesses, exploiting opportunities, and blunting threats.

- Assess Feasibility

The resources needed to carry out a strategy and the reactions of key people who are stakeholders provide indications of feasibility. Public and third-sector organisations can get resources from internal reallocations, and from outside support.

- Implement

During implementation, plans are devised to deal with the concerns posed by the resource and stakeholder assessments. Stakeholders thought to be amenable to one or more of these tactics are approached by the organisational leader to try to win them over.

Strategy in research and technology organisations

Much has been written on managing innovation - for example, see Tidd et al. (2005) - but the researcher questions the relevance of this topic to the present study, since many research associations are more concerned with providing a technical service than with innovation products. Tidd et al. consider incremental and radical innovation, and underline the importance of incremental innovation, quoting Ettlie (1999) who suggests that 'disruptive' or 'new to the world' innovations comprise only 6 to 10% of all projects labelled 'innovation'. The research associations are in general concerned with technology development and transfer and not with 'new to the world' research.

Hall (2006) states that competencies must be clearly defined and measured in order to distinguish them from generic organisational strengths or more routine activities and tasks. He also argues that competencies represent a potential asset, and therefore cannot contribute to competitiveness or performance unless they are successfully translated into new processes, products or services. It is the role of innovation management to make this transition. The remaining competence, which is probably implied, is the marketing of the new products or services following their successful development.

Whittington (1991, p. 75) discusses the importance of R&D – marketing integration with the belief that the need for this integration has increased over recent years. The research associations have in the past been poor at marketing with directors being appointed on the strength of their research skills rather than being competent at marketing. One exception to this trend was the appointment of a director at one case study research association on the basis of his marketing

skills. As an anecdote the researcher was working at a research association in the mid 1950s and his director likened the transfer of research results to members as “casting pearls before swine”.

Whittington (1991, p 48) also introduces the concept of market and professional control and states that by 1987 all the research associations had been propelled towards market control. He also states (p. 50) that although the research associations were trying to diversify from their original industries, they were still more guided by their existing technological resources than by economic criteria.

Two papers, by Rush et al. (1995) and by Arnold et al. (1998), are concerned with strategy in research institutes; the first with strategy for best practice in research and technology institutes and the second with strategic planning. Both papers were the outcome of case studies, covering eight research institutes worldwide in the first paper and the same eight research institutes plus a ninth BMI in the second. Both papers include PERA as the UK research and technology institute (RTI). As in this thesis the authors considered success criteria as follows: Rush (1995, p.18) states that:

“... unlike firms RTIs cannot be judged on the simple basis of market share or profits....The criteria used for success in their study was the combination of dynamism, relevance to industry, contribution to the national science and technology infrastructure, value for money, industrial appreciation, independent fund raising capability, innovative organisational approaches, effective management and valued scientific and technological outputs”.

Many of these criteria would in practice be difficult to measure and would somehow have to be weighted to produce a success measure. In this research the researcher has selected sustainable growth as the measure of success which could be considered to incorporate the elements identified by Rush.

Arnold et al. states that:

“...operational reasons for poor RTI performance often stem from a failure to run the RTI as if it were a business. Lacking, at least in part, the economic discipline of the market, RTI management is often tempted to operate more in the style of a university” (1998, p. 90).

This is in line with the Whittington (1991) comment of professionalism and market control, indicating that, for success of the RTI, market control is important. Arnold et al. (1998, p. 96) underlines the importance “with decreasing state funding will drive the RTIs to seek a rising share of income by establishing strategic partnerships with industrial companies and state institutions”.

Arnold et al. (1998) go on to enumerate typical improvement opportunities for RTIs which were identified as a result of the detailed case studies. The four categories they identified were marketing, human resource management, management systems and governance.

With reference to marketing, the authors state that marketing is an area where significant change in internal culture is often needed in the RTI in order to operate effectively. They outline in some detail the scope of the marketing process including creating awareness of the organisation by publications, conference participation and mailings, identifying and managing large potential clients,

creating and maintaining systems to manage the marketing process. The authors stress the importance of long term relationships with customers, which can be achieved by a membership base, a practice adopted by most research associations.

With reference to human resource management, the authors make the point, sometimes assumed, that the possession of higher degrees equates to experience in industrial engineering, which is wrong (Arnold, 1998, p.98). They state that people with experience have a willingness to compromise technical excellence to market and production needs. They also advocate that rotating people amongst internal teams will contribute to building and diffusion of industrial experience.

With respect to management systems, the authors stress the importance of project control by the installation of cost analysis and project tracking systems.

With reference to governance, the authors recommend a two-tier governance structure with a high level board with the function of overseeing and a technical board to run the organisation. They recommend that the overall composition of the board should be strongly weighted in favour of industrial representation.

Tidd (2006) describes strategic competencies and refers to a questionnaire to which 95 CEOs responded. The questionnaire asked them to rank competencies in their organisation. The results are shown below in ranked order.

1. Company Reputation
2. Product Reputation
3. Employee Knowledge and Know-how

4. Organisational Culture
5. Personal Networks
6. Specialised Physical Resources

This chapter has reviewed the literature concerning research associations and that pertaining to governance and strategy. A number of important factors concerning strategy governance and other factors which can have a significant impact on performance were uncovered and questions were raised. These are brought into the development of the secondary questions for the research in Chapter 4. These research questions will also be developed using data obtained from the pilot interviews with research associations, which are described in the next chapter.

3. PILOT INTERVIEWS

3.1 Introduction

In addition to the issues identified in the literature review in Chapter 2, in order to contribute to the development of the research questions, pilot interviews were undertaken. The results of these interviews are set out in this section and focus mainly on the key threats, issues and opportunities which were identified.

The pilot interviews were undertaken as exploratory research, in order to obtain some understanding of the issues perceived by the CEOs selected at the outset of this research, in 2006. This approach is in line with the 'drift' stage of the research project as described by Bonoma (1985). In the drift stage, one is trying to define the area of research, the concepts and the technology.

The research associations were selected for these pilot interviews on the basis that the researcher had a good relationship with the CEOs of the organisations and it was hoped that this longstanding relationship would lead to a free and frank discussion. Three pilot interviews were arranged to give triangulation of the data obtained. The interviews were unstructured. The interview approach is in line with the philosophy of Gillam (2000, p. 18): "... research is to start by collecting data (and looking for it) with as open a mind as possible."

The interviews were undertaken on a confidential basis, with the names of the research associations and their CEOs not disclosed, only the issues which emerged.

The pilot interviews were undertaken in September 2006. The main purpose of these pilot interviews was to find out what were the main threats, concerns and opportunities of the CEOs interviewed.

The pilots revealed that, in addition to finance, other important issues were governance and culture change, together with the emerging issue of the burden of pension scheme deficits.

3.2 Issues identified from the three pilot interviews

Pilot RA1

Size

The CEO is of the opinion that the critical mass for a research association is a turnover in excess of £10M. However, he is of the opinion that very small research associations employing less than 20 people seem to survive. He also maintains it is important for the research association not to grow larger than the size the industry will support. Since becoming CEO, the CEO has reduced the size of his research association by 25%.

Business activities

In his research association the CEO maintains that research is not what the industry wants, since the processes used in the industry are now well understood and hence no further research is required. He is therefore concentrating on due

diligence, external testing, monitoring of procedures as well as some training.

The CEO's strategy is to move closer to the market place and undertake a large number of small assignments rather than a few major projects for which it is difficult to maintain continuity.

The CEO has not followed the research association trend to go into consulting but has developed testing and other services which require less highly paid staff and are easier to manage.

Company structure

The CEO mentioned that a company limited by guarantee presents a problem in raising capital since the organisation cannot issue shares and can only expand through bank loans or through reinvesting its surpluses.

Governance

During the CEO's term of office the council (which consisted of members) has been replaced by a board of directors consisting of executive directors and paid non-executives. He firmly believes that a research association cannot be run by its members in the same way as any business cannot be run by its customers.

Management buyout

The CEO, while CEO of another research association, prepared the way for a management buyout which was not completed.

Relocation

This research association, in common with several others, has been developed in the grounds of a country house located in an expensive suburban environment.

The CEO says this is not an ideal arrangement and he has plans to relocate in a factory estate which would release capital and reduce running costs.

Acquisition

The CEO has acquired a small company in a related industry and is seeking further similar opportunities to grow his client base.

Researcher's observations

The CEO appears to have a clear strategy for the optimum size of the organisation and its activities, and he has introduced a governance structure he considered appropriate.

Pilot RA2

Pension fund

The main concern of the CEO of this research association is the deficit in the organisation's pension fund. He informed the researcher that as from 6th April 2006 companies have a statutory obligation to include the pension deficit figure in the annual accounts, which will indicate that many companies including research associations are technically insolvent. The CEO stated that this problem is facing

many research associations and that AIRTO has written to the pension protection fund administrators on this topic.

The option facing this research association is to wind up the pension scheme and replace it by an individual pension plan but no action has been taken to date.

Corporation tax exemption

The interviewee stated that of the 55 research associations previously exempt from corporation tax, under Section 508 of the 1998 Companies Act, only six have retained exemption on the basis that they still meet the criteria of undertaking research rather than providing technical services. This research association has maintained its exemption and the CEO is very concerned that if this exemption was withdrawn the research association would have to pay corporation tax on its surplus and this would inhibit future investments

Mergers

This research association has had a successful merger with a smaller research association. The increased size secured the research association and also gave it economies of scale. The CEO considered this a satisfactory method of expansion and is looking for further opportunities.

Membership

This research association is a strong membership organisation, with members contributing 18% of turnover by way of subscriptions. Membership provides

opportunity for selling services to established clients. The CEO did not plan any changes in approach to membership. However it was mentioned during the interview that there are research associations that are successful with a small, or no, membership base.

Governance

The CEO is satisfied with the present governance structure where the research association is controlled by its council, comprising members elected by and from the membership. He has no plans to change the situation.

Culture change

The CEO is concerned to make scientific staff more aware that they are part of a commercial business and not undertaking research for the sake of it. It appeared to the researcher that no visible action had been taken.

Location

The CEO stated that this research association has the advantage of operating in an area where that employment costs are low hence giving it a competitive advantage over other service providers.

Researcher's observations

Although issues were raised concerning pension fund and culture change, no action was mentioned to tackle these problems.

Pilot RA3

Pension Fund

The underfunding of the pension fund poses a similar problem to that faced by

Pilot RA2

Culture change

The CEO stated that he also, as at Pilot RA2, had the problem of scientific staff wishing to carry out research for its own sake rather than seizing commercial opportunities - but, unlike Pilot RA2, has tackled the problem by introducing business managers to provide the interface between customers and the scientific staff.

Relocation

The CEO mentioned the possibility of relocating from a valuable suburban site in order to raise capital.

Governance

The CEO, in common with that of Pilot RA2, values membership but has isolated membership from the governance of the organisation, which is now in the hands of non-executives and - increasingly - executive directors.

Business activities

The CEO sees an opportunity in developing information services and is developing commercial and legal information services as well as technical services and marketing these services worldwide.

Diversification

The CEO has identified allied industries whose potential he is exploring.

Survival strategy

This CEO stated that a strategy for survival was needed to counter the pension fund deficit, which to date has been achieved by tightening up control procedures, appointing business managers and focusing on the market.

Researcher's observations

It appears to the researcher that the CEO has a strategy for tackling culture change and also for developing new markets and products.

3.3 Analysis of issues raised at pilot interviews

The issues identified in the three pilot interviews are discussed below under the headings of threats, concerns and opportunities.

Threats

Pension deficit

The pension deficit problem was raised at two of the three interviews. The researcher will investigate whether this was sufficient of a problem to cause research associations to fail and what strategies the research associations adopted to deal with the pension deficit.

Corporation tax exemption

The majority of the research associations are dealing with the problem of the withdrawal of corporation tax exemption. Of the remaining six that still benefit from this exemption, the researcher will investigate whether they are they intend to maintain exemption into the future and if not what strategy they have for dealing with the withdrawal. Practically there is a problem because in order to maintain exemption the research association must continue to do a minimum of 50% research, which is against the general trend of the research associations becoming more market-focused.

Concerns

Size of research association

All three CEOs feel that there is an optimum size for their research association. In two cases this was being achieved by growth either through acquisitions or diversification, and in the third case by reducing its size to what the CEO felt were the industry's needs in the short term. There was a comment that the very big and

the very small would survive. The researcher aims to investigate whether there is any relationship between size and success. In the case studies, research associations of all sizes have been included.

Governance

In two cases the governance has been changed from control by a council to control by an executive board consisting of executive directors and non-executive directors. In the third case the governance structure has not been changed although the effective control has shifted from the council to the executive directors, emphasized by the comment "...a research association cannot be run by its members in the same way as any business cannot be run by its customers" (CEO, Pilot RA3). The researcher will explore the governance, governance changes and reasons for governance change in research associations during the case studies, and aim to identify the relationship between governance models and success.

Research associations, being companies limited by guarantee, are unable to raise capital through the issue of shares.

The researcher will identify cases where management buyouts have been attempted and where they were completed whether it has led the organisation to success.

Culture

Two CEOs raised the issues of culture change from a research focus to a market focus. The third CEO has abandoned research and has a market focused

strategy. The researcher will explore how widespread the culture change concern is, and the actions being taken to address the problem. In particular, CEOs will be, in the semi structured questionnaire, questioned about culture change, staff competencies and how they assess user needs.

Opportunities for business growth

Opportunities for business growth were identified by the CEOs in the following areas:

1. New products
2. Geographical expansion
3. Diversification
4. Acquisitions
5. Raising capital

Two CEOs mentioned the possibility of relocation to raise capital, and in the case of one, also reduce the operating costs. The researcher will identify other case study research associations which are planning to relocate or have relocated, and with what success. This issue will be raised during the semi-structured interviews when discussing access to capital.

The researcher will explore the extent to which these opportunities are being or are planned to be explored by the research associations in the case studies through the semi- structured questionnaire, presented as Appendix X.

This chapter has identified additional factors to be considered in the research, which are included in the development of the primary and secondary research questions, discussed in Chapter 4, 'Development of the research questions', following.

4. DEVELOPMENT OF THE RESEARCH QUESTIONS

4.1 Introduction

This Chapter covers:

- Development of the primary research question
- Development of secondary research questions from the literature review and pilot interviews

The section on the definition of the primary research question (Section 4.2) frames the problem under scrutiny and positions the study.

The section on the secondary research questions (Sections 4.3 to 4.5) develops the subsidiary questions arising from the literature review and from the results of pilot interviews used for the design of the semi-structured questionnaire (the main data collection tool used in this thesis).

The aim of this research is to position the theoretical perspectives of governance and strategy as derived from the analysis of the case study data and to relate these perspectives to research association success.

The literature review and the pilot interviews identified a number of secondary research questions and the answers to these secondary research questions are

used to contribute to the analysis and hence the positioning of the theoretical perspectives of governance and strategy in the case study research associations

4.2 Development of the primary research question

The primary research question is:

Which strategies have led to success in UK research Associations?

Ghuri and Gronhaug (2005) identify the two key characteristics of a research question as follows:

- It expresses a relationship between two or more variables
- It is clear, i.e. what is asked is understood

The starting point is therefore to evaluate the research question against the above criteria.

The first characteristic is satisfied in that two variables are under consideration, namely the strategy employed and the outcome (the extent of success). Both these parameters need to be evaluated and measured. The strategies employed can be categorised under Whittington's (2001) strategy concepts, whilst the success criteria can be measured in terms of sustainable growth, as discussed in Chapter 5.

Saunders et al. (2009) highlight the attributes of a good research topic, as follows.

- The research topic must excite the researcher
- The researcher should be capable of undertaking the research topic and be reasonably certain of gaining access to the data required
- For most topics it is important that the issues within the research are capable of being linked to theory

Considering the above:

- The research topic is one of considerable interest to the researcher and a topic with which he has been involved for many years as outlined in the introduction (Chapter 1)
- The researcher is in a unique position to gain access to the data that might be relevant to the research because of his professional background and resulting experience and networks
- The literature review (Chapter 2) has identified theoretical models of governance and strategy and the research seeks to relate the findings of this research to the theoretical models.

The Bessborough Report (1973) and the Jones Report (1972) comment on the changing environment facing the research associations. The Bessborough study attempts to identify the strengths and weaknesses of the contemporary research association system, with the aim of providing a background against which the further development of research associations can be assessed.

The Jones Report states that it is interesting that few research associations appear to regard their own economic performance as an object of policy. Their ambitions were usually held on behalf of their industries rather than themselves. Whether this is altogether healthy is debatable. (Jones, 1972)

In the researcher's view, this is a very prophetic question.

The Rothschild Report (1971) eventually brought to an end the partnership between industry and government in formulating research association policy. From that date onwards, the research associations would have to formulate their own strategy to meet these changing conditions. Although the formal partnership between the research associations and government ceased in the early 1970s, government continued to devise schemes which enabled the research associations to bid for financial support for their research activities. By 1990 this form of financial support from government had also ceased, and the research associations had to formulate and adopt strategies to enable them to become wholly commercial and market focussed.

This research will concentrate on the period after which government support for research associations ceased, and in particular the period 2003-2008, a period for which it is practical to research strategic planning as documentation and the personnel responsible for the strategy are still available for consultation.

Since 1999, Qui Credit Assessment Ltd. has published data, the QuiScore, on the sustainability of organisations including research associations. As will be seen in the section on performance measurement describing the QuiScore (Section 3.7), this provides useful data for the purpose of this research.

The literature review revealed that no academic study had been undertaken on the development of UK research associations since the 1970s. The prime research question regarding the 'strategies for success' used by research associations to make the transition from government-supported organisations for the benefit of the British industry, to market-driven companies operating commercially with international clients, therefore addresses a gap in existing knowledge.

4.3 Development of secondary research questions from the literature review and pilot interviews

4.3.1 Introduction

The literature review and the pilot interviews identify a number of important considerations which will be approached as secondary research questions in this study. The answers to these secondary questions are critical in positioning the strategic and governance structures adopted by the case study research associations under the theoretical models identified in the literature.

The issues arising from the literature review and the pilot interviews have been grouped under the headings of governance, strategy and other factors.

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The issues arising from the literature review and the pilot interviews have been grouped under the headings of governance, strategy and other factors.

4.3.2 Governance

The importance of governance emerged both from the literature review and the pilot interviews. The two pilot interviews revealed a different approach to governance. In one case the research association council has been replaced by an executive board, with the majority of the board members coming from the research association's executive staff. This change has moved the power base from the research association's membership, as represented by the council, to the executive management. In the case of two other research associations, this move has continued, with a management buyout firmly replacing control in the hands of senior management.

The second research association has retained its council structure successfully. How has the tension between not for profit boards and management been managed? Has this tension been managed by dealing with existing council, or has it been managed by diluting the power of council? Kramer (1985) raises the question of managing tensions.

Carver (2002) suggests the role of the board in not for profit organisations to be to focus on external, rather than internal matters. The motivation of the Chief Executive Officer in not for profit organisations is described by Nutt and Backoff (1993), who suggest that the CEO is motivated by professional goals, rather than financial reward. This will be examined in the research, along with the role of governance within research associations.

4.3.3 Strategy

The literature review identified a number of specific issues with respect to strategy formation in not for profit organisations, a heading which as has been discussed encompasses research associations. Courtney (2002) makes the claim that strategy in not for profit organisations lags behind strategy formation in 'for profit' organisations. This research does not set out to substantiate or rebuff this claim; but it is hoped that during the case study interviews it will be possible to establish if modern strategy tools are being used (and if so, to what extent), and whether active development of organisational strategy is a new aspect of research association activity. Bryson (1995) highlights the problems associated with producing a strategy with a diverse set of stakeholders, as exists with research associations. Which stakeholders do the research associations consider to be most important in strategy formation? Who are the principal players in strategy formation; is it the board of the organisation or the executive? Carver & Oliver (2002) highlight this dilemma with respect to not for profit organisations, and ask the question 'Who triggers the setting up of the strategy process?'. As was seen above, this question was asked by the Association of Chief Executives of Voluntary Organisations, who suggest from their survey that the request comes from the board, the arrival of a new CEO, or as a result of financial difficulties.

The literature review has also brought to the surface a number of questions regarding the elements of the strategy. Jones (1972) makes the claim that research associations are focused on the industries they serve, rather than - and perhaps at the expense of - research associations themselves. The research will examine whether this is still the case, or whether the research associations are now more focused on their own destiny. The services which the research

association offers could depend upon the extent to which the research association is servant to its industry or focused on its own destiny. Tidd et al. (2005) considered, with respect to high tech companies, whether they focus on innovation products or technical service. In the case of research associations, are they now more concerned with the delivery of technical services - a change of emphasis from the research programme they were originally set up to undertake? Tidd (2006) raises the question of whether patents are as important in research associations as they are in ranking the performance of universities.

Ansoff (1965) discusses whether strategy is focused on new products or new markets. It will be interesting to see whether the research associations, in formulating a strategy, look primarily at extending existing services to other organisations in the supply chain, or in different countries, or whether they develop new products and services to sell to existing members.

Butler & Wilson (1990) consider whether a strategy should be a cooperative, or a competitive one, with particular reference to strategy in not for profit organisations. With respect to research associations, do they have a strategy to co-operate with other research associations, to share market opportunities, and do they have wider cooperation with, for example, universities and the government research establishments, who now in many cases often operate in the same market as the research associations? This research will attempt to establish whether research associations take a competitive or collaborative stance.

The principal conclusion of Freeman (1974) is that the most important factor in the success of innovation products is the understanding of user needs. What impact

has this understanding of user needs made on the strategy formulation of research associations?

Hall (2006) considers strategic competencies to be regulatory, positional, functional and cultural. Does this analysis apply to research associations? And, if so, which is the most highly rated competence? Coyne (1986), when investigating intangible assets in not for profit organisations, discovered through his questionnaire that reputation was by far the highest rated intangible asset. Will this be the case for research associations?

Butler and Wilson (1995) identified the importance of lobbying, and of the internal structure of the organisation on performance of not for profit organisations. Hence this should be incorporated into strategy plans. Do the research associations regard these two factors as important?

As will be seen, the pilot interviews in the food sector highlighted the importance of culture and culture change. One research association in the sector had a programme of culture change with respect to the commercial approach, while the other research associations had attempted to bring about the desired change of outlook by appointing new staff with commercial experience. Which is the more successful approach? The research will address this question.

With respect to the strategy process in research associations, is it deliberate or emergent as considered by Pettigrew (1987), and with reference to the tools used in the strategy process, is SWOT the most commonly used approach, as suggested by Courtney (2002)?

Finally, which of the classical, evolutionary, systemic and processual classifications of strategy (Whittington (2001) discussed in Chapter 2 have contributed to success in for research associations?

4.3.4 Other Factors

One important external factor which influences research association strategy is how the research association coped with the removal of government grant and other government funding following the decision taken by government not to fund near-market research. Other government schemes, such as the Faraday Initiative, provided research associations with the opportunity to receive government financial support through collaboration with universities. The European Commission also offered financial incentive to research associations who took part in their schemes. The research will attempt to analyse whether or not research associations were judicious to participate in public funded schemes, or whether they should have followed the commercial route at an earlier stage.

Participation in government and European Union schemes could have provided a transition to commercialisation, or it could have provided a hope for continuing public support, which was not to materialise - hence deflecting the research association strategy from a move to commercial success.

Another important external factor, identified from the pilot interviews, was the difficulty arising from the change in the pension regulations. An effect of the legislation was to remove the tax exemption from pension funds. As a consequence, pension funds were not adequately funded, and this has brought

about the demise of at least one large research association. Another aspect of government policy affecting the financial viability of research associations has been the removal of the exemption from corporation tax, as defined in Section 508 of the 1998 Companies Act. The Act stated that, in order to qualify for corporation tax exemption, the research association had to devote at least 50% of its activities to research.

Over the years as the research associations have become more commercial, and technical services replaced research in most research associations, at least to some extent, the criteria for tax exemption became more difficult to satisfy. In 2006 only six research associations had retained their tax exemption status. Another factor is that other players entered the technical services field; the government encouraged universities to undertake repayment work for industry, and the privatised government research establishments also entered the technology service market. The effect of this competition on research association performance and strategy will be examined.

As will be seen, the pilot interviews also highlighted the difficulty for research associations in raising capital through issuing shares. This made it hard for them to expand their businesses, having to rely on capital generated by surpluses and bank loans secured against assets. It may be supposed that those research associations that are now part of commercial organisations, have benefited from their access to capital from their holding organisations or other means, and this too is examined.

4.3.5 Secondary research questions

The literature review and the pilot interviews identified 26 issues which are grouped under six secondary questions. These are listed with the link to the associated reference and grouped under the headings of governance, strategy and other influencing factors.

The issues identified by the literature review and the pilot interviews are incorporated into the semi-structured questionnaire (see Appendix 2).

The six secondary questions (A - F) are:

Governance

A What is the effect of governance on research association performance?

Strategy

B When did strategic planning start and who initiates the strategy?

C What is the strategy development process?

D How do research associations view their strategic competencies?

E What are the diversification strategies?

Other factors

F What is the impact of the other important factors identified that may influence strategy?

The results for question A, obtained as described in Chapter 5, 'Methodology', enable the governance to be positioned using the theoretical perspective provided by Cornforth (2003).

Similarly the results for questions B-E will enable the strategic process and strategy to be positioned under the theoretical perspectives of Whittington (2001).

The researcher aims to determine the effect of size on success, since the case studies research associations selected (as will be seen in Chapter 5) have from 30 to 1000 employees.

The issues with references are set out, below.

A What is the effect of governance on research association performance?

- | | |
|--|----------------------------|
| 1. What is the relationship between the board and the executive? | Carlson and Donohoe (2003) |
| 2. Has the role of the research association's governing body changed to meet the needs of the research associations to become more like trading companies? | Fama and Jensen (1983) |

- | | |
|---|------------------------------------|
| 3. Do the boards exercise real power or does management run the show? | Mole (2003)
Chait et al. (2005) |
| 4. Do boards get involved in management details? | Chait et al. (2005) |
| 5. Do tensions exist between the board and the executives and how are they managed? | Kramer (1985)
Mole (2003) |
| 6. What is the background and length of tenure of the CEO? | Whittington (1991) |

B When did strategic planning start and who initiates the strategy?

- | | |
|---|--|
| 7. Does the research association have a strategy? | Whittington (2001) |
| 8. Does strategy formulation in not for profit organisations lag behind strategy formulation in profit organisations? | Courtney (2002) |
| 9. Who triggers the setting up of the strategy process – the board or the CEO? | Carver and Oliver (2002)
ACEVO (1990) |

C What is the strategy development process?

- | | |
|---|--------------------------|
| 10. How does the research association rank the importance of stakeholders? | Bryson (1995) |
| 11. Has the importance of user needs been incorporated into strategy formulation? | Freeman (1974) |
| 12. Do research associations consider lobbying to be important? | Butler and Wilson (1990) |
| 13. What is the role of research association councils in strategy formulation ? | Carver and Oliver (2002) |
| 14. Does the board produce the strategy for small organisations? | Bolton (2008) |
| 15. What is the most commonly used strategy tool? | Courtney (2002) |

D How do research associations view their strategic competencies?

- | | |
|---|-------------|
| 16. How do research associations rank strategic | Hall (2006) |
|---|-------------|

competencies under the headings of regulatory, positional, functional and cultural?

17. Do research associations consider reputation to be their most important tangible asset? ACEVO (1990)

E What are the diversification strategies?

18. Have research associations changed their focus from research to new products, new services and new markets? Ansoff (1965)
Day (1977)
Pilot interviews

19. Have research associations adopted a collaborative or competitive attitude? Butler and Wilson (1990)

F What is the impact of the other important factors identified that may influence strategy?

20. Does size have an impact on performance? Pilot interviews

21. Were research associations wise to participate in public funded schemes or should they have followed a more commercial route? Kealey (1996)

22. Do pension liabilities, where they exist have a Pilot interviews

strong influence on strategy formulation?

- | | |
|---|--------------------|
| 23. Has the effect of government withdrawal of tax exemption in some research associations influenced their strategy? | Pilot interviews |
| 24. Is access to capital a limiting factor on research association growth? | Pilot interviews |
| 25. How is culture change effected? Is it possible to identify which is the more successful approach? | Pilot interviews |
| 26. How far have research associations made the move from professional to market control? | Whittington (1991) |

This chapter has identified the research aim and questions to be addressed. In the next chapter the research methodology for undertaking this research is discussed and the approach set out in detail.

5. METHODOLOGY

5.1 Introduction

This chapter addresses the methodology used in this research. This chapter is structured to cover the following:

- Philosophical and practical background to methodology leading to the research approach using case studies

- Overall research design. This covers:
 - the data required, sources for the data and the use of interviews and questionnaires.

 - how the research associations for the case study were selected and the resulting selection

 - the approach to collecting the data

 - the approaches to assessing the performance of research associations leading to the performance measure used in this research

 - the analytical framework approach to classifying governance and strategy

The philosophical approach (5.2) attempts to establish an appropriate research paradigm for this research from which the appropriate methodology will flow. The theoretical analysis indicates a case study approach which uses both qualitative and quantitative data – a 'mixed method' approach. It includes a review of the literature on case studies and concludes that case studies which describe current practice will be appropriate for this research. The section also illustrates the effectiveness of the case study approach by giving a business case study review and describing case studies which have been previously undertaken of research associations.

Section 5.3 covers the overall research design.

- The data and data sources (5.3.2 and 5.3.3)
- How the Research Associations were selected for detailed case studies (5.3.4)
- The data collection (5.3.5). This section describes the approach to gathering research association information held in published literature, archival material and company accounts. It covers the collection of primary data from interviews based on a semi-structured questionnaire with the chief executive officers (CEOs) of the case study research associations. The data was triangulated by written answers to a formal questionnaire sent to non executive directors.
- How to approach assessing the performance of research associations (5.3.6). The literature review on assessing the performance both of academic and commercial organisations strongly suggests that the methods used are not applicable to research associations. On the one hand setting the performance of universities by the numbers of published papers

and their citations is not appropriate to research associations, since much of their work is undertaken on a confidential basis, and hence publication is not appropriate. On the other hand, the methods used in assessing the performance of commercial organisations, such as return on capital, are also not appropriate since research associations are not for profit organisations with no shareholders. The main criterion therefore used in this research for 'success' is sustainable growth.

- The analytical framework (5.3.7). The development of appropriate models for classifying the case study data is addressed.

5.2 Philosophical and practical background to methodology leading to the research approach using case studies

5.2.1 Philosophical background

Hussey & Hussey (1997) advise readers to establish and justify their selection of the research paradigm from which the appropriate methodology will stem. They consider the two extremes of the research paradigm spectrum - positivism and phenomenological - and list in Table 3.1 alternative terms for these definitions as reproduced in table 5.1.

Table 5.1 Alternative terms for the main research paradigms in business research

Positivistic paradigm	Phenomenological paradigm
Quantitative	Qualitative
Objectivist	Subjectivist
Scientific	Humanistic
Experimentalist	Interpretivist
Traditionalist	

Source: Hussey & Hussey (1997, Table 3.1)

The authors, in subsequent discussion, seem to prefer the use of terms 'qualitative' and 'quantitative', and the researcher also prefers them in the context of this thesis. The authors infer that business research can be positioned between the two extremes of the research paradigm spectrum, and hence the use of both qualitative and quantitative methods is appropriate to business research, i.e. the mixed method approach.

The authors reproduce a comparison table adapted from Cresswell (1994) which outlines the assumptions of the main paradigms covering the nature of reality, what constitutes valid knowledge, the role of values, the language of research and the process of research. Table 3.2 from Hussey and Hussey is reproduced in table 5.2.

Table 5.2 Assumptions of the two main paradigms

<i>Assumption</i>	<i>Question</i>	<i>Quantitative</i>	<i>Qualitative</i>
Ontological	What is the nature of reality?	Reality is subjective and singular apart from the researcher	Reality is subjective and multiple as seen by participants in a study
Epistemological	What is the relationship of the researcher to the researched?	Researcher is independent from that being researched	Researcher interacts with that being researched
Axe theological	What is the role of values?	Value free of bias	Value laden and biased
Rhetorical	What is the language of research	Formal Based on set definitions Impersonal voice Use of accepted quantitative words	Informal Evolving decisions, Personal voice Use of accepted qualitative words
Methodological	What is the process of research?	Deductive process Cause and effect Static design -categories are isolated before study Context - free Generalisations leading to prediction, explanation and understanding	Inductive process Mutual simultaneous shaping of factors Emerging design - categories identified during research process Context - bound Patterns, theories developed for understanding

they refer to Yin's (2009) characterisation of case studies, which are reproduced below:

- The research aims not only to explore certain phenomena but also to understand them within a particular context.
- The research does not commence with a set of questions and notions about the limits within which the study will take place.
- The research uses multiple methods for collecting data which may be both qualitative and quantitative.

This usage of both qualitative and quantitative data in case study research seems to place case studies within both extremes of the paradigm spectrum. Hussey & Hussey refer to Creswell (2003) "If you are having trouble identifying your paradigms you can take comfort since Creswell suggests that the knowledge, claims, strategy and methods used by the researcher determine the tendency of the research approach."

Reasons for employing a case study approach

Creswell (2003) advises that:

- The issue or concern to be addressed needs to be considered fully and the research needs to be designed to best match the problem.

- The researcher needs to consider his or her skills and experience and assesses which approach best complements these.
- The researcher needs to consider the audience to whom the findings from the research will be addressed.

Ghuri & Gronaug (2005) set the scene by stating that the case study approach is often associated with descriptive or exploratory research. However, as they emphasise, in business research, case studies are particularly useful since often there are too many variables to be considered, making survey methods inappropriate to use.

Butler & Wilson (1990), state that they were predisposed to using a multiple method to studying an organisation. Thus they employ case studies, structured data from interviews and use documentary and archival data wherever possible. They continue that they believe multiple methods helps in the understanding of the field of research which has until now largely been absent from the analytical vocabulary of the analysis.

Doctorial theses of Berryman (2000), Morrow (1998) and Spittle (2006) were concerned with strategy development in not for profit organisations and employed a case study methodology. In the cases of Spittle and Morrow the trigger for strategy development was the reduction in public funding and the move towards alternative sources of income, a situation similar to that experienced by the research associations. Both Morrow and Berryman's research was carried out in a scientific establishment.

The researcher has developed skills in the use of case studies in his career.

The needs of the beneficiaries (or 'users') of the present research will best be served by a case study approach where the Councils of the research associations can extrapolate the findings of the case studies used in this research to their own circumstances and organisations. Other organisations profiting from this research will be those who have to make the transition from public funding to market driven support. Hence, both from the theoretical approach outlined by Hussey & Hussey and the more practical guidance of Creswell, the use of case studies will be of paramount importance in planning this research project.

5.2.2 Review of case studies in business research.

Case study research has been advocated as a valid research strategy in many aspects of business research, in particular Mintzberg (1973) advocates its use in research into strategy. In general case study research is useful, according to Jans and Dittrich (2008) p 24

- When the topic is broad and highly complex
- When there is a lot of theory available.
- When context is very important.

This analysis has encouraged this researcher to consider seriously the use of case studies in the present research. Further encouragement is supplied by the analysis of the number of published papers in the use of case study research in business situations.

Jans and Dittrich (2008) identified the number of publications in journals, which were published in journals that were part of the bibliographical databases of the Institute for Scientific Information (ISI) over the period 2000 to 2005. Their data is presented in the table 5.3.

Table 5.3 Three types of case studies in five fields of business research (2000-2005) (Jans and Dittrich 2008,p. 23)

	Strategy	Finance	Marketing	HRM	Operations	Total
Practice -oriented	153	24	19	104	154	454
Theory -building	48	21	19	41	83	212
Theory - testing	5	2	1	8	7	23
Total	206	47	39	153	244	689

It can be seen that 206 publications were identified under the heading of strategy, with 153 being classified as practice oriented studies. In this article, they refer to how they classify the three types of case studies, practice oriented, theory building and the theory testing. They classified theory building and theory testing publications, when this description was contained in the article abstract. Hence it can reasonably be assumed that practice oriented publications could contain an element of theory building or theory testing as could be the case in this present research. In addition to identifying the publications, they reported on the evaluation of the case study publications. This evaluation was more concerned with management information systems, than it was with strategy, but the conclusions at least flags up shortcomings in the case study research, which this researcher will endeavour to avoid. In particular, the author stated that in nearly

half the case studies evaluated, the publications did not state clearly the research question and that in three quarters of the publication the method of data analysis was not sufficiently discussed and further that only one quarter made satisfactory references to the literature on case study methodology.

The widespread use of the case study approach in business research, and in particular research on strategy using case study methods has endorsed the use of study methods in this research.

5.2.3 Research association case studies

The following account describes case studies concerning research associations which have been undertaken and did identify factors concerning their performance.

The Bessborough Report (1973) contains case studies of 42 research associations. Not surprisingly, since the report was sponsored by the Research Associations, it contains little criticism. However it makes observations on threats and opportunities, strengths and weaknesses - the elements of a SWOT analysis.

The Jones Report (1972) contains eight case studies. Although not related to strategy theory, it nevertheless provides a useful and sometimes critical analysis of the research associations' activities.

Of the four research associations in the case studies undertaken by Johnson (1973), one has failed, two have survived, and one has prospered. The case

studies highlight problems facing the research associations with respect to both internal organisation and customer needs, and he makes the comment 'that the only major link which holds them together as a whole is the existence of a Government grant in some shape or other'.

This seems a prescient observation, as the end of central government grant has forced the research associations to adopt a range of strategies for survival which will be explored in this research.

Others have written on individual research associations using a case study approach.

- Rush (1996) has published a case study on PERA where he examines common challenges and success factors for RTIs. Callow (1993) case study on MIRA, where he was employed, examines the way forward and the transition to contract research. Could the success of MIRA be a result of this study?
- Darling (1985) and Bailey (1995) have both written accounts of the ship industries Research Associations now amalgamated to form BMT. Bennett (2001) was concerned with the changes of governance structure at BMT to an employee benefit trust.
- Houldcroft (1996) has written an account of the Welding Institute, TWI, a success story under the classification used in this study and Tippett (1988) provides a useful history of the Shirley Institute now part of BTTG, the Textile Research Association, which is now only a shadow of its former

glory. Ringe (1991) explores the contract research business in the UK and outlines opportunities for growth.

5.3 Overall research design

5.3.1 Introduction

The primary and secondary research questions have been formulated in chapter 4. A multiple approach has been followed, as recommended by Butler and Wilson (1990), to address these questions. Sources used in addressing the research questions are:

- archival material
- primary data collected from the research associations using questionnaires and semi structured interviews.

5.3.2 Data

The research aim and associated research questions discussed in chapter 4 were developed as described previously in chapters 2 and 3.

The data stemming from the research questions to can be grouped broadly under the categories of:

- overview of the history of research associations obtained from archival sources which was used extensively in chapter 6 to record and assess the failures and mergers which had taken place in and between research

associations. Archival data is also used in chapter 7 to augment the data obtained from interviews and questions in the case studies.

- performance data on employment number and QuiScore obtained from the FAME website is used to quantify sustainable growth in the case studies reported in chapter 7
- data from the case studies augmented by data from published and unpublished sources is used to position and classify the strategy and governance perspectives according to theory; for strategy developed by Whittington (2001) and for governance by Cornforth (2002)

5.3.3 Data sources

Archival data

The archival data is obtained from published books, annual reports and other unpublished documents which the researcher gathered during the period when he was secretary general of AIRTO 1990 -1997. More recent material including annual reports and papers were obtained by the researcher at the time of the interviews. Electronic data has been sourced primarily from the FAME data base and also from the research associations' websites which in general contain press releases on important events and developments.

Primary data

The primary data was collected from the case study research associations directly through interviews and questionnaires. The data is obtained from two sources. Firstly data is obtained from an interview with the CEO of each case study research association . This is supplemented written responses, to a

questionnaire, given by one or more non executive directors of each case study research association. This triangular approach is used to obtain separate views of the research associations from both the executive and non-executive.

5.3.4 Selecting the research associations for detailed case studies

The methodology used in this research was to study pairs of research associations. The criterion for success or better performance was 'sustainable growth', where growth was measured in terms of employment numbers and QuiScore over the period 1999-2008.

A pairing approach was used in the SAPPHO project which was undertaken at SPRU, University of Sussex during the early 1970s. According to Freeman and Soete (1997), SAPPHO was conceived as a way in which to substantiate or refute generalisations about technical innovation, by the systematic comparison of successful and unsuccessful attempts to innovate. According to the authors:

“By pairing attempted innovations it was hoped to discriminate between respective characteristics of failure and success. The technique had of course been widely used in the natural sciences, especially in biology by McKay and Bernal (1966). When the two halves of the pair differ with respect to a particular characteristic or set of characteristics, this indicates a possible explanation of innovative success or failure.”

The SAPPHO project dataset consisted of 29 pairs of innovations in the scientific instrument and chemical processing industries. The total number of innovations is

not recorded in the account of the SAPPHO project and was probably unknown. In the present research, the total number of research associations was known to be 24 in 2008, and so the decision which has to be made is how many pairs to select for case studies.

Sampling procedures for large populations in the context of business research are well documented, for example as described by Cooper and Schindler (1998) . The authors do make a reference to the case of fewer than 50 companies where they consider the situation of a small number of companies who develop and manufacture amplifiers and loudspeaker products for the high end of the price range. They conclude that when the population is small and variable,(as is the case with research associations), any sample which is drawn may not be representative of the population. They go on to state that when the sample is drawn properly it can improve reliability - but they do not enlarge on how to properly draw samples.

In the present research although pairs have been selected from similar industries and also based on size, ownership and technology base, there is no statistical analysis that can confirm that these samples represent the population as a whole.

Yin (2009) draws a very clear distinction between sampling and case replication and states that, when using multi-case design, the question the researcher encounters is the number of cases deemed necessary or sufficient for one's study. However he continues

”... because the sampling logic should not be used the typical criteria regarding sample size are also irrelevant. Instead you should think of this decision as a

reflection of the number of case replications – both literal and theoretical – that you need or would like to have in your study. If your theory is subtle you may press for 5, 6 or more replications’.

In the present research, 16 of the total population of research associations will be covered by detailed case studies.

The theoretical basis of the pairing approach is to minimise the influence of the external environment. Hence, the first four pairs of research associations are selected, where each research association in the pair was serving the same or a very similar sector of industry. This approach is designed to eliminate as far as possible the influence of the industrial sector. It could be assumed that a successful industrial sector would be supported by a successful research association and a declining industrial sector by a failing research association, hence by examining two research associations serving the same sector the effect of the industrial sector could be minimised.

- Four pairings were selected on an industry basis serving
 - the food industry
 - the construction industry
 - transportation
 - clothing and footwear
- One pair was selected for research associations which were not serving a particular industrial sector, but were technology-based. The technology based research associations are research associations which were not set up to serve a particular industrial sector but to improve technologies, such as welding, which are employed in many sectors of industry. This pair will

enable the strategies developed to be compared and also compared with industry-based research associations.

- One pair selected were research associations which had been absorbed into large commercial organisations. This pair can be compared with not for profit research associations where the drivers could be very different.
- Two pairs were selected to investigate the effects of size on strategy, one pair, being medium sized employing 40 staff, and the other being small, with a staff of less than 20. These pairs have been included because of the focus on SMEs.

5.3.5 Data collection

The focus of this section is on the process by which the primary data was collected and processed.

Arranging an interview with the CEO

Interviews were sought with the CEOs of the selected research associations. A letter of introduction was constructed which was initially sent to three CEOs in order to test the effectiveness of this introductory letter.

The response to this introductory letter was somewhat sluggish and although no CEO refused an interview, an alternative approach was investigated. The 'gatekeeper' approach, where the personal assistant of the CEO was telephoned asking for an interview. The response was to send the PA an e-mail describing

the project, and this could then be followed up by telephone. This method of setting up interviews proved very successful, with all 16 CEOs granting interviews. The satisfactory response rate could in part be due to the fact that the researcher was, before retirement, a CEO of a research association. However it was more than ten years ago since he was active in the research association movement, and although his background may have helped in obtaining an interview, he considers himself to be external to the organisations.

The interviews were not tape recorded, replicating the method used by Spittle (2006), and the notes taken at the interviews were typed up on either the same or the following day.

Spittle carefully examines the three alternative methods of recording interviewing data as outlined by Whyte (1984).

1. Tape recording the interview.
2. Taking notes on the interview as it progresses which can later be developed into a full report.
3. Drafting notes or a report on the interview after it has terminated.

Spittle argues that the presence of a recording machine may inhibit the interviewee, who may either feel constrained to speak for the record, given the competitive nature of many of the funding regimes, and will want to avoid anything which is regarded as 'commercial in confidence'. However the process of note taking may interfere with the flow of the interaction as the interviewer is

endeavouring to simultaneously conduct a conversation and take notes at the same time. She dismissed the third option as following a long interview it may be difficult to recall all the data offered by the respondent. Spittle stated she had considerable experience of note taking during interviews and therefore elected for the option of taking notes during the interview. The researcher adopts this same technique, for similar reasons. The same use of note taking rather than tape recording was used by Whittington (1991, p.46) states that for independent research organisations “greater commercial sensitivity confined the researcher to note taking”.

Immediately following the interview a short questionnaire was sent to one or more non- executive members of the board of the research association.

Semi structured interviews

It was determined that a semi-structured interview approach would be used. A semi-structured questionnaire was designed for use by the researcher during the interview. The design of the questionnaire covers the data to address the research questions detailed in Chapter 4. The semi structured questionnaire structure and ordering is intended to ensuring good coverage of the data required in the time allowed for the interview. The semi structured questionnaire is included in Appendix 1. In some cases scoring is used to quickly establish importance of some factors e.g. stakeholders and strategic competencies and to allow comparative analysis between research associations.

The time allocated for the interviews with the CEO was 1 1/4 hours and in most cases this target was met. This was achieved as the researcher had considerable

experience in carrying out interviews with senior personnel. The researcher's approach, alongside using a semi-structured questionnaire, was to obtain as much information as possible but also to allow the CEO to enlarge on topics which the CEO considered to be important.

During the interview the researcher had a copy of the semi structured questionnaire which he filled out as the interview progressed. He also took copious notes during the interview. On the same day as the interview, the data from the semi - structured questionnaire was transferred to a working spread sheet which eventually contained data from all the case study research associations. As well as transferring data to a spread sheet a detailed narrative account of the interview was prepared. In some cases the CEO was telephoned on the following day in order to request any available outstanding data.

The information obtained from the semi-structured interviews is presented and analysed in Chapter 7.

Non executive questionnaire

In order to gain triangulation and perhaps a further insight into governance issues a questionnaire was sent to at least one member of the non-executive board of each case study research association. The questionnaire is included in Appendix 2. The questionnaires were not appropriate for the privatised research associations since their governance did not have non executive directors. Recognising the need to make the questionnaire easy to complete, it is designed to be on one page and focuses on confirming or otherwise the business the research association is in, and determining the non executives views on the nature

of governance. It explores the non executive's role in strategy development, looks for confirmation or otherwise of the research association's strategic aim It provides a scoring method for assessing stakeholders and the research association competencies. It ends by addressing the non executive's view of the future and the changes needed. It allows further comment in case other important factors can be uncovered.

Link between the research data and the research questions

The semi structured questionnaire and the non executive questionnaire are designed to address the data needs arising from the research questions (4.3.5)

The detailed relationship between each research question and the sources of data, that is archive, performance, interviews and questionnaires is given in

Appendix 3

5.3.6 Approaches to assessing the performance of research associations

In this section the way in which the performance of the research association will be assessed is explored. As will be seen from the following discussion, research associations cannot be assessed in the same way as academic research establishments or commercial organisations.

With reference to academic bodies, Lipetz (1965) has used the number of papers published and the citation of these papers as an indication of research worth.

Rush (2002) has assessed research and technology institutes and suggested that

success can be measured in the same way. The portfolio of patents as suggested by Schmookler (1966) is another way of assessing the worth of academic bodies. However, unlike academic institutions, the research outputs of research associations are not normally published but rather are circulated to members as confidential documents. Likewise, patents, as stated by Johnson (1973), are not usually applied for by research associations, as the results of a research programme are for the membership at large to exploit. Winter (2011) points out that managers tend to place too much emphasis on intellectual property law in protecting the gains from innovation. Secrecy and lead time are other important factors as are complementary assets which include customer relationships – members in research associations.

Narin (2000) in assessing technological competencies, follows up the importance of patents in assessing technological competence and gives a detailed description of TECH-LINE, an online database covering 1,139 companies in 26 industrial groups and 30 technological areas over a period of ten years with nine technological indicators. This approach raises the question of whether patents reflect technological competence in research associations, since patents are perhaps more appropriate in assessing the technical competence of commercial organisations. In the present study the CEOs of research associations will be asked their policy on patenting; is it a core activity within their organisations, or do CEOs not consider patenting to be important.

Research associations cannot be assessed as commercial companies by the use of financial ratios, since as the research associations are companies limited by guarantee, and hence having no shareholders, shareholder-worth is a meaningless measure, as is return on capital.

From the above the performance of research associations cannot be measured in terms of number and citation of papers, nor from the number of patents nor by means of financial ratios used by commercial companies.

Characteristics of sustainable growth

A measure of success for management-controlled organisations suggested by Sainsbury (1991) is growth, which can be measured in terms of turnover or staff numbers. The problem with the use of turnover over a period of time is that the Retail Price Index is not applicable to research endeavours, where the expense of carrying out research could be greater than indicated by the RPI Index. Hence for the initial indication of success in this study, the employment numbers have been used over the period of interest to determine growth.

Success is not solely determined by growth since it does not consider risk, and unsustainable growth can lead to failure. A more measured criterion for success is sustainable growth. Reid & Smith (2003), in their research into the realities of long term post investment performance for venture backed enterprises, use the QuiScore to determine risk by relating the QuiScore to the likelihood of the company failing in the near future. The description of the QuiScore is reproduced below from Reid & Smith.

The QuiScore is a measure of the likelihood of company failure in the twelve months following the date of calculation. It is given as a number in the range 0 to 100. For ease of interpretation, that range may be considered as comprising five distinct bands.

81-100 The Secure Band

Companies in this sector tend to be large and successful public companies. Failure is very unusual and normally occurs only as a result of exceptional changes within the company or its market.

61-80 The Stable Band

Here again, company failure is a rare occurrence and will only come about if there are major company or marketplace changes.

41-60 The Normal Band

This sector contains many companies that do not fail, but some that do.

21-40 The Unstable Band Here, as the name suggests, there is a significant risk of company failure: in fact, companies in this band are, on average, four times more likely to fail than those in the Normal Band.

0-20 The High Risk Band

Companies in the High Risk sector may have difficulties in continuing trading unless significant remedial action is undertaken, there is support from a parent company, or special circumstances apply.

A low score does not mean that failure is inevitable.

In this research the measure of sustainable growth will be in terms of both growth measured in employment numbers and the QuiScore.

5.3.7 Analysis framework

Assessment of governance

The first consideration is whether or not the governance is satisfactory. In this research the responses from the CEO and the non executive director are used.

The second consideration is the background to the CEO. The CEO is undoubtedly an important figure in the governance of the research association. The CEO's personal characteristics, as previously stated, are outside the scope of this research. Whether the appointment was internal or external was examined to assess whether an internal or external appointment contributed to the success of the organisation. The length of service of the CEO with the research association was examined to see if this was also a contributory factor to success.

The third consideration was who runs the research association: is it the executive directors or is the research association run in tandem by the executive or non-executive directors? Even where there is a theoretical partnership between the executive and non executive directors, it could be that in practice the running of the organisation is in the hand of the executives.

The fourth consideration is the classification of governance under the model proposed by Cornforth(2003). The literature review on governance identified the work of Cornforth (2003) in which he developed 'A comparison of theoretical perspectives on organisational governments', reproduced in table 2.2. Of his six models three seem to be applicable to research associations:

- Agency theory, where the non-executive directors oversee management and check compliance. (Compliance)
- The stewardship model, where there is a partnership between the executive directors and the non-executive directors to improve performance (Partnership)
- The democratic perspective where the non-executive directors represent the members interests (Democratic)

In positioning the case study research associations under one of the three theoretical models a difficulty arises, as the agency and stewardship models are defined in terms of function and the democratic model is a positional model. In practice, the democratic model was adopted where the non-executive directors were council members elected by and from the members to represent the interests of members in the running of the organisation. The partnership model was applicable in research associations, where the non-executive directors were not representative of the membership but were appointed on the basis of their expertise and the executives and non-executive directors worked in tandem.

Introduction to assessment of strategy

The aim of this research is to determine the strategy which the research associations adopted over the period of this study, 1999-2008, which lead to success. The analysis of the data is based on the four approaches to strategy: the classic, the systemic, the evolutionary and the processual, as defined by Whittington (2001).

The researcher has selected this model because it embraces both the strategy process and the strategy outcome or aim. In this research the term aim is used rather than outcome for the analysis because the case studies focussed on the strategic plan.

Arnold et al (1998, p.97) state “that in order to support growth the RTIs market understanding would need to be strengthened”.

Assessment of Strategy Aim

Whittington (2001) measured strategic outcomes ranging from profit maximisation to plural. In this research which is concerned with the strategy adopted by not for profit organisations the outcome of profit maximisation has been widened and replaced by the term “maximising long term advantage”. This term has been used by Whittington (2001 p. 3). The term maximising long term advantage in not for profit organisations includes profit maximisation, where the organisation has to generate capital for diversification or acquisitions or to meet unplanned financial situations such as dealing with a pension deficit. The term maximising long term advantage covers the outcome of sustainable growth, the criterion used for success of research associations in this research and the driver in organisations controlled by the management as described by Sainsbury (1991).

The plural aim of maximising long-term benefit with additional aims such as ‘for the benefit of members’, is a strategic name which could result in an organisation controlled by its members. Alternatively the plural outcome describes a professional control as cited by Whittington (1991) where the outcome is to focus on the professional satisfaction of the staff.

The next consideration is how to categorise the strategic aim i.e. whether it is singular (maximising long term advantage) or plural. The following factors may have an influence on whether the aim is maximising long term advantage or pluralistic.

The strategic aim will be influenced by the relative roles played by the executive directors and the council. In the case where the strategy document is prepared by the executive and ratified by the council, the emphasis is more likely to be on growing the organisation, the aim of management control organisations such as stated by Sainsbury (1991). On the other hand, if the strategy document is jointly produced, the emphasis seems likely to pluralistic, with greater emphasis on membership benefits.

The semi-structured questionnaire seeks information on who triggers the strategy process and who was involved in the first and subsequent drafts.

The analysis of the customer base of a research association should also provide an insight into its strategy focus. Research associations with a large membership base who provide, by way of membership subscriptions, a high percentage of total income, will, it is suggested, develop a strategy with a bias towards plurality of outcomes. Research associations with a smaller membership base, with a focus on customers who are not members, are more likely to have a bias towards maximising long term advantage. The semi-structured questionnaire seeks information to help answer these questions; for example, 'Who are your most important stakeholders, members or clients?', together with factual data on

number of members and the percentage of the total income which the members provide to the research association.

Assessment of the Strategy Process

In order to position the strategies adopted by the research associations on the process scale from 'deliberate' to 'emergent', (ref section 2.4) the approach proposed by Mintzberg & Waters (1985) has been followed. Mintzberg and Waters (1985), in their study used the term 'types of strategy' but their types of strategies are types of strategy processes. They do not consider strategic outcomes, the second element in classifying strategy under the Whittington (2001) classification. Mintzberg & Waters (1985) propose eight types of strategy, in the spectrum from 'planned' to 'imposed', as described below:

Table 5.4 Summary description of types of strategies

Strategy	Major features
Planned	Strategies originate in formal plans: precise intentions exist, formulated and articulated by central leadership, backed up by formal controls to ensure surprise-free implementation in benign, controllable or predictable environment; strategies most deliberate
Entrepreneurial	Strategies originate in central vision: intentions exist as personal, unarticulated vision of single leader, and so adaptable to new opportunities; organisation under personal control of leader and located in protected niche in environment; strategies relatively deliberate but can emerge
Ideological	Strategies originate in shared beliefs: intentions exist as collective vision of all actors, in inspirational form and relatively immutable, controlled normatively through indoctrination
Umbrella	Strategies originate in constraints: leadership, in partial control of organisational actions, defines strategic boundaries or targets within which other actors respond to own forces or to complex, perhaps also unpredictable environment; strategies partly deliberate, partly emergent and deliberately emergent
Process	Strategies originate in process: leadership controls process aspects of strategy (hiring, structure, etc.), leaving content aspects to other actors; strategies partly deliberate, partly emergent (and, again, deliberately emergent)
Unconnected	Strategies originate in enclaves: actor(s) loosely coupled to rest of organisation produce(s) patterns in own actions in absence of, or in direct contradiction to, central or common intentions; strategies organisationally emergent whether or not deliberate for actor(s)
Consensus	Strategies originate in consensus: through mutual adjustment, actors converge on patterns that become pervasive in absence of central or common intentions;

	strategies rather emergent
Imposed	Strategies originate in environment: environment dictates patterns in actions either through direct imposition or through implicitly pre-empting or bounding organisational choice; strategies most emergent, although may be internalized by organisation and made deliberate

Source: Mintzberg & Waters (1985), Table 1.

Table 5.4 describe the characteristics of each of these 8 types. In this present research the aim will be to characterise the strategy process of each research association selected for case studies. In order to simplify this analysis the number of strategy process types has been reduced from 8 to 3 corresponding to the Mintzberg and Waters classifications of planned, entrepreneurial and imposed. The planned and the imposed are in this research used to describe the extremes of the strategy process and the entrepreneurial an intermediate classification which Mintzberg and Waters (1985) p 260 'are rather common in entrepreneurial firms' – a suitable description for research organisations.

Mintzberg & Waters consider three conditions necessary for a strategy to be perfectly deliberate. Firstly, the organisation must have "precise intentions articulated in a relatively concrete level of detail". Secondly, these intentions must be "common to virtually all actors (stakeholders)", and thirdly that "no external forces, market, technical, political etc. have interfered with these intentions"; that is, the organisation must operate in a stable external environment (Ibid., p. 258).

Mintzberg & Waters suggest that a purely emergent strategy rarely, if ever exists, but that 'near emergent' strategies could exist when the external environment is very unstable and the strategy has to be opportunistic, rather than planned. In

reality, strategies generally exist between these two extremes and may be classified as one of the eight types suggested by the authors.

The researcher will consider the two factors which influence the strategy process as identified by Mintzberg & Waters (1985),:

- The consensus of the stakeholders in formulating the strategy. In the case where interests are shared, a partnership model (Cornforth 2003), the strategy is more likely to be deliberate than in a situation where compromises have to be made to accommodate as far as possible the desires of all stakeholders. The semi-structured questionnaire seeks information on the degree of unity of each research association's governance, in order to assess this.
- The second major influence is the stability of the external environment. With respect to these organisations, if the research association has a long and well established customer base, it should be easier to determine a deliberate strategy than for a research association with an unstable customer base, i.e. one which is constantly changing and developing. The semi-structured questionnaire also explores each research association's market, in particular the extent to which it comprised established and developing markets.
- The aim, then is, taking these two factors into consideration, together with the framework provided by Mintzberg & Waters (1985), to position each research association's strategy process as planned entrepreneurial or imposed.

Summary of analytical framework

The strategic aim, or outcomes as depicted by Whittington (2001) and reproduced in figure 2.2 have been tailored to fit the present research. In the Whittington approach the outcomes range from profit maximisation to plural. The profit maximisation outcome can be replaced in not for profit organisations such as research associations by maximising long term advantage. This redefinition aligns with the success criteria for research associations used in this research (Section 5.3.6). The plural outcomes can be defined for research associations as being, in addition to maximising long term advantage, for the benefit of the membership and or the association staff. Hence a Whittington type diagram can be modified to include these concepts for research associations.

The strategic process as defined by Mintzberg and Waters (1985) has been adapted in this research by reducing the number of classifications from eight to three. The three classifications, used in this research for the strategy process are planned, entrepreneurial and imposed. These three strategy processes fit the Whittington process definitions from deliberate to emergent, where planned equates to deliberate and emergent to entrepreneurial. Although the imposed strategy process is not considered by Whittington as it is a strategy dictated by the external environment, it can be considered as having a strategy process which is beyond emergent on the Whittington scale.

The combination of the strategic aim and the strategy process are classified under the four types of strategy defined by Whittington (2001) as classical, evolutionary, systemic and processual. Figure. 2.2

6. OVERVIEW OF RESEARCH ASSOCIATIONS

6.1 Introduction

The primary research question developed in section 1.2 is “what strategy lead to success of the UK based research associations?” This chapter on information pertaining to research associations is secondary data obtained from published documents including the research associations’ annual reports. The first table 6.1, in section 6.2, presents an overview of the research associations from 1967 to 2008. The data is expressed in staff numbers, hence giving an indication of growth or decline in the size of the research associations over the past forty years. The table also lists mergers which have taken place between research associations over the period together with failures where the association has ceased trading. These are indicated by x for failure or m for merger and inserted into the table at the approximate dates these events occurred.

Section 6.3 of this chapter analyses failures indicating the period when they occurred and the factors leading up to the failures. The section also gives a more detailed account of the two failures which occurred during 2006 and 2007 as they could give an insight into the strategies they adopted which lead to their ultimate demise. The source of data used in section 6.3 is archival data from published accounts and in particular from the administrators’ reports in the case of the two most recent failures. Interviews with the senior staff of the failed research associations was considered but not followed up as it was anticipated that such

interviews could be distressing to those concerned and also give a biased view of the situation.

Porter (1985) argues that too many organisations end up being “stuck in the middle” – they are following no clear generic strategy – recipe for failure. The research will investigate whether failure was due to no clear strategy or the influence of external factors such as a large pension deficit or a drastic decline in the sector of the industry which the research associations was set up to serve.

Section 6.4 is concerned with mergers which have taken place within the research association community, whether they occurred between two weak research associations in an attempt to strengthen their position or whether between research associations where one at least is successful.

Section 6.5 is concerned with management buyouts, a topic raised in one of the pilot interviews, and research associations which have been acquired by large for profit organisations. With respect to management buyouts consideration will be given to stakeholder mapping as described by Johnson and Scholes (1997, p. 198) “ although these stakeholders might in general be relatively passive a disastrous situation can arise if their level of interest is underrated and they suddenly reposition themselves as key players with a high level of interest and power”. Such a situation presented itself in one of the management buyouts reported in this section where a relatively passive membership prevented a management buyout from proceeding.

Many research associations have changed their names over the years. Some of these changes have been due to amalgamations e.g. Campden Research

Association became Campden and Chorleywood Research Association and latterly Campden BRI and when the British Cast Iron Research Association amalgamated with the Steel Castings and Research Trade Association , the joint organisation was renamed Castings Technology International. Other research associations have changed their names to alter their image. In many cases the full name has been replaced by an acronym e.g. British Scientific Instrument Research Association was altered to SIRA Ltd. A number of research associations have added the word international after their name as they are trading internationally e.g. BIBRA International. Furthermore a number of research associations have amalgamated with their trade association e.g. The Spring Research Association became the Spring Research and Manufacturers Association and more recently dissociated itself from the trade activities to become the Institute of Spring Technology. The situation is further confused in that the trading name is not always the same as the official name registered with Company's House. These changes of names presented the researcher with a dilemma and in most cases when the research association is introduced in the text the full research association name is given to indicate the industrial interest. The names of the research associations are also given in the list of abbreviations.

6.2 Summary data of all research associations that existed in 1963

The following table from Hammond (1967) lists the research associations, together with their staff numbers, which were in existence in 1963. To the list has been added available information about the number of staff for the following years: 1967 Johnson, (1973) , table 5.2, 1973 Bessborough (1973), (data extracted from text

for individual research associations), 1989, AIRTO (1989), 1997, AIRTO (1997), 2005 (FAME) , and 2008 (FAME). As can be seen from the table, a number of research associations have ceased trading since 1963. Others have merged to form larger units. Of the survivors, it can be noted that 8 have grown over the period 1997-2008.

In the following table 6.1 the identification of the research association is taken from Hammond (1967) and refers to the industry sector served by the research association. The name of the research association is not used in this table as the majority of research associations have changed their name over the period covered.

Table 6.1 Research Association Staff Numbers 1963 to 2008

Industry served	No. of Staff						
	1963	1967	1973	1989	1997	2005	2008
aircraft				290	152	140	140
baking	63	133	120			m	
brewing					100	60	M
brushes	8	11	x				
cast iron	172	194	173			m	
ceramics	209	234		211	180	141	184
civil engineering	4	24		40	43	47	47
coal	312	292	x				
coke	131	133	x				
computing				500	170	270	288
cotton	488	383				m	
cutlery	10	11				19	

Industry served	No. of Staff						
	1963	1967	1973	1989	1997	2005	2008
drop forging	19	28		x			
electrical	350	322	360	388	460	231	203
files	15					m	
flour milling	66			m			
food (Leatherhead)	99	107	121	240	230	190	167
food (Campden)	34	46		152	300	330	330
furniture	33	49	100	100	50	75	80
gelatine & glue	22	24	x				
glass	57	71	62	40	40	40	38
heating & ventilation	33	38	50	90	124	125	150
hosiery	69	73	80	x			
hydro - mechanics	46	115	122	199	137	70	
internal combustion engines	70			95	x		
industrial biology	33	95	100		130	x	
iron & steel	613	762	x				
jute	50	39	x				
lace	34	20	x				
laundry	84	66	x				
leather	70	70		54	58	50	
lime	19			x			
linen	82	81				x	

Industry served	No. of Staff						
	1963	1967	1973	1989	1997	2005	2008
machine tools	36	58	68	70	38	33	33
motor	163	197	200	287	540	394	386
non ferrous metal	192	181	180	90	x		
paint	98	90	97	56	56	37	29
paper	90	88	x				
printing & packaging	105	136	195	360	200	130	98
production engineering	412	592		360	323	439	560
rubber and plastic	163	196	205	170	160	130	
scientific instruments	126	172		225	200	160	X
ships	423	334	289	210	500	950	950
shoes		165	165	169	162	179	178
springs	13	20	20			14	
steel castings	107	116	101	55		112	121
tar	92	89	x				
timber	86	94	106	105	85	50	75
water	57	90	140	650	430	246	207
welding	208	378	384	530	415	366	458
whiting	20	45	23	x			
wool	247	221		250	132	73	69

Notes

x – no longer in existence

m – research association mergers

6.3 Research associations which have ceased trading between 1963 and 2006

In this section, a brief account is given of the research associations which ceased trading between 1963 and 2008. They are presented in chronological order.

6.3.1 The British Iron and Steel Research Association (ceased trading 1967)

The British Iron and Steel Research Association was in existence between 1944 and 1967. It ceased trading as a result of the nationalisation of the steel industry, when it was transferred to British Steel. At the time of its transfer to British Steel it was the largest research association in terms of number of staff employed. Over its 23 years of existence it had only one director, Sir Charles Goodeve, who was a founder of operational research. He was a very successful and respected director and received both a knighthood and was elected to a fellowship of the Royal Society during his tenure of office. BISRA operated on three sites, in Sheffield, Swansea and Battersea, and had a head office in central London.

6.3.2 The British Coal Utilisation Research Association (ceased trading 1971)

McCaffrey (2010) provided the following information on BCURA.

In 1938, BCURA was formed as a Research Association with employees and premises and had a number of industrial members, who provided financial support. The aim of BCURA was to promote research and other activities concerned with the production, distribution, and use of coal and its derivatives. By the mid-late 1960s, BCURA had only one industrial Member, the National Coal Board, (NCB). On 1st January 1969, BCC, (British Coal Corporation, then the NCB), took control of the BCURA Company and made it a subsidiary company of the NCB. All of the previous Directors resigned and the NCB appointed its nominees to the Board of Directors, (the BCURA Council). BCURA was then based at a site in Leatherhead, Surrey, and BCC took over responsibility for all of BCURA's operational activities.

In 1971, BCC closed down a large part of BCURA, with the transfer of some staff to become BCC employees at the Coal Research Establishment at Stoke Orchard, (near Cheltenham), and redundancy for many of the other staff. However, there remained a residue of staff at the Leatherhead site who were working on commercial contracts for US Government Departments and others. Between 1971 and 1976, BCC changed the name of this remaining part of BCURA still carrying out contract research work from BCURA to CURL, (Coal Utilisation Research Laboratories). During 1973 to 1976, The Board of Directors of BCURA converted the BCURA Company into its current form as a Registered Charity which gives research grants mainly to UK Universities to carry out coal utilisation research. As a part of this conversion process, a condition imposed by the Charities Commission was that BCURA should relinquish all of its staff and the commercial research work it was then carrying out for US Government Departments and others. Thus the BCURA Company was effectively split at that stage into the BCURA Charity, with the transfer by BCC of the remaining staff at Leatherhead,

who were carrying out the commercial research work, to become BCC employees. In 1976, the BCURA Charity began providing grants mainly to UK Universities for coal utilisation research. The BCURA Charity was administered by BCC through the Coal Research Establishment.

In 1983, the Leatherhead site, (CURL), was closed down completely by BCC.

In 1991, the common interest between BCURA and the Department of Trade and Industry, (DTI), Coal R&D programme was recognised and a jointly funded programme, meeting the objectives of both parties, was established. The Agreement for this jointly funded programme has been renewed at periodic intervals, now with the Department of Energy and Climate Change, (DECC), with the latest renewal being in April 2008 for the funding for the lifetime of the current projects, which concludes in March 2011.

6.3.3 The Lace Research Association (ceased trading 1971)

Between 1946 –1949 the lace industry's research association was known as the Lace Federation Research Council. It received a grant from 1949. It had a staff of 34 in 1963, which had decreased to 20 by 1970, and the organisation failed soon afterwards in 1970. The reason for the failure has been the subject of a case study by Jones (1972), which concluded that the changes in the technology used in the industry were not followed by the research association. Jones continues (1972, p.56), "It felt that a contributory factor to the association's downfall was the reduction in ministry grant and that there should always be a reliable form of grant support for technical work."

The removal of the statutory levy presented problems in obtaining industry subscriptions. Jones (1972, p.54))

6.3.4 The British Brush Manufacturers Research Association (ceased trading about 1975)

The British Brush Manufacturers Research Association was formed in 1946, and received grant from 1960. The Bessborough Report (op. cit.) does not state employment numbers, but with a turnover of only £20k it was at that time by far the smallest research association. The association was based in the University of Leeds with the administrative work being undertaken by the industry's trade association. It employed eight staff in 1967. It was still in existence in 1973 with a staff of seven. The Bessborough Report did not predict its demise but it ceased trading in the early 1970s. Bessborough (1973, p. 60) commenting on research association size states, "Indeed, given the size and highly specialized nature of this industry there is probably no case for the RA becoming very much larger than it is at present. The continued survival of BBMRA must depend solely on its ability to convince its industry of its value and we believe that the RA is quite content to accept this condition".

6.3.5 The British Jute Research Association (ceased trading 1973)

The British Jute Research Association was formed in 1946. In 1963 it had a staff of 50 which had fallen to 39 in 1970. According to Johnson (1973), the Association "... is currently (1972) winding up" (Ibid., p. 39). He postulates the reason as being that the industry was not willing to finance co-operative research.

The jute industry's principal customer was the linoleum industry, a product which had become unfashionable by the early 1970s.

6.3.6 The Chalk Lime and Allied Industries Research Association (ceased trading 1973)

The Chalk Lime and Allied Industries Research Association was formed in 1955 with a staff of 19. According to the Bessborough Report (op. cit.), the Association was located on the site owned by the British Whiting Federation. In 1964, encouraged by DSIR, the two organisations amalgamated to form the Welwyn Hall Research Association. By 1971 the employment of Welwyn Hall had fallen to 23 and the demise of the organisation followed in 1973. This failure could have been due to the merger of two organisations with incompatible cultures.

6.3.7 Welwyn Hall Research Association (ceased trading 1973)

The British Whiting Federation, in 1964 merged with Chalk Lime and Allied Industries Research Association to form Welwyn Hall Research Association, with a staff of 45. Employment dropped to 23 by 1971 and the organisation's demise followed in 1973. According to Bessborough (1973, p. 167) the position of Welwyn Hall seemed similar to any industrial company which finds that its market no longer exists. If there are no longer sufficient members prepared to pay subscriptions then it is a necessary consequence that the association should be faced with the disposal or closure of its activities.

6.3.8 The British Coke Research Association (ceased trading 1975)

The British Coke Research Association was formed in 1944. Its main objective was to produce the best coke for steel making. It had only two members after the nationalisation of the steel and coal industries. As a result of nationalisation the organisation was disbanded in 1975. BCRA (2010)

6.3.9 The British Laundry Research Association (ceased trading 1975)

The British Laundry Research Association was formed in 1920. It was one of the oldest research associations and had a relatively large membership of 1140, according to the Bessborough Report of 1973. It had a staff of 84 in 1963, which had decreased to 77 by 1973. There is no hint of the association's demise in either the Bessborough (1973) or Jones (1972) reports; however, it ceased trading not long after the date of these publications. It had a spin off in the Dyers and Cleaners Research Association, which changed its name to The Fabric Care Research Association and ceased trading in the 1990s.

6.3.10 The Coal Tar Research Association (ceased trading 1970s)

The Coal Tar Research Association was formed in 1949. According to Bessborough (1973, p.67) it had grown very slowly during the 1960s and in 1970/1 devoted nearly three quarters of its total effort to co-operative work for members. It employed 52 staff. Bessborough continues that it had become dominated by four major industrial members: British Steel, National Coal Board,

and two industrial members. All of these have extensive in-house research facilities. This trend, combined with a 50% fall in the tar industries production since 1960, made the position of the CTRA highly insecure. It ceased trading during the 1970s.

6.3.11 The Drop Forging Research Association (ceased trading 1987)

According to Jones (1972) the Drop Forging Research Association was established by the trade association of the industry in 1960. It received a grant from 1962. In 1970 it had a staff of 28. DFRA was always dominated by its trade association which undertook work which was normally undertaken by a research association, including standards and training. The association concentrated on research into noise reduction, energy use, and die design and die wear.

The following information was supplied by Campbell (2010) "On the 1st July, 1986, the DFRA merged with the British Forging Industry Association, BFIA, the industry's trade association. It was to be known as the BFIA Technology Centre, still located in Sheffield. However, it soon became evident that financial constraints would make this an impracticable proposition. Cut-backs in government support to research organisations had taken their toll on the DFRA, and the very difficult economic circumstances in the forging industry had meant that the number and volume of contracts placed with the Centre had diminished. The Governing Council of the BFIA therefore took the decision to close the Centre at the end of April, 1987. A technical advisory service and technology transfer work continued to operate from the Birmingham offices of the BFIA. A consortium of independent consultants was formed from the employees of the Centre."

BISRA was involved in setting up three small research associations under its wing in Sheffield. The last to be established was DFRA and to date the only one to fail.

6.3.12 Hosiery and Allied Trades Research Association (ceased trading 1991)

Nutting et al (2009) provided information for the following account. The Hosiery Research Council was established in 1944. A Government report in 1946 recommended that the hosiery industry should have its own research association which was established in 1949. From 1955 to 1970 the staff numbers remained around 65. In 1973 staff numbers increased to 85 but from that point declined to 40 in 1980 and to 10 in 1990.

In 1964 discussion took place regarding the amalgamation of the textile based research associations as many of them were small in size and scope (Nutting (2009 p. 10). In 1967 the Nottingham Committee was set up to investigate closer co-operation between the textile RAs which resulted in the setting up of co-ordinating committees. Financial uncertainty was realised by HATRA in 1966 and as a result after much lobbying a statutory levy for hosiery research came into effect on 1st July 1969.

The Rothschild recommendations implemented in 1974 forced research associations to make applications for individual projects, replacing grant related to industrial subscriptions. As a result of this change in funding staff reductions took place 1974/5.

In 1980 the statutory levy was officially revoked and its cessation in 1982 removed the main source of HATRA funds. In the same year, the then director G K Mecklinburg concluded that HATRA had reached the end of its life. During the 1980s discussions took place regarding possible mergers with other research associations and also between HATRA and the industry's trade association KIF (Knitting Industry Federation). Staff numbers reduced to 10 and there was a loss of £170K in 1990 with further losses forecast for 1991 and 1992. In fact during the last four years of trading HATRA made losses in total of 33% of its total turnover over the same period – and entirely unsustainable situation. The organisation was wound up in 1991. Equipment was sold to Leicester Polytechnic. The HATRA building was let earning a rent but was eventually sold realizing £503K in 2004. A trust fund was established with this money which is managed by the Worshipful Company of Framework Knitters. The trust endows textile research at universities.

Nutting (2009, p.58) concludes: “Much of the HATRA work in yarn technology, knitting, water and effluent, flammability and many, other sectors stood the test of some time. A serious review of activities at the end of the first forty years. a retrenchment of facilities, a more sympathetic controlling Council, a different approach to R&D by government to allow a better method of funding and, finally, a sympathetic industry not hell-bent on remaining a craft, plagued by recession and contraction, might have yielded a different result and a longer life-span for the association.” From these conclusions the following comments can be made

- There were governance problems. This is based on his comment that a more sympathetic controlling council might have been of benefit. Also in Nutting's text he refers somewhat critically to BTTG, the only other remaining textile research association, having replaced its council by a

board of directors. However no steps appear to have been taken to resolve the governance situation.

- Criticism was made of governments funding of R&D. HATRA appears to have been dependant on government money and/or a statutory levy. No efforts appear to have been made to run HATRA on commercial lines.
- Criticism of the industry it was set up to serve, rather than seeking out the needs of the industry and devising a strategy to meet these needs it appears to have adopted an attitude of casting pearls before swine.

6.3.13 The Linen Industry Research Association (ceased trading 1990s)

Formed in 1919, the Linen Industry Research Association was the only research association based in Northern Ireland. In the 1970s it changed its name to Lambeg Industrial Research Association (LIRA), the town where it was located, and at the same time expanded its activities to provide a pan-industrial service to industry in Northern Ireland. The organisation failed in the early 1990s (Park and Shore, 2009, p.3).

6.3.14 The British Non Ferrous Metals Research Association (ceased trading 1992)

The British Non Ferrous Metals Research Association was formed in 1919 and moved from Euston Square, London to Wantage in Oxfordshire in the 1970s. In 1989 BNF had a turnover of £2.7M and employed a staff of 90. In 1989 a merger between Fulmer Ltd. and the British Non Ferrous Metals Research Association was planned.

Fulmer Ltd. was an independent research organisation, originally the laboratories of British Aluminium. In the 1970s Fulmer Ltd. was acquired by the Institute of Physics. Fulmer Ltd operated on a valuable site in Stoke Poges in Buckinghamshire, and the Institute of Physics (for reasons which are not documented), decided to divest itself of Fulmer. Fulmer research made a profit of £181,000 in 1987 and a loss of £355,000 in the following year, and as a result, the various divisions of Fulmer were sold off.

Papers in the archive at the Institute of Physics outlined the financial forecasts following the merger. The first year would result in a loss owing to merger expenses and, after that, it was anticipated that the joint organisation would be profitable. In reality, following the merger of the BNF and Fulmer in 1990, the joint organisation failed in 1992. The researcher's understanding, from one private source, is that both organisations had a very different culture and a power struggle ensued, resulting in Fulmer gaining control and the former managing director of BNF leaving.

This failure was not due to a demise of an industry but was caused by an incompatible merger.

Cartwright and Cooper (1992), in their study of mergers and acquisitions, made a number of observations that seem relevant to this merger. Firstly they quote (Table 2.2 p. 2) the Department of Trade and Industry (DTI) figures on the number of mergers indicating that the number of companies acquired had increased from 469 in 1980 to 1077 in 1989. The Fulmer-BNF merger therefore occurred at a period when mergers were fashionable. Cartwright and Cooper also refer to a DTI

discussion paper published by the British Institute of Management (1986) which stated that "... the merger failure rate is still running at around 50%.". The authors also quote Davy et al. (1988) who attributed 'employee problems' as being responsible for between one third and a half of all merger failures. This failure rate is reinforced by another reference in Cartwright and Cooper to a British Institute of Management discussion paper (1986) which identifies 16 factors associated with unsuccessful mergers and acquisitions, concluding that at least half of these were directly related to people and people management.

6.3.15 The Internal Combustion Engine Research Association (ceased trading 1997)

The Internal Combustion Engine Research Association was formed in 1943. In 1963 it employed a staff of 70. In 1964 the RA was deemed too small to attract a government grant and according to Johnson (1973, p.66), "It could no longer function as a normal co-operative RA on the DSIR pattern and was consequently transformed into a non grant aided sponsored research institute. In 1989, it had a staff of 95, but went into administration in May 1992. The association was purchased from the administrators by a management buyout lead by John Bradley who provided the following information. Bradley(2010) confirmed that the association was set up during the 1939/45 war for the common good of engine manufacturers. After the war the industry became very competitive and undertaking co-operative research was not possible. The association undertook contract research nearly all for government departments and when this source of income dried up in the 1980s the association had lost its sources of income. Bradley (2010) said that the model for the organisation was flawed. The

governance structure of a part time council was not appropriate for a commercial organisation. The Association went into liquidation with a staff of 60 which the administrators reduced to 15 and also closed the final salary pension scheme. Bradley engineered a management buyout in association with a venture capital company. According to Bradley the company prospered staff numbers increased and investment took place in new test equipment. However after 5 years the venture capital company appointed a chairman and a financial director and wished to take over the running of the organisation. At this point, 1996, Bradley left the organisation and it failed one year later in 1997.

6.3.16 British Industrial Biological Research Association (ceased trading 1999)

BIBRA was formed in 1960 and was concerned with food additives. It was formed as a result of government initiatives, with substantial government funding. Staff numbers grew to 130 in 1989. It failed in 1999 owing to a reduction in government support and competition with other state agencies. Part of the organisation was acquired by TNO Holland. BIBRA was not absorbed into TNO but was operated as an outpost in the UK. This arrangement did not last, Clarke (2010) BIBRA failed in 2003. Hopkins (2010) who led the management buyout.) He informed the researcher that towards the end of its life BIBRA focused on clinical research. However BIBRA was not able to compete commercially with other organisations offering a similar service. James Hopkins said the governance structure with a part time non-executive board was not suitable for an organisation endeavouring to be commercial.

The information Department of BIBRA was bought in 2005 by Toxicology Advice and Consulting. (- a company which had been set up in 2003 by ex employees of BIBRA). BIBRA (2010). This company is still trading and is so small that it does not have to produce full accounts including turnover and staff numbers. Although the BIBRA name continues the organisation is very different from BIBRA in its heyday and is no longer a research association.

6.3.17 Scientific Instruments Research Association (ceased trading 2006)

The British Scientific Instrument Research Association (BSIRA) was one of the first research associations to be formed under the government scheme in 1918. As its name implies, it was established to serve the British Scientific Instrument Industry, and its aims and objectives changed little over the next 40 years. SIRA (1957) stated that in addition to basic research, the Association provided facilities for individual members to obtain technical assistance and advice on all problems associated with the design, development, manufacture and use of instruments together with a complete technical information service covering all aspects of instrument technology.

“Proper use of these services can be of immense value to members and can result in a considerable reduction of time spent on such problems by the members’ own technical staff who are encouraged to visit the laboratories whenever possible in order that they should understand how to make the fullest possible use of the services available to them. Furthermore regular liaison visits take place between SIRA and its members by suitably experienced staff qualified to give on the spot

confidential advice and assistance in dealing with members' technical problems. The membership of the association covers every phase and type of scientific instrument manufacture and use." (SIRA, 1957)

The same source also states that:

"Keeping abreast of present day trends has led to the establishment of an automatic control research panel whilst provision dealing with the requirements of the industry in the field of nucleonic instrumentation has also been made. In this way the staff, equipment and the size of the laboratories is continually expanding".

Hence it can be seen that SIRA's mandate was in 1957 to still support the British Scientific Instrument Industry. It had however ventured into new fields such as nucleonics, in order to keep up to or perhaps lead the technical demands of the industry.

The 1957 booklet lists staff numbers at 69. Membership comprised 100 scientific instrument makers and 25 associate members with varying interests. The director, Dr J Thompson, who was appointed in 1956, resigned in the early 1960s and was succeeded by Mr S S Carlisle who was previously assistant director at the British Iron and Steel Research Association. Under Mr Carlisle's directorship the research association changed its focus as the Bessborough report (1973) states:

"In 1971 SIRA was one of the larger research associations with an income of nearly £600,000. It received thirty one per cent of its income from voluntary subscriptions and group project contributions, thirty nine per cent from government grant and eighteen per cent from contract work. It employed a total staff of 189.

Its proportion of co-operative work was less than the figures for voluntary subscriptions and grant suggests, because a large proportion of these were contributed for multi-client projects or group projects, particularly within the industrial measurement and control programme (IMC). This programme, started by SIRA in the early 60s as a means of promoting the application of scientific instrumentation and automation to industry at large, represented a move by SIRA away from its traditional base within the scientific instrument manufacturing industry to users of instruments and control systems.” Bessborough Report (1973), p. 148)

Hence it can be seen that between 1957 and 1970 staff numbers had increased from 67 to 189, and the focus shifted from scientific instrument makers to the application of measurement and control across many industries. This diversification was supported by a generous 'three to one' grant from the DTI. This grant ratio meant that for every £1 raised by industry the DTI supported the programme with £3. This grant enabled changes to take place, and perhaps with hindsight established a culture of SIRA's dependence on government contracts rather than moving to a wholly commercial approach.

After the retirement of Mr S S Carlisle as director, the following three directors were all internal appointments; Mr T F Flanagan, appointed on the retirement of Mr Carlisle, followed by Mr R A Brooke and Mr S Pickering in 1997.

By 2002 the governance of SIRA had been changed from a council of 28 members elected by and from the full members to a board of seven members consisting of a non-executive chairman, a non-executive deputy chairman, together with two further non-executive directors and three executive directors. The company

structure had also changed over the years, with SIRA Ltd. the holdings company, with four subsidiary companies SIRA (2002, p. 14).

The subsidiary companies were:

- SIRA Test and Certification Limited, registered in England, having a principal activity of the certification of instruments and quality management systems, assessment services for equipment operating in potentially flammable atmospheres, the performance evaluation, testing and calibration of instruments and the provision of training course.
- SIRA Electro Optics Limited, also registered in England, with a principle activity of research and development in electro-optic and electronics and production of prototype and fully engineered equipment.
- Image Automation Ltd., the third English registered company, was set up for the design, manufacture, marketing and support assistance for online automatic inspection and process control of scientific and industrial instruments.
- SIRA Holdings Inc, registered in the USA, was a holdings company for Image Automation Inc, whose activity was marketing and support of systems for underlying automatic inspection and process control and the support of scientific and industrial instruments.

The report also stated that the company at that time owned 89% of issued share capital of SIRA Holdings Limited and indirectly of its subsidiary undertakings, the

remaining 11% being held by executive directors and staff. This 89% could be reduced to 80% if all the options granted and approved for future grants were exercised (SIRA, 2002, p. 5).

The lack of enthusiasm on the part of the directors and staff to take up this share option could lead to the conclusion that the long term viability or at least profitability of SIRA was in doubt. The change in structure from a company limited by guarantee to one with a share capital was presumably done with a long term aim of a management buyout, followed perhaps by flotation, but this was not to be. Trading losses were made between 2000 and 2005 and the chairman's report for 2002 refers to the pension scheme deficit as well as trading losses. The chairman stated

“That pension provision through final salary scheme has been reviewed and in common with many other organisations with similar schemes, there is cause for concern over the future sustainability of the scheme. In the absence of some action to manage liabilities and risk, having taken professional advice, we have elected to increase the retirement age from sixty to sixty five and increase staff contributions. We shall continue to keep the situation under review.” (SIRA 2002, p. 4)

The 2003 chairman's report (SIRA, 2003, p. 3), reflects on the group's poor performance and reported on a three day enterprise workshop which was set up to address the problem, which led to a “SIRA vision of profitability” : market driven technical excellence and innovation which can be viewed as a statement of Kaplan and Norton (1992) balance score card.

The 2004 chairman's report, (SIRA, 2004, p. 3), showed a marked improvement in the financial performance with an operating loss of only £307,000 versus a loss of £755,000 in 2003, the cash flow statement having been improved with help from the sale of Kelvin House. However the situation did not improve and on 12 April 2006 the board of directors appointed administrators. The letter dated 5 May 2006 from the administrators, Grant Thornton UK LLP, to creditors outlined the background to the demise of SIRA, Grant Thornton(2006):-

"4 BACKGROUND TO ADMINISTRATORS' APPOINTMENT

4.1 The Sira Group was established in 1918 and traded as an independent research and technology development organisation undertaking a range of laboratory based collaborative work in the design, application and use of instrumentation and associated technologies. It also provided technical consultancy and training services in instrument technology and its applications, together with developing a range of products to supply companies in the space, security and defence markets.

4.2 The Group had been significantly loss making over the five years to 31 March 2005, reporting total losses of £2.6m for this period. This trend continued in the nine months ended 31 December 2005 with losses of around £0.85m being recorded (before exceptional gains). These losses were funded principally by the sale of certain of the Group's business divisions, and borrowings secured against the freehold property at South Hill, Chislehurst, Kent, owned by Sira.

4.3 During November and December 2005 the board approached Close Brothers Limited to consider an increase in their existing £3m loan facility, and HSBC Bank Plc to seek an increase in the Group's £250k overdraft facility. No further funds were forthcoming.

4.4 The Group had first commenced marketing its 5.9 acre freehold site at South Hill in April 2003. Following interest from a number of parties, a conditional sale contract, subject to planning, was exchanged in July 2004 at a sales price of £9.85m. The contract involved the purchaser

obtaining residential planning permission for the site, at which point the Group would be given a two year period to vacate the premises.

4.5 By December 2005, planning permission had not been received for the site and management considered that obtaining this permission was likely to take up to a further 15 months if an appeal process were required. By this stage the prospective purchaser had sought to renegotiate the contract, seeking to reduce the consideration to £6.75m, whilst maintaining the sale on a conditional basis.

4.6 In light of these developments and the requirement for an immediate cash injection into the Group, the board instructed their property advisers to approach additional parties to obtain offers for the property on an unconditional basis.

4.7 In January 2006, the board agreed that Grant Thornton UK LLP should be instructed to provide a report in respect of the Group's financial position. At the same time, management explored, without success, possible alternative sources of finance to support a management buy-out of parts of the Group's activities. The report on the Group's financial position concluded that the Group was insolvent and that the interests of creditors would be best served by concluding an unconditional sale of the freehold property, followed by the appointment of Administrators to pursue the sale of remaining business activities and assets.

4.8 Accordingly an unconditional sale of the freehold property was completed on 3 March 2006 for £6.4m to St James Group Limited. Under the terms of the property sale agreement, Sira entered into a lease-back of the site to facilitate the sale of parts of the Group's business activities and disposal of remaining assets in-situ. A capital gain arises on the sale, however any tax charge arising, to the extent that it cannot be relieved by available group losses and other allowances, will form an unsecured claim against the Group rather than a prior ranking expense of the Administration as would be the case had the sale taken place post appointment. The Group made redundant 61 employees on 16 March 2006 and appointed Administrators on 22 March 2006."

The administrators also refer to the pension fund:-

“5.14 The level of dividend ultimately available to unsecured creditors of each company within the Group is fundamentally driven by the quantum of the Group's pension scheme deficit. In particular, the final agreed claim of the pension scheme and the level at which the scheme can claim against each of the Group companies is critical to ascertaining the dividend rate.

5.15 As at 31 March 2005, the pension scheme liability, calculated in accordance with the requirements of FRS 17 for company statutory financial reporting, was £7,676,000. However, following the wind-up of the scheme the final claim will be based on an actuarial valuation of the full cost of securing members benefits. This full 'buy out' basis may well result in a significant increase in the quantum of the claim from that stated in the outcome statement and on the directors' Statements of Affairs.

5.16 In respect of the allocation of the claim, we are advised that this is a complex calculation that will need to be prepared by Actuaries. For the purpose of this report, we have assumed, in accordance with the Statements of Affairs, that the full amount of the FRS 17 claim is made against Sira, STL and Sira Group Limited, with 80% of the deficit being claimed against SEC and IAL.

5.17 Prior to our appointments the Group had contractually undertaken to make a one-off payment of £350,000 in respect of the pension deficit. This amount was not paid and is shown separately on the outcome statement.”

Ellis and Hosking (2007) report that the status of SIRA was moved from administration to voluntary liquidation. Hence it can be stated that the pension deficit brought the company into administration; however the years of loss making were not sustainable and the pension deficit brought about the demise of SIRA earlier than would otherwise have been the case.

Post-SIRA history

Certain of SIRA's assets were acquired by Volvere plc in 2005/6. In 2008, Volvere was chaired by Lord Kalms who grew the Dixon Group into the UK's

leading electrical trader and stood down in 2002 at the age of 70 and set up Volvere which was incorporated on 5th July 2002. It is a venture capital company and its website volvere.co.uk (2008) stated "Volvere will also consider investment in any private or public company that is in distress but offers the possibility of a turn round". Volvere acquired SIRA Test and Certification Ltd. in September 2005 prior to the SIRA Group going into administration. It subsequently bought SIRA Environmental Ltd. and SIRA Defence and Security Ltd. in March 2006. Lander (2008) In the year ended December 2007 Volvere had a turnover of £13.1m and the turnover attributed to the SIRA companies was £3.7m. The first six months of 2008 the turnover was £2.3m compared to £1.8m for the same period in 2007.

Fame (2008)

Volvere has been successful in turning companies around as illustrated by VECTRA (a loss making concern with losses running at £2.4m per year for the sum of £2.1m.) which it acquired in May 2003. The purchase price was repaid by VECTRA from operating cash flows and sold in 2007 for £6m.

Jonathan Lander, CEO of Volvere, has confirmed that his company would be willing to acquire more research associations and he has spoken to a number of them. Lander, (2008). Lander considers research associations in many cases are not run as businesses and that some are sitting on underutilised assets. The management is not driving the organisation forward and tends to be inward looking. However they have good technical staff and he has found in the case of SIRA that the name is an asset. At present, Volvere is cash-rich, with some £11m available for acquisitions.

One can speculate on the reasons for the demise of this company. It seems surprising that SIRA should fail, as it was associated with a business and technology of growing importance. Measurement and control have been increasingly important to all industries in all parts of the world, and it could be argued that SIRA's expertise could have been sold commercially.

It may be significant that SIRA has really had no injection of 'new blood' at chief executive level over the last 40 years of its life when the director, Mr S S Carlisle made a very important and fundamental change in the emphasis of the organisation from helping scientific instrument makers to helping all industry with their measurement and control problems. However he did this with the help of a large injection of money from government, and perhaps SIRA could never escape from its dependence on government support. The succession of internal CEO appointments since Carlisle may have contributed to difficulty in changing the organisation's culture. SIRA was technically very competent, but perhaps did not direct enough attention to the marketplace.

In common with many other research associations the change in pension legislation did lead to a major problem which accelerated the demise of SIRA, but steps could have been taken earlier to close the final salary pension scheme and institute a pension scheme based on contributions rather than on final expectations.

6.3.18 The Machine Tool Industry Research Association (ceased trading 2007)

AMTRI was originally named the Machine Tool Industry Research Association (MTIRA). According to Johnson (1973) it was one of only two completely new research associations to have been set up since 1960 (he does not refer to the National Computing Centre, which was established in 1960). The other research association mentioned by Johnson was the Drop Forging Research Association which was established in 1962 and which ceased trading in the late 1990s. Hence the two latecomers were relatively short-lived by comparison with many other research associations.

The events leading up to the setting up of MTIRA will be examined, as they have an influence on its activities and eventual demise.

The organisation which was responsible for MTIRA was the Machine Tool Trade Association (MTTA). This was a situation similar to that of the Drop Forging Research Association, where the industry trade association was responsible for bringing the research association into existence. According to De Barr and Sharman (1982), MTTA was active during 1945 in encouraging, with other organisations, the formation of the Production Engineering Research Association (PERA), which was formed out of the Metal Cutting Research Unit at Loughborough College. Also according to De Barr and Sharman the MTTA support for PERA was emphasised in a report it prepared in 1958 entitled, 'Research and Development in the Machine Tool Industry', in which it encouraged its members to be active members of PERA. In spite of these efforts to support PERA, around 1959 PERA came under criticism for not doing enough to help

makers and users of machine tools. De Barr and Sharman cite the Piercy Report (1960), prepared by Penelope Piercy an economist with the DSIR, which was not published but made available to MTTA. This report made a number of recommendations including that efforts be made by the Department of Trade & Industry to persuade the machine tool industry, through the Machine Tool Trades Association,

“... to take more responsibility for research and development by setting up a committee to consider the possibility of making greater use in relation to the special needs of machine tool manufacturers of the facilities of PERA”. (De Barr and Sharman, 1982, p. 11)

The report also explored the possibility of the formation of a research association on the lines of the British Ship Building Research Association, specifically designed to foster extra research in the interest of the machine tool manufacturers in universities and technical colleges, in other research associations, in members' work and in the National Engineering Laboratory.

The recommendations of the Piercy Committee were followed up by MTTA which convinced the DSIR that neither the National Engineering Laboratory (NEL) or PERA could provide an answer to the machine tool industry's problems, resulting in the formation of MTIRA as a legal entity on 1 October 1960, with Mr A E De Barr taking up the post of director of MTIRA on 31 December 1960.

In hindsight the researcher considers that PERA and NEL could have undertaken the required work on machine tools, and in the 1980s PERA, under the directorship of Professor Higginbottom, became a leading organisation in the

development of numerically controlled machines. Mr De Barr, as director, and Miss Sharman, as company secretary, steered MTIRA successfully through the next 20 years, and the published MTIRA booklet by De Barr and Sharman (1982) covering its activities between 1960 and 1981 outlines many technical advances, mainly focused on the improved performance of machine tools. After the initial period during which MTIRA was set up, from 1965 to 1981 staff numbers remained relatively constant in the 50 to 70 range, with no long term expansion or contraction. MTIRA continued to receive public funds which contributed on average 50% of the income. The Bessborough Report (1973) comments that MTIRA faced a difficult time at the period the report was produced, owing to a recession in the UK machine tool industry which inhibited further expansion of MTIRA.

The Bessborough Report also considers the ongoing relationship between MTIRA and PERA as follows:

“MTIRA’s main inter-RA relationship is with PERA. The trade association of the machine tool industry was one of the organisations which helped to establish PERA. After a period of operation it was felt that the work of PERA had broadened, so that insufficient specialist attention was being devoted to the design and manufacture of machine tools. MTIRA was established, again with initiative of the Machine Tools Trade Association. To begin with there was considerable overlap between the work of the two associations, but in more recent years a system of regular liaison has served to reduce this. The distinction between the work of the two research associations is now regarded as follows: PERA is concerned with the utilisation of machine tools, with the user of machine tools and

his problems, while MTIRA services the makers of machine tools and provides design and manufacturing expertise.”

(Bessborough, 1973, p. 123)

But with the decline of the UK machine tool manufacturing base, the research association diversified into new areas of work and in particular to the usage of machine tools as well as their design and manufacture. This move downstream in the customer base was not unique to MTIRA. A similar policy was adopted by SIRA which refocused its customer base from the scientific instrument makers to the users of scientific instruments. In the case of MTIRA, moving its activities towards to the users of machine tools overlapped with PERA, who, to confuse the situation, had embarked on a large numerically controlled machine programme.

At the time of the Bessborough Report, PERA employed 550 staff, while MTIRA employed only 68, so perhaps a merger at that time would have been sensible. In the mid-1980s MTIRA had changed its name to the Advanced Manufacturing Technology Research Institute (AMTRI), and its entry into the AIRTO Directory 1989 states:

“AMTRI is a practical and forward looking commercial and technological resource providing expert consultancy in manufacturing technology, manufacturing systems and management services to all sectors of industry. AMTRI works with companies to improve business performance and profitability from the strategic level for the solutions of individual problems....”

There is no reference to machine tools in this entry in the 1989 AIRTO Directory. The change of name and direction resulted in the organisation retaining its size, employing 70 staff.

By 1997 the AIRTO Directory states that staff numbers at AMTRI had been reduced to 38 and the directory entry states:

“Research, development and consultancy work in connection with machine tools, special purpose machinery, automation, manufacturing systems and business strategy. AMTRI’s flexible approach covers machinery and process performance, safety and output quality using sophisticated analysis and test methods”. (AIRTO Directory 1997, p. 12)

This entry, with its mention of machine tools, indicates perhaps a return to its original mandate which was emphasised in the AIRTO Directories of 2004 and 2006 where in both cases the entry states that the objectives of AMTRI were to

“Design and build special purpose manufacturing machinery, test/ inspection systems and automation equipment. Consultancy services supporting suppliers and operators of machine tool based manufacturing facilities and equipment including analytical design, performance enhancement, process selection and compliance with mechanical and electrical safety legislation and EMC legislation” (AIRTO, 2006, p. 1).

To summarise, MTIRA/AMTRI has experienced an overlapping interest, particularly after the demise of the UK machine tool industry, with PERA, who in 2006 employed 400 people, or 12 times the employment of AMTRI. AMTRI

continued to trade satisfactorily and in the year ending 31 December 2004 made a surplus of £152,000 on a turnover of £1.5m. The situation after this date is best described in the statement for the administrator's proposals dated 13 November 2007, where the administrator states:

“The company was a provider of special purpose engineering solutions and consultancy to the manufacturing industry. The company has become insolvent as a result of the directors questioning the viability of the business, lack of work, and also due to its pension scheme deficit. In 2003 the pension was deemed to be moderately under-funded on a continued valuation basis, as a result contributions were increased and benefit decreased. In 2006 a further valuation was completed of the scheme. This revealed a massive deficit due to changes in legislation and guidance. In autumn 2006 advice was received that this deficit was beyond the resources of the company. Again contributions were increased and benefit decreased. The company's plan was to pay off the pension scheme deficit over a twenty year period. Considerable management time had been expended while reviewing operations and the core business. In 2007 the business experienced a downturn in sales and orders to the extent that it made a loss, having made a loss of £595,000 in the year ending 2005 and a further loss of £406,000 in the year ending 2006. Attempts were made to source additional finance for the business. The company changed its bankers and initial discussions with potential purchasers proved unsuccessful. A business restructuring consultant was then employed in a further attempt to sell the business, which proved unsuccessful. The directors then appointed Baker Tilley Restructuring and Recovery LLP for advice, and this resulted in the directors making arrangements to place the company in administration. This occurred on 26 September 2007.”

Allen and Pierce (2007) Section 4.

In the case of AMTRI, it can be seen that the primary cause of failure was the pension deficit, and the poor performance over the last two years of its existence was perhaps partly caused by the directors' preoccupation in trying to overcome the pension problem. The demise does however call into question the fundamental grounds upon which MTIRA was set up. Perhaps PERA should have adopted a mandate to conduct research on the design of machine tools, as well as their application.

6.3.19 Summary of review of Research Associations that have ceased trading since 1963

Of the research associations which have ceased trading, the three largest (BISRA, BCURA and BCRA) were as a result of the nationalisation of the industries they served. Of the remainder, seven failed in the 1970s, six in the 1990s and two in the 21st century. It is worth drawing attention to the fact that there were no failures during the 1980s, which is in line with the comment by Kennedy (1985) that in 1972 only four research associations received more money from government than from members. By 1982, 17 out of the 23 research associations were in that position. The 1980s was a period of increased government support for research associations. This support declined in the early 1990s, contributing to six failures during this decade.

Table 6.2 Research associations that have ceased trading since 1963

	Industry	Research Association	Failure date	Postulated reason for failure	Approx number of staff at demise
1	Iron & Steel	The British Iron and Steel Research Association	1967	Nationalisation of steel	762
2	Coal	The British Coal Utilisation Research Association	1969	Absorbed into National Coal board	292
3	Lace	The Lace Research Association	1970	RA failure to keep up with technology changes in industry	20
4	Brushes	The British Brush Manufacturers Research Association	early70s		7
5	Jute	The British Jute Research Association	1972	industry was not willing to finance co-operative research	39
6	Lime	The Chalk Lime and Allied Industries Research Association	1973	merger of two organisations with incompatible cultures.	23
7	Whiting	Welwyn Hall Research Association	1973	Not enough members to pay subscriptions	23
8	Coke	The British Coke Research Association	1975	Nationalisation of coal and steel industries	133
9	Laundry	The British Laundry Research Association	Mid 70s	Demise of industry	77
10	Tar	The Coal Tar Research Association	1970s	Demise of industry and members had R&D facilities in house	52
11	Drop Forging	The Drop Forging Research Association	1986	Dependence on government finance and competition from trade Association	28

	Industry	Research Association	Failure date	Postulated reason for failure	Approx number of staff at demise
12	Hosiery	Hosiery and Allied Trades Research Association	1991	Dependence on government finance. Not tackling real industry problems. Poor governance	10
13	Linen	Linen Industry Research Association	Early 1990s	Demise of industry. Failed to diversify into other industries in Northern Ireland	44
14	Non Ferrous Metal	The British Non Ferrous Metals Research Association	1992	Unsuccessful merger with Fulmer Ltd.	90
15	Internal Combustion Engines	The Internal Combustion Engine Research Association	1997	Lack of enthusiasm for co-operative research. Decline in government contracts. Governance not suitable. Outdated equipment.	60
16	Industrial Biology	BIBRA International	1999	Uncompetitive in clinical testing and reduction of grant support.	130
17	Scientific Instruments	SIRA Ltd	2007	Dependence on large government financed contracts. Pension fund liabilities.	33
18	Machine Tools	The Advanced Manufacturing Technology Research Institute (AMTRI)	2006	Always in Competition with Pera. Pension fund liabilities	160

6.3.20 Analysis of the factors that contributed to failure

A brief account of the eighteen research associations which failed between 1963 and 2007 is given in table 6.2 which sets out the factors which it is postulated contributed to the failures of the research associations. In this analysis only the research associations which failed after 1990 will be considered as the factors relating to earlier failures may now not be relevant. The factors considered are governance, reliance on government support, unsuccessful mergers, pension deficits and competition.

Governance

HATRA, according to Nutting et al. (2009) identified governance problems and considered that a more sympathetic controlling council might have been of benefit. ICERA according to Bradley (2010) considered that a part time council was not appropriate for a commercial organisation.

Reliance on government support

BIBRA was formed in 1960 as a result of a government initiative with substantial government funding. In 1986 it received 150% grant. SIRA was formed in 1918 to serve the research needs of the British Scientific Instrument Industry. In 1960 its focus was changed to the application of instrumentation and control with a generous 300% grant from the Department of Trade and Industry. (Wedgewood Benn 1986). Both research associations were too dependent on government support. HATRA, according to Nutting (2009), was also dependant on government support and lamented the removal of its statutory level.

Unsuccessful merger

BNFMRA merged with Fulmer Limited in 1990 and failed in 1992 despite a business plan for the joint organisation which would be profitable after the first year of the merger. Section 7.4 of this thesis provides an account of ten intra research association mergers, none of which led to failure of the newly formed joint organisation. Hence intra research association mergers are deemed to be successful. However the merger of a research association with a dissimilar organisation did not work and failure was attributed to a culture clash.

Pension deficits

The problem of the underfunding of the pension scheme was identified during the pilot interviews and was a contributing factor to the demise of AMTRI & SIRA. The poor performance of these two research associations which did not generate sufficient surpluses to cope with the pension deficit was a contributing factor to their failure.

Competition

BIBRA was not competitive in its clinical research activities, AMTRI, when it diversified from undertaking research and development for the machine tool industry to the application of machine tools to manufacturing in general was not competitive with its much larger research association PERA (Production Engineering Research Association). The Drop Forging Research Association was

always in competition with its trade association which undertook work on training and standards activities normally undertaken by the research associations.

Summary

From the above it can be seen that there were several factors which contributed to failure. A continued reliance on government financial supports was a contributory factor. The governance structure must be consistent with the needs of the organisation as the research associations became more commercial and the governance will have to be changed to meet these new challenges. The pension deficit is a major factor in failure of two recent research associations which were not generating sufficient surplus to deal with a pension deficiency.

6.4 Mergers within the research association community

6.4.1 Introduction

The practice of intra research association mergers is not new. Wedgewood Benn (1968) announced a policy of encouraging research associations to amalgamate where there was seen to be some clear advantage. This section gives an account of ten mergers which have taken place within the research association community. The mergers are listed in chronological order. A more detailed account of the four most recent mergers is given and an evaluation made of their success.

6.4.2 The Flour Milling Research Association and Baking Research Association

The Flour Milling and Baking Research Association was established in 1966 as the result of a merger between the Baking Research Association, established in 1947, and the Flour Milling Association, established in 1923. In 1973 it had a turnover of £320,000, membership of 757, and 133 staff. In 1994 the combined associations merged with the Campden Food and Drink Research Association to form the Campden and Chorleywood Research Association.

6.4.3 The Printing Research Association and Packaging Research Association

The Printing and Allied Trade Research Association was formed in 1936 and in 1967 merged with the British Paper and Board Industry Research Association to form PIRA.

6.4.4 The File Research Council and Cutlery Research Association

The File Research Council, founded in 1956, was taken over by the Cutlery Research Association in 1968 to form the Cutlery and Allied Trades Association (CATRA), (Johnson, 1973, p. 41). These were two very small organisations with a combined staff of only 20 people. During the FRC's existence, it occupied the same premises as the Cutlery Research Association in laboratories owned by the British Iron and Steel Research Association (BSIRA) in Sheffield.

6.4.5 The Gelatine and Glue Research Association and Leatherhead Food Research Association

The Gelatine and Glue Research Association was formed in 1948 and in 1967 had a staff of 24. It failed in 1970 and its assets were transferred to the Leatherhead Food Research Association.

6.4.6 The Shirley Institute and Wool Industry Research Association

The early history of the research associations serving the textile industry is well documented in two publications, Tippet (1988) and Anderson (1988).

The Cotton Industry Research Association was formed in 1919 and the British Rayon Research Association in 1946. These two organisations amalgamated in 1961 and the name of the merged organisation was changed to the Shirley Institute in 1972.

In 1963 the Shirley Institute and the Wool Industry Research Association employed 735 staff, (Table 6.1), but as the British textile industry declined both organisations faced difficult years, not only due to the decline in their industries, but also because both research associations lost statutory levies and received less money from the DTI to support research projects.

In the mid-1980s an external organisation was retained with sponsorship from the DTI to investigate the practicality of a merger between these two bodies. The two organisations announced in June 1987 that a merger would take place subject to satisfactory detailed agreement and their members' approval. On 1 October 1988

the two organisations merged, forming an organisation with the title The British Textile Technology Group. It could be argued that the negotiations for the merger took far too long and one of the unsatisfactory outcomes of the merger was that the new organisation would continue to operate from two sites, the WIRA site in Leeds and the SHIRLEY site in Manchester. This compromised arrangement had the disadvantage of not yielding cost savings which could have been achieved, and also the physical separation would not help to mould a common culture between the two organisations.

6.4.7 British Maritime Technology

British Maritime Technology (BMT) was formed in 1985 following a merger between NMI Ltd., a privatised government research establishment, and the British Ship Research Association. NMI itself was established in 1976 as a result of action taken by Eric Varley, then Secretary of State for Industry, to privatise the ship and marine science division of the National Physical Laboratory with its testing tanks at Teddington and Feltham. The British Ship Research Association came into existence in 1962 and was an amalgamation of two research associations, namely the British Shipbuilding Research Association and the PAMETRADA. The latter rather cumbersome title is an abbreviation of Parsons And Marine Engineering Turbine Research and Development Association. Like BISRA, BMT had only one director, David Goodrich, from 1985 until his retirement in 2005. BMT acted as a holdings company with a large number of trading units. It grew from employing 210 people in 1989 to 950 in 2005. Before retirement, David Goodrich changed the ownership of BMT into an employee owned organisation, in

order to prevent BMT being the subject of a hostile takeover. BMT is very successful and in 2008 the largest research association.

6.4.8 The Timber Research and Development Association and Furniture Industry Research Association

TRADA (Timber Research and Development Association) was formed in 1962. FIRA (Furniture Industry Research Association) was established one year earlier in 1961. In 1994 TRADA was the subject of a management buyout with the formation of a new holdings company entitled TTL Chiltern Ltd. TTL Chiltern Ltd acquired the Furniture Industry Research Association in 1996.

The name TTL Chiltern Ltd. was changed to BM TRADA Group in 2008, (FAME, 2008). Prior to the management buyout and the merger of the two research associations FIRA employed 100 staff and TRADA 105. In 2008 BM TRADA Group employed 269 staff. This has been a successful merger.

6.4.9 The British Cast Iron Research Association and Steel Casting Research and Trade Association

The British Cast Iron Research Association was formed in 1921 and was supported by a statutory levy since 1947. The Steel Castings Research Association was established in 1953 and amalgamated with the industry's trade association -The Steel Castings Association - in 1968 to form SCRATA. (Steel Castings Research and Trade association). Rothschild (1973, p. 157), discusses

the merger of these two organisations as follows: “We would on balance support a merger between these two associations but only if it seemed to both associations and their members that this would be a beneficial step.” Rothschild goes on to state that SCRATA may fear submersion as a result of a merger as it is the smaller organisation.

In 1973 the joint employment of the two organisations was 276 (Table 6.1 Section 6.2).

The Cast Iron Research Association amalgamated with the Steel Casting Research and Trade Association, SCRATA, in 1996. For many years before this merger the Department of Trade and Industry had encouraged and even threatened these two organisations to merge, but the merger did not take place at that time. The merged organisation, Castings Technology International, employed a staff of 121 in 2008.

Castings Technology International in 2008 operated on three sites, the two former sites of BCIRA and SCRATA and new premises in Rotherham which opened in 2006. CTI had a turnover of £8.9M with 13% from subscriptions, 20% UK and EEC grants, 59% service to members and 8% from other sources. The association had 300 members in 40 countries and, according to the CTI website (www.castingsdev.com, accessed 2009), from which the above data was obtained, has a compound revenue growth of 11% per annum. CTI now undertakes work on non-ferrous as well as ferrous materials, hence perhaps taking up some of the market from the demised British Non Ferrous Metals Research Association (demised in 1992). This appears to have been a successful merger.

6.4.10 Brewing Research International and Campden and Chorleywood Research Association

The following summary is based on information obtained at a pilot interview in September 2006 conducted with Dr. Mark Keirston, Director of Brewing Research International (BRI)

BRI has its roots going back to the days when the brewing process was not reproducible. It is a stand-alone organisation and has never applied for a government grant. The emphasis of the work has changed from research to trouble shooting, largely because the brewing process according to Dr Kierstan is now fully understood and needs no more fundamental research.

Dr Kierstan believes that the critical mass for a research association is £10M per annum and that with turnovers less than this, as at BRI, it is difficult to generate cash to replace facilities. In the six years he has been at BRI the staff numbers have declined from 90 to 60. He believes that 60 is the right number for the industry to support.

Dr Kierstan says it is very difficult to run a medium sized research association. The very small ones employing 20 people seem to succeed and the very big ones have momentum. One way out of this difficulty he said was growth through mergers.

6.4.11 The Paint Research Association and PERA

On 22 January 2009 it was announced that The Paint Research Association had merged with PERA (2011).

6.4.12 Evaluation of four recent mergers

Four recent inter research association mergers will be evaluated;

- two mergers occurring in 1996 between research associations of similar size, the first between the timber and furniture research associations and the second between the research associations serving the cast iron and steel industries. As well as the partners in these mergers being of similar size they were also between organisations serving similar or related industries.
- the second two mergers occurred in 2008 and 2009 and were between organisations of very different size but also having some synergy.

TRADA/FIRA

TRADA and FIRA merged in 1996. Prior to the merger both organisations were declining in numbers of staff employed.

Staff numbers quoted in AIRTO directories 1989 and 1997 show that between these dates FIRA's staff numbers decreased from 100 to 50 and TRADA's from 105 to 85. The FAME website (2010) sets out accounts for

the TRADA group of Companies which includes data on its subsidiaries FIRA International and two TRADA companies, TRADA Technology and TRADA Certification.

Employment numbers			
	year	2000	2009
TRADA Certification		25	40
TRADA Technology		44	79
TRADA total		69	119
FIRA International		67	72
Total		136	191

Hence it can be seen that over the past decade TRADA and FIRA have prospered and grown in terms of employment numbers. They have also had the highest QUI score of secure since 2005. One can conclude that this merger has been successful.

SCRATA/ BCIRA

Johnson (1973) provides staff numbers for the year 1967 at which time BCIRA employed 194 and SCRATA 116 giving a total employment of 310. By 1989 AIRTO directory gives SCRATA employment numbers as 55. Data was not available for BCIRA as they were not members of AIRTO at that date. The organisations merged in 1996 to form Castings Technology International. The accounts for Castings Technology International, as available from FAME (2010), give data for the new organisation with no

reference to its component parts. Castings Technology International employed 110 staff in 2000 increasing to 134 in 2009. Castings Technology International had a QuiScore of secure over the period. Hence it can be assumed that the merger was successful.

BRI/Campden

Campden had previously merged with the Baking and Flour Milling Research Association in 1994. In 1996 Campden merged with BRI. In 2008 Campden employed 344 staff and BRI 60. The joint organisation increased its turnover from £14m to £19.1m between 2007 and 2009. This merger between two organisations of dissimilar size, although it is in its early stages, appears to be successful.

PERA/PRA

At the time of the merger PERA employed 663 staff and PRA 25. The Paint Research Association's employment had decreased from 56 in 2000 to 25 at the time of the merger. Over the same period PERA's staff numbers had increased from 267 to 663. Hence the merger can be seen as a rescue operation but the researcher understands that it has been successful with PERA taking in house PRA's administration and accounting functions and improving its presentation. This merger appears to the researcher to be a lifeline for the Paint research association as it now has access to PERA's expertise and extensive customer base.

All of the above four examples of inter research association mergers were successful.

6.5 Research associations that have been absorbed into large for profit companies.

6.5.1 Introduction

There are three former research associations which are now part of large commercial organisations. These are RAPRA, now part of the US Smithers Group, ERA, part of Cobham PLC, and PIRA, part of CIBA Speciality Chemicals plc. All three changes of ownership took place between 2003 and 2006 and hence an account of the factors leading up to these changes together with an assessment of whether these changes lead to success has been included in this section as such changes may be strategic options which other research associations could evaluate as a way forward.

6.5.2 The privatisation of Rubber and Plastic Research Association (RAPRA)

The following information was obtained during an interview with Mr Richard Walton on 6th October 2008. Richard Walton was a director of RAPRA both prior to and after privatization and hence had firsthand knowledge of the transformation.

Upon the retirement of Dr J Berry, CEO of RAPRA, in 1985 the council sought to appoint a director with a commercial background, and hence Dr Malcolm Copley, who had industrial and commercial experience with Dunlop and BTR was appointed director. Prior to Dr Copley's appointment the council had established

an executive board to be responsible for the running of RAPRA. The board consisted of a chairman, two members of RAPRA council, and two executive directors. Dr Copley replaced the two council board members with two CEOs of other research associations, Dr Stuart Excel of EA Technology, and Mr Nigel Bannister of NCC. This move must have increased the influence of the RAPRA executive in the running of RAPRA. The RAPRA council, realising that it no longer had a role, voted in 1990 to wind itself up. The governance of RAPRA was now in the hands of the executive directors and its appointees to the executive board. From having appointees of the membership on the executive committee to having other research associations CEOs, the governance changed from a democratic to a partnership model.

In 1990 a management buyout was attempted but failed as only fifty eight per cent of the membership voted for the buyout, hence not obtaining the seventy five per cent required by the constitution.

In 1995 RAPRA had talks with PERA on the possibility of a merger. The board were divided on this proposal, mainly as PERA was twice the size of RAPRA and a merger would in fact be takeover.

In 1996 Dr Copley retired as CEO but became chairman of the executive board. Talks took place on a possible merger with the northern office of the privatised laboratory of the government chemist. Here again, as with the discussions with PERA, there was no unanimous board decision and no action was taken.

In Jul 2001, ten years after the first attempt at a management buyout, a scheme was put forward by the board for a second attempt at a management buyout. As a

result of much canvassing by the board members, a ninety six per cent positive vote was obtained. And hence the buyout took place. In order to facilitate the management buyout RAPRA had to be restructured and was divided into two companies, RAPRA Limited was retained as a membership organisation which collected the subscriptions which were used to support a programme of co-operative research at RAPRA. RAPRA Technology Limited, the new company formed by the management buyout, was the operating company.

With the staff, RAPRA Technology acquired the pension scheme. The pension scheme was the Achilles heel of RAPRA Technology Limited, and in spite of the scheme being closed to new entrants the pension scheme liability had been calculated at around £1m, which was manageable, but in February 2006 it was recalculated as £14m and although RAPRA Technology Limited had performed well, its turnover increasing from £6.5m in 2002 to £9m in 2005, the organisation could not generate sufficient surplus to meet the liability in the pension scheme, and RAPRA Technology went to administration in February 2006.

There were a number of organisations interested in buying parts of RAPRA Technology Limited, however the Smithers Group which had had dealings with RAPRA over many years was interested in purchasing the whole business and did so in 2006.

Smithers Group, which is not a group in the technical sense but a group of companies owned by the Herswender family, which included a rubber testing business in the USA. The Smithers Group employed some three hundred staff and successfully acquired RAPRA Technology Limited with its staff of one hundred and fifty.

The pension liability had not been settled at the date of the interview, October 2008, and was under consideration by the Pension Protection Fund.

In summary the management and strategy of RAPRA changed in 1985 with the appointment of a CEO with commercial experience. The power base was shifted from the membership to the executive with little or no opposition. However the membership was not willing to relinquish the final control over the organisation and sanction a management buyout in 1990. The management next considered a possible merger with firstly PERA, a large successful research association, and second with LGC, the privatised GRE. Broad agreement on these possible moves was not obtained and action was not pursued. Ten years after the first attempt at a management buyout a second successful bid was made in June 2001. Five years later RAPRA Technology Limited went into receivership as the result of a large pension liability and was acquired by an American owned group of companies. RAPRA Limited still manages the membership. RAPRA Technology Limited itself is claimed by Richard Walton to be successful, although detailed accounts are now integrated into the Smithers Group account, and precise data is not available.

6.5.3 The privatisation of Electrical Research Association (ERA Technology Limited) 2003

The following information on the changes that took place within ERA was obtained during an interview on 12th December 2008 with Mr. Joe Frutell, the financial director of ERA, who has spent most of his working life with ERA prior to and after privatisation.

In 2001 changes were made to ERA Technology which were masterminded by Sir Alan Rudge. (Sir Alan Rudge was CEO of ERA Technology for ten years from 1979. Upon his retirement as head of BT Research in 1997 he became chairman of ERA Technology.) The restructuring took the form of a holdings company, ERA Foundation being formed as a company limited by guarantee, and ERA Technology as the trading company. ERA Technology was structured as an employee benefit trust, with 25 per cent of the share capital held by the staff and 75 per cent held by the foundation. The structure of an employee benefit trust was adopted as a means of attracting good staff. British Maritime Technology adopted a similar structure (section 7.2.3)

In 2001 Mr. Fred Cahill was recruited by Sir Alan Rudge to run ERA Technology. According to Joe Frutell, Fred Cahill transformed ERA Technology into being “commercial, lean and efficient”.

In September 2003 Cobham Plc sought to buy ERA Technology for its expertise and the industrial property rights of ERA Technology. Cobham Plc purchased ERA Technology for £40m, of which some £10m was due to the staff as a result of being members of the benefit trust. This £10m was paid out to staff over the next five years. The researcher estimates £1,000 per member of staff per year. The remaining £30m was transferred to the foundation for supporting the science base.

On the acquisition by Cobham, Fred Cahill was absorbed into the Cobham Group and was at the time of the interview vice president of Cobham Antennas and general manager of Charlton, a subsidiary company of Cobham.

The ERA Foundation invests in early stages of young technology companies, the size of the investments being in the range £0.2m to £1m. The foundation states that it does not seek investments in the later stages of developments as this is already well catered for by venture capital markets.

6.5.4 The privatisation of Printing Industries Research Association (PIRA) 2004

The following information was obtained from Mr Nick Kernoghan, during an interview at PIRA on 3rd December 2008. He was at the time one of the three business managers at PIRA responsible for the group undertaking testing and analysis. He joined PIRA in 1996 prior to privatization and hence had firsthand knowledge of the transformation.

In 1997 according to the AIRTO 1997 directory, PIRA employed two hundred people and had a turnover of £8.2m. Mr. Brian Blunden, who had been CEO for many years, retired in 1997 and he was succeeded by Mr. Michael Hancock who was previously director of commercial affairs at PIRA, hence an internal appointment. Soon after Mr Hancock's appointment Mr Clifford Jarvis, the long serving financial director and company secretary, left PIRA and his successor was Mr Richard Boyd an ex-Andersen Consulting employee. According to Nick Kernoghan, Richard as an outsider investigated the ownership of a company limited by guarantee, the status of PIRA at that time. Mr Michael Hancock, Richard Boyd and two other senior members of PIRA staff, put a management buyout proposal to the six non-executive directors of PIRA. These non-executives were elected from the membership, two from the packaging industry, two from the paper making industry and two from the printing and publishing industry. In order

to facilitate this buyout, PIRA, on 13 October 1999, was restructured with PIRA Trustees, a company limited by guarantee and PIRA International Limited Incorporated as a private limited company. The arrangement was that membership subscriptions would be paid to PIRA Trustees, and PIRA International Limited would be sold to the four directors of PIRA staff who would own the operating company.

The financial arrangements were that each director would put up £30,000 and a further £30,000 would be put up by staff who wished to participate in the scheme. Hence it was agreed by the non-executive directors that the operating company would be sold for £150,000. The date of this transaction was 10 January 2000.

The income of the trading company was approximately £10m from the time of the management buyout until the year ended 31 March 2003. The operation was profitable, with profits before taxation amounting to some 5% of turnover FAME (2008). According to Nick Kernoghan the pension liabilities for the final salary pension scheme had become a major issue, and he believed that had not CIBA wished to purchase the company, its future would have been uncertain. In the event PIRA had decided to sell its site and relocate the company in part of the premises owned by ERA some half a mile away.

The financial deal was that CIBA would acquire PIRA for a sum of £1.2m. In addition CIBA would subscribe £22m towards the pension scheme deficit, and in return receive the £11.2m proceeds from the sale of the PIRA site. Hence CIBA paid in total £12m for the business, and each director received £240,000, a profit of £210,000 for each director on the original investment.

According to Nick Kernoghan, over the period of ownership the directors endeavoured to transfer PIRA into a consulting company. This could have been the influence of Richard Boyd with his experience of Andersen Consulting. This move to consulting did not prove to be the correct strategy, since in the ten months to 31 January 2004 a loss before tax of £1m was recorded on a turnover of £7m. Hence the rescue by CIBA which took place on 15 March 2004 was a timely deal.

According to Nick Kernoghan, being part of a larger group is beneficial, since PIRA now has access to capital and expert knowledge such as legal advice within the CIBA organisation. He also stated that PIRA is more likely to survive a recession as part of a large successful commercial group. The only freedom it does not have is to set its own targets, but Mr Kernoghan was adamant that working for PIRA as part of CIBA is much more rewarding than under the previous structure.

6.5.5 Evaluation of privatisations

It can be seen that all three privatisations have been successful. In two cases research associations which had been the subject of a management buyout which lead to financial instability were rescued by the new parent company. In the third case a successful research association which had become an employee benefit trust as a result of being absorbed into a large commercial organisation produced rewards for the staff and financial support for a charitable trust run by the association.

Features that the study of privatisations revealed in all cases were:

- An injection of capital

- Replacement of the CEO by a person from the new holding company
- Staff satisfaction

In this chapter the researcher has analysed the reasons why research associations have failed with particular reference to the more recent failures. The results of intra research association mergers have also been examined with the conclusion that inter research association mergers are a way forward. The research associations that are now part of large commercial organisations have prospered under their new ownership. In the next chapter the case study research association will be examined in detail and in the following chapter the results of the case studies will be brought together and considered in the light of the data on failures mergers and privatisation.

7. RESEARCH ASSOCIATION CASE STUDIES

7.1 Introduction

Case study data presentation

This chapter contains a description and analysis of the data for each of the pairs of research associations selected for case study. Case study pairs are presented in the following categories:

- Food sector
- Transport sector
- Construction sector
- Clothing sector
- Technology-based
- Privatised
- Medium-sized
- Small

The data analysed was obtained from archival sources and data generated from the semi-structured interviews with the CEOs (Appendix 1) of the case study research associations and the returned questionnaires from the non-executive directors (Appendix 2) of the case study research associations. The privatised research associations having no non executive directors, a senior member of staff in addition to the CEO of both organisations was interviewed to obtain their views which are included in the case study reports.

A summary of the data from the semi structured interviews and the returned questionnaires is tabulated in Appendix 5 for each pair of research associations.

It should be noted that the case study information is at 2008 when the interviews were held.

The performance data of the case study research associations was obtained from the FAME website and included turnover, trading surplus, staff numbers and QuiScore over the period 1999-2008. The turnover per employee was calculated from the FAME data. The performance data is presented in tabular and graphical form in Appendix 4

For reasons of confidentiality the names of the research associations have not been disclosed and pseudonyms are used:

FOODRA1, FOODRA2

TRANSPORTRA1, TRANSPORTRA2

CONSTRUCTIONRA1, CONSTRUCTIONRA2

CLOTHINGRA1, CLOTHINGRA2

TECHNOLOGYRA1, TECHNOLOGYRA2

PRIVATISEDRA1, PRIVATISEDRA2

MEDIUMRA1, MEDIUMRA2

SMALLRA1, SMALLRA2

For each case study pair, in order to improve the readability of the text, the research association which the data shows to be the more successful of the pair in terms of sustainable growth in Table 7.1 is designated RA1. This designation was assigned after the analysis presented section 7.2 had been carried out.

Data for each case study is set out in narrative form covering, as appropriate, the following topics from sections of the semi- structured questionnaire and non executive questionnaire (Appendices 1 and 2) :

Background

- relevant history of the research association
- staff numbers, number of members, turnover and profitability at 2008.
- CEO background and appointment date

Governance

- company status
- governance structure and main functions of the board
- changes in the governance which have occurred or are planned

Strategy

Strategy development

- date when strategic planning started
- planning organisation and management
- strategy setting process at 2008 including any tools used
- how users or customers needs are understood
- view on importance of stakeholders
- CEO's view of strategic competencies
- issues and threats / influencing factors
- strategy implementation

Strategy overview

- key aims
- key strategic actions associated with the strategy in 2008

- strategy for areas of market activity and product or service development
- strategic options

Summary including an assessment of governance and strategy

The account of each research association is presented in narrative form. This account gives the chain of evidence (Yin, 1989) which includes data and comments made by the CEO during the semi-structured interview and gives an overview of the nature of the organisation's governance, approach to strategy development and strategy plans.

Following the review of the individual research associations in each pair, a comparison of each pair was undertaken and the research association's governance and strategy categorised with reference to theoretical models.

Positioning of governance and strategy

The analysis of the case study material in this chapter enables the governance structure of the research associations to be positioned as;

- Satisfactory/ unsatisfactory
- Run by executives?
- A partnership or democratic model (Cornforth (2003))

The aim of this chapter is to position the strategies adopted by the case study research associations under one of the four perspectives of strategy:

- Classical
- Evolutionary
- Systemic

- Processual

according to the classification of Whittington (2001). This approach is described in section 5.3.7 where the classification is based on both the strategic aim and the strategic process. The strategy is positioned as a combination of the strategy aim and the strategic process as shown in the Whittington (2001) diagram, fig 2.2.

The strategic aim is considered to be:

- either singular, with the aim of maximising long term advantage
- or plural, incorporating additional aims such as work for the benefit of staff.

The strategy process is evaluated and categorised as:

- deliberate
- entrepreneurial
- imposed.

Mintzberg and Waters (1985)

Assessing the governance and strategy classifications from the data

Dey (1993 p.94) states “We have to interpret our data in order to analyse it. But analysis can go beyond interpretation. We can try to create conceptual tools to classify and compare the important or essential features of the phenomena we are studying.”

In some instances, data, such as the length of service of the CEO, is available directly without the need for interpretation. In other cases qualitative data has to be analysed and assessed to classify the results. Assessment was particularly needed in the classification of governance and strategy described above.

This section gives a guide to the approach used to interpret the data to make these assessments.

There are three aspects of governance to be assessed.

Firstly determining whether the governance satisfactory. The governance is considered to be satisfactory when both the executive directors and the non executive directors consider it to be so; reinforced by such statements as 'relationship and trust' (FOODRA1)

Secondly determining whether the research association is run by the executive directors? The judgement on this situation is made on the basis of the data stemming from the semi-structured interviews with the CEO and the returned questionnaire from the non-executive directors. The evidence to answer this question came from CEOs information as:

- 'an organisation cannot be controlled by its customers' members are loyal customers but they cannot run the organisation'
- when the CEO and the executive directors produce all the papers for board meetings including the strategy document which are only approved by the board. The board is not involved with strategy documents in their initial stages.
- when the role of the non executive is 'improving and approving' and when the non-executive directors are said to be "wise sages".
- when the executive directors 'know the business and are in the best position to make executive decisions'.

However it is assessed that the CEO and executive directors do not run the organisation when:

- all papers are jointly produced and are discussed at away days with non executive directors.
- in the case of SMALLRA2 where the non-executive directors in fact manage the organisation.

Thirdly – the positioning of the governance under one of the theoretical perspectives of organisational governance as set out in table 2.2 (Cornforth, 2003) The two relevant classifications of governance of the Cornforth (2003) model are the democratic and the partnership model:

- Democratic model: where the members and their elected representatives constitute the non executive directors of the board and their mandate is to represent the interests of members. E.g. ‘The council consists of 35 members, all representatives of the association’s members’, (CONSTRUCTIONRA1), ‘two members elected from the membership’ (CLOTHINGRA2)
- Partnership model: when the non executive directors are appointed on the basis of the expertise they bring to the running of the organisation, whether from the membership or external i.e. ‘where the non executive directors improve performance, add value to top decisions and support management’ Cornforth (2003) e.g. ‘non executive directors are appointed on the basis of the expertise they bring to the organisation’ (TRANSPORTRA1).

To assess strategy the Whittington (2001) model of strategy is used. In order to position the strategy within this model the strategic aim and strategic process are classified.

The strategic aim is classified as either singular or plural based on the following criteria

- **Singular:** The single strategic aim was to ‘maximise long term advantage’ and this single condition was satisfied when the CEO stated that the aim was one of survival, profitability or growth, and the strategy did not include any other parallel aims which would or could influence the above. The determination of whether the aim is singular and the nature of the singular aim is mostly clear from the CEOs statements during the interview. However other comments have contributed to the assessment, for example:
 - “no desire to preside over a declining research organisation” (FOODRA1), would indicate that growth was the singular aim.
- **Plural:** Where the CEO stated that there was more than one aim i.e. there were two or more aims which could impact on each other. In this case further aims include:
 - “A successful, sustainable business providing rewarding employment for the staff” (TRANSPORTRA2)
 - For the benefit of members, e.g. “to provide better support for the industry” (CONSTRUCTIONRA2)
 - Maintain employment for staff, e.g. “security of the jobs of the remaining research association staff” (MEDIUMRA1)
 - “Providing a forum for members to meet and exchange information” (SMALLRA2)

The strategy process was assessed to enable the Whittington (2001) classification to be made. The strategic process is classified under deliberate, imposed or entrepreneurial.

- **Deliberate:** when there is a research programme which is approved and which governs the research association's work i.e. there is little scope for deviating from this programme. The process is deliberate where the research programme set out in the plan covers a large part of the research association's activities after extensive consultation with members and was in effect cast in tablets of stone. The deliberate model was further reinforced when the programme of work was subcontracted and hence modification would be impractical.

- **Entrepreneurial:** when the strategy sets out general aims and objectives but is not specific about how these aims are to be achieved. The process is entrepreneurial, for example, where :
 - the CEO spoke of flexibility, "goals never change although the means of achieving them does" (TECHNOLOGY RA1).
 - there is a desire to follow up opportunities.
 - targets are set but the means of meeting these are not well defined. 'the plan contains targets for growth, membership etc., but the CEO stressed the importance of flexibility' (CLOTHINGRA1)
 - the strategy has become "a continuing process" (TRANSPORTRA1).
 - the CEO describes himself as an opportunist and when opportunities present themselves they are evaluated and followed up. (FOODRA1)

- **Imposed:** when there is no clear strategy and the future of the research association is determined by external factors. The process is imposed when no clear strategy plan had been produced and the research association's future was determined by uncontrollable factors such as the very large size of the pension deficit. For example a CEO's comment of the need to "tack from one direction to another" (CLOTHINGRA2).

7.2 Measurement of sustainable growth

Sustainable growth is measured in terms of growth and the QuiScore. (Section 5.3.6) Growth has been measured over both years 1999 to 2008 and years 2004 to 2008 and is expressed in terms of the percentage change in employment numbers per staff member in employment in 2008 over the period concerned. This is referred to as specific growth.

Data was obtained from the FAME website and is tabulated in Table. 7.1. Where the specific growth has a positive value it indicates an increase in staff numbers and negative value indicates a decline in staff numbers. The average QuiScore band is also tabulated. This was calculated from the average of the QuiScores over the period.

Over the period 2004-2008, all the QuiScores fall into the 'secure' band. Over the period 1999-2008, where the two QuiScores for the two research associations in the same pair differ, the one with the poorer specific growth also has the lower QuiScore band. Hence the QuiScore band does not give a different ranking of the

pairs of research associations evaluated in terms only of growth, and the same ranking can be used for sustainable growth as for specific growth alone.

Growth data for the two small research associations is not tabulated as their abbreviated accounts do not contain employment numbers. Instead a more subjective approach has been used in order to determine which of the two small research associations has the better record of sustainable growth as enlarged in section 7.10.3.

From Table 7.1 it can be seen that, for both the period 2004 to 2008 and 1999 to 2008, the rankings of specific growth are the same, with the exception of the medium-sized research associations. For these, in the 2004 to 2008 analysis, MEDIUMRA1 is marginally superior in growth (decline) terms with similar QuiScore while over the 1999 to 2008 period MEDIUMRA2 is marginally superior but has a QuiScore in the 'stable', and not the higher 'secure' band. By giving more importance to the more recent past, 2004-2008, MEDIUMRA1 is judged to be the more successful of the medium-sized research associations, but only marginally so.

The rankings of the pairs in terms of specific growth and QuiScore are hence the same for both the periods except for the medium-sized research associations, as explained above. The performance over the period 2004-2008 has been used in the analysis as it corresponds roughly to the period of research association strategic plans.

Table 7.1 Sustainable growth of research associations over the period 2004-2008 and the period 1999-2008

Years		1999 - 2008			2004 - 2008	
Case study research associations	No. of employees at 2008	Average QuiScore band	Specific growth	Growth period where data for ten years not available	Average QuiScore band	Specific growth
FOODRA1	344	Secure	-1.47		Secure	3.46
FOODRA2	167	Stable	-2.54		Secure	-2.51
TRANSPORTRA1	1228	Secure	5.57		Secure	7.61
TRANSPORTRA2	386	Secure	-5.17		Secure	-0.54
CONSTRUCTIONRA1	150	Stable	1.92		Secure	4.40
CONSTRUCTIONRA2	40	Stable	-2.83		Secure	-1.75
CLOTHINGRA1	178	Secure	-0.18		Secure	-0.62
CLOTHINGRA2	69	Stable	-10.28		Secure	-2.61
TECHNOLOGYRA1	615	Secure	6.82		Secure	10.26
TECHNOLOGYRA2	458	Stable	1.17	9yrs	Secure	4.61
PRIVATISEDRA1	235	Secure	-7.94	8yrs	Secure	-2.38
PRIVATISEDRA2	98	Normal	-9.49	9yrs	Secure	-7.14
MEDIUMRA1	29	Secure	-10.95		Secure	-10.00
MEDIUMRA2	32	Stable	-8.25	8yrs	Secure	-11.88
SMALLRA1		Secure			Stable	
SMALLRA2		Normal			Stable	

Where data was not available for the whole of the period, the number of years for which data is available is indicated.

Having established which of the pair in the case study research associations has the superior performance in terms of sustainable growth there now follows the analysis of the case study pairs and the factors which could contribute to the superior performance.

7.3 The food sector

(Research associations referred to as FOODRA1 and FOODRA2)

7.3.1 FOODRA1

Background

FOODRA1 was formed from a series of mergers.

FOODRA1 employed 380 staff in 2008, of which 300 were located at the main campus, 50 at a second location, another five at a third location, and the remainder in Hungary.

The combined annual turnover of the group was £375M, and the organisation has generated a surplus over the past ten years.

FOODRA1 has 1800 members.

The CEO was appointed in 1988, having joined the organisation in 1981.

Governance

FOODRA1 is a company limited by guarantee. FOODRA1 is a membership organisation and the governance structure is that of a traditional research association with a council and executive committee.

The council consists of 26 representatives. The executive committee is a sub-committee of council with 13 members sharing the same chairman as the council.

The council and the executive committee each meet three times a year. The members of council are directors of the organisation under the Companies Act.

The executive committee, unlike the governance structure in most research associations, has no representative from the executive directors and, in spite of its name, is advisory rather than executive. The CEO and five other executive directors meet monthly to manage the organisation on a day-to-day basis. The CEO is of the opinion that the executive directors “know the business” and are in the best position to make executive decisions.

The council and its sub-committees agree the budget, monitor expenditure against budget, and authorise expenditure on single items costing more than £75,000.

The CEO has, in his own mind, a clear distinction between governance and management which is very similar to that given by Carver & Oliver (2002) who state that

“.... governance is outside the phenomenon of management and governance operates at a level that transcends current issues and specific company transactions”.

Hence at FOODRA1 the council and its sub-committees, in addition to approving budgets and monitoring progress against them, are responsible for advising on the selection of research projects, from which the future needs of the membership will be satisfied. The governance and management, as the CEO put it, functions on “relationship and trust”.

Strategy

Strategy development

The formal strategy process was triggered by a council member in 2006 who had previously worked for the Boston Consulting Group.

The strategy process starts with a meeting of the executive team together with eight council members, with the executive producing the briefing papers. The strategy process takes three months to complete.

FOODRA1 has 14 membership advisory panels who advise on the composition of the research programme.

SWOT is used as the strategy development tool.

The CEO stated that members are the most important stakeholders. According to the 2007 Annual Review, 130 new members were recruited during the year, to bring the total membership to over 1800.

Strategic competencies

The core competences of FOODRA1 are its growing membership base and its employee knowledge. The CEO is proud of an award that FOODRA1 received in 2008 for people development, which was said to have had a motivating effect on staff.

Teamwork is important and customer service is being continually improved with the assistance of external marketing consultants.

Issues and threats

In common with many research associations, the pension liability is a serious problem, and in 2008 FOODRA1 had to pay an extra £800,000 (5% of turnover) to reduce the pension deficit. This sum will have to be allocated to the pension fund for many years to come.

Recruitment is a problem. The CEO believes that many graduates do not understand what they must do in a commercial environment and has the impression that they learn by rote.

Implementation

All staff have access to the strategy document. The CEO briefs all staff twice a year, and directors and managers cascade the briefing process to reinforce the message.

Strategy overview

The overall strategic plan is for a 3-5% annual growth rate with a 4-6% trading surplus, with the growth being achieved through an emphasis on increased productivity rather than by employing additional staff.

FOODRA1 has grown largely by acquisition and it was stated at the interview that this policy will continue when opportunities present themselves.

The main areas of activity are:

- Research and development

- Analysis and testing
- Process development
- Training
- Consultation and information

The research and development activity is supported by the membership subscriptions which amount to 18% of total income together with 10% of income from the UK Government and the EU. This research and development programme is carried out for the benefit of the membership and it also provides the basis for the development of consulting and test services which will in the future be available to members on a fee-paying basis.

Testing and analytical services are of prime importance, followed by consultancy. Training is also important, with over 200 training courses being offered in the year 2008 to 2009, attracting some 5,000 delegates and an income of £2M.

Market development is global, with the first step a presence of some 25 staff in Hungary. The main target for global expansion is Europe, although training courses are offered in South Africa, and food safety knowledge is being sold in China and India.

Strategic options

A management buyout is “definitely not the way to go” according to the CEO. An employee benefit trust may be considered in future, but as the CEO put it, “If it is not broken, don’t try to fix it”.

The CEO's view was that the organisation needed a growth opportunity. He has no desire to preside over any declining organisation. Mergers and acquisitions are not part of the formal strategy; however the CEO describes himself as an opportunist, and when opportunities present themselves they are evaluated and followed up. There have been two major acquisitions of other research associations since 1994.

Summary

FOODRA1 is a membership organisation with over 80% of income derived from the membership through subscriptions and the sale of services. Membership involvement through the council and its sub-committees is principally directed towards a selection of topics for the research programme. The management of the business is strongly in the hands of the executive directors, who, as stated by the CEO, know the business.

Governance: The organisation is managed by the executive directors with the council and the executive committee representing the interests of members. This fits the democratic model of governance as set out by Cornforth (2003).

Strategy: The strategic aim is singular, profitable growth which can be classified as maximising long-term advantage. The strategy process is entrepreneurial based on the CEOs views on seizing opportunities. The strategy can be defined as evolutionary, in Whittington's (2001) terms.

7.3.2 FOODRA2

Background

FOODRA2 was formed in 1919.

According to information obtained by the researcher from a retired CEO of FOODRA2 in 2006, the organisation ran profitably from 1990 to 2000.⁴ During this period the structure was changed from a company limited by guarantee to a private limited company.

At the time of the interview, November 2008, FOODRA2 was making a slow recovery from a very difficult eight year loss-making period.

FOODRA2 has 1000 members as at 2008.

The CEO interviewed joined FOODRA2 in 2005 as Research Director and was appointed CEO in January 2008. He is a public analyst by training and experience, and has an MBA degree and a PhD in Science Strategy.

Governance

FOODRA2 is a private limited company governed by an executive with no council.

It had a long-serving director who retired in 1990 after 24 years as CEO.

According to information obtained by the researcher from a previous interview, the CEO from 1990 to 2000 ran the organisation profitably and during that period the

⁴ The researcher conducted this interview as part of the pilot study interviews

governance was changed from a council to an executive board. The researcher was also told that the CEO endeavoured to replace research by technical services. This can be seen as a move from a professional to a market control, as defined by Whittington (1991). According to the same source, the changes in company structure were enacted as a prelude to a management buyout which was not achieved

Since 2000 FOODRA2 has had three CEOs as at the date of interview, in 2008.

The organisation has no council. It has an executive board consisting of the CEO and the Financial Director together with three non-executive directors, (the chairman, the second non-executive a pension expert and the third a financial specialist). FOODRA2 has five strategic platforms, each with an executive director in charge; hence a flat management structure.

The researcher was informed by the CEO that the executive board works well with no tensions. The non-executive director stated in his returned questionnaire that he wishes to increase the number of non-executive directors. Hence the governance is not satisfactory according to the non-executive director.

The executive committee agrees budgets and monitors progress. The executive board has monthly meetings and its main function is to monitor progress.

Strategy

Strategy development

The strategy process started in 2005 at FOODRA2 when the present CEO joined the company.

The strategic plans are for a three-year period and the second such plan was commenced in 2008 when he was appointed CEO.

The CEO triggers the strategy process with the directors of the five platforms (regulation, innovation, nutrition, safety and knowledge), and holds departmental workshops to analyse and choose options. Each department undertakes a SWOT analysis.

With 1,000 members up and down the supply chain, members are important stakeholders, bringing in 20% of total income in membership subscriptions.

Strategic competencies

Employee knowledge is of paramount importance with 46% of staff having a first degree, a further 16% having master's degrees, and 9% having a doctorate.

Hence over 70% of employers have at least a first degree.

Team working is deemed to be good and customer service, which is of paramount importance, is under a process of continual improvement. Reputation is of paramount importance and the website is considered the most important publicity tool.

Issues and threats

Recruitment was said not to be a problem as FOODRA2 has good links with universities.

FOODRA2 carried out a membership poll on the name of the organisation and 80% of respondents were supportive of the present name being retained in the title. The CEO sees FOODRA2 as an intermediate organisation, bridging the gap between academia and industry. Reputation is considered to be the most important and tangible asset, with culture and team work and customer satisfaction being continually upgraded.

Between 2002 and 2007 FOODRA2 made a loss. The QuiScore dropped in 2002 to move the organisation into the 'high risk' band. Since 2004 the organisation's QuiScore has improved, to move it into the 'secure' band. In 2008 FOODRA2 made a small profit for the first time since 2001 (Appendix 4.1).

Implementation

The strategy document is sent to all staff and the CEO prides himself on having an open management style so all staff members are familiar with the organisation's strategy.

Strategy overview

Profitability is the strategic aim of FOODRA2. FOODRA2 has not made a profit since 2001 and the average loss before taxation over the ten-year period 1999-2008 is £756,000. The size of FOODRA2 has remained stable over the same period with an average annual turnover over ten years of £8.7M, and with a turnover in year ended 31 December 2007 of £10.2M.

Overhead cost-cutting is under way. FOODRA2 in 2008 divested a laboratory in Wales in order to reduce costs.

The reduction of the pension liability is a strategic aim of this research association. The final salary pension scheme was closed to new entrants as late as 2007. The pension liability shown in the accounts for the year 2007 amounts to £3.5M and the researcher was told by the CEO at the interview in 2008 that a plan has been agreed with the Pensions Regulator to reduce the organisation's liability.

Although FOODRA2 must be in competition with FOODRA1, the CEO takes a co-operative stance and has joint studies with other organisations.

A key element of this research association's strategy is to expand membership by 20% over the period 2008 to 2011. Members are important to FOODRA2 since they generate 75% of the resulting services. It is worth noting that FOODRA2 maintains and expands its membership base, but unlike many research associations the membership has no role in governing the organisation, as FOODRA2 has no council and members have no voting rights.

Table 7.2, below, summarises FOODRA2's vision, mission, strategic platforms, existing products and new products, as set out in its strategic plan for the period 2008 to 2011.

Table 7.2 FOODRA2 strategic overview

Vision	The food industry's preferred partner for scientific and legal solutions				
Mission	<ol style="list-style-type: none"> 1. Provide global food law advice 2. Develop innovative foods and food ingredients 3. Substantiate nutrition, health and labelling claims 4. Deliver novel food safety solutions 5. Facilitate learning and knowledge transfer 6. Build our membership base 				
Strategic Platforms	Regulation	Innovation	Nutrition	Safety	Knowledge
Existing products	<ol style="list-style-type: none"> 1. Helpline <ul style="list-style-type: none"> • UK law • EU Law • Global Law 2. Legal Highlights 3. Regulatory Guides 4. Training (Legal) 5. Label checks 6. Projects 	<ol style="list-style-type: none"> 1. Research <ul style="list-style-type: none"> • Ingredients/NPD • Microscopy • Sensory & Cons • Healthy food & drink 2. Testing <ul style="list-style-type: none"> • Cooking instructa • Foreign bodies • Taints • Benchmarking 	<ol style="list-style-type: none"> 1. Research <ul style="list-style-type: none"> • Satiety • GI • Bioavailability 2. Testing <ul style="list-style-type: none"> • Nutrition composition 	<ol style="list-style-type: none"> 1. Research <ul style="list-style-type: none"> • Natural Antimicrobial systems • Probiotics • Authenticity • Viruses 2. Testing <ul style="list-style-type: none"> • Microbiology 	<ol style="list-style-type: none"> 1. Publications 2. Training (Science) 3. Conferences 4. Library & e-info 5. Technical Helpline 6. Market Intelligence
New products	<ol style="list-style-type: none"> 1. Regulatory approval advice 2. Extend global coverage 	<ol style="list-style-type: none"> 1. Shelf life 2. Manipulating food structure 	<ol style="list-style-type: none"> 1. Weight management studies 2. Blood analysis 	<ol style="list-style-type: none"> 1. Natural antimicrobials Mk II 2. Microbe culture maintenance. 	<ol style="list-style-type: none"> 1. Upgrade products 2. Extend global coverage

Source: FOODRA2 strategic plan for period 2008 to 2011, p. 4

Patents and licences are not of principal importance to FOODRA2. However the core research programme is, since it enables centres of expertise to be developed which can act as springboards for the launch of new products and services.

New products included in the 2009/2011 strategic plan are regulatory approval advice, shelf life and manipulating food structure, weight management studies and expansion of the blood analysis service, while in the area of safety, microbe culture maintenance and microbiology testing are expanding services, and for all knowledge and regulatory advice, expansion is planned into new geographical areas.

With respect to market development, FOODRA2 currently obtains half its income from overseas and the CEO plans to develop further its overseas markets. The

EU and UK governments are not considered to be an important source of income. At present 5% of income comes from the Food Standards Agency and the CEO expressed a preference for working with commercial clients. Supermarkets are important to FOODRA2, with increasing emphasis on supplying cooking instructions and label checks, with expertise in regulation, food innovation, nutrition and safety being targeted to the retail trade.

FOODRA2 has a series of advisory panels, and senior staff visit member firms. Two satisfaction surveys are carried out annually and there are three open days each year with each focusing on safety, nutrition or food innovation. Feedback questionnaires are sent to all participants of conferences and training courses, and questionnaires sent on a sample basis to companies for whom investigations have been carried out.

The website is the organisation's major publicity tool.

FOODRA2 also runs a legal helpline.

Access to capital for expansion is a problem, as new equipment has to be financed out of surpluses, which have not been generated over recent years. Selling the present site and moving to cheaper accommodation has been considered, but has not been followed up.

Strategic options

The board considered changes to FOODRA2's constitution, including a venture capital finance management buyout, which was considered "no way forward" at the time of the interview but which may be considered in the future. An employee

benefit trust was also explored. No changes were however implemented as at the date of interview.

Summary

Governance: The governance is not satisfactory. The organisation is jointly managed by the executive and non-executive directors. This fits the partnership model in Cornforth's (2003) terms.

Strategy: FOODRA2 has a singular strategic aim to return to profitability in order to secure the future of the organisation. The strategy is a precisely defined programme of work set out in the strategic overview table 7.2. Neither the CEO nor the non executive director refer to flexibility in their approach to strategy hence a deliberate strategy process which coupled with the singular strategic aim can be classified as classical (Whittington, 2001).

7.3.3 Comparison and analysis of the two research associations in the food sector

Introduction

Since 1994, when both research associations in the food sector employed 215 staff, FOODRA1 has grown in staff numbers, reaching a peak of 375 in 1999 and declining to 300 staff between 2002 and 2007, and subsequently increasing in 2008 to 344 as a result of an acquisition. FOODRA2 on the other hand has experienced a decline in staff numbers, flattening out between 2003 and 2007 at a level of 190 staff.

From Table 7.1, over the five-year period 2004-2008 it can be seen that FOODRA1 has a superior performance rating, of 3.46 compared to -2.51 for FOODRA2

Governance

FOODRA1 has had one CEO since 1988 while over the same period FOODRA2 has had four CEOs.

FOODRA1 has maintained its original governance structure, with both a council and an executive board. The executive board is a subset of the large (26 member) council. The board is unusual in that it does not have representation from the executive directors. In practice both the council and the executive board are advisory and FOODRA1 is run by the executive directors.

As noted before, the CEO of FOODRA1 told the researcher that the governance and management of the organisation “functions on relationship and trust”.

FOODRA2 has no council; this is unusual for a membership research association. As a result, the members have no input into the running of the organisation. The executive board has two executive and two non executive directors. The two external members are appointed on the basis of the expertise they can bring to the organisation rather than to represent the members. This can be viewed as fitting the partnership model of Cornforth (2003).

According to the CEO of FOODRA2, the executive board works well without tension. It would seem that relations must have improved since the attempt at an unsuccessful management buyout. However the non-executive director of

FOODRA2, in response to postal questionnaire, expressed a view of wishing to increase the number of non-executive directors, hence tightening their control over the organisation. This suggests that the present arrangement is not satisfactory from the point of view of the non-executive director.

FOODRA1 has not attempted to modify its governance; the running of the business is left to the executive directors who, as the CEO put it, “know the business”. In contrast, FOODRA2 is run jointly by the executive and non-executive directors.

Strategy

FOODRA1 has profitable growth as its strategic aim. The CEO expressed a commitment to ensuring that he is not part of a declining organisation, once again demonstrating that growth is the main aim of a management-controlled organisation.

After almost a decade of loss-making and with a large pension deficit, FOODRA2 has a strategic aim of returning to profitability (and this was finally achieved in 2008).

FOODRA1 has grown by the acquisition of two other research associations in 1994 and in 2008. Its strategy appears to be not to develop new products in house but rather one of relying on testing and analytical services as 'cash cows' and relying on new products and markets through acquisitions.

FOODRA2 on the other hand has a strategy of developing new products based on its platforms of regulatory, innovation, nutrition, safety and knowledge.

The two food research associations therefore have different strategic aims: FOODRA2 of returning to profitability and FOODRA1 one of profitable growth, both leading to maximising long term advantage. Both have a planned strategy, with FOODRA2 having a more detailed strategic plan. FOODRA1 is more prepared to take opportunities such as acquisitions when the opportunities present themselves.

FOODRA1 has a strategy which is profitable growth and entrepreneurial, an evolutionary strategy (Whittington, 2001).

FOODRA2 strategy can be described as classical, being deliberate, with no mention of flexibility, and focused on maximising long term advantage by becoming profitable.

Summary

The governance of FOODRA1 is democratic in representing members' interests, while FOODRA2's governance fits the partnership model, under the Cornforth (2003) classification.

The greater success of FOODRA1 can perhaps be attributed to a more stable and trusting style of governance, where in fact the executive directors run the organisation, with a council and board monitoring progress.

FOODRA2 has a partnership model of governance; however, with high turnover of chief executives (four CEOs since 1998) the organisation has had internal

problems and even now the non-executive director wants more representation on the executive board.

The strategy of FOODRA1 has been growth by acquisition, with the new acquisitions bringing new expertise and market opportunities to the organisation. FOODRA2 now has a well-developed strategy for developing its business.

Governance:

Satisfactory:

RA1 : yes

RA2 : no

Run by executives:

RA1 : yes

RA2 : no

Model: Cornforth (2003)

RA1 : democratic model

RA2 : partnership model

Strategy:

Strategic aim:

RA1 : singular

RA2 : singular

Strategy process:

RA1 : entrepreneurial

RA2 : deliberate

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : classical perspective on strategy

7.4 Transport sector

(Research associations referred to as TRANSPORTRA1 and TRANSPORTRA2)

7.4.1 TRANSPORTRA1

Background

TRANSPORTRA1 was formed in 1985 following a merger between a privatised government research establishment and a research association which was itself the result of an earlier merger.

TRANSPORTRA1 acted as a holding company with, in 2008, 29 subsidiary companies. TRANSPORTRA1 has grown from employing 210 people in 1989 to 1200 in 2008.

TRANSPORTRA1 is an employee benefit trust. According to the CEO, this structure was adopted in order to prevent TRANSPORTRA1 being the subject of a hostile takeover and also, since at that time it had only nine members, it prevented these members from impeding the development of TRANSPORTRA1.

TRANSPORTRA1 is a very successful organisation with a turnover for the year ended September 2007 of £94.5M, which made it by far the largest research association in the UK at that time. 2007 saw an increase in turnover of 12% over the year 2006, a 3% growth in profits. From the profits, £5.2M was returned to the employees in the form of a bonus.

TRANSPORTRA1 has no members.

TRANSPORTRA1 had only one CEO from its formation until his retirement in 2005. The CEO at the date of the interview, joined TRANSPORTRA1 in 1990 and was appointed CEO in 2005.

Governance

The governance of the organisation is carried out by a board of directors consisting of two executive directors, the CEO and the financial director, and three non-executive directors. The non-executive directors are appointed on the basis of the expertise they can bring to the organisation, including a professor of strategy and a high-ranking retired civil servant. The main function of the board, which meets six times a year, is to monitor performance against agreed strategy.

Strategy

Strategy development

Formal strategic planning started in 2005.

The strategy process takes about six months to complete, and all plans are approved at the end of each financial year, hence the three-year strategic plan is updated on an annual basis.

The CEO stated that the strategy process is moving towards a continuous process, a 'scoreboard approach' in his terms.

Various strategic tools are used in the operating companies, with SWOT the most popular.

The CEO firmly viewed the staff as the most important stakeholders, although he suggested that if the researcher were to ask the same question of the operating companies, the answer would probably be 'clients', since they generate the income.

Strategic competencies

TRANSPORTRA1 does not have a portfolio of patents, although it is careful to protect its intellectual property rights, which it does by using copyright legislation. Copyright is obtained on designs so that they can be used with other clients. It also obtains royalties on these repeat designs.

Reputation is considered to be of paramount importance and effort is being put into branding the TRANSPORTRA1 name with its four key values.

Employee knowledge is good but, in the CEO's view, it is important to capture employee knowledge, since in a large organisation there is a tendency for some staff to keep this knowledge to themselves and when they retire or leave the organisation the knowledge is lost.

Team working is important and training is central to the organisation, with training in leadership, marketing, and customer service and the staff are well aware of the importance of the customer.

Strategy overview

After a decade of rapid growth, profitability has replaced growth as the primary strategic aim.

The company is being restructured to reduce the number of operating companies.

Each business has its own business plan and all heads of operating companies receive a copy of the overall strategy plan.

TRANSPORTRA1's vision statement is shown in Table 7.3 below.

Table 7.3 TRANSPORTRA1 vision statement, year 2008

The source...	Definitive: setting the standard Singular: the group as an entity Language: original; of inspiration
of high value...	Positioning: high end of customer needs Work profile: leading world class projects Earnings: command higher fees Invention: beyond the every day Valuable: for all concerned
insight and...	Talent: imaginative and clear thinking Experience: cumulative strength Added value: beyond learning and skills
knowledge	Quality: integrity of thought Range: multi-disciplinary Discipline: technical excellence....it grounds insight

Source: TRANSPORTRA1 strategy document (2008)

The main strategic aim is now profitability rather than growth, since, as the Chief Executive explained, growth without increase in profits means with increased staff, individuals will get a reduction in benefit. If however the size remains constant and the organisation becomes more profitable there will be more profit to be distributed in the form of bonuses to existing staff.

The company has in the past grown by acquisition but it is now tending to grow organically.

In this CEO's view, it is important that staff have time to develop their own ideas, and 6% of revenue is devoted to this end. The ultimate aim is that new opportunities will emerge from the work that staff undertake.

The sales pattern is 57% sales to Europe, 24% to North America and 19% to the rest of the world.

Oil and gas are becoming more important to TRANSPORTRA1, particularly in exploitation and pipeline products, and TRANSPORTRA1 has been involved in the welding of pipeline.

In addition to ship transport, rail transport consultancy is also being undertaken, with particular reference to better maintenance with more reliable maintenance schedules.

With respect to markets, defence accounts for 32% of sales, energy and the environment 29%, risks and insurance 13%, maritime transport 20%, and ports and logistics 6%.

members are elected by the membership. The organisation has a strong market control rather than a professional control.

Strategy: CONSTRUCTIONRA1 does have a formal strategy but the CEO emphasised the importance of flexibility. Staff are considered by the CEO to be the most important stakeholders and reputation is the number one strategic competence.

The principal strategic aim is growth, both organic growth, and, increasingly, growth by acquisitions with the aim of maximising long term advantage. Thus the strategic aim is singular. The strategy development process is entrepreneurial because although there is a formal strategy document the emphasis is on being entrepreneurial, flexible and modifying the strategy as needed. Hence the strategy classification can be said to be evolutionary, in Whittington's (2001) terms.

7.5.2 CONSTRUCTIONRA2

Background

CONSTRUCTIONRA2 had its origin in the early 1960s in a civil engineering research group which in 1964 became the Civil Engineering Research Association. Shortly after the association's establishment it was proposed that it should expand its function to cover building as well as civil engineering. It was also proposed that the new organisation should provide an information service for the whole of the construction industry and in 1967 the articles of association were amended and its name changed. The characteristic of CONSTRUCTIONRA2 which distinguishes it from other research associations is that it has no laboratory facilities – it operates by contracting out its research programme to appropriate

CEO stated that strategy setting is moving towards a continuous process and the organisation's strategy can be classified as evolutionary under the Whittington classification.

7.4.2 TRANSPORTRA2

Background

In 2001 TRANSPORTRA2 changed its name to more accurately describe its then current activities. The company did not change its limited by guarantee status when it changed its name as, according to the CEO, a company without shareholders and limited by guarantee reflects the independence and not for profit credentials of the organisation.

In the year ended December 2007 the turnover of TRANSPORTRA2 was £28.4M and the average annual income of the period 1998 -2007 was £29.2M. The workforce over this period fell from 558 for the year 1998 to 368 in 2008.

The CEO with whom the interview was conducted was due to retire at the end of 2008 and was appointed in 1991. This was an external appointment. His successor had been appointed, again an external appointment, but had not taken up his appointment at the date of the interview.

Governance

TRANSPORTRA2 was governed by a council until 1997, when council was replaced by a board consisting of five non-executive directors and four executive directors who are directors under the Companies Act. The non-executive directors

used to be elected from the members, but this has changed and the non-executive directors are now beginning to reflect other aspects of TRANSPORTRA2's business - a move from a democratic to a partnership model of governance. The board meets four times a year. In practice there is no evidence of the executive directors running the organisation.

According to the CEO, membership has reduced over the years, owing to amalgamations in the industry, and TRANSPORTRA2 in 2008 has only 50 members, whose total subscriptions amount to only 0.3% of TRANSPORTRA2's income. However the members contribute nearly 50% of the annual turnover through purchase of services.

Strategy

Strategy development

Strategic planning started in the early 1990s soon after the appointment of the present CEO. Up until that point TRANSPORTRA2 was adequately supported by its industry and alternative strategies were not developed.

The CEO said that the board looked long and hard at the *raison d'être* for TRANSPORTRA2 and the outcome was "A successful, sustainable business providing rewarding employment for the staff": a plural strategic aim.

The strategic plan is for a five-year period, with an annual review. The process has a 'bottom-up' approach, with departmental managers having an input to

formulate group strategy. These strategies are co-ordinated by the executive directors into a draft strategy document.

The full board briefly discusses this strategy document at one of its regular quarterly meetings. Then a full day is set aside for the executive directors to produce the final draft strategy document, and at the following quarterly meeting of the executive board the final draft is amended if necessary, and then approved.

The focus appeared to be more on diversification and fostering new start-up ventures than on the needs of the existing client base.

The principal tool used in the strategy formulation process is that supplied by the European Federation for Quality Management, (2011).

The Chief Executive held the view that the staff are 'number one' stakeholders. Members and clients are considered of equal importance but not as important as the staff.

Strategic competencies

Employee knowledge is vital. The CEO believed that staff stay with TRANSPORTRA2 because the work they do is technically challenging and has variety. Job satisfaction is recognised as important.

Of the strategic competences, reputation is of primary importance.

TRANSPORTRA2 employed consultants in order to identify the clients' view of the organisation. The message they received was of a good, technically competent

but somewhat old-fashioned organisation. The image TRANSPORTRA2 is working towards is a flexible, responsible, responsive one.

Issues and threats

The final salary pension scheme was reluctantly closed and TRANSPORTRA2 now has a large pension liability which is deemed to be manageable.

The CEO stated that the economic cycle of TRANSPORTRA2 is not in phase with that of its clients, as when the industry is facing a recession they tend to sub-contract more work out to TRANSPORTRA2.

Strategy overview

TRANSPORTRA2 has ambitions to grow, but not at the expense of staff satisfaction.

According to the CEO, survival has been the strategy since the '9/11' incident but now he has a growth strategy which needs to be sustainable and also to provide rewarding employment for staff.

Acquisitions are sought and a successful design company has been acquired, which enabled TRANSPORTRA2 to diversify into other markets.

TRANSPORTRA2 acts as an incubator for start-up companies and as at 2008 housed 32 separate companies employing 200 people who make use of TRANSPORTRA2's facilities, services and security. The legal structure of TRANSPORTRA2 facilitates the acquisition of small companies where the owner

is looking for a safe haven for his staff. TRANSPORTRA2 acts “as a godfather”, as the CEO put it.

The CEO has a co-operative/competitive outlook and mentioned other organisations with which TRANSPORTRA2 both co-operates and competes.

TRANSPORTRA2 is active in graduate training. Recruitment is reportedly not a problem, with low staff turnover and no overall expansion of staff.

The main business drivers are in the areas of safety, the environment and legal product liability. A total of 50% of the organisation's income is derived from safety, spanning physical testing, modelling and simulation.

TRANSPORTRA2 is global and has offices in China, India and South Korea.

TRANSPORTRA2 participates in European programmes of research, important for networking, but this only produces 1-2% of total income.

Strategic options

An employee benefit trust has been seriously considered and may happen in the future. However at the time of interview the CEO was content with TRANSPORTRA2 being a company limited by guarantee for reasons already given, i.e. independence and long-term stability. The disadvantage of this structure is difficulty in raising capital.

The retiring CEO suggested he contacted his successor for non executive director comments. Contact was made but the new CEO was unwilling to provide information at this point.

Summary

The governance of TRANSPORTRA2 has developed from council control through its membership, a democratic model, to governance by an executive committee consisting of executive directors and non-executive directors who are now appointed on the basis of the expertise they bring to the organisation rather than representing the interests of the membership: a partnership model (Cornforth, 2003).

The strategic aim is plural in Whittington's (2001) terms, being growth and for the benefit of the staff. The strategy process is deliberate, having a carefully drawn up strategy plan, resulting from the use of the European federation for quality management strategy procedure. TRANSPORTRA2 has strong market control but still has an element of professional control with staff being provided with interesting work.

Governance: A partnership model with the executive and non-executive directors working together has been adopted.

Strategy: A plural strategic aim, maximising long term advantage and providing staff with challenging and rewarding work. The strategy process is deliberate as a result of the formal strategy formulation process, and hence the strategy can be defined as systemic.

7.4.3 Comparison and analysis of the two research associations in the transport sector

Introduction

In 1990 both TRANSPORTRA1 and TRANSPORTRA2 employed approximately 600 staff. By 2008 TRANSPORTRA1 staff numbers had doubled to 1200 while TRANSPORTRA2's staff numbers had fallen below 400 by 2003, remaining stable at that number to 2008. Both organisations have had a high QuiScore since 2004 (well into the top, 'secure') band. From Table 7.1, over the five-year period 2004-2008, it can be seen that TRANSPORTRA1 has the superior performance rating of 7.61 compared to -0.54 for TRANSPORTRA2

Governance

Unlike most research associations, TRANSPORTRA1 now has no members and is therefore free to adopt a governance structure that is not influenced by the 'baggage' of membership control. The status of the company is an employee benefit trust, which was established by the CEO who developed the organisation between 1985 and 2005. TRANSPORTRA1 is governed by a board composed of two executive directors and three non-executive directors who are appointed on the expertise they bring to the running of the company. The main function of the Board, according to the CEO at interview, is to monitor performance against strategy. This view is confirmed by the non executive director who uses the phrase to 'constructively scrutinise'. So the organisation is, in practice, run by the executive directors.

In 1997, TRANSPORTRA2 council was replaced by a board. The board is now responsible for the governance of TRANSPORTRA2. The role of the non

executive directors has recently (in 2008) been changed from representing the interests of members to providing expertise to the organisation. The role of the board under Cornforth's (2003) classification has therefore changed from democratic to partnership.

Both the boards of TRANSPORTRA1 and TRANSPORTRA2 set targets and monitor progress.

Both TRANSPORTRA1 and TRANSPORTRA2 consider their governance to be satisfactory.

Strategy

The strategy process of TRANSPORTRA1, according to the CEO, is that “the board is moving towards a continuous review of strategy”. The strategy is therefore not classical. Rather, it is emergent, a Darwinian process that typifies an entrepreneurial strategy process. The divisional structure of TRANSPORTRA1, with its large number of operational companies, some as a result of acquisitions, is consistent with an evolutionary structure as described by Whittington (2001):

“... for classical and evolutionary perspectives however diversification is a perfectly logical development ensuring the rational and efficient use of resources” (Whittington, 2001, p. 82).

Whittington goes on to state that for evolutionary perspectives, structure follows strategy (Whittington, 2001, p. 107); this is consistent with TRANSPORTRA1's diversified structure. TRANSPORTRA1 strategic aim is now profitability rather than growth. TRANSPORTRA1's product range indicates diversification from the

original focus into areas such as the environment and energy. TRANSPORTRA1 also has a strategy of internationalisation, with 57% of Sales in Europe, 24% in North America, and 19% in the rest of the world. Innovation is also important to TRANSPORTRA1. Staff can spend 6% of their time on developing technologies of their own choice. The product range embraces innovative design features which are protected by IPR. TRANSPORTRA1 follows a strategy of diversification, internationalisation and innovation.

TRANSPORTRA1's strategic aim is profitability rather than growth, as its preferred route to maximising long term advantage

In contrast, TRANSPORTRA2's strategic aim is pluralistic; "a successful sustainable business providing rewarding employment to staff" (CEO interview). The strategy development process is formal and deliberate, indicating a systemic perspective on strategy. This is consistent with the social element of strategy, staff satisfaction, and also the focus on the nature of the research association, which can be likened to a society or club. TRANSPORTRA2 has diversified into defence and related fields, and Whittington's (2001, p. 97) comment on the systemic perspective that: "diversification is suspected as reflecting more the managerial interest in growth than the shareholder interest in maximising profits" seems relevant here. TRANSPORTRA2 is more involved in the safety aspect of vehicles rather than in their design, hence it could be argued that TRANSPORTRA2 is less innovative than TRANSPORTRA1 and hence less secure and more open to competition.

Summary

Both organisations have a satisfactory and similar governance, a partnership model (Cornforth, 2003).

TRANSPORTRA1's strategic aim is maximising profits leading to maximising long term advantage and the strategy process is emergent. It thus can be seen as following an evolutionary strategy under the Whittington (2001) classification.

TRANSPORTRA2's strategic aim is plural (growth and staff interest) and is arrived at via a deliberate process; hence the strategy can be classified as systemic under Whittington's classification.

Governance:

Satisfactory:

RA1 : yes

RA2 : yes

Run by executives:

RA1 : yes

RA2 : no

Model: Cornforth (2003)

RA1 : partnership model

RA2 : partnership model

Strategy:

Strategic aim:

RA1 : singular

RA2 : plural

Strategy process:

RA1 : entrepreneurial

RA2 : deliberate

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : systemic perspective on strategy

7.5 Construction sector

(Research associations referred to as CONSTRUCTIONRA1 and CONSTRUCTIONRA2)

7.5.1 CONSTRUCTIONRA1

Background

The formation of this research association in 1955 was not by a trade association set out to serve or protect a very specific interest, but rather by a professional institution that from the beginning incorporated into the thinking, and ultimately into membership, members of the supply chain in this sector of the building industry. The CEO stated that this was one of the strengths of the association because it was not constrained by the interests of a particular industrial sector.

The professional body also had an influence on the development of the association when, in 1975, the professional body widened its mandate to all building services and at the same time encouraged the research association to follow suit – which it did.

A further factor which had an influence on the development of CONSTRUCTIONRA1 was the early realisation of the importance of marketing. The previous CEO told the researcher in 1997 that he was originally employed as the marketing manager with the job of developing the association's contract work. The marketing director (in 2008) in the view of the CEO makes a valuable contribution to the continuing success of CONSTRUCTIONRA1. This is an example of a research association recruiting staff with marketing expertise to help

make the transition from a 'professional control' strategy to a 'market control' strategy. (Whittington, 1991).

For the year ending 30 March 2008 the turnover of CONSTRUCTIONRA1 was £9.935M, with a trading surplus of £694,000. Over the past ten years i.e. 1999-2008, the average pre-tax profit has been £82,000 with turnover increasing from £4.9M in the year ended 30 March 1999 to its 2008 level, a doubling of income over the period in terms which have not been corrected by inflation. Hence CONSTRUCTIONRA1 can be considered to be successful in terms of sustainable growth and financial stability.

The CEO of CONSTRUCTIONRA1 has been in office since 1998. He holds a degree in physics and has worked at the association since 1975. He is due to retire in 2012. The previous CEO had also worked at CONSTRUCTIONRA1 for a long time, in his case 30 years. The association therefore has a history of the internal promotion of long-serving employees.

Governance

CONSTRUCTIONRA1 has both a council and a board.

During 2000, the legal identity of the company was changed, with the company being split, the holdings company, a company limited by guarantee, remaining as the membership organisation, and CONSTRUCTIONRA1, a wholly owned subsidiary, as a trading company. The reason for this split, according to the CEO, was to isolate the company from Corporation Tax liability following changes which were enacted in Section 508 of the 1998 Companies Act. This structural change was suggested by a government official. In the CEO's view, however, the

restructuring was unsatisfactory for the following two reasons. Firstly, research associations were exempt from Corporation Tax if their principal activity was research. However the Ministry changed its definition of 'research' to 'pure research', and also the criterion was changed from the majority of the effort being devoted to research to all the effort being devoted to research. Hence following this redefinition of research the intention that the trading company should be exempt from Corporation Tax was no longer possible. Secondly, in order for the revised structure to be effective, the surplus generated by CONSTRUCTIONRA1, the trading company, would have to be transferred to the holdings company and spent on research. This would mean in practice that CONSTRUCTIONRA1 would not be able to retain surpluses to generate future business.

The council consists of 35 members, all representatives of the association's members.

The board was created out of council in 1989 and, according to the CEO, if the board had not been formed, CONSTRUCTIONRA1 "would have encountered severe problems".

The board as at 2008 consists of five non-executive directors including a chairman, and four executive directors. The executive directors comprise the CEO, the marketing director, the engineering director and the financial director. The non-executive directors are members of council proposed by council and elected at the AGM. According to the CEO, the council have no involvement in the running of the association, although, as shareholders, could voice concerns at the AGM.

The council meets three times a year and council members are elected for a three-year period with the possibility of re-election. The function of the board as articulated by the CEO is an “approving and improving body”. Papers for board meetings are carefully prepared by the executive team so that the meetings run smoothly. The chairman of CONSTRUCTIONRA1 is chairman of both the council and the board. The board has an internal focus and the council an external focus. According to the CEO at interview, there were no tensions between council and the board; this is perhaps hardly surprising since the board is a subset of council. Additionally, it was stated that there were no tensions between the executive and non-executive directors. The CEO indicated that the executives are very much in control in the running of the association.

Strategy

Strategy development

CONSTRUCTIONRA1 has had a strategic planning process since 1992. The trigger for the introduction of the formal process came from the marketing director, who obtained an MBA at Cranfield. In theory the strategic plans cover a five-year period, but in practice they are often superseded by a new or revised plan after four years. The present plan is in its third year but work is already under way for the next strategic plan. The reason the researcher was given for this initiative is that the present CEO is due to retire in 2012 and wished to have a plan in place for his successor.

For the previous strategic plans, a 'bottom-up' process was adopted and the seven business managers put forward their plans for the development of their sections of the business. From this input and after much discussion a plan was agreed and

submitted to the board for approval. One shortcoming of this process, as was pointed out by the CEO, is that it did not produce innovative ideas but tended rather to maintain the status quo.

The present strategic planning process therefore started with a brainstorming meeting, with the four executive directors and the seven business managers each asked to put forward one “big idea for the strategy plan” which was not resource-limited. These big ideas were discussed and a consensus obtained on which should be the principal elements for the new strategy document. This brainstorming meeting involved people with market knowledge, knowledge of internal strengths and weaknesses of the organisation, together with financial and political expertise.

The production of the strategy plan is in the hands of the executive directors and senior staff.

As far as analytical tools used in the strategic process, SWOT had been used in the past, but the CEO has some reservations on SWOT as (in his view) it tends to perpetuate the status quo, so in future less importance is being assigned to this tool. As far as the researcher could ascertain, SWOT has not at the time of the interview been replaced by another strategy tool.

With reference to the importance of stakeholders, the CEO unhesitatingly ranked the staff first, followed by the clients, and members viewed as less important than clients. Members number 700 compared to 4500 clients, and also only contribute 20% of the income of the association.

Strategic competencies

With regard to strategic competences, reputation was considered to be the most important, followed by employee knowledge and customer service. Patents and licences are not important to CONSTRUCTIONRA1. The important strategic competences come under the headings of positional (reputation), functional (employee knowledge) and cultural (team working).

Issues and threats

Other important drivers for a new strategic plan are the pension issue and the perceived need to build a more coherent organisation.

The CEO stressed the importance of project champions, or “heroes” as he calls them. New projects will not succeed without such a person, and the identification of the hero is essential for any successful development. In his opinion, in a small organisation, the project depends on the hero, and if the hero leaves the organisation, the project will lose momentum.

Strategy overview

The principal strategic aim is growth, both organic growth, and of increasing importance, growth by acquisition. CONSTRUCTIONRA1 has been successful with a number of acquisitions and is looking for future opportunities. The CEO is very firm that growth must be sustained from the surplus generated from income, and is very much against borrowing money.

CONSTRUCTIONRA1's values are summarised in its strategy document as at 2008 “to be independent, open and authoritative, agile and sustainable, sharing and supportive”. At the start of the interview the CEO had stressed the flexibility

and agility of his organisation, and that its strategic plan in no way prevents new opportunities being vigorously followed up.

With reference to product development, Table 7.4, lists income from activities for the year 1995/1996 and the year 2007/2008 as stated in the annual reports.

Table 7.4 CONSTRUCTIONRA1's stated income and activities, 1995/6 and 2007/8

1995/6	2007/8	Activities
19%	26%	Instrument Solutions. Hiring out of test equipment to the industry.
0%	22%	World Wide Market Intelligence.
	22%	Test Engineering and Commissioned Research.
28%	13%	Test and Consultation.
10%	12%	Membership Information and Training.
15%	0%	Information and publications.
28%	4%	Collaborative Research.

It can be seen that over the period 1995/6 to 2007/8 the collaborative research programme has been drastically reduced as a percentage of activities and has been replaced by worldwide market intelligence and testing and consultancy.

The growth area identified for the forthcoming strategy plan is energy and the carbon footprint, driven both by increasing legislation in this area and companies' needs to reduce energy costs.

Market development is based on CONSTRUCTIONRA1's in-house market research facility and seizing opportunities when they occur. An example of the latter is CONSTRUCTIONRA1's opening an office in Beijing in China. The organisation employed three Chinese staff in their market research facility. One member of this group wanted to return to China and CONSTRUCTIONRA1 saw the opportunity of this person establishing a presence in China. This has been done and the facility in China will be expanded to include training and technical advice. CONSTRUCTIONRA1 is looking towards the Middle East for its next overseas office, to add to those in France and Germany.

For the year 2007/2008, 18% of CONSTRUCTIONRA1's income came from exports, with 11% from Europe and 7% from elsewhere.

No returned questionnaire was obtained from the non executive director of CONSTRUCTIONRA1. He was contacted by telephone and confirmed that the account given by the CEO was correct and that the organisation was well managed.

Summary

Governance: The management of CONSTRUCTIONRA1 is in the hands of the executive directors. The council and the non-executive directors have an "improving and approving role" as defined by the CEO. The governance model is democratic in Cornforth's (2003) terms as all council and non-executive board

members are elected by the membership. The organisation has a strong market control rather than a professional control.

Strategy: CONSTRUCTIONRA1 does have a formal strategy but the CEO emphasised the importance of flexibility. Staff are considered by the CEO to be the most important stakeholders and reputation is the number one strategic competence.

The principal strategic aim is growth, both organic growth, and, increasingly, growth by acquisitions with the aim of maximising long term advantage. Thus the strategic aim is singular. The strategy development process is entrepreneurial because although there is a formal strategy document the emphasis is on being entrepreneurial, flexible and modifying the strategy as needed. Hence the strategy classification can be said to be evolutionary, in Whittington's (2001) terms.

7.5.2 CONSTRUCTIONRA2

Background

CONSTRUCTIONRA2 had its origin in the early 1960s in a civil engineering research group which in 1964 became the Civil Engineering Research Association. Shortly after the association's establishment it was proposed that it should expand its function to cover building as well as civil engineering. It was also proposed that the new organisation should provide an information service for the whole of the construction industry and in 1967 the articles of association were amended and its name changed. The characteristic of CONSTRUCTIONRA2 which distinguishes it from other research associations is that it has no laboratory facilities – it operates by contracting out its research programme to appropriate

institutions. During the interview the CEO stated that this flexibility allows it to respond to industrial needs, since the research programme does not depend on in-house expertise and available laboratory equipment. Both the Bessborough (1973) and Jones (1972) reports observed that membership was small compared to the size of the industry that CONSTRUCTIONRA2 serves. This situation is still true today. The Keynote (2009) gives a value of the UK construction industry in 2008 as £123.24 Billion. This figure is double the turnover of the food industry. CONSTRUCTIONRA2 has only one-seventh of the turnover of FOODRA1 and FOODRA2 together.

In terms of its structure, CONSTRUCTIONRA2 is a company limited by guarantee.

The CEO was an internal appointment, made in 2006. Prior to his appointment there was a long-serving CEO from 1986 to 2002, and a second CEO from 2002 to 2006.

Governance

CONSTRUCTIONRA2 is very much a membership organisation, with the members running the organisation and selecting the programmes of work. This is achieved through a number of advisory committees.

CONSTRUCTIONRA2 has a council and a board. Prior to 2004, council members were elected from the core membership, but since 2004 all 70 core members have a representative on the council. The council has an advisory role. The executive board meets quarterly.

The board was established in 2004 and is made up of three executives and four non-executive directors, including the chairman. The executive board, according to the CEO, "has full control". The non-executive board members are not usually the same company representatives as those on council, but are selected for the expertise they can bring to the running of the organisation; a democratic model, in Cornforth's (2003) terms.

Strategy

Strategy development

According to the present CEO, CONSTRUCTIONRA2 had a strategy and strategy formulation process up to 2002 but this was not followed by the CEO during the years 2002 and 2006. It was reinstated by the present CEO following his appointment in 2006. The current strategy (as at the date of interview) is for the three-year period 2008 to 2010. The executive board was involved in the formulation of the strategy; that is, not just approving it. The process was that the executive produced strategy working papers and the full board including non-executive directors had two separate one-day workshops, at which the options were evaluated and a strategy agreed. The council was not involved in the strategy formulation process, nor was council asked to approve the strategy.

The timescale for the organisation's strategy development was six months and the strategy document went through more than five drafts. The CEO consulted with a sample of eight core members to obtain their opinion on the strategy document.

SWOT was used in strategy development and the CEO emphasised that strategy formulation was not a mechanistic process.

Members are, according to the CEO at interview, the most important stakeholders. They run the organisation and receive its benefits.

With regard to strategic competences, it was stated that reputation is foremost, employee knowledge is good; however there is a need to improve links with the membership.

There is still an element of professional control, Whittington, (1991) but there is a move towards market control.

Issues and threats

CONSTRUCTIONRA2 participates in EU Framework programmes but finds the UK government difficult to deal with, having had six ministers responsible for construction in the last seven years.

Strategy overview

The CEO of CONSTRUCTIONRA2 stated at interview that: "We have no mandate to grow the business", and the strategic aim of CONSTRUCTIONRA2 is to provide better support for the industry it serves and to focus on defining higher aims. The CEO stressed that CONSTRUCTIONRA2 has to be in a good financial state in order to fulfil its objectives. In fact a sizeable surplus was generated during the year 2007 and a further surplus is planned for 2008 (the current year at the time of the interview), but this is not the primary strategic aim, which is one of serving the industry. The profitability of CONSTRUCTIONRA2 is seen as a means towards this end.

CONSTRUCTIONRA2 has no strategy to acquire or merge with other organisations but would consider acquisitions if it would help meet their primary strategic aim.

According to the CEO, CONSTRUCTIONRA2 has a co-operative stance and co-operated with the Building Research Establishment, which is a privatised government research laboratory. CONSTRUCTIONRA2 is very sensitive about competing with its members and for that reason does not undertake consultative work, which could be in direct competition to some of their interests.

Membership will be increased, not for financial reasons, as pointed out by the CEO, but to improve links with the industry. However more members contributing to the core programme of work will improve the 'gearing' for each and every member.

During the interview it was noted that in January 2009 a new grade of associate member would be launched. Associate members will receive restricted benefits at a reduced cost and will not have a seat on the council.

A membership manager has been appointed; this is a new post, with a remit to still further improve links between CONSTRUCTIONRA2 and its members.

The CEO expressed a wish to expand the information service to members, both by circulating written briefings on ongoing projects and by producing a newsletter to signpost members to matters of real concern and interest.

In 2007, of the £4.1M total turnover, 58% was spent on research, 16% on publications, and 14% on networks and events. The remaining 12% was spent on

core membership activities. The 2008 annual report claims that 3400 people attended over 100 separate events and that CONSTRUCTIONRA2 offered over 600 titles. CONSTRUCTIONRA2 also obtained funding for 70 projects covering the following topics, as tabled in the association's 2008 annual review:

- Managing archaeological risk in construction
- Whole life infrastructure asset management across industries
- Remediation of explosive sites
- Case studies of the segregation, collection and recycling of waste plasterboard
- Construction site of the future
- Delivering the sustainable construction product - scoping study
- Designing for crowd behaviour
- Safer surfaces to walk on - slip resistance of floors
- Iron and steel bridges: condition appraisal and remedial treatment
- Sustainable drainage systems - guidance on technical design and construction
- CDM regulation 2007 - update of CONSTRUCTIONRA2 guidance
- The rock manual
- Masonry arch bridges - appraisal and remedial treatment
- Low carbon homes - European mission co coordinator
- Sustainable construction strategy consultation support

With reference to new markets, CONSTRUCTIONRA2 sells publications abroad, in particular to Hong Kong. An office in the Middle East was seen as a potential future development, but the level of investment was (in the CEO's view) too high for such a move at the date of interview, (2008).

Strategic options

Strategic options were considered during the strategy formulation process and it was agreed to follow the membership model and not to undertake commercial consulting work which could conflict with the interests of the membership.

Summary

CONSTRUCTIONRA2 operates very much like a traditional research association, set up to serve its members, and a particular sector of industry. It is very sensitive about engaging in any activity which could spoil this relationship. The CEO is very aware that this strategy has a potential danger in the present economic downturn, since CONSTRUCTIONRA2's output is research, an activity with a long lead time, and members may be tempted to resign from membership in order to reduce expenditure (since research may not have a great impact in the short term). However, CONSTRUCTIONRA2 is determined to remain a research organisation.

The organisation is slowly moving from professional control to market control, with the non-executive directors responding to the researcher's questionnaire emphasising the importance of raising the profile of the organisation.

Governance: CONSTRUCTIONRA2 is jointly governed by the members and the executive directors, with the membership appearing to have the greater input. No problems were identified. It can therefore be seen as fitting a democratic model of governance, in Cornforth's (2003) terms.

Strategy: The strategic aim is not growth. The strategic aim is to serve the industry and be viable and is thus plural. The strategy process is deliberate, with very little

scope for flexibility as the research programme is fixed and sub-contracted. The strategy can be classified as classical, in Whittington's (2001) classification.

7.5.3 Comparison and analysis of two research associations in the construction industry

Introduction

The two research associations serving the construction sector are complementary, with CONSTRUCTIONRA2 concentrating on the civil engineering needs of the industry and CONSTRUCTIONRA1 on building services. Both were formed post-second world war, CONSTRUCTIONRA2 in 1964 and CONSTRUCTIONRA1 established in 1959. CONSTRUCTIONRA2, although smaller than CONSTRUCTIONRA1, serves a much larger proportion of the construction industry. CONSTRUCTIONRA1 has no growth strategy of diversifying into contract research.

CONSTRUCTIONRA2 is very traditional in that it only carries out a programme of co-operative research, the results of which are only available to its membership. It is also unique in the way it operates, since it has no laboratories of its own and operates as a facilitator for the projects which are selected by the membership and are out-sourced to establishments which are best equipped to carry them out. This method of operation is reflected in the turnover per employee which is approximately twice that of CONSTRUCTIONRA1.

From Table 7.1 over the five-year period 2004-2008 it can be seen that CONSTRUCTIONRA1 has the superior performance rating of 4.4 compared to - 1.75 for CONSTRUCTIONRA2.

Governance

Both research associations have a satisfactory governance.

CONSTRUCTIONRA1 has had the same CEO in office since 1988 and this individual has been employed in the organisation since 1975.

CONSTRUCTIONRA2's chief executive was appointed in 2006 following the two previous directors (1986 to 2002 and 2002 to 2006).

CONSTRUCTIONRA2 is very much a membership organisation with a council comprising of representatives from all the core members. The council has an advisory role. The executive committee is made up of executive directors and non-executive directors (who are members of council) and run the organisation in tandem. CONSTRUCTIONRA1 has a similar structure, with a council and an executive board, but in this case as the CEO put it "the executive board is an improving and approving body". Here, the executive directors are in control.

CONSTRUCTIONRA1 is governed by the executive directors with the representatives of council having an improving and approving role as noted above, a style of governance which fits the democratic model described by Cornforth (2003). CONSTRUCTIONRA2 is governed jointly by the executive and non executive directors, where the non executive directors are elected by and from the membership, which fits a democratic model under the Cornforth (2003) classification.

Strategy

CONSTRUCTIONRA2 has remained close to its roots with its central activity being the core research programme upon which 58% of income was spent in 2007.

CONSTRUCTIONRA1 has moved away from collaborative research representing 20% of total activities in 1995/6 to only 4% in 2007/8, and has developed non-research activities such as worldwide market intelligence and test work.

CONSTRUCTIONRA1 has a history of being market-driven and employs a marketing director and four MBAs, the most encountered in all the case studies. In contrast, CONSTRUCTIONRA2 has only recently appointed a membership manager. As far as the control strategy is concerned, CONSTRUCTIONRA2 is professional whilst CONSTRUCTIONRA1 fits the category of market control, Whittington (1991).

CONSTRUCTIONRA1's strategic aim is maximising long term advantage i.e. growth, together with generating a surplus in order to develop the business and manage its pension liability. The strategy has an element of flexibility and is evolutionary. CONSTRUCTIONRA2 has a deliberate strategy process embodied in its research programme and its strategic aim is plural - both maintaining viability and serving its members - and the strategy can be classified as systemic.

Summary

These are two very different organisations with CONSTRUCTIONRA2 maintaining the constitution and operation of a classical research association.

CONSTRUCTIONRA1 is controlled by the executive directors and the activities

have moved away from research to worldwide market intelligence and the hiring out of test equipment to the industry.

Governance:

Satisfactory:

RA1 : yes

RA2 : yes

Run by executives:

RA1 : yes

RA2 : no

Model: Cornforth (2003)

RA1 : democratic model

RA2 : democratic model

Strategy:

Strategic aim:

RA1 : singular

RA2 : plural

Strategy process:

RA1 : entrepreneurial

RA2 : deliberate

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : systemic perspective on strategy

7.6 Clothing sector

(Research associations referred to as CLOTHINGRA1 and CLOTHINGRA2)

7.6.1 CLOTHINGRA1

Background

CLOTHINGRA1, established in 1919, was one of the earliest research associations. Its employment numbers have remained relatively stable over the past 40 years, with 165 staff in 1970, 169 staff in 1989, 176 in 1998 and 182 in 2007.

The average turnover over the past ten years has been £7.5M with an average annual surplus of £450,000 being made over the same period. According to the CEO, CLOTHINGRA1 had made a surplus every year for at least the last 37 years.

Although this organisation has remained the same size it has changed over the years. For example, as far back as 1973 the Bessborough Report stated that CLOTHINGRA1 defined its brief very widely to provide services not only dealing with the study and testing of materials used in the industry, but factory organisation, process and methods, quality control and design work, management services, computer applications and operational research. This development took place at a time when most research associations were concentrating on a programme of core research.

Another characteristic highlighted in the Bessborough Report (1973) is that in spite of CLOTHINGRA1's close relationship with its Trade Association which at that time contributed 29% to CLOTHINGRA1's income, CLOTHINGRA1 in the early 1970s had over 300 overseas members, achieved in spite of the intense competition which the domestic industry was facing from imported products.

The Bessborough Report also mentions CLOTHINGRA1 having achieved in 1969 a Queen's Award to Industry for technology innovation and also cites CLOTHINGRA1 as having carried out 44 surveys and a further 23 quality audits, demonstrating the practical help which CLOTHINGRA1 gave its members.

The growth in overseas membership has continued with, in 1989, 1000 members in 20 countries, in 1997 a total of 1200 members in 60 countries and, in 2008, 1600 members in 72 countries. CLOTHINGRA1 has not only extended its market from domestic to worldwide but has also diversified into the following activities:

- Leather and leather goods - CLOTHINGRA1 works with tanners and their customers to ensure leather and its resulting products meet performance needs in the marketplace.
- Clothing and home textiles is likewise directed to improving the quality of clothing.

- Cleaning – with the latest laundering, dry cleaning and hard surface cleaning facilities, CLOTHINGRA1 provides training and technical support for companies in the cleaning sector.
- Personal protective equipment – as a notified body, CLOTHINGRA1 can test and certify all types of protective clothing and equipment used in industry and sports, from fire fighting to motor cycle riding.
- Furniture, bedding and upholstery – sophisticated laboratories are equipped for the rapid testing of chairs and other products.
- Floor coverings – this covers tests and full evaluation of services for domestic contract flooring and helps clients meet tough new flammability regulations.
- Construction products – CLOTHINGRA1 is a product certification body under the European Construction Products Directive. It can test a wide range of products using the construction industry.
- Toys – as a notified body under the Toys Directorate, CLOTHINGRA1 can evaluate many children's products from the chemical, physical hazards, flammability, dangers and toxic substances.
- Homeware – CLOTHINGRA1 has a comprehensive facility for evaluating the performance of ceramics, glass and other homeware products.

- Automotives – CLOTHINGRA1 tests automotive interiors and exterior components against main company specifications, including car seats, floor coverings and linings.

CLOTHINGRA1 has always been located near the centre of its industry. It occupied a large Victorian house around which new buildings were added as time went by, not an unusual pattern for a research association. The same also took place in SIRA, WIRA and the SHIRLEY Institute.

In 1997 CLOTHINGRA1 needed further expansion which was not available on its site, and so it purchased an area of land on a nearby trading estate. Over the past ten years building took place in four stages on the new site and in 2006 the entire workforce of CLOTHINGRA1 were re-located to the new purpose-built modern premises. The old site was retained, and is now let to small industries with a 90% occupancy yielding additional sources of income to CLOTHINGRA1; just another example of the organisation which has made beneficial strategic choices over the years.

CLOTHINGRA1 has a history of internal appointments to the chief executive's job, with three internal appointments taking place over the past 35 years. The CEO in 2008 was appointed in 2006 having worked at CLOTHINGRA1 since 1963.

Governance

In the early 1990s the-then CEO of CLOTHINGRA1, according to the present CEO, persuaded council to delegate power and restructure, replacing council with an executive board consisting of three executive directors and five non-executive directors. Originally the non-executive directors were from the industry but over

the years they have been replaced by non-executives with particular experience of value to CLOTHINGRA1. A recent example is the recruitment of a non-executive director with pension expertise. This is an example of Cornforth's (2003) organisational change from a democratic theory of organisational governance to a partnership model of governance. As from January 2009 the non-executives will be paid £6,000 per annum. As the CEO told the researcher, "If you pay people you can justifiably expect a contribution from them".

The non-executives, together with the CEO, form a number of the sub-committees including an audit committee, a remuneration committee, a nomination committee and a pension committee.

Following the changes brought about by the 2006 Companies Act, CLOTHINGRA1 now has no annual general meeting. The organisation is very much membership based, with 1600 members contributing some 22% of total income in membership fees, but according to the CEO, the members have 'no desire to run the business'.

Strategy

Strategy development

CLOTHINGRA1 started business planning in the 1990s, and this has evolved into strategic planning covering five-year periods.

With reference to the most important stakeholders, the CEO's view is that the staff are number one, the directors are number two and members number three. There

are many services which are only offered to members, so in order for companies to avail themselves of some services, membership is essential.

At the time of interview, work was taking place on the next five-year plan to take effect in 2010. The plan contains targets for growth, membership etc., but the CEO stressed the importance of flexibility.

Issues and threats

The final salary pension scheme was closed in 2004. The deficit in the scheme is claimed to be manageable, with £300,000 being transferred from an operations service to the pension fund in 2007.

Recruitment is a real problem according to the CEO, who found it difficult to get good graduates with a customer focus

Employee knowledge was deemed to be good by the CEO, and a new open-plan building has assisted in the transfer of knowledge between staff members. Also according to the CEO, the culture has become even more open. The directors are visible, they walk the job, and staff feel that they are valued, according to the CEO.

Strategy overview

CLOTHINGRA1's success philosophy, as expounded by the CEO, was to "Give members a good service but don't let them control the business".

As noted above, flexibility was considered important – hence the importance of seizing opportunities. An example is taking over dry cleaning and furniture testing from other research associations and taking on these research associations' staff.

With reference to the development of strategic competences, the CLOTHINGRA1 brand is being continually reinforced and strengthened and it is only the members of CLOTHINGRA1 who can refer to testing as being undertaken by CLOTHINGRA1, hence maintaining the brand value, and attracting members.

Little publicity is sponsored, relying on the brand name and staff knowledge to expand markets. Liaison visits are very important, as is contact with all members.

Of the services offered, the membership receives free information services and a 20% discount on testing work. CLOTHINGRA1 concentrates on testing services; 60% of income is derived from this source and a further 20% from the sale of test equipment. Hence the strategy is to focus on testing and test equipment and also to diversify both geographically and by penetrating further the consumer product industries.

Market development is geographical, with members in 72 countries with an office in China and a partnership for testing in Hong Kong.

Strategic options

Over 60% of income is generated offshore. CLOTHINGRA1 does not seek UK government or EU funding. It considers it to be 'useless' and concentrates on commercial activities.

Management buyout is neither possible nor desirable according to the CEO, but an employee benefit trust could be the way forward.

Summary

CLOTHINGRA1 has been very successful in both diversifying the range of services it offers and expanding its customer base worldwide.

CLOTHINGRA1 was one of the first research associations to move from a professional control to a market control.

The governance was again changed in 1990 to give greater authority to the executive directors. The last five CEO appointments have been internal appointments under which the organisation has prospered. The CEO develops the strategy and in practice runs the organisation. The non executive director in his reply to the non executive questionnaire confirms that he is not involved in producing the strategy document but only in commenting and final approval.

CLOTHINGRA1 has been financially very successful, enabling the organisation to locate into new premises while still owning the original premises which are now let and generating an income.

Governance: The governance is satisfactory. CLOTHINGRA1 is managed by the executive directors with the CEO stating that members have no desire to run the business. The non-executive directors are appointed on the basis of the expertise they can bring. The governance model is partnership (Cornforth, 2003).

Strategy: The strategic aim of CLOTHINGRA1 is singular, maximising long term advantage and the strategy process is entrepreneurial with the flexibility to seize opportunities. The strategy perspective can be classified as evolutionary under the Whittington (2001) classification.

7.6.2 CLOTHINGRA2

Background

CLOTHINGRA2 was formed as a result of a merger in 1986. CLOTHINGRA2 operates with three business units, the first the Dyeing and Finishing Unit which offers a commercial service for small batches of dyeing and has a turnover of £1M, the second also with a turnover of £1M provides a broad range of services to the traditional apparel sector, specialising in chemical testing and provides certification. The largest unit, with a turnover of £1.5M, is CLOTHINGRA2 Testing and Certification which specialises in the certification and testing of personnel protective equipment, geosynthetic floor coverings and other construction products.

In 1989 the CLOTHINGRA2 employed 250 people, falling to 132 in 1998 and continuing to decline to 69 staff for the year ended 30 September 2007.

The CEO had worked at CLOTHINGRA2 since 1998, had a commercial background and was appointed CEO in 2006.

Governance

The company has five directors. The managing director and the company secretary, the two executive directors, and, the chairman and two members elected from the membership, the three non-executive directors.

The CEO stated that CLOTHINGRA2's governance was unsatisfactory both in its configuration and its practicality. With reference to the configuration, the non-executive directors still represent the members, a dwindling body, who contribute less than 10% of CLOTHINGRA2's income. In practice, as explained by the CEO during interview, it will be difficult for CLOTHINGRA2 to replace the three existing non-executive directors when the present three incumbents retire.

Strategy

Strategy development

The CEO considers strategy to be the living thing, and believes that after the merger there was no clarity of thought and the focus was still on research until 2000 when the previous CEO moved the organisation away from research to commercial activities, a move from professional to market control in terms of Whittington (1991). The CEO said that since CLOTHINGRA2 was small it could not dominate the market and had to "tack from one direction to another in order to become commercial". CLOTHINGRA2, unlike the majority of research associations selected for case study, therefore has no strategy and actions are dictated by events. Hence for this research the strategy process can be defined as emergent.

The three basic units, or 'market teams', as the CEO describes them, run the divisions and the management team constructed from the senior managers in each unit meets every two months to guide the organisation. Staff are briefed after all these meetings.

Strategic competencies

Staff and reputation are important assets with staff knowledge, according to the CEO, the most important and tangible asset.

With reference to strategic competences, the regulatory competence is CLOTHINGRA2's representation on the appropriate EU and British specification boards, which enables the organisation to position itself to undertake testing and accreditation against new standards and regulations. Reputation is important and the researcher was told that CLOTHINGRA2 had carried out a customer survey which revealed that new customers were attracted to the organisation through its reputation.

Employee knowledge was good for senior members of staff but this knowledge was not always diffused to more junior staff. There was no formal appraisal scheme and the researcher gained the impression that although the management identified problems within the organisation they were reluctant to deal with them, having a fear of upsetting key personnel.

Issues and threats

With reference to culture, CLOTHINGRA2 has a problem of generating a customer focus in staff. Some staff according to the CEO, are focused on some customers while others still live in the past. Here again, no solution to the problem is being worked out.

A report by the managing director in the 2007 annual report highlights the problem with the final salary pension scheme. This was closed to new entrants in 2000 and for future accruals in 2003. The accounts show a pension liability of £4.3M, equal to 15 months' turnover. The report stated that the company had sought

legal and actuarial advice and hoped to resolve the pension problems, but it is undoubtedly a serious worry, as was reinforced during the interview with the CEO.

The membership has dwindled to 60 who only contribute £25,000 in total to the income of CLOTHINGRA2 (£400 each). According to the CEO, the members have very little interest in the organisation as they do not attend AGMs, and proxy forms are necessary for motions to be carried. The CEO is concerned that when the three non-executive directors reach the age of retirement, which will occur in the near future, they will have to stand down under company law, raising the question of who will take their place. The CEO stated that the merger to form CLOTHINGRA2 was “a disaster”, and that the organisation has been fighting for survival ever since. His major concern is the pension liability which, in the CEO's view, needs to be resolved before concepts like governance and membership can be addressed.

Governance clearly needs resolving, since all the non-executive directors are nearing retirement. The CEO also expressed concern about a lack of 'holistic' thinking within the organisation, with managers in one business unit not concerned with the operation of the other two business units.

Strategy overview

The CEO's view was that there was no blueprint for best practice, which depends on the personality of the managers.

The organisation's strategic aim, the researcher was told, was survival. The strategy for survival is being hampered by the pension scheme deficit which, according to the CEO, occupies one-third of his time, and the future restructuring, governance and forming of partnerships appears to be on hold. CLOTHINGRA2 is

in competition with CLOTHINGRA1 on protective clothing. The CEO is proud of CLOTHINGRA2's independence, which he considers to be essential.

CLOTHINGRA2 has developed markets in China, India and South East Asia, has no government or EU funding, and has a customer base moving downstream from the manufacturers of equipment to the users. Members are not a serious source of income, with over 90% of income arising from non-members' enquiries.

Summary

CLOTHINGRA2 has a baggage of problems, some of which have been identified but progress is being overshadowed by the pension deficit. On the positive side, a large organisation with a history in research is being transferred into three small business units meeting market needs.

CLOTHINGRA2 , which was formed by the merger of two research-focussed research associations, has not been successful. Staff numbers have declined. The operation has not been financially successful and the organisation has to try to manage a very substantial pension deficit exceeding one year's turnover. The three operating units of CLOTHINGRA2 appear to be providing a commercial service but the whole organisation is threatened by the pension deficit. The organisation does not have a strategy and the strategy-making process is imposed by external events.

Governance: CLOTHINGRA2 is managed by the senior staff and representatives of the members – a democratic model, in Cornforth's (2003) concept of organisational governance. The CEO stated that the governance is unsatisfactory

while the non executive director states that the governance has changed over the past twenty years to meet the present situation. The non executive director does not go as far as to state the present governance is satisfactory. There is no evidence of the executive directors taking the lead in running the organisation. It is jointly run. The non executive director states their function is 'to bring to the board independent judgement and to guide on strategy development, performance and appointments'.

Strategy: The singular strategic aim is survival and the strategy is process is imposed, in Mintzberg and Waters' (1985) terms.

7.6.3 Comparison and analysis of two research associations in the clothing sector.

Introduction

Both the research associations, which came together to form CLOTHINGRA2, had an impressive research record, one being the only research association to receive a Nobel prize in 1952 for work on chromatography and the other association having published much acclaimed research. Even up to 1988, Tippett (1998) and Anderson (1998) both emphasise the importance of research to these organisations. CLOTHINGRA1 on the other hand had diversified as early as the 1970s into management services and operational research, Bessborough (1973), indicating flexibility and the desire to undertake activities which were tailored to the needs of the industry rather than continuing with basic research. The contrasting backgrounds of CLOTHINGRA2 with its focus on research and CLOTHINGRA1 with its emphasis on meeting the needs of members could have installed diverse

cultures in the two organisations which were difficult to change. With reference to the Whittington (1991) control strategy, CLOTHINGRA2 had a professional control strategy while CLOTHINGRA1 had a market control strategy.

On the basis of sustainable growth as the criterion for success adopted in this research, CLOTHINGRA1's staff numbers have not grown but rather have remained constant at around 180 staff for the period 1988 to 2008. Over the same period, staff employment at CLOTHINGRA2 has halved. Hence CLOTHINGRA1, with a QuiScore in the 'secure' band over the same period, is considered to be the more successful of the two research associations, since its staff numbers have remained constant.

From Table 7.1, over the five-year period 2004-2008, it can be seen that CLOTHINGRA1 has the superior performance rating, of -0.62, compared to a rating of -2.61 for CLOTHINGRA2.

Governance

CLOTHINGRA2's governance is unsatisfactory. The governance is democratic as two of the non-executive directors are elected from the membership.

CLOTHINGRA1 has a partnership model of governance, the non-executive directors bringing expertise to the organisation with the executive directors taking the lead.

Strategy

CLOTHINGRA1 has a strategic plan and its singular aim is to increase membership which, according to the CEO, will increase turnover and profits.

CLOTHINGRA2 does not have a formal strategic plan and there is no strategy to overcome problems such as the pension deficit and the difficulties arising from the organisation's culture. Its singular strategic aim is survival and in the absence of a strategic plan the strategic process is classified as imposed. Such a strategy (or non-strategy) is here classified as evolutionary, in Whittington's (2001) terms.

CLOTHINGRA1 has a strategy of internationalisation, with over 60% of income being generated offshore. It also has diversified into products other than footwear, offering testing facilities for a range of products including toys and floor coverings. CLOTHINGRA1 appears to have abandoned its original mandate of undertaking research since it received in 1969 the Queen's Award to Industry for technology innovation and is currently concentrating on expanding its testing expertise into new geographical markets and new products. CLOTHINGRA2 has also more recently abandoned research and has developed three service areas, two devoted to testing, and the third a small batch dyeing service. Both organisations have encountered problems with a pension deficit. CLOTHINGRA1 closed its final salary pension scheme in 2004 and the deficit is claimed to be manageable as a result of trading surpluses. CLOTHINGRA2 has a serious pension problem which at the time of interview was absorbing a large amount of senior management time without a solution in sight.

Summary

CLOTHINGRA1 has moved from professional to market control and has also adopted a governance structure where the executive directors are in control

supported by non-executive directors who bring additional expertise to the organisation. CLOTHINGRA1 has a large membership base that can be categorised as loyal customers with no say in the management of the organisation. It has a flexible entrepreneurial strategy and has seized opportunities for the diversification of products and also has expanded globally.

By contrast, CLOTHINGRA2 is struggling after being formed in 1998 by the amalgamation of two large research associations, both with a history of research and professional control. The transition to market control has been slow and the organisation has been severely handicapped by its large and so far unmanageable pension deficit.

Governance:

Satisfactory:

RA1 : yes

RA2 : no

Run by executives:

RA1 : yes

RA2 : no

Model: Cornforth (2003)

RA1 : partnership model

RA2 : democratic model

Strategy:

Strategic aim:

RA1 : singular

RA2 : singular

Strategy process:

RA1 : entrepreneurial

RA2 : imposed

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : evolutionary perspective on strategy

7.7 Technology based research associations

(Research associations referred to as TECHNOLOGYRA1 and TECHNOLOGYRA2)

7.7.1 TECHNOLOGYRA1

Background

TECHNOLOGYRA1 was established in 1946, incidentally at the same time as TECHNOLOGYRA2. Both research associations are technology- rather than industry-based. By 1970, according to the Bessborough Report (Bessborough, 1973), TECHNOLOGYRA1 had a membership of 1,279 companies, the second largest of any research association at the time. It employed the largest number of staff of any research association, with 550 people, and during the 1960s its income rose by 400%. This success may be attributed to the flexibility which it enjoyed, not being associated with or controlled by one sector of industry. Its success could also be attributed to its founder director, whose charismatic and dictatorial style were folklore within the research association community.

By 1989 its staff numbers had fallen to 360, reducing further to 300 in 1997. (These figures are obtained from the AIRTO reports at those dates). The staff numbers reached a minimum of 254 in 1999, according to FAME (2008). However, growth over the next ten years, as reported by FAME (2008), has restored the employment level to 550 staff, the same level as in 1970 (Bessborough 1973).

From 1999 to 2008, the turnover, as it did in the 1960s, nearly quadrupled to a figure in excess of £50M, making it, in 2008, the second largest research association in terms of income and employment. This expansion has been achieved with surplus generation in all but three of the past ten years and with the highest QuiScore banding of 'secure' (81% to 100%).

In 1970, according to Bessborough (1973) the largest element of TECHNOLOGYRA1's income, 37%, came from contract work for government. Income from industry was 20%, and that from membership income and government grant accounted for only 27% of the organisation's income. Hence in the data published by Johnson (1973), TECHNOLOGYRA1 had by far the largest income from repayment work and also the largest percentage of income from that source. Although in the intermediate years TECHNOLOGYRA1 may have lost its way, over the period 2000 to 2008 according to the CEO it has returned to its roots and the sharp increase in income has been derived from repayment work for government, the EU and industry.

The CEO, appointed in 2008, was an internal appointment and had worked at TECHNOLOGYRA1 for 21 years.

Governance

In 1985 the-then CEO, according to the present CEO, disbanded the council, with the board becoming the sole governing body for TECHNOLOGYRA1. Also according to the present CEO, the CEO in 1985 was engineering a management buyout and the removal of council assisted this process. However his ambitions were not successful and he resigned as CEO.

The researcher was also told that the board at the time were not totally against a management buyout; however, the incoming CEO was not in favour of such a move as he maintained that it destroys the not for profit image and the independence of the organisation, and also perhaps causes internal friction between those staff members involved in the buyout and those staff members who were not.

The present governance structure comprises a board with five non-executive directors selected on the basis of the contribution they can make to TECHNOLOGYRA1, and the CEO and the Financial Director. This is a partnership model, in Cornforth's (2003) terms.

The CEO felt the main function of the non-executive directors to be advisory and he looked upon them as 'wise sages'. Hence in practice TECHNOLOGYRA1 is run by the executive directors. This view is confirmed by the non executive director whose function he describes is to 'ensure the research association remains a viable organisation'.

Although the legal constitution of TECHNOLOGYRA1 remains a company limited by guarantee, the CEO stated that in practice the structure embraces the elements of a partnership and an employee benefit trust. This can be characterised as a 'partnership' because the three most senior executive directors are in fact called partners, and receive financial bonuses. In addition, all staff members are the beneficiaries of a profit-sharing scheme. Hence rewards to the staff have been achieved without the employee benefit trust status that could involve an element of control by staff.

In 2007 TECHNOLOGYRA1 set up a separate organisation as a charitable trust with the aim, according to the CEO, of promoting youth enterprise, 'Giving life changing opportunities to individual young people through enterprise and entrepreneurialism', at first working with partners such as the Prince's Trust, the foundation is financed out of TECHNOLOGYRA1 surpluses and is a charitable, not a commercial, venture.

Strategy

Strategy development

TECHNOLOGYRA1 started strategic planning in 1997. The strategy is set out in a three year plan which is revised annually. The strategy is produced internally, with the board agreeing or making minor alterations to it in the later stages of its production.

The internal process is 'bottom-up', so that all staff will 'buy into' it. This process consists of working through the organisation, with the CEO personally holding meetings with all staff to determine their input and opinions on the corporate strategy. The strategy process takes from five to six months from the initial brainstorming to the final document. The process works from the organisation's goals through new markets, new products, TECHNOLOGYRA1's USP to, finally, the budget.

Strategy overview

At the time of interview, the strategic aim was to grow the organisation to 1,000 employees and £100M turnover by 2012.⁵ According to the CEO, goals never change although the means of achieving them does. The aim is for TECHNOLOGYRA1 to be the “best in class in the delivery of its selective products to its selective markets”.

As the CEO states in the introduction to the corporate strategy document for 2009, “what makes a successful company is not just a good strategy but a shared belief in it and a collective commitment towards seeing it succeed”. This document emphasises diversity and flexibility and, in the current recession, the importance of short-term benefits to clients is emphasised.

TECHNOLOGYRA1 will continue to act as an agency for the development of government initiatives and at the same time to grow its commercial activities.

In summary, TECHNOLOGYRA1’s goals and strategy are very much aimed at growth with profitability, however these aims are met with great flexibility and particularly in the present economic climate with the government reducing spending on such initiatives.

The strategy for growth has been organic but recently TECHNOLOGYRA1 has acquired a small research association and the researcher was told that a sizeable acquisition of an organisation in Europe may be the next step.

5 This date has recently been revised due to the recession, to 2014.

TECHNOLOGYRA1 has established a successful business as an agency for government initiatives aimed at improving the performance of industrial companies, in particular SMEs who represent 85% of TECHNOLOGYRA1's industrial clients. These initiatives include business support centres where TECHNOLOGYRA1 operates a scheme on behalf of the UK regional development agencies. Other schemes include learning centres offering skill development to the support of the UK learning and skills centres. The global knowledge and enterprise centres are aimed at helping with global visibility and connectivity to knowledge and technology.

TECHNOLOGYRA1 also runs eight research centres across Europe and its strategy can be summed up as: "TECHNOLOGYRA1 tenders on a competitive basis for public funding to deliver business support programmes for government and the EEC" (extract from TECHNOLOGYRA1's 2007 annual report). It can be seen from this that TECHNOLOGYRA1's support to industry is as much focused on business processes as it is on research.

The organisation's bids to government for running schemes are both proactive and reactive, and TECHNOLOGYRA1 attempts to obtain contracts for schemes that run for up to ten years.

With respect to markets, TECHNOLOGYRA1 has developed from serving a UK clientele to serving a European one through research centres in Denmark, Italy, Spain, Estonia, France and Norway. The 2007 annual report states that the rate of growth in these overseas countries is four times that of TECHNOLOGYRA1's growth in England, indicating (as the annual report states), the transition of

TECHNOLOGYRA1's clients away from those of a British company towards those of a European network.

The researcher was informed by the CEO that there is no planned expansion outside Europe, and in fact some retrenchment has taken place overseas, particularly in North America.

Summary

The legal structure of TECHNOLOGYRA1 is a company limited by guarantee; however in practice the three senior executive directors are treated as partners and the rest of the staff receive some of the benefits of an employee benefit trust.

TECHNOLOGYRA1 is controlled by its board with the non-executive directors being appointed on the basis of the contribution they can make to the organisation. The organisation is run by the executive directors. In practice the executive directors take the initiative in the strategy process and the CEO considers the non-executive directors as "wise sages" whose role is to advise and comment on the strategy produced by the executives. This is a partnership model (Cornforth, 2003).

The strategic aim is singular, to maximise long term advantage and the strategy process is entrepreneurial with flexibility built into the strategic plan. The strategy is classified as evolutionary. (Whittington, 1991)

TECHNOLOGYRA1 has a strong market control.

7.7.2 TECHNOLOGYRA2

Background

A learned society, associated with TECHNOLOGYRA2's technology, with individual professional members was formed in 1923. The research association was formed in 1946 and the two organisations worked in parallel. They were formally amalgamated in 1968 to form TECHNOLOGYRA2. Its turnover was £21M in the year ended 2000, increasing to £40M for the year ended 2007.

In 2000 it employed 382 staff and in 2008 employed 592, FAME (2008)

This research association has become increasingly profitable since 2004, £1.4M in 2005, £3.2M in 2006 and £5.2M in 2007. FAME (2008)

A bold move to develop a science park, on the 35 acre site owned by TECHNOLOGYRA2, has been successful and in 2006 produced over £3M in rental income. According to the CEO (interviewed in 2008), the capital investment in this project has been repaid.

This development has also enabled TECHNOLOGYRA2 to demolish its range of buildings and move into a very impressive modern headquarters and also to develop new regional sites in Yorkshire, Wales and the North East.

The CEO replaced the previous CEO upon his retirement in 2004. In 1991 the current CEO had been recruited by the previous CEO to fill the new post of Business Development Director. The previous director, who had been CEO since 1988, was then embarking on a project to develop the land owned by

TECHNOLOGYRA2. The CEO, with his business development background, had then been recruited to front this important project.

In discussing the merits of internal and external appointments, the CEO said that an outsider must be “loyal” to the organisation.

Governance

The company is a company limited by guarantee and TECHNOLOGYRA2 is still exempt under Section 508 of the Finance Act (1985) for corporation taxes.

The TECHNOLOGYRA2 council consists of individuals elected by and from professional members of the institute, and 12 representatives from member companies. In addition, eight further people can be co-opted onto the council.

The council members are directors of TECHNOLOGYRA2 under the Companies Act. The CEO is not a director; hence TECHNOLOGYRA2 has a council structure similar to that set out in the original Memorandum and Articles of Association.

The two most important sub-committees are the Finance & General Purposes committee (consisting of the chairman and vice-chairman of council, together with four further council members and four executive directors) and the executive board made up of eight senior executives. The council, which meets three times a year is, according to the CEO, a supervisory and guiding body, but is responsible for final approval of annual accounts, appointing the council sub-committees and the appointment of the CEO.

The executive board, which is composed entirely of TECHNOLOGYRA2 senior executives, is a proposing body. Final plans including the strategy document are

produced by the executive board for approval by the finance and general purposes committee. The executive directors however take the initiative and according to the CEO are in control. This view is confirmed by the non executive director's statement of his function - 'Sounding Board. Non executives can contribute with experience and knowledge in the research area. Non executives' network can be of value'.

Strategy

Strategy development

The strategic planning process started at TECHNOLOGYRA2 in 1991 when the present CEO was recruited as Business Development Director. The strategy takes the form of a three-year plan which is updated annually. The document setting out the organisation's strategy is produced by the executive directors and senior managers approved by the finance and general purposes committee, with supervision and guidance from council. Market knowledge is provided by the executives, who also build the strategy document on the internal strengths of TECHNOLOGYRA2. The CEO provides the analytical skills.

The position of Business Development Director has not been filled since the incumbent became CEO.

The strategy process develops from vision to aims to objectives. The CEO maintains that one has to start the strategy process with a deliberate approach.

The final strategy document is more flexible and meets emerging needs.

TECHNOLOGYRA2 has a range of advisory panels which provide an input into the TECHNOLOGYRA2 projects. Feedback is obtained on every job undertaken

by TECHNOLOGYRA2 to ascertain customer levels of satisfaction. These activities provide the means of obtaining user needs.

The organisation's website is considered to be an extremely important publicity device. TECHNOLOGYRA2 does not advertise but organises conferences and presents papers to other conferences.

SWOT is an important strategy tool.

The CEO had no hesitation in naming the 2800 members as the organisation's most important stakeholders, followed by the staff. TECHNOLOGYRA2 previously had a policy of establishing spin-off companies, but this has been abandoned as it is felt that these spin-off companies resulting from research work undertaken at TECHNOLOGYRA2, could have a conflict of interest with its members.

Issues and threats

The final salary pension scheme was closed to new entrants in 2006, much to the regret of the CEO, who is against reducing staff benefits. The scheme still exists for staff that joined the scheme prior to 2006 and is a financial liability which is being managed.

The possible tension between the professional members and the corporate members seems to be well handled. The CEO maintains that there is a synergy, with the company membership needing skills and accredited staff which TECHNOLOGYRA2, through its professional services, oversees.

Implementation

Each year the rolling strategy process begins in September and the strategy is approved by the finance and general purposes committee in December, and is distributed to all staff in late December, prior to the Christmas closing.

Implementation of the strategy starts after the return to work after the Christmas break. The CEO emphasised the importance of strategy implementation. Every member of staff receives a copy of the strategy document and managers are encouraged to expand on this document with reference to their own sections.

Strategy overview

The TECHNOLOGYRA2 mission statement is “To supply world class services in materials, engineering and allied technologies, meeting the needs of a global membership network”.

A 10% annual growth rate is the singular, principal aim. As the CEO states, growth is an indication that TECHNOLOGYRA2 is doing the right thing for its members, and the larger the organisation the more individual members will gain.

TECHNOLOGYRA2 growth is organic growth, not growth by mergers or acquisition.

The CEO maintains that he has a co-operative outlook, with joint projects with other research and technology organisations.

The income from the professional side of the business is only £350,000 but it attracts a further £7M in fees for training and examination. The professional side

of the business cannot be ignored from a financial point of view and the CEO maintains that it is growing, particularly overseas.

TECHNOLOGYRA2 according to the CEO has a strong patent portfolio which produces an income stream.

In general terms, income for TECHNOLOGYRA2 is 48% from single client research, 4% from group projects and 36% from collaborative research. The remaining income is from training and investments, which are expanding.

TECHNOLOGYRA2 is very much a membership organisation, with some 2800 corporate members worldwide. It supports a collaborative research and development programme supported by members' subscriptions, with UK and European agencies giving additional funding.

A total of 74 projects were being undertaken in 2008, the results of which are available to all members.

Additionally 21 group-sponsored projects are supported by a number of members of TECHNOLOGYRA2 and the results of group-sponsored projects are available to the member companies who sponsor them.

Single client projects are also important and this work for contract research - or consultancy, as it could be called - is an important and increasing part of TECHNOLOGYRA2's activities.

No dramatic change is planned in product mix. The present portfolio of products and services has produced steady growth, profitability and customer satisfaction. TECHNOLOGYRA2 prides itself in not only responding to members' needs but to stimulate them through new developments which, it is felt, could be of benefit to TECHNOLOGYRA2 members.

Market development is geographical. At present 50% of the work comes from outside the UK, and this trend will continue with the global expansion of the use of technology worldwide.

Strategic options

The CEO considers that standing still is not an option, and organisations which plan to stand still often decrease in turnover and value.

In discussing alternative structures, the CEO is not in favour of an employee benefit trust as this, in his view, could lead to TECHNOLOGYRA2 losing its independence, focusing on the staff rather than on the members which it was set up to serve and still continues to serve. He is also not in favour of a management buyout to form a commercial company, as this, in his opinion, would remove the focus from the membership.

Summary

The governance is vested in two separate bodies, the council and its subcommittee, the Finance and General Purposes Committee, which represents the interests of the members and monitors the management of TECHNOLOGYRA2. The executive board is made up of the executive directors and senior staff and is responsible for the day-to-day management and for

producing strategy documents and budgets. The senior staff are in control. The council is composed of representatives from the membership, which represents the democratic theory of governance (Cornforth, 2003)

The strategic aim, which is singular, is to maximise long-term advantage by services to members and by expanding the membership base. The strategy process is entrepreneurial based on a flexible strategy plan.

Although TECHNOLOGYRA2 has a strong market control, there is also an element of professional control through the research programme which represents 36% of total effort.

7.7.3 Comparison and analysis of the two technology-based research associations

Introduction

The two technology-based research associations adopted very different strategies for their development. In the case of TECHNOLOGYRA1, the organisation acted as an agency for the UK government and EU initiatives, while TECHNOLOGYRA2 concentrated on developing its technology base by means of its co-operative research programme and exploiting its knowledge base to worldwide markets. Both these diverse strategies have been successful and both organisations have grown.

From Table 7.1, over the five-year period 2004-2008 it can be seen that TECHNOLOGYRA1 has the superior performance rating, of 10.26 compared to 4.61 for TECHNOLOGYRA2.

Governance

Both companies are limited by guarantee with a satisfactory governance structure.

TECHNOLOGYRA1 is governed by an executive board with five non-executive directors appointed on the basis of the contribution they can make to the organisation. The executive board has two executive directors, the CEO and the finance director – a partnership model.

TECHNOLOGYRA2 is run by the executive board which is composed entirely of TECHNOLOGYRA2 senior executives. The council with its sub committees, including the finance and general purposes committee, are composed of members elected by and from the membership. The governance model is democratic.

Strategy

The strategic aim of both TECHNOLOGYRA1 and TECHNOLOGYRA2 is to maximise long term advantage.

In both organisations the initial strategy document is produced by the senior staff. Hence the growth objective is consistent with that of a management-controlled organisation. The main difference between the two organisations is the means of achieving growth. TECHNOLOGYRA1 has been transformed from an organisation undertaking laboratory research to an organisation managing

programmes of work for the British government and the EU on innovation and skills training. TECHNOLOGYRA2 has remained much closer to its roots, with 36% of expenditure devoted to a co-operative research programme and a growing 48% of income from single-client research based on the traditional research association model of exploiting through single-client sponsored work results of the co-operative research programme. TECHNOLOGYRA2 is the only research association in the case studies which has successfully exploited patents.

With reference to the strategy process, the CEO of TECHNOLOGYRA2 believes in a deliberate process “as it focuses the mind on important issues but in practice flexibility has to be built into the system”. TECHNOLOGYRA1 has a growth strategy which is embedded in a three-year plan but is constantly under review. Hence on balance TECHNOLOGYRA1 has the more flexible strategy of the two organisations. TECHNOLOGYRA2 has a less flexible strategy manifest in the research programme which cannot be changed at short notice. Of the two research associations, one can question which has the more sustainable strategy - one based on the technology in all its aspects from shipbuilding to micro-electronics or the TECHNOLOGYRA1 strategy of acting as an agent for UK and EU initiatives. Both are likely to suffer from a credit squeeze, one from the private and one from the public sector. Which is the more sustainable strategy remains to be seen.

Summary

Both the technology-based research associations have been successful in terms of sustainable growth. Both are managed by the executive directors with, in the case of TECHNOLOGYRA1, the non-executive directors complying with a

partnership model and, in the case of TECHNOLOGYRA2, with a democratic model.

In both cases the strategic aim is singular – to maximise long term advantage.

Both organisations have a strategy process classified as evolutionary, with TECHNOLOGYRA2 having an element of professional control whilst TECHNOLOGYRA1 has total market control.

The main difference in the two organisations is the customer base. In the case of TECHNOLOGYRA1, customers are the UK and EU governments and, in the case of TECHNOLOGYRA2, the worldwide membership.

Governance:

Satisfactory:

RA1 : yes

RA2 : yes

Run by executives:

RA1 : yes

RA2 : yes

Model: Cornforth (2003)

RA1 : partnership model

RA2 : democratic model

Strategy:

Strategic aim:

RA1 : singular

RA2 : singular

Strategy process:

RA1 : entrepreneurial

RA2 : entrepreneurial

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : evolutionary perspective on strategy

7.8 Privatised research associations

(Research associations referred to as PRIVATISEDRA1 and PRIVATISEDRA2)

The background to research associations which have been absorbed into large for profit companies is set out in section 6.5. These research associations are referred to as “privatised research associations”.

PRIVATISEDRA1 was privatised in September 2003 and PRIVATISEDRA2 in March 2004.

7.8.1 PRIVATISEDRA1

Background

The parent company has had a phenomenal growth over recent years, with turnover expanding from £575M in 2007 to £818M in 2008, employing some 12,000 people in the UK and the US.

PRIVATISEDRA1 had a turnover of £19.5M in 2006 with a profit of £3.1M. In 2007 the turnover fell to £17.1M with profits increasing slightly to £3.4M. The researcher was told by the CEO than in 2008 the turnover had increased to £19.7M with profits at £3.9M, hence a very successful operation.

The CEO was appointed in October 2008 and has an MBA as well as an engineering degree. He had previously worked at PRIVATISEDRA1 as marketing director and subsequently head of PRIVATISEDRA1’s electronic systems

business. He then spent a period at the parent company before returning to PRIVATISEDRA1 as CEO.

Governance

PRIVATISEDRA1 is run as a commercial company.

The directors are the managing director, the financial director of PRIVATISEDRA1, and the group financial director. PRIVATISEDRA1 has five business managers who, together with the three directors, run the organisation. They have a meeting each Monday morning to review progress over the previous week and also hold more formal monthly board meetings.

Strategy

Strategy development

PRIVATISEDRA1 has a five-year financial performance target incorporated into which is a three-year strategic plan. The reason the researcher was given for this was that strategy is more determined by external influences and hence three years is the more appropriate time horizon for strategic decisions. A good example was given for a new piece of legislation which will come into effect in four years time. The technology has to be developed, the hardware ready for production, and the marketing in place before the deadline. This approach suggests that many of the group products are driven by legislation or by defence or security needs.

The strategy team consists of the PRIVATISEDRA1 directors and the business managers. The process is a mixture of bottom-up and top-down, with PEST

(Political, Economic, Social and Technological analysis), SWOT, as is – to be – who – what – how – techniques being used.

The final strategy document is approved and ratified by the main parent company board. Unlike most research associations, government money is sought, normally for defence development work, as well as European projects undertaken on a 50% funding basis.

Strategy implementation is by means of strategy documents which are available to all staff. Monthly briefings take place and the managing director gives a quarterly briefing to all staff, with a question and answer session.

Strategic competencies

With reference to strategic competences, the reputation of the PRIVATISEDRA1 brand is vital and it is worthy of note that the parent company brand is being refreshed and, according to its October 2008 newsletter, the PRIVATISEDRA1 brand is being retained.

Employee knowledge is vital and according to the CEO, PRIVATISEDRA1 has always had an exceptionally talented workforce with over 50% of employees holding at least a Master's Degree. Employee knowledge is a most important and tangible asset.

Culture has become market-focused and the organisation has a market, not a professional control. The previous managing director of PRIVATISEDRA1, who came with industrial experience, has also contributed largely to the culture change.

Issues and threats

Unlike most research associations, PRIVATISEDRA1, the researcher was told, does not have pension problems. The pension problem has been well managed by the financial director and his predecessor.

Recruitment is a major problem, according to the CEO. Graduates with the right engineering and commercial approach are scarce.

Strategy overview

Strategic aims, according to the managing director, would have been two months ago a 20% growth in both turnover and profit, but now (in December 2008) with the recession growing, in place of the present strategy the aim is to escape the decline and to maintain profitability.

PRIVATISEDRA1 is the only consulting company in the group and has no plans to acquire its competitors, but rather to rely on organic growth.

PRIVATISEDRA1 sells some products, about 10% of turnover coming from the sale of antennas, but its main activity is consulting (78% of income) being design relevant work for the government, its parent company or other clients.

PRIVATISEDRA1 has the following business activities:

- A company branded scheme for reward for loyal clients
- Antennae Systems
- Safety Engineering

- Electronic Systems
- Reliability and Failure Analysis
- Engineering Consultancy Services
- Electromagnetic Compatibility
- Vector Fields

PRIVATISEDRA1 has reinvented a membership scheme. It has attracted some 150 participants who, on payment of a subscription, receive information which is not available to non-participants and who are also entitled to a 20% discount on any work they sponsor.

Subsequent to the interview the researcher had a telephone conversation with the financial director of PRIVATISEDRA1 who had been employed by the organisation prior to the formation of the employee benefit trust and privatisation. He confirmed that the organisation had no pension problems and that surpluses were generated which were used to develop the organisation and support the foundation. He reported that the governance structure was satisfactory and the organisation successful.

Summary

The parent group is defence, security and avionic-based, so PRIVATISEDRA1 has greater access to government funding than most research associations.

PRIVATISEDRA1 does not give the impression of a research association, being fully integrated into its parent company.

7.8.2 PRIVATISEDRA2

Background

According to the CEO of PRIVATISEDRA2, the parent company had set up a management services facility in 2001 aimed initially at providing an internal service, but soon realised that this facility could generate third party revenue, and that the acquisition of a company such as PRIVATISEDRA2 would enable the parent company to expand its customer base through a trusted and independent brand.

PRIVATISEDRA2, the wholly owned subsidiary, still makes an annual return to Companies House. Turnover data, according to the FAME website, over the past eight years, 2001 to 2007, has remained steady at £10m. It is not possible to extract the exact figures as PRIVATISEDRA2 has changed its accounting period three times since 2001. Staff numbers have fallen from 183 in 2001 to 118 in 2007. It is difficult to analyse the profitability trend, as doubtless transactions have taken place between PRIVATISEDRA2 and its holding company. However the CEO told the researcher that the company had been consistently profitable.

The CEO had worked for the holdings company for some 25 years, his previous experience being in manufacturing companies.

Governance

The directors of PRIVATISEDRA2 under the Companies Act are the CEO, the company secretary, and two senior directors from and appointed by the parent company. This board of four directors meets four times a year. PRIVATISEDRA2 has a second tier board called a leadership team, consisting of PRIVATISEDRA2's

CEO and business managers and three other representatives from the parent company, who are not board members. It is this leadership scheme which runs the business on a day-to-day basis.

Strategy

Strategy development

PRIVATISEDRA2 has had a strategy since 1992 when government funding was withdrawn and PRIVATISEDRA2 had to re-align itself in the marketplace.

The present strategic plan is for a three-year period. The CEO told the researcher that, in service industries such as PRIVATISEDRA2, events move much more rapidly than in manufacturing, and hence it is difficult for PRIVATISEDRA2 to plan in the long term.

The strategy process is a bottom-up process which the CEO stated is a robust approach and the strategy, which took three months to define, covers the period 2009 to 2011.

The strategy is market-driven and PRIVATISEDRA2 responds to and stimulates market needs, assisted by its in-house market research group

With reference to stakeholders, the CEO stated that staff are considered to be the most important in a knowledge-based industry, with clients and members in second and third place.

Issues and threats

PRIVATISEDRA2 has closed its final salary pension scheme and the pension scheme is, according to the CEO, manageable after the injection of £22M from the parent company.

The CEO stated that the reputation of PRIVATISEDRA2 brand must be safeguarded. Employee knowledge is constantly being upgraded, and customer service is much better than it was ten years ago, (according to a senior member of staff who had worked for the research association both before and after privatisation), but is still under a process of continual improvement.

Implementation

Strategy implementation is via informal days which take place three times a year, and the information cascades down through monthly briefings from the three business managers.

Strategy overview

The strategy aim is profitability and sustainable growth to maximise long-term advantage, which is achieved by a mixture of organic growth and acquisitions. A recent example of an acquisition is the purchase of a US company, with 21 people and a turnover of £1.6M with 12% return on capital.

The strategy covers the three business areas, namely: information and events, (40% of income); consulting (30%), and testing (30%). Prior to acquisition by the holdings company, PRIVATISEDRA2 had had up to 16 areas of activity. These have now been grouped under the three business managers who have autonomy

within their areas of responsibility. The targets are fixed, but means of achieving them are flexible - this can be seen as an emergent strategy.

With reference to services offered, according to the CEO, testing and market research have good growth prospects and events including conferences will be hit by the economic downturn.

Membership subscriptions generate 6% of total income, with one-third of contract income being derived from members and the remaining two-thirds from non-members.

PRIVATISEDRA2 does not seek government funding. It participates in EU projects, not as the lead contractor, but contributes mainly for the networking it facilitates. It competes with other research associations, but its main competition comes from the free testing services which are offered by suppliers to their customers.

Team culture is being fostered and the most important asset, according to the CEO, is the moral culture, the way people operate.

PRIVATISEDRA2 truly has a worldwide market with, in 2007, 57% of the income generated overseas.

A second meeting, on the same day as the meeting with the CEO, was held with one of the three business managers who had been employed by the organisation since 1996 and had experienced the changes from the traditional research association through a management buyout to being part of a large commercial

group. This business manager confirmed the governance structure worked well. With respect to strategy, he endorsed the CEO's statement that the strategic drive was customer focus and that the aim was profitability and sustainable growth, that targets were fixed but the means of achieving them were flexible.

Summary

Goals are defined, but the route to achieving the goals has great flexibility as determined by the business managers.

Governance: The governance is two-tier, the upper level of governance is by a small team consisting of the CEO and company secretary of PRIVATISEDRA2 together with two senior directors from the parent company. The lower level of governance consists of the CEO plus the three business managers of PRIVATISEDRA2 together with three other experts from within the holding company group. In both cases this is a partnership model, using Cornforth's (2003) classification.

Strategy: The strategic aim is profitability to maximise long-term advantage, and the strategy process is entrepreneurial. This is classified as an evolutionary perspective (Whittington, 2001).

7.8.3 Comparison and analysis of privatised research associations

Introduction

Staff numbers for both organisations continue to fall after becoming parts of a large commercial organisation. The new commercial owners had a strategic aim of profitability and it can be seen that the profitability of PRIVATISED RA1 increased dramatically. The profitability of PRIVATISEDRA2 is not available but the CEO said his company was profitable.

From Table 7.1 over the five-year period 2004-2008, it can also be seen that PRIVATISEDRA1 has the superior performance rating, of -2.38 compared to -7.14 for PRIVATISEDRA2.

Governance

Both organisations had a partnership model of governance after privatisation, and the governance is satisfactory.

Strategy

Both organisations had a singular strategic aim of maximising long term advantage through increasing profitability. Both organisations produced a strategy plan which incorporated flexibility, seizing opportunities.

Summary

PRIVATISEDRA1, unlike PRIVATISEDRA2, appears to be fully integrated into the parent company with projects originating in one part of the group being produced or marketed in another.

PRIVATISEDRA1 has a higher technology product range which could be a barrier to competition. PRIVATISEDRA2's product range of information events, consulting, and testing can be duplicated by other organisations.

Governance:

Satisfactory:

RA1 : yes

RA2 : yes

Run by executives:

RA1 : yes

RA2 : yes

Model: Cornforth (2003)

RA1 : partnership model

RA2 : partnership model

Strategy:

Strategic aim:

RA1 : singular

RA2 : singular

Strategy process:

RA1 : entrepreneurial

RA2 : entrepreneurial

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : evolutionary perspective on strategy

7.9 Medium-sized research associations

(Research associations referred to as MEDIUMRA1 and MEDIUMRA2)

7.9.1 MEDIUMRA1

Background

The Bessborough Report (1973) states that MEDIUMRA1 employed 97 staff in 1973. The employment numbers fell to 56 as listed in the AIRTO 1989 Directory, and remained at that level until 1999. Subsequently employment numbers fell to 32 in the year ended 30 June 2007.

During the same period, turnover fell from £2.34M in 1999 to £1.4M in 2006, and between 2001 and 2007 losses were made in every year except for 2005. The total losses over this period amounted to £1.9M.

During 2005, the premises were sold for redevelopment, yielding additional income for that year of £3.64M. (annual accounts for 2005). The research association moved to new premises.

The current CEO was appointed in 2006. He has a degree in management and chemical studies. The CEO spent ten years with BP, largely in marketing roles before joining a management consulting company as an investment adviser to the chemical industry.

Governance

MEDIUMRA1 is a company limited by guarantee. MEDIUMRA1 has both a council and a board.

The CEO increased the number of council members from 16 to its present level of 23. The board is made up of six non executive directors, appointed from council members for a three-year period together with two executive directors.

MEDIUMRA1 has 100 members from the industry and its supply chain.

According to the CEO, "The council role is governance and the board's role is executive." The board used to meet six times a year but now meets four times a year since telephone conferencing has been introduced to enable important matters to be discussed. The council meets twice a year, once for the AGM and the second time for a strategy day. It can be judged from the above that members are very much involved in the running of MEDIUMRA1 and, as the CEO stresses, members are important and the future of the MEDIUMRA1 is focused on them. The model of governance is the democratic one.

Strategy

Strategy development

The CEO has no evidence of a strategy document being produced before his appointment, however he noted that his predecessor enacted the strategy to relocate the organisation and restructure the pension scheme, both essential for MEDIUMRA1's survival.

The five-year strategic plan in 2008, was instigated by the CEO soon after his arrival. The first stage of this was to survey the needs and attitudes of members and clients. He summarised the results of this survey as being that MEDIUMRA1 was a trusted brand, however not proactive and too UK-centric. Members were unsure of the benefits of membership. The strategy, which is strongly member-focused, is based on the CEO's previous commercial experience, which emphasises that it is essential to understand the customers' (members') needs, which is achieved by a process of key account management.

The CEO confirmed SWOT analysis to be the principal analytical tool.

Strategic competences are reputation, employee knowledge, and customer services.

Eight redundancies have been made, with the objective of replacing some technical knowledge with marketing and business knowledge and in order to improve culture to emphasise customer service. In the CEO's view, "New staff have no baggage", and the new purpose-designed building, according to the CEO, "generates a feeling of optimism for the future".

Strategic overview

The strategic aim is to double the business with members within a three-year time span. According to the CEO the members will appreciate that they will be obtaining outstanding value for money from a larger organisation.

The aim for the organisation is sustainable growth. One acquisition has been made and others will be considered. The CEO of MEDIUMRA1 stated that he had experience in evaluating companies.

The strategic aim is a mission to its members, the security of the jobs of the 30 remaining research association staff and consolidation of the core business.

Much attention has been given to strengthening and simplifying the organisation's message, brand, and the somewhat overcomplicated logo that the CEO inherited.

Strategic options

A management buyout, according to the CEO, would not serve the industry. The CEO stated that an employee benefit trust could be a long-term goal and the importance of the staff is underlined by the fact that he had paid a bonus to staff, perhaps for the first time in the organisation's 80 year history.

Summary

Governance: MEDIUMRA1 has the governance of a traditional research association with a large (26 member) council and a board comprising of a subset of council – a democratic model (Cornforth, 2003).

Strategy: Members are very much involved with the strategy process. The strategic aim is plural, with sustainable growth being combined with service to members and maintaining employment for the staff. The strategy process is emergent and the strategy can therefore be classified as processual, (Whittington

2001). The control is market control, with an element of professional control through the membership involvement.⁶

7.9.2 MEDIUMRA2

Background

MEDIUMRA2 was formed in 1983 as a result of a merger between the research association and the trade association serving this industrial sector. The research association was formed in 1920 and the trade association in 1908. Following the merger in 1983 the newly-formed organisation was relocated in new purpose-built accommodation.

In 2000 the trade association, activities which were undertaken by one long serving staff member, was separated from the research association as at that time the research association was actively recruiting overseas members who did not wish to be associated with the UK trade association. This restructuring also helped to minimise corporation tax. MEDIUMRA2 employs 34 staff, has no CEO and is run by a 'troika' consisting of the technical director, the commercial director and the financial director. All three executive directors have been with the organisation between ten and fifteen years.

The semi-structured interview was with the commercial director who had an MBA together with a marketing degree.

The commercial director is very proud of the technical activities and felt that it could be a good model for other organisations, being totally commercially driven,

⁶ On 22 January 2009 it was announced that MEDIUMRA1 had merged with TECHNOLOGYRA1.

priding itself on a rapid response to enquiries and testing. Being a small organisation it claims to be flexible and agile.

MEDIUMRA2 has a membership of 200 companies spanning the supply chain of the industry. Subscriptions amount to 15% of turnover. The commercial director believes strongly that members cannot control the company; in his terms, "A company cannot be controlled by its customers."

Governance

The governance of the organisation presents problems. MEDIUMRA2 used to have a council of 16 people but as the UK industry declined this was replaced by a supervisory board. There are four directors of MEDIUMRA2; two executive directors and the two representatives from the industry.

The directors including the non-executive directors meet monthly with the chair rotating - a very informal structure. The function of the non-executive directors is, according to the commercial director is to provide a check and balance. The MEDIUMRA2 board meets quarterly and one of its functions is to set the salaries of the three executive directors. The CEO indicated that the executive directors were not happy with this situation. The MEDIUMRA2 board also has to approve expenditure over a certain amount for capital equipment.

The non-executive director, in his returned questionnaire, stated that he wished to increase the number of non-executive directors.

The non-executive directors on the executive board represent the members, and hence the governance model is a democratic one.

Strategy

Strategy development

The commercial director said that up to 2005 the previous managing director did not produce a strategy.

After that, in 2005, a five-year strategy document was produced, referred to by the commercial director as a philosophy of where the organisation is going, with milestones and financial goals. Progress is reviewed every three months and this director emphasised the need to seize opportunities. Part of the philosophy was to review the fundamental cost structure and to have a flat management structure and to be totally open with staff giving them detailed monthly reports of all staff matters including revenues and capital expenditure.

SWOT is used as a strategy tool.

Issues and threats

According to the commercial director, recruitment is a problem “It is difficult to find the right people.”

Pension liability is not a problem.

Strategic overview

The overall strategic aim is to increase turnover and profitability, as the way to maximise long-term advantage. Acquisitions have been followed up and MEDIUMRA2 has large capital reserves which could be used for acquisitions.

An important part of the strategy, as at the time of interview in 2008, was to change the staff culture to become totally customer-focused. The commercial director had an interesting approach to facilitate this change, which may be outlined as follows:

The present building is an attractive single storey one set in grounds of an industrial estate. However the researcher was told it was internally subdivided into many areas with a labyrinth of passages. As part of the strategy the building was gutted and turned into open space offices and laboratories. The commercial director said that with an open plan layout there was no "hiding place", as staff that were not comfortable with the new surroundings were encouraged to leave.

He had a policy of not changing cultures in individuals but to change the individuals; in his terms, "No-one is bigger than the company." The commercial director emphasised that: "Changes must take place. People hate change. We must create a new environment for change, helped by a flat structure and open door policy." He went on to stress that reputation is most important. MEDIUMRA2 must be first in customers' minds.

The organisation's areas of activity are problem solving, consulting, testing, training and membership. The largest area is testing, bringing in 50% of total income. This activity was not profitable five years ago but now is, with better

financial control and capital investment in new equipment. It is the 'cash cow' of the business.

MEDIUMRA2 has a very competitive attitude but cooperates with other research associations in some instances.

MEDIUMRA2 receives no income from the UK government and a relatively small proportion, approximately 5%, of its income from EU projects. The commercial director said that 50% of income is from new products and services which were developed over the past three years that is, the period 2006 to 2008.

The commercial director does not like the term 'test house' and refers to the organisation rather as a technical centre selling data with interpretation. The average price for an investigation in testing is £300. Testing service is a growth area. There is an environmental engineering team, who undertake a two-day environmental audit not only in Europe but in the US. This is also a growth area.

MEDIUMRA2 used to have an animal husbandry team and health and safety team. Both these have been disbanded as they were not profitable. The commercial director said that a trade association has an emotional attachment to services which they think should be supplied. He does not go along with this, having a totally commercial approach.

Strategic options

The aim of the executive directors is to purchase the company. This in fact happened in 2009.⁷

Summary

In summary, this was an organisation with an impressive building, commercial attitude and achieving strategic changes. It had no pension problems and has sufficient capital reserves of nearly six months' trading.

Governance: According to the commercial director, the present governance structure is unsatisfactory, as he feels the organisation should be run by the three directors whom he claims generate the wealth of MEDIUMRA2. This is contrary to the wishes of the non-executive director who in his returned questionnaire wanted to increase the number of non-executive directors from two to three, in this way giving the non-executive directors a greater say in the management of the organisation. This is an unsatisfactory situation which must produce tensions and needs resolving. The governance is a democratic model, in Cornforth (2003) terms.

Strategy: The strategic aim is singular, to maximise long-term advantage. The strategy process is entrepreneurial, and the organisation can therefore be said to fit an evolutionary perspective on strategy (Whittington, 2001)

⁷ A telephone conversation with the commercial director on the 10th May 2011 revealed that a management buyout by the three executive directors took place on the 9th September 2009 and that since that date the company filed only a set of abbreviated accounts, from which it is difficult to deduce the company's performance. No data was given on employment numbers. The researcher was informed by the commercial director that progress is being made and four additional staff members have been recruited.

7.9.3 Comparison and analysis of two medium-sized research associations

Introduction

Two medium-sized research associations, with staff numbers in the 30 to 35 range, were included in the case studies, both to determine strategies for success in these research associations but also to compare the success in growth terms with larger and smaller research associations.

From Table 7.1 over the five-year period 2004 - 2008 it can be seen that MEDIUMRA1 has the marginally superior performance rating, of -10.00 compared to -11.88 for MEDIUMRA2.

Governance

Both organisations have marketing expertise, in the case of MEDIUMRA1 a CEO with marketing qualifications and experience and in MEDIUMRA2 one of the three executive directors has an MBA and MA in marketing. The CEO of MEDIUMRA1, which has a satisfactory governance structure, stresses the importance of members: "The future of MEDIUMRA1 is focused on them" and they play an active role in the governance of the research association through both the council and the executive board. In contrast, the governance of MEDIUMRA2 is considered not to be satisfactory by both the executive and non-executive directors. The executives believe that an organisation cannot be run by its members and they appear to resent the role of the non-executive directors in setting senior staff salaries. From the non-executive directors' viewpoint they also consider the governance to be unsatisfactory and plan to increase the number of non-executive

directors on the board. This conflict of governance cannot have a positive influence on the running of MEDIUMRA2.

Strategy

The CEO of MEDIUMRA1 has the strategic aim to grow the organisation through membership as well as protecting the jobs of MEDIUMRA1 staff, a pluralistic perspective on strategy and an entrepreneurial process. Therefore the research association has a processual perspective on strategy.

MEDIUMRA2 strategy is profitable growth, a singular strategy. The CEO emphasised the need to seize opportunities and hence the strategy process is entrepreneurial and the strategy classification evolutionary (Whittington, 2001).

The major activity of both organisations was testing - an activity which can be undertaken at a productivity of £40k per staff member. This may be compared with that of TECHNOLOGYRA1 and TECHNOLOGYRA2, which had a productivity of almost double that value.

Postscript

Following the case study interview with MEDIUMRA1 on the 24 November 2008, MEDIUMRA1 announced its merger with TECHNOLOGYRA1 on the 22 January 2009, after which date the administration activities of MEDIUMRA1 were taken over by TECHNOLOGYRA1. MEDIUMRA1 generated a surplus and its productivity increased. On 9 September 2009 MEDIUMRA2 was the subject of a management buyout. The ownership of both the medium-sized research associations has changed since the case studies were undertaken. It could be argued that, albeit not on the success criteria used in this thesis, MEDIUMRA1 has

guaranteed its future and long-term advantage by sacrificing its independence to a larger successful research association. Whereas MEDIUMRA2, after the management buyout, has removed its unsatisfactory governance and is now a purely commercially driven organisation.

Summary

Governance:

Satisfactory:

RA1 : yes

RA2 : no

Run by executives:

RA1 : no

RA2 : no

Model: Cornforth (2003)

RA1 : democratic model

RA2 : democratic model

Strategy:

Strategic aim:

RA1 : plural

RA2 : singular

Strategy process:

RA1 : entrepreneurial

RA2 : entrepreneurial

Strategy classification: (Whittington, 2001)

RA1 : processual perspective on strategy

RA2 : evolutionary perspective on strategy

7.10 Small Research Associations

(Research associations referred to as SMALLRA1 and SMALLRA2)

According to Bessborough (1973) both SMALLRA1 and SMALLRA2 were in joint occupation of a modern building. This arrangement had not changed when the researcher visited these organisations in 2008.

7.10.1 SMALLRA1

Background

The Bessborough Report (1973) states that SMALLRA1 employed 17 people. Employment remained relatively constant over the next 35 years with employment numbers at 14 (AIRTO Directory, 1989) and 15 (AIRTO Directory, 1997). At the date of interview, in 2008, SMALLRA1 still employed 14 people. Commenting on its size, the Bessborough Report stated:

“The committee’s acquaintance with SMALLRA1 was material to the development of its conviction that size has little to do with research association effectiveness. The ‘right’ size for a research association cannot be determined by reference to an absolute financial yardstick, but only by reference to its circumstances. We do not think SMALLRA1 is too small to play an effective role, nor do we feel that much would be gained by a merger, even if an obvious partner existed.” [The identifying name has been removed from this paragraph.]

The SMALLRA1’s website refers to its business plan to become commercial, and states that over the past ten years SMALLRA1’s export revenues have risen to

50% of turnover and that commercial activities have risen to nearly 95% of turnover, from below 5% of turnover in 1980.

SMALLRA1, having a turnover of less than £3M per annum, has dispensation from publishing full accounts, under Sections 246(5) and (6) of the Companies Act (1985), and the published abbreviated accounts give no information on turnover or profitability. The FAME website gives an average QuiScore of 80 over the decade 2000 to 2009.

The researcher was given data for the year 2008, when the turnover would be £800,000, an increase from £450,000 in 1998. The researcher was also told that a profit has been made for the past ten years (that is, 1999 to 2008), currently in the region of £25,000 from which the staff bonus is allocated.

The director of research (note: still using the original job title of director of research for a research association and has not adopted the CEO or MD title unlike most other research associations) was appointed to this post in 1988, succeeding the previous director of research who had been in charge for 32 years.

Governance

SMALLRA1 is a company limited by guarantee. When the statutory levy was abolished in 1988, SMALLRA1 had 350 members. This number has been reduced over the years to fewer than ten in 2008. Membership is not important to the organisation, and in fact members' subscriptions are kept low and even reduced in some cases to retain the existing members, so that the organisation can continue to exist as a company limited by guarantee.

At interview, the research director anticipated a change to the legal structure of the organisation at the end of the 2009 financial year, from a company limited by guarantee to an employee benefit trust. The council and remaining members were reportedly in favour of this change.

In 1989 the Memorandum and Articles of Association were changed to permit EU companies to become members, but this has not been followed up, as the research director sees the way forward as a contract, rather than a membership organisation.

SMALLRA1 is governed by a council, as it has always been, and as the organisation now has fewer than ten members the council numbers were reduced from eight to three, plus the director of research.

The researcher was told that council meetings are held quarterly, each lasting one and a half hours, at which the director of research reports on activities over the previous quarter. According to the director of research, the council leaves the planning and running of the organisation to him. In practice this is a partnership model of governance, in which the function of the board is to “improve performance – support management”.

Strategy

Strategy development

Strategy is in the head of the research director. He does not produce a strategy document, only an annual budget; however, from interview, it is apparent that he

has clear and well thought out plans for SMALLRA1's future. He does not discuss his strategy plans with council.

User needs are sought through surveys which are carried out on future needs.

There is no formal request for feedback on work done, although customer complaints are dealt with in detail.

Strategic competencies

Reputation was considered to be the most important strategic competence. The research director maintains that SMALLRA1 has a worldwide reputation and that SMALLRA1 is well known, as indicated by the number of hits on its website.

Patents are not important according to the CEO. They are costly to produce and in many cases difficult to police. Employee knowledge is high but the average age of the staff at SMALLRA1 is 55, so care has to be taken to ensure that the knowledge base does not disappear with retirement.

In the research director's view, the skills in marketing need to be developed. Currently, that is at the time of interview, the research director does the marketing. Over the past seven years he has employed three marketing assistants, none of whom have proved to be successful.

Team working is not strong owing to lack of training and the customers are often considered to be more important than the business. To quote the research director, "The staff will do anything the customer wants, even if it is not profitable or in the terms of the contract". He wants the staff to do a good job - which they

do - but a good job must be a good commercial job as well as a good technical job.

The limitation for growth, as stated by the director of research, is that he is not "good enough at marketing". He is convinced that the business is out there and more must be done to ensure that it comes to SMALLRA1.

Issues and threats

The change in pension commitment from a final salary scheme took place in 1993. The initiative for this change came from the chairman at that time, in 1993. In the research director's opinion, if this change had not been made, SMALLRA1 would now not be in existence.

UK government and EU funding are of no importance to SMALLRA1. According to the research director, they had a negative influence in the past and are not considered as future contributors to SMALLRA1's success. The downsizing of SMALLRA1's industry was a slow process, and gave SMALLRA1 the opportunity of acquiring clients in other countries.

It has no competition from other organisations since it has a unique spread of products and services, but the research director has to monitor potential competition from other organisations which could provide part of this service.

Change in pension legislation is no longer a problem since, as noted above, the difficulties were resolved at an early date.

SMALLRA1 finds it hard to find people with marketing experience. It has failed three times to appoint the right person.

On the technical side SMALLRA1 has a very low staff turnover of one every four years.

SMALLRA1 is not seen as a research association as it trades under an acronym, and in fact will no longer be a research association if the membership base is superseded by an employee co-operative.

The internal factors influencing strategy are the knowledge of the industry and the sector.

Internal tensions are reportedly low, and the organisation has a very flat structure with two senior people who run the metallurgy and engineering side and report directly to the director of research. The director of research makes a point of spending much time in the laboratories and being accessible to all.

Strategic overview

The organisation's strategic aim is singular - sustainable growth with a target of doubling in size in the next five years, before the retirement of the current director of research.

SMALLRA1 has 1500 clients, of which 700 are active in each year. The research director stated that recruitment of new clients is proceeding well, with three new clients being enrolled each week.

The sale of machinery and test equipment together contribute one-third of SMALLRA1's income. Out of this, the majority is for test equipment. Software is not sold, technical publications are of growing importance, and innovation in testing equipment is of paramount importance.

Consultancy is important, leading to machine development and selling to both manufacturers and users.

The growth area is China and currently 10% of income comes directly from China with another 40% indirectly, that is testing imported goods from China and other related activities.

At present the association has no plans to go into China although it has had a long and hard look at it. The research director thinks that it would be difficult to keep control at a distance, and reputation (which SMALLRA1 values highly) could be damaged.

Extension up and down the supply chain has taken place over the years and now users are much more important than manufacturers, although machines and test equipment are still sold to manufacturers.

Strategic options

Merger with other research associations is not currently a serious proposition, although there was an opportunity to merge with SMALLRA2 when their previous

director retired; however, this was considered not to be advantageous to SMALLRA1.⁸

Summary

Governance: The governance is satisfactory. The council, according to the director of research, leaves the planning and running of the organisation to him. The function of the non executive director is to “monitor business opportunities” and not to represent the membership. Hence the model of governance is a partnership one.

Strategy: There is no formal strategy document. The singular strategic aim is to increase the size of SMALLRA1 not through increased membership but through sale of services to clients. The strategy process is entrepreneurial and the strategy can be classified as evolutionary, (Whittington, 2001).

7.10.2 SMALLRA2

Background

Bessborough (1973) stated that SMALLRA2 employed 20 staff and had 157 members. Bessborough also states (1973, p. 153), that:

8 On the 27th April 2011 the researcher telephoned the research director of SMALLRA1 to ascertain if any progress had been made with the conversion of SMALLRA1 into an employee benefit trust. The transfer has been followed up but not completed as it proved difficult to transfer the assets, as the land and buildings of SMALLRA1 and SMALLRA2 are held in a trust which would be difficult to dissolve. However the present arrangement of a company limited by guarantee run by the management presents no practical problems. The researcher was also told that the business activities were progressing well and the staff numbers were unchanged.

“SMALLRA2, while a small association, has had a significant impact on its industry. We understand that it has been influential in developing a collaborative spirit in an industry which, 20 years ago, was composed of highly secretive companies. The RA has acted as a platform or forum through which companies have been able to establish contact with each other and through which their mutual interests have benefited. As an example, SMALLRA2's regular general technical meetings have provided an opportunity for bilateral and multilateral co-operation and friendship to grow between company representatives. The activities of SMALLRA2 are also thought to have improved relations between the industry itself and its supply chain”

This club element of SMALLRA2 has been maintained, as will be described in this section. The size of SMALLRA2 increased to 23 (AIRTO Directory, 1989) and decreased to 14 at the date of the interview (2008). SMALLRA2 amalgamated with its trade association during the 1980s for the same reason as MEDIUMRA2. In 1997 the trade association and research association were separated, with the trade association being a company limited by guarantee holding the two shares of the research association, a private limited company.

The semi-structured interview did not yield all the information the researcher sought, so on the following day a telephone conversation took place between the researcher and a council member of SMALLRA2. The additional information obtained has been integrated with the information obtained from the semi-structured interview. More recent information was obtained by telephone conversation with the same council member on 27th April 2011.

Governance

Both the trade and research associations are governed by a council. The council of the trade association has ten members and that of the research association seven members, with three members in common. The researcher was told that joint meetings are held four times a year, with all council members of both organisations being present.

Prior to 2006 both organisations were managed on an interim basis by the person who had been company secretary under two previous CEOs. The researcher was informed by the council member that this arrangement was not satisfactory and that the organisation made heavy losses. In 2006 an external CEO was appointed with whom the researcher conducted the semi-structured interview.⁹ The governance is democratic (Cornforth, 2003), run by the members.

Strategy

The council member, during the telephone conversation in 2008, told the researcher that SMALLRA2 was still very much a membership organisation which played an important role in bringing the members together – a social function, a social embeddedness aspect of a systemic strategy. In this council member's (2008) view, the organisation only had a 50% chance of survival.

SWOT is used as a strategy tool.

⁹ The researcher was informed by the council member that the policy adopted by the council was to give the new CEO a free hand to run the organisation. This policy did not work out and in 2009 the CEO left the organisation after heavy losses were made. Before the appointment of a replacement CEO, the council ran the organisation 'hands on'. After a new CEO had been appointed, in 2010 - again an external appointment, the new CEO had the title 'manager' and not managing director, and the council continued to have a hands on input into the management of SMALLRA2.

At the semi-structured interview, the researcher was told that the membership base was being actively extended to China, India and Brazil and that the income was derived from the sale of test equipment, training courses, testing and consultancy services.

The strategic aim of the organisation is plural; to act as a “meeting place” for members and to maximise long-term advantage. The strategy process was entrepreneurial. Hence the strategy can be classified as processual (Whittington, 2001).

Summary

Governance: SMALLRA2 is managed by its council; a democratic governance model (Cornforth, 2003).

Strategy: The strategic aim is plural, the process entrepreneurial, hence a processual strategy perspective (Whittington 2001).

7.10.3 Comparison of the two small research associations

Introduction

In the case of SMALLRA1 staff numbers have remained constant at 14 over the 35-year period. In the case of SMALLRA2, staff numbers have decreased from 23 in 1989 to 14 in 2008. The average QuiScore for SMALLRA1 is 80 over the period 1999-2008 while that of SMALLRA2 is 54 over the same period. Over the period 2004 – 2008 both the small research associations have similar QuiScores of 73 and 72 respectively.

Hence, on the basis of sustainable growth, SMALLRA1 has the better performance. It has not grown but falls into the 'stable' QuiScore banding, and staff numbers have not declined. SMALLRA2 has experienced a fall in staff numbers and has a lower average QuiScore. This seems to be supported by the view, noted above, of the interviewed council member of SMALLRA2, who expressed the view to the researcher in 2008 that the organisation had only a 50% chance of survival.

On the basis of the above, SMALLRA1 is deemed the more successful.

Governance

The governance of SMALLRA1 is in the hands of the CEO who has been employed by the organisation since 1975 and has been its chief officer since 1988. The council of SMALLRA1 are prepared to hand over the organisation to the staff in the form of an employee benefit trust. Only the legal holding of the two small research associations is delaying this action. SMALLRA1 has replaced members with clients.

SMALLRA2 is a membership organisation and is controlled by its members through its councils. It has had two CEOs since 2000 who have not managed to produce profits, and since 2009 the organisation has been managed as well as being governed by its council.

Two very different styles of governances have emerged from two very similar organisations. SMALLRA1 is managed by its long-standing CEO with minimum

input from its small council. By contrast, SMALLRA2 is now managed as well as governed by its council.

SMALLRA1 has a partnership model of governance and SMALLRA2 has a democratic model (Cornforth, 2003).

Strategy

One important element of SMALLRA1's strategy is to become an employee benefit trust. The strategic aim is to maximise long-term advantage and the process is entrepreneurial; hence this may be termed an evolutionary strategy (Whittington, 2001).

SMALLRA2 has a plural strategic aim: survival and to provide a forum for the membership to meet and exchange information. The strategy process is entrepreneurial, hence the strategy can be classified as processual (Whittington, 2001).

Summary

Governance:

Satisfactory:

RA1 : yes

RA2 : no

Run by executives:

RA1 : yes

RA2 : no

Model: Cornforth (2003)

RA1 : partnership model

RA2 : democratic model

Strategy:

Strategic aim:

RA1 : singular

RA2 : plural

Strategy process:

RA1 : entrepreneurial

RA2 : entrepreneurial

Strategy classification: (Whittington, 2001)

RA1 : evolutionary perspective on strategy

RA2 : processual perspective on strategy

Having in this section described and analysed the data on each pair of research associations selected for the case studies, the next chapter (Chapter 8) summarises this data, addresses the secondary research questions and provides an overview analysis.

8. ANALYSIS OF ALL RESEARCH ASSOCIATIONS SELECTED FOR CASE STUDIES

8.1 Introduction

The analysis presented in Chapter 7 identified which of the pair of each pair of case study research associations is the more successful in terms of sustainable growth. The data, obtained from the semi-structured interviews with the CEOs and the returned questionnaires from the non-executive directors of the research associations, was analysed, thus enabling the governance structure and strategy for each research association to be categorised; the governance under the theoretical perspectives on organisational governance as conceptualised by Cornforth (2003) and the strategy under the generic perspectives on strategy as characterised by Whittington (2001).

In section 8.2 the secondary research questions listed in chapter 5 arising from the literature review and the pilot case studies will be considered in the light of the data generated by the case studies. This analysis will be approached under the headings of governance, strategy and other factors, and using the same question notation as in chapter 5. Appendix 3 illustrates the relationship between the research questions and the data.

In section 8.3 an overview of the governance structure and strategy models which the data indicates is associated with success will be analysed.

In section 8.4 the effect of research association characteristics and size on performance will be examined.

Finally in section 8.5 the causes of failure of research associations as identified in section 6.3.20 are examined to investigate whether the factors which contributed to success also in a negative sense contributed to failure.

8.2 Research questions – analysis in terms of governance and strategy and other identified factors

The secondary questions addressed (section 4.3.5) are :

A What is the effect of governance on research association performance?

1. What is the relationship between the board and the executive?
2. Has the role of the research association's governing body changed to meet the needs of the research associations to become more like trading companies?
3. Do the boards exercise real power or does management run the show?
4. Do boards get involved in management details?
5. Do tensions exist between the board and the executives and how are they managed?
6. What is the background and length of tenure of the CEO?

B When did strategic planning start and who initiates the strategy?

7. Does the research association have a strategy?

8. Does strategy formulation in not for profit organisations lag behind strategy formulation in profit organisations?
9. Who triggers the setting up of the strategy process – the board or the CEO?

C What is the strategy development process?

10. How does the research association rank the importance of stakeholders?
11. Has the importance of user needs been incorporated into strategy formulation?
12. Do research associations consider lobbying to be important?
13. What is the role of research association councils in strategy formulation?
14. Does the board produce the strategy for small organisations?
15. What is the most commonly used strategy tool?

D How do research associations view their strategic competencies?

16. How do research associations rank strategic competencies under the headings of regulatory, positional, functional and cultural?
17. Do research associations consider reputation to be their most important tangible asset?

E What are the diversification strategies?

18. Have research associations changed their focus from research to new products, new services and new markets?
19. Have research associations adopted a collaborative or competitive attitude?

F What is the impact of the other important factors identified that may influence strategy?

20. Does size have an impact on performance?
21. Were research associations wise to participate in public funded schemes or should they have followed a more commercial route?
22. Do pension liabilities, where they exist have a strong influence on strategy formulation?
23. Has the effect of government withdrawal of tax exemption in some research associations influenced their strategy?
24. Is access to capital a limiting factor on research association growth?
25. How is culture change effected? Is it possible to identify which is the more successful approach?
26. How far have research associations made the move from professional to market control?

8.2.1 Governance

A What is the effect of governance on research association performance?

What is the relationship between the board and the executive? (Question 1)

Carlson and Donohoe (2003) state that the single most important factor is how well the board partners with the executive directors. If the relationship is healthy the organisation thrives. If the relationship is unstable or poor the organisation suffers. In order to test the applicability of this conclusion with information obtained from case studies, the responses from the non-executive directors'

questionnaire will be examined. All the responses from the non-executive directors of the more successful of the pairs of research associations responded that the governance was satisfactory. Two of the responses from the non executive directors of the less successful research associations stated that the governance was unsatisfactory and that there was a need in both cases to increase the number of non-executive directors. Hence the importance of a good relationship between the board and the executive directors is supported by the results.

Has the role of the research association's governing body changed to meet the needs of the research associations to become more like trading companies?

(Question 2)

With respect to board size and style, Oster (1995) suggests that the boards of not for profit organisations tend to be larger, with fewer insiders and a more 'hands on' approach than tends to be the case for commercial organisations. As research associations have become more commercial, (moving from professional to market control as conceptualised by Whittington (1991)), large councils have been replaced by small executive boards which are in general less 'hands on'. So the research seems to confirm Ostler's view that as the research associations become more commercial large councils are replaced by smaller boards.

As was discussed in chapter 2, Carver & Oliver (2002) define three roles of board members as;

- giving expert advice, either proactive or reactive,
- providing safeguards, the board provides security,

- useful connections, extending the networking of the organisation to potential sources of finance, potential clients and public relations.

The roles of board members may be summarised, based on this research, as follows:

FOOD

FOODRA1 is very much a membership organisation and the role of council and the board is to represent the interests of the members and to cater for their future needs via the members input into the research programme.

FOODRA1 uses its non-executive directors to strengthen the links with the membership in order to improve networking. In FOODRA2, non-executive directors are appointed externally to the membership on the basis of the expertise they bring to the organisation. Thus the board focus of FOODRA1 is networking – membership and FOODRA2 is expertise.

TRANSPORT

In the two transport research associations, TRANSPORTRA1 has non-executive directors who provide expert advice and knowledge of potential markets. In the case of TRANSPORTRA2, the role of the non-executive directors has changed from representing the membership to providing expert advice. Thus the board focus of both research associations is expertise.

CONSTRUCTION

In the case of CONSTRUCTIONRA1, the non-executive directors are drawn from the membership and have an advisory role to play, which has an

external not an internal focus. The non-executive directors of CONSTRUCTIONRA2 are active in running the organisation and are selected from the membership. Thus the board focus of CONSTRUCTIONRA1 is safeguards and CONSTRUCTIONRA2 is networking – membership.

CLOTHING

CLOTHINGRA1 has stipendiary non-executive directors who are appointed on the basis of the expertise they can bring to the organisation.

CLOTHINGRA2 has an unsatisfactory governance, with representation from the membership, who have only the legal role of providing safeguards. Thus the board focus of CLOTHINGRA1 is expertise and CLOTHINGRA2 is safeguards.

TECHNOLOGY

In TECHNOLOGYRA1, executive directors are appointed on the basis of the contribution they can make to the organisation, giving expert advice, whilst in TECHNOLOGYRA2, the function of the non-executive directors is to represent the members, a similar role to that in FOODRA1. Thus the board focus of TECHNOLOGYRA1 is expertise and TECHNOLOGYRA2 is networking - membership.

MEDIUM-SIZED

MEDIUMRA1 is focused on the membership. The non-executive directors represent the membership. In MEDIUMRA2, the governance was not considered to be satisfactory as the representation of the membership is

only a small part of MEDIUMRA2's activities. Thus the board focus of both research associations is networking - membership.

Note: Since the case studies were carried out in late 2008, both medium-sized RAs have changed their legal structure. MEDIUMRA1 is now a part of TECHNOLOGYRA1 and MEDIUMRA2 has undergone a management buy-out.

SMALL

SMALLRA1 is run by the staff, both non-executive and executive directors wanting to change the structure of the organisation to an employee benefit trust. Following the departure of two CEOs, SMALLRA2 is now run 'hands on' by the council. Thus the board focus of SMALLRA1 is safeguards and SMALLRA2 is networking - membership.

In summary, for the more successful research associations, the number of research associations with the given board focus was:

2 - networking – membership

3 - expertise

2 - safeguards

For the less successful research associations the number of research associations with the given board focus was:

4 - networking - membership

2 - expertise

1 - safeguards

In the more successful research associations it can be seen that there was slightly less focus on representation from the membership.

Cornforth (2003) asks the question, are boards in not for profit organisations able to exercise real power, or does management run the show? The answer is that boards have legally, a high level of power but when the performance of the organisation is satisfactory they express a low level of concern (interest). They can become the key players when things are not satisfactory and express a high level of interest.

Hence it can be concluded from the case study research associations that it is important that the executive directors respect the non-executive directors and ensure that the organisation is successful so the non-executive directors are kept satisfied and do not exercise the power they ultimately have.

Do the boards exercise real power or does management run the show? (Question 3)

In response to the question regarding the function of the non-executive directors, the executive directors of the better performing research associations made statements such as:

“To assist management to contribute to the development of the organisation”

“To constructively scrutinising performance”

“To ensure the research association remains a viable organisation.”

“To oversee and advise management“

From the non-executives of the poorer performing research associations comments such as the following were received:

“To set performance targets for the business and the CEO and act in good time of either of these is not satisfactory“

“To bring to the board independent judgement and to guide on strategy development performance and appointments“

Hence in general for the better-performing research associations the non-executive directors assumed their role as assisting management, a partnership model of governance as conceptualised by Cornforth (2003) while for the poorer-performing research associations the non executive directors assumed a more democratic role Cornforth (2003).

The views of the executive directors, in the case of the more successful research associations, was that the governance is based on trust, with the executive directors taking the initiative and regarding the non-executive directors as, for example, ‘wise sages’. In seven out of the eight more successful research associations, the organisations are run by the executives, while in the remaining research association - which was only marginally superior to its partner - the governance was described as not satisfactory.

Do boards get involved in management details? (Question 4)

Chait (2005) reports on a growing importance of the executive director in not for profit organisations, and the case studies indicate this is true for research associations. The importance of the executive director has been increasing since 1980 with the reduction in government support and the need for the executive director to negotiate alternative sources of funds from activities such as confidential sponsored research over which the council or board has no control. Chait (2005) claims that as the result of a growing importance of the executive director the boards tend to get involved with management issues. The present research does not support Chait's suggestion that the boards tend to get involved with management issues.

Do tensions exist between the board and the executives and how are they managed? (Question 5)

There was no evidence of tension within the boards as suggested by Kramer (1985). The evidence from the case studies supports the argument that in the better-performing research associations the boards work well based on trust and that in the less well-performing organisations, where non-executive directors take a more leading role in setting targets and monitoring progress, the research indicates the situation is accepted by all parties.

What is the background and length of tenure of the CEO? (Question 6)

The CEO's length of service with the organisation and whether their appointment was an internal or external one could be a factor leading to the success (or not) of the organisation. Of the eight more successful research associations, only one

was an external appointment to the post of chief executive, and that was MEDIUMRA1, which had only a marginally superior performance to MEDIUMRA2. FOODRA2 had three CEOs since 2000, two of which were external appointments. A similar situation occurred in CONSTRUCTIONRA2 and SMALLRA2 where recent external appointments to the post of CEO were deemed not successful. This could be in line with Whittington's (1991) comments: "... There has been so little comprehension between the newcomer and existing R&D managers that the appointment was felt not to have been a success..." (p. 52)

This implies that the research association culture must be understood before it can be changed - and as this takes time, the length of the service of the internal appointee may be a factor relevant to success. In five out of seven of the better performing research associations, the CEOs had been employed by the research association for a greater length of time in contrast to two out of the seven less well performing research associations. The privatised research associations have not been included in this analysis as in both cases the appointment of the CEO were internal from the holding company. The length of service as CEO was not significant as three of the successful research associations had a CEO with the longer service compared to four for the less successful research associations, with the CEOs of one pair (the clothing research associations) having the same length of service.

The conclusions from this data are that external appointments have not been as successful as internal appointments, and that greater length of service of the CEO with the organisation contributes to the organisation's success.

This result supports Bryson and Crosby (2004, p. 297) who state that there is no substitute for effective leadership when it comes to strategic planning and it could be argued that a close knowledge of the organisation and its culture, only obtainable from a direct involvement over a period of time, is important in developing a successful strategy.

Summary of the effect of governance on research associations

For the more successful research associations the analysis highlights the following:

- the governance structure must be satisfactory to both the executive and non executive directors
- in the more successful research associations the non executive directors function is to bring expertise to the organisation, not just represent the interests of members
- the executives take the lead role in running the organisation
- internal appointment of the CEO is preferable to external appointment
- longer service of CEO with the organisation is beneficial.

8.2.2 Strategy

Strategy initiation

B When did strategic planning start and who initiates the strategy?

Does the research association have a strategy? (Question 7)

All except one the case study research associations had a strategy at the time of the interview. The research association which had no strategy was one of the poorer performing research associations.

Does strategy formulation in not for profit organisations lag behind strategy formulation in profit organisations? (Question 8)

As was noted in Chapter 2, Courtney (2002) claims that strategy in not for profit organisations has lagged behind strategy in for profit organisations. This research shows that only one association was involved in the strategic planning process in the 1980s, seven in the 1990s and five after the year 2000. The literature, for example Table 2.3 in Whittington (2001), indicates when the four perspectives of strategy were developed, and this table dates back to 1960. Of the remaining three the strategy start date is unknown for two and one does no formal planning. The research association which started planning in the 1980's was the more successful of the pair.

Who triggers the setting up of the strategy process – the board or the CEO? (Question 9)

The 1996 ACEVO report raises the question - who triggers the strategy process in not for profit organisations? This research shows that in 11 cases the process was triggered by the CEO, in one case by the executive directors and in two cases the process was part of the culture. The initial strategy was triggered in one research association by the non-executive director whose previous expertise was in strategy consulting.

Summary

The key points concerning strategy initiation were:

- All but one of the case study research associations had a strategy and the research association without a strategy was a poor performer
- The strategy process is initiated mostly by the CEO
- The more successful research associations had a longer history of strategic planning.

Strategy process

C What is the strategy development process?

How does the research association rank the importance of stakeholders?

(Question 10)

The rankings for different groups of stakeholders made by the executive and non-executive directors are shown in table 8.1, grouped into 'more successful' and 'less successful' research associations.

Table 8.1 Relative importance of different stakeholders as stated by executive and non-executive directors

Rating given by:	Executives					Non executives			
	Members	Clients	Staff	Other		Members	Clients	Staff	Other
FOODRA1	1					2	1	2	
TRANSPORTRA1			1				1	2	
CONSTRUCTIONRA1	3	2	1						
CLOTHINGRA1	3		1	2		2		1	
TECHNOLOGYRA1		2	1	3		3	1	2	
PRIVATISEDRA1		2	1						
MEDIUMRA1			1			1	3	2	
SMALLRA1						1	3	2	
FOODRA2	2		2			1	3	2	
TRANSPORTRA2	3	2	1						
CONSTRUCTIONRA2	1					1		2	
CLOTHINGRA2			1				2	1	
TECHNOLOGYRA2	1		2			2	1	3	
PRIVATISEDRA2	3	2	1						
MEDIUMRA2			1			1	3	2	
SMALLRA2	1					1			

Ranking 1-3 high to low

The executive directors of six of the more successful research associations rate staff as the most important stakeholders, whilst two of the less successful research associations put staff in second place. Staff are considered less important by the non-executive directors with only two ranking it first. Hence staff are considered to be more important by the executive directors than the non executive directors.

Members are rated more important by the non-executive directors than by the executive directors, and members have a higher rating from both the executive and non-executive directors for the less successful research associations.

Carver (2006) recommends that boards of not for profit organisations should focus more on external than internal matters. This research is in line with these findings – with the non-executive directors giving less importance to staff and more importance to members and clients. Another interpretation of these findings is that non-executive directors, where they are representative of the members, focus more on the interests of the members.

Has the importance of user needs been incorporated into strategy formulation?

(Question 11)

All the research associations through various mechanisms of sub committees and focus groups explore the user needs. User needs are determined from the membership for those research associations with a large membership. Two of the more successful research associations explore the user needs outside the existing membership and client base.

Do research associations consider lobbying to be important? (Question 12)

None of the case study research associations undertook lobbying. This activity appears to be left to AIRTO who have made submissions to seven UK government and EU framework programmes between 2005 and 2011.

What is the role of research association councils in strategy formulation?

(Question 13)

The initial strategy document was produced in 11 cases by the executive directors and in three cases jointly with non-executive directors. In the case of the jointly

produced strategy, this occurred in one of the less successful of the research association pairs and in the other two research associations where the initial strategy was jointly produced it occurred in the two medium-sized research associations who had an equally poor performance. Hence it can be seen that where the initial strategy document is solely produced by the executive directors this can lead to the research association having a superior performance.

Does the board produce the strategy for small organisations? (Question 14)

In none of the small or medium sized research associations was strategy initiated or produced by the non executive directors.

What is the most commonly used strategy tool? (Question 15)

With reference to the most used strategy tool, SWOT was used by FOODRA1 and 2, CONSTRUCTIONRA1and 2, MEDIUMRA1 and 2, TRANSPORTRA1, PRIVATISEDRA1, SMALLRA2 and TECHNOLOGYRA2. Therefore 10 out of the 16 case study research associations stated that they used SWOT. Additionally PRIVATISEDRA1 also used PEST and 'as is to be' and TRANSPORTRA2 used the analysis tool developed by the European Federation of Quality Management. This research supports the proposition of Courtney (2002) that SWOT was the most commonly used strategy tool.

Strategic competencies

D How do research associations view their strategic competencies?

How do research associations rank strategic competencies under the headings of regulatory, positional, functional and cultural? (Questions 18 and 19)

In the present research, information on the most significant strategic competence under the four headings used by Coyne (1986) was sought from the CEOs. The four headings are regulatory, positional, functional and cultural.

Under regulatory competence, Coyne includes contracts, patents and licenses.

Only one, TECHNOLOGYRA2, listed patents as important, whilst TRANSPORTRA1 emphasised the importance of copyright protection. Five other research associations stressed the importance of being involved in the production of standards, regulations and environmental legislation which can lead to future market opportunities in testing and consultancies.

With respect to positional competence, under which Coyne lists reputation, supply chain and external networks, all the case study research associations rated reputation as the most valuable.

Under functional competence, all the case study research associations considered employee knowledge to be the most important. This is consistent with research associations being knowledge-based organisations.

Under cultural competence, three research associations listed team working, four listed customer service, two referred to an open culture, and one the free internal

communication (which can be considered as an aspect of team working). Also several research associations mentioned the need to change the culture to become more market-focussed.

These findings are in line with those of Tidd (2006), who in a questionnaire he sent to 95 CEOs of organisations, asked for the competences to be ranked in order in their organisation. He obtained the following results:

- Company reputation
- Product reputation
- Employee knowledge/know how
- Organisational culture
- Personal networks
- Specialist physical resources

The ranking of competencies expressed by the non executive directors is shown in table 8.2 .

Table 8.2 Ranking of competencies given by non-executive directors

Ranking	Competencies			
	Reputation	Staff knowledge	Customer focus	Team working
	Number of successful research associations with given ranking			
1	2	3	2	0
2	2	3	2	3
3	1	0	1	1
4	1	0	1	2
	Number of less successful research associations with given ranking			
1	1	4	0	0
2	0	0	5	0
3	2	1	0	2
4	2	0	0	3

Ranking 1-4 high to low

The table splits the results for the more successful and less successful research associations of each pair. The entries in the table then indicate the number of case study research associations giving each of the rankings 1 to 4 for each of the key competencies identified.

Thus from the table it can be seen from the non executives' perspective:

- reputation has been given higher priority in the more successful research associations. Four of the more successful research associations have ranked reputation either first or second and in the case of the less successful only one ranked it first or second.

- the results for customer focus are mixed and conclusions cannot be drawn.

- in the case of staff knowledge, six of the more successful research associations and four of the less successful research associations put staff knowledge first or second priority.

- there is a small bias towards giving team working a higher ranking in the more successful research associations.

Diversification strategy

E What are the diversification strategies?

Have research associations changed their focus from research to new products, new services and new markets? (Question 18)

Ansoff (1965), discusses whether diversification is achieved by means of new products or new markets. In this research, new products were the diversification route for five research associations, three in the more successful and two in the less successful research associations. In 11 cases there were no new products reported. With reference to new markets, nine research associations have a strategy of diversification into new markets, five being from the better performing and four from the less successful research associations. Research associations which have no policy to diversify into new products or new markets were the poorer performers. Of those with a diversification policy, the choice between new markets and new products seems to have had no influence on the success of the organisation.

In the above, the term 'new products' includes services as well as new products. Tidd et al (2005) separates the focus on technical services or innovation products. From the research associations selected for case study, ten focused on technical services, four from the better performing research associations and six from the poorer performers.

Of the four research associations focusing on innovation, three were from the better performers and one from the less successful research associations.

The evidence from this data is that technical services do not lead to superior performance whilst, of the four research associations who focused on innovation, three were successful.

Have research associations adopted a collaborative or competitive attitude?

(Question 19)

With reference to competitive or collaborative stance with other research associations and universities, six were collaborative and six competitive.

However, all six competitive research associations were the more successful of their respective pairs, suggesting that a competitive stance pays off.

8.2.3 Other factors

The other factors which were identified and explored that may have an important impact on the research association strategy and on its performance are considered in this section.

F What is the impact of the other important factors identified that may influence strategy?

Does size have an impact on performance? (Question 20).

This research has identified that size appears to be a significant factor which impacts on sustainable growth. The overview of the effect is given in section 8.3 and discussed in detail in section 8.4

Were research associations wise to participate in public funded schemes or should they have followed a more commercial route? (Question 21)

One reason for research association failures, discussed in Chapter 6, is that research associations were still seeking finance from the government. The data from the research associations covered by the case studies yields mixed results, for example TECHNOLOGYRA1 has prospered by acting as an agent for government initiatives and hence has been very successful at obtaining government funding. The second most successful research association as ranked in figure 8.3 is TRANSPORTRA1 which is an entirely commercial organisation. Both the FOODRAs use public funding for their core research from which commercial opportunities stem. CLOTHINGRA1 has an aversion to public money and has achieved success through expanding its commercial product range and international clientele. In conclusion, hankering after public finance can be a disaster, however public support can augment income from private sources.

Do pension liabilities, where they exist have a strong influence on strategy formulation? (Question 22)

An unmanageable pension deficit has contributed to two recent failures, AMTRI and SIRA. The pension deficit is unmanageable in the sense that the organisations were not sufficiently commercially driven to generate surpluses sufficient to reduce the pension deficit. Other case study research associations with substantial pension deficits have had to modify their strategic aim from that of growth to that of profitability in order to generate a surplus large enough to reduce the pension liability. CLOTHINGRA2 which has an unmanageable pension deficit was still struggling (at the time of the interview) to develop a strategy to cope with

the situation. The problem of a pension deficit was identified by some research associations earlier than others, and the case studies cite examples of research associations who abandoned final salary pension schemes before the deficit became a serious problem.

Has the effect of Government withdrawal of Tax Exemption in some research associations influenced their strategy? (Question 23)

One case study research association restructured the association into two companies; a research company and a service company with the object of minimising tax liabilities, with the research company being exempt from corporation tax and the service company liable to corporation tax. This tactic did not yield the desired results as the criteria for corporation tax exemption were altered by the government while the restructuring was in process. A second case study research association also restructured in 2000 for the same reason. Some research associations, who are profitable, have to pay corporation tax which reduces the surplus they can transfer to the balance sheet for future developments. Their strategic aim is therefore modified to increase profitability to take into account the reduction of the surplus due to corporation tax. The rationale (Section 508 Companies Act) upon which the government decided to exempt some research associations from corporation tax and not others is to the researcher a mystery.

Is access to capital a limiting factor on research association growth? (Question 24)

This question surfaced during one of the pilot interviews and was followed through the case studies. FOODRA2 stated that access to capital for new equipment was a problem. None of the case study research associations stated that access to capital was seen as a major factor inhibiting growth. The two privatised research association stated that one of the benefits of being part of a large commercial organisation is access to capital. These results indicate research associations do not actively consider injection of capital amongst their strategic options.

How is culture change effected? Is it possible to identify which is the more successful approach? (Question 25)

The culture change identified in the case studies was the need for research and technical staff to become more market focussed. Contrasting approaches to a solution to this problem can be found in two case studies. In the food based research associations FOODRA1 has established tutorials and internal focus groups to improve the customer focus. FOODRA1 brought in external trainers. FOODRA2 recruited staff with marketing experience who acted as intermediaries between the research staff and the customers. FOODRA2 has not shown the better financial performance which could be attributed to bringing in skilled marketing experience but one example is not sufficient evidence for a preferred approach. MEDIUMRA2 took a different approach again following a policy of not changing the culture of the individuals but replacing the individuals.

How far have research associations made the move from professional to market control? (Question 26)

Whittington (1991) states that professional control was prevalent in research associations prior to 1971 and that, after that period with a reduction in government funding and the lessening of the importance of the co-operative research programme, market control replaced professional control.

In order to assist the judgement of the extent of professional control such comments by research associations concerning strategy as 'providing interesting work for the staff' are interpreted as the research association still having an element of professional control.

In the industry based case studies:

- FOODRA2 was at the time of the interview 2008 still endeavouring to move from professional to market control by replacing research with technical services.
- CONSTRUCTIONRA2 in 2008 was operating as a traditional research association, the dominant feature of which was its co-operative research programme. This programme had an element of professional as well as market control.
- CLOTHINGRA2 is the result of an amalgamation between two research associations with a strong professional control. It was not until 2000 that the CEO endeavoured to move the organisation away from research to commercial activities. However an element of professional control remains.
- TECHNOLOGYRA2 in 2008 had a research programme which represented 36% of total effort which represented an element of professional control.

Although the majority of case study research associations have made the move from professional to market control as proposed by Whittington (1991) the industry based research associations listed above which are still making the transition to full market control are the less well performing of the pair.

8.3 An overview of the governance structure and strategy models associated with success

The data relating to governance and strategy obtained from analysis data presented in Chapter 7 is shown in table 8.3.

Table 8.3 Summary analysis of characteristics of research associations

	More successful research associations								Less successful research associations									
	FOODRA1	TRANSPORTRA1	CONSTRUCTIONRA1	CLOTHINGRA1	TECHNOLOGYRA1	PRIVATISEDRA1	MEDIUMRA1	SMALLRA1	Total	FOODRA2	TRANSPORTRA2	CONSTRUCTIONRA2	CLOTHINGRA2	TECHNOLOGYRA2	PRIVATISEDRA2	MEDIUMRA2	SMALLRA2	Total
No. of employees	344	1228	150	178	615	235	n/a	n/a	5 with more	167	386	40	69	458	98	n/a	n/a	1 with more
No of members	1800	none	750	1600	500	150	100	<10	3 with more	1000	50	70	60	2800	200	200	200	5 with more
Directors length of service	1981	1990	1975	1963	1988	1993	external	1975	7 with greater length of service	2005	external	2003	1998	1991	1983	1994	external	1 with greater length of service
Length of service as CEO	1988	2006	1998	2006	2008	2008	2006	1988	3 with greater length of service	2008	1991	2006	2006	2004	2006	2005	2005	4 with greater length of service
Internal or external appointment	i	i	i	i	i	i/h	e	i	1e	i	e	i	i	i	i/h	i	e	2e
Governance satisfactory	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓	✓	✓	✓	✓	✓	4
Run by executives	✓	✓	✓	✓	✓	✓	✓	✓	7	✓	✓	✓	✓	✓	✓	✓	✓	2
Partnership or compliance model	d	p	d	p	p	p	d	p	5p 3d	p	p	d	d	d	p	d	d	3p 5d
Strategic aim	s	s	s	s	s	s	pl	s	7s 1pl	s	pl	pl	s	s	s	s	pl	5s 3pl
Strategy process	ent	ent	ent	ent	ent	ent	ent	ent	8ent	del	del	del	imp	ent	ent	ent	ent	4ent 3del 1imp
Strategy classification	ev	ev	ev	ev	ev	ev	pr	ev	7ev 1pr	cl	sy	sy	ev	ev	ev	ev	pr	4ev 1cl 1pr 2sy

nd - same length of service	p - partnership	ent - entrepreneurial	ev - evolutionary
i/h - internal from holdings company	d - democratic	del - deliberate	cl - classical
i - internal appointment	s - singular	imp - imposed	pr - processual
e - external appointment	pl - plural		sy - systemic

The table is arranged with the eight more successful research associations on the left hand side and the less successful of the pairs on the right hand side. The first two rows illustrate the effect of size and number of members on success. With

respect to size, the medium and small research associations have been excluded from this analysis as they were selected on the basis of being the same or nearly the same size. For the remaining six pairs of research associations, in five cases the larger one was the more successful. This apparent size effect will be examined in more detail in section 8.4

The number of members was investigated since, as the research associations were established as member organisations, it could be surmised that a larger number of members led to success. This possibility was not supported by the evidence from the case study pairs as only three of the eight 'successful' research associations had a greater membership compared to five of the less successful research associations having the greater number of members.

The table includes data on the CEOs length of service with the organisation and his length of service as CEO. The length of service of the CEO as CEO does not, from these case studies, contribute to success. His length of services with the organisation does contribute to success. (section 8.2.1 question 6)

The remaining data in the table is concerned with governance and strategy and these are discussed below.

8.3.1 Governance

All the more successful research associations had, according to both the CEOs and the non-executive directors, a satisfactory governance structure. For example in the case of the less successful research associations FOODRA2, the non-executive directors wished to strengthen their representation on the board and, in

the case of CLOTHINGRA2, the membership had so little interest in the organisation that it would be difficult to replace the non-executive directors when the current nominees retired. In MEDIUMRA2, the executive directors resented the influence of the non-executive directors and, in the case of SMALLRA2, the non-executive directors took over the running of the organisation. The conclusion from this analysis is that success was associated with a satisfactory governance as postulated by Carlson and Donoghoe (2003).

The governance model as postulated by Cornforth (2003) and Table 8.3 indicates that, for the more successful research associations, there is a split of 5:3 for the partnership and democratic model and, for the less successful research associations, a split of 3:5. This indicates that a partnership model is marginally better.

The above analysis strongly indicates that satisfactory governance is essential for success and that the CEO should be in control.

8.3.2 Strategy

Under this heading the strategic aim and the strategy process of the more and less successful research associations will be compared, as will the generic perspectives on strategy as set out by Whittington (2001).

Strategic aim

The strategic aims have been classified as singular or plural, where the single aim is to maximise long-term advantage and the plural aims may be additionally;

maintaining employment (as in MEDIUMRA1), providing interesting work for staff - TRANSPORTRA2, and focus on the membership - CLOTHINGRA2 and SMALLRA2.

Of the eight more successful research associations, only MEDIUMRA1 had a plural strategic aim and, as has been stated above, MEDIUMRA1 was only marginally superior to MEDIUMRA2. For the eight less successful research associations, three had a plural strategic aim, indicating that, for success, a singular strategic aim to maximise long term advantage is the best approach.

Strategic process

In this research the eight more successful research associations had an entrepreneurial approach. For the less successful research associations, four had an entrepreneurial strategy process, three had a deliberate strategy process, and one was an imposed strategy. The deliberate strategies were within the research associations where the executive directors were not in charge. CLOTHINGRA2 was considered to have little or no strategy to deal with its pension and culture issues meaning an imposed strategy process. From these case studies across the pairs, the entrepreneurial strategy process is the more satisfactory in terms of achieving sustained growth.

Strategy Classification

As set out in Chapter 2 (fig. 2.2), Whittington (2001) defines four generic perspectives on strategy which combine the organisation's strategic aim and the strategy process. These are classical, evolutionary, systemic and processual. The generic perspectives on strategy for the 16 research associations have been classified according to Whittington's model and are set out in Table 8.3. The

analysis indicates that seven out of the eight more successful research associations have adopted an evolutionary perspective on strategy and the 8th a processual perspective. For the less successful research associations, four had an evolutionary perspective, two a systemic perspective, one a classical and one a processual perspective. This analysis suggests that across the case study pairs, the evolutionary perspective is the one that is most associated with superior performance as it was developed in seven of the eight more successful research associations and only in four of the eight of the less successful research associations. The five most successful case study research associations ranked in terms of positive sustainable growth all adopted an evolutionary strategy perspective. (fig. 8.3)

8.4 The effect of research association characteristics and size on their performance

In figure 8.1 the growth of the case study research associations (with the exemption of the two small research associations whose abbreviated accounts do not include staff numbers) over the period 2004 to 2008 measured as a percentage of the number of staff in 2008 has been plotted against the size of the research association in terms of staff employed in 2008. The linear regression has been calculated and this trend line is displayed in the figure. As can be seen, the slope of the trend line is positive, indicating that the larger research associations have shown the greater growth per staff member. Where the trend line crosses the abscissa, i.e. above around 400 staff numbers the research associations have grown.

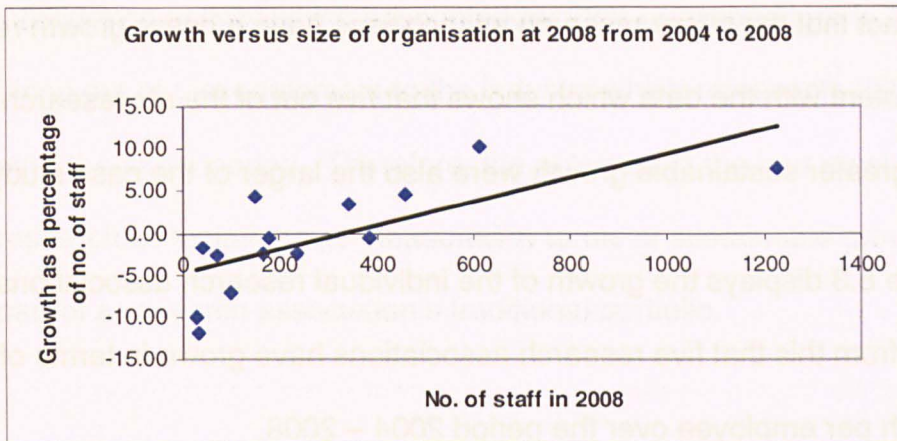


Figure 8.1 Growth versus size of organisation – linear trend

The logarithmic presentation provides a better fit as can be seen in Figure 8.2, where the indicated threshold for growth is around 200 staff level.

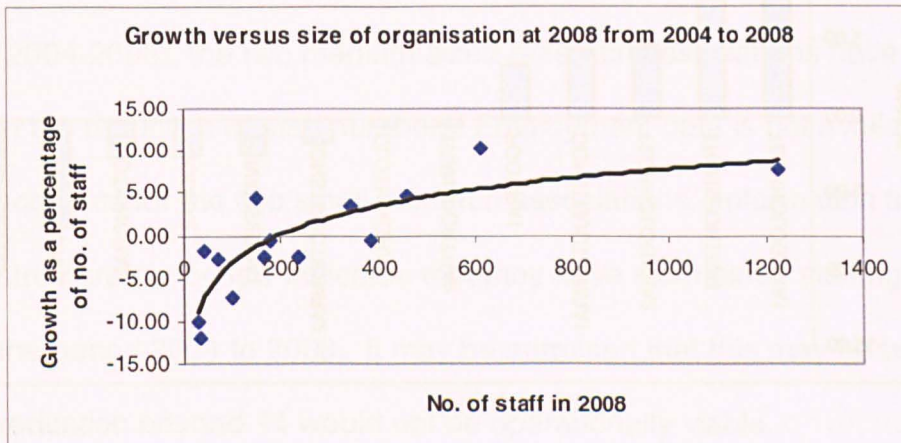


Figure 8.2 Growth versus size of organisation – logarithmic trend

The research does not permit the size above which research associations grow to be precisely defined but as a guide is in the region of 200-400 staff. The only research association to achieve sustainable growth with less than 200 staff is CONSTRUCTIONRA1 which, as the case study analysis (section 7.5.1) indicates, has moved far away from its roots offering new businesses in market research and hiring out measurement equipment.

The fact that the larger research associations have a better growth record is consistent with the data which shows that five out of the six research associations with greater sustainable growth were also the larger of the case study pairs.

Figure 8.3 displays the growth of the individual research associations. It can be seen from this that five research associations have grown in terms of percentage growth per employee over the period 2004 – 2008.

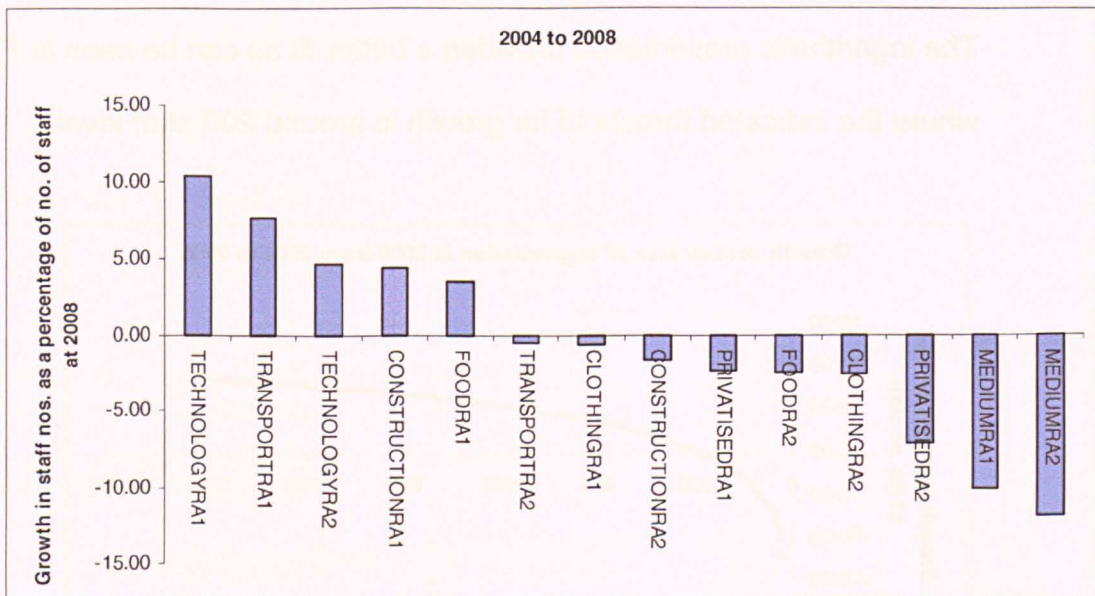


Figure 8.3 Ranked growth of case study research associations

The two technology-based research associations appear in 1st and 3rd place in the diagram, indicating that research associations which are not linked to an industrial sector may have more growth options. TECHNOLOGYRA1, as described in Chapter 8, acts as an agency for the UK government and for the EU and has diversified far from its roots as a traditional research association. This is also true for TRANSPORTRA1 which has no members, has the structure of an employee benefit trust and is a very profitable consultancy. CONSTRUCTIONRA1, with the fourth best growth record, has reduced its expenditure on collaborative research from 28% in 1995-6 to 4% in 2007-8. It has also developed a worldwide market

intelligence activity which accounted for 22% of expenditure in 2007-8 and the hiring out of test equipment to the industry which represents 26% of expenditure over the same period. Therefore, the activities of the four most successful research associations as measured in terms of sustainable growth do not form part of a research association's traditional portfolio.

It can be inferred from the above that the more successful research associations, in terms of sustainable growth, are the ones which have diversified most from their roots and are run by their executives.

With reference to the research associations which have not grown over the period (2004-2008), the two medium sized research associations have suffered the most in the reduction of staff numbers. Employment data is not available from published accounts for the two small research associations. Information from the semi-structured interview indicates that they have maintained staffing levels at 14 over the period 2004 to 2008. It may be surmised that this may be because any reduction beyond 14 would not be operationally viable.

The two privatised research associations have also declined in staff numbers over the period in question. This could be a result of the change in their status from non-profit organisations, which have the strategic aim of growth, to commercial organisations, with the strategic aim of profitability.

8.5 Factors contributing to the failure of research associations since 1990.

In this chapter both the governance structure and strategy perspectives of the more and less successful research associations have been positioned within the theoretical models. The size effect of the case study research associations has been analysed, which provided evidence that the larger research associations had superior specific growth with the critical size measured in terms of sustainable growth occurring in research associations employing staff numbers in excess of some 200 to 400.

In this section the cause of failure in research associations which have failed since 1990 are examined to establish if there is any correlation between the factors which led to success and those leading in a negative sense to failure. The analysis carried out in this chapter establishes that size is a contributory factor to success. Therefore mergers between the research associations, which is a mechanism for increasing size are a possible way forward.

Section 6.3 .20 analysed the factors which contributed to failure of research associations. The data used in this analysis was secondary data. No attempt was made by the researcher to interview the CEOs of failed research associations. The identification of the strategies developed by the failed research associations has not been attempted by the researcher. Both in the case of the HATRA and ICERA an unsatisfactory governance was identified, which according to Carlson and Donoghue (2003) could be a most important factor in the organisations not achieving success.

SIRA and BIBRA continuing dependence on government support was a factor which contributed to failure.

The analysis in this chapter has indicated that the six research associations, which adopted a competitive stance to other organisations were more successful than the six research associations which did not adopt a competitive stance. Two of the failed research associations AMTRI and DFRA were in a competitive situation, AMTRI with PERA a larger and more successful research association and DFRA with its well-established trade association.

The pension scheme deficit is identified in the pilot interviews, as the sword of Damocles hanging over the head of many research associations. It has contributed to the demise of SIRA and AMTRI and can only be mitigated if the research associations are able to generate sufficient surplus to pay off the deficit. In the case of BNFMR, an unsuccessful merger with a research organisation which was not a research association, resulted in a culture clash which contributed to failure. Section 6.4 .12 evaluates intra-research association mergers none of which led to failure and since size is a contributory factor to success. Growth by mergers is a way of increasing size and contributing to success.

This chapter has developed answers to the research questions identified by the literature review and the pilot interviews. The overview of the research is discussed in the next chapter.

9. CONCLUSIONS

9.1 Background

In this chapter the thesis will be reviewed to see if the research questions have been satisfactorily answered, the methodology followed in this thesis has provided a logical approach to tackling the research questions, and that the thesis has made both an original contribution to knowledge and has developed practical recommendations.

Chapter 1 sets the background to the thesis which is career related. The researcher has spent most of his working life in research associations both as a research physicist, a manager and for nearly twenty years a CEO of a research association. Even after retirement the researcher was still involved with research associations as Secretary General of AIRTO, the trade association of research and technology organisations for seven years which broadened his knowledge from the two research associations in which he worked to an overview of all research associations. During this period the basic research question was developing in the researcher's mind, why were some research associations more successful than others, why did some fail and why others grew and prospered. As outlined in the introduction, success did not appear to be related to the prosperity of the industry the research associations served, as some research associations prospered in declining industries while others have failed serving an industry which was successful.

The research question was further developed in the mind of the researcher as a result of an MBA degree which emphasised the importance of strategy. Some leading researchers go as far as to say that strategy is the most important determinant of performance.

The research question was the remit to explore what strategies led to success in research associations. The literature review, chapter 2, and the pilot interviews, chapter 3, confirmed the importance of governance. For example Carlson and Donohoe (2003) state that the single most important factor is how well the board partners with the executive directors. If the relationship is healthy the organisation thrives, hence the researcher has extended the study to both strategy and governance.

The thesis develops the success criteria for research associations. Being not for profit organisations, success was not measured in terms of return on capital but in terms of sustainable growth which was measured in employment numbers and the QuiScore which is a measure of the risk of the company failing in the near future.

9.2 Review of research

This research contributes to the knowledge concerning best practice for setting strategies in research associations and the case study approach is considered an appropriate effective approach.

The literature review provided an historical foundation to the study and the literature on strategy and governance provided models which were used in the

research to classify the strategy and governance adopted by the case study research associations. A large number of research questions were raised by the literature review and the pilot interviews with CEOs which were wide ranging and were distilled into 26 categorised secondary questions.

The 26 secondary questions were embodied in the semi-structured questionnaire and the data obtained in the interviews is summarised in chapter 7 and appendix 5. The analysis of data is presented in chapter 8 which provides answers and comments on the 26 research questions.

The case studies were undertaken in pairs following the practice developed by Freeman (1991). Freeman states (p 11) "The most effective way to identify those factors which are important for success is by paired comparisons"

The interviews with the CEOs of the 16 case study research associations provided a wealth of data. The question has to be asked whether the information given was accurate and whether it was biased. The researcher spent twenty years as a CEO of a research association and consequent familiarity with the nature of the organisations may have encouraged open and accurate information to be provided. Some triangulation was achieved by the returned and signed questionnaire from the non executive directors. The CEO's view of the strategy may be biased but the CEO was in all cases the instigator of the strategy process and the author of the first draft. The accuracy and the level of detail of the information about strategy plans given to the researcher may have been affected by the CEO's wish for confidentiality, respected by the use of pseudonyms in the thesis.

The answers to the many questions were, in some cases, factual and simple. An example is 'what strategy tools were used?' In other case data, evidence and quotes had to be used to arrive at an answer. Here a degree of judgement was required against guide criteria. This element of subjectivity was particularly true in the classification of strategy using the Whittington (2001) classification given by the diagram (fig 2.1). Initially the researcher planned to position the case study research associations as a point on the diagram by estimating the degree of plurality on the one axis and the degree of emergence on the other. It was not possible to position the research associations in this way due to the need for subjective judgement and also insufficient means of comparing the degree of either plurality or emergence between research associations. The strategies could however, based on guide criteria, be classified as falling into one of the four quadrants of the Whittington diagram.

To make an original contribution to knowledge the thesis should be both the first of its kind and innovative. It is some forty years since a major study has been undertaken on research associations as indicated in the introduction, so this study is not the first of its kind but is certainly the first for a long time. The research is innovative as it sets out the position strategy in research organisations and to relate perspectives of strategy to success. The measurement of success is in itself innovative since it combines growth in staff numbers with the QuiScore to arrive at a measure of sustainable growth. The pairing technique, although used by Freeman (1974) some forty years ago has not been, to the researcher's knowledge, employed in strategy research where the selection of the pairs in the research can minimise the influence of the industrial sector and hence the external environment.

The practical application of this research can have an impact both on the development of the research association community and also on similar not for profit organisations that are undergoing the change from professional to market control.

9.3 The research findings

Has the research question been answered? The primary research question was aimed at identifying what strategies led to success. The detailed answers to this and secondary questions are analysed in section 8. In this chapter the main conclusions will be summarised.

Strategy

All but one of the case study research associations had produced a strategy. The strategy process was initiated by the CEO and the executive directors produced the first draft. The executive directors had a greater influence than the non executive directors on the final strategy document in the cases of the more successful research associations.

The more successful research associations had a singular strategic aim of maximising long term advantage and did not adopt a plural strategy embracing such considerations as for the 'benefit of members' or 'providing interesting work for the staff'.

The successful research associations had an entrepreneurial strategy process; this strategy reflects the ability to respond to opportunities. A deliberate strategy process was less successful. A combination of the single strategic aim and a flexible strategy process resulted in a strategy for success which was evaluated in terms of Whittington (2001) classification as evolutionary.

Additionally a strategy of innovation rather than providing technical services is more likely to be successful and a competitive rather than a collaborative stance was also a success factor. The four most successful research associations are the ones that diversified most from their roots and responded to market needs rather than to the professional interests of staff.

Technology based research associations performed well, being first and third in the sustainable growth table. As they are not restricted to one industry sector, they have greater freedom to develop and diversify.

Role of stakeholders

The CEO in the more successful research associations rated staff as the most important stakeholders, while in the case of the less successful research associations the CEO placed the members as the most important stakeholders. Although the research associations were established as membership organisations the greater number of members in only a minority of cases led to success and in the two successful research associations with more than 1500 members both the CEOs made the point that an organisation cannot be run by its members and the main benefit of a large membership is that it represents a larger customer base and also provides an input into the needs of the industry.

Governance

A governance structure which is considered to be satisfactory by both the executive and non-executive directors is essential for success. Where the governance structure is not satisfactory performance is affected. When the CEO and executive directors are in charge, the research association is more successful. The non-executive directors in a successful research association are viewed as 'wise sages', bringing expertise to the organisation but not initiating initiatives.

The influence of the executive directors has been achieved by establishing executive boards which either replace the council or transfer power from the council to the boards.

The governance of the research associations needs to be re-evaluated with serious consideration given to the formation of employee benefit trusts. This governance structure was adopted by the largest and successful research association. This change of company structure to an employee benefit trust is also under consideration by one of the smallest research associations. Research associations are knowledge based organisations and the staff are considered to be the most valued asset by the CEO in the more successful research associations. The ownership of the organisation by the staff in the form of an employee benefit trust could be the way forward.

External appointments to the top job have not been as successful in research associations as internal appointments. The CEOs with the greater length of

service with the organisation have also contributed to the success of the more successful research associations.

Size

The effects of the size of the research association on the research association's performance was also investigated by selecting two of the pairs of research associations which could be described as medium sized, employing thirty staff, and small, employing half that number. (The other pairs of research association had staff numbers up to 1000.) With reference to the medium sized research associations, since the interviews were undertaken in 2008, both have changed their ownership. One is now part of a larger research associations and the other has been the subject of a management buyout. The two small research associations had not, in 2011, changed their structure although the more successful of the two is being restructured as an employee benefit trust and the other is now being managed hands-on by its council.

The study of the effect of size on performance was extended by looking at the total population of the research associations in the case study. This revealed that the larger research associations were the ones that had achieved sustainable growth over the period 2004 – 2008 and that the smaller research associations had suffered a decline with a critical size of approximately 200 to 400 staff members, above which sustainable growth was attained and below which a decline resulted.

Chapter 6 evaluated the outcome of intra-research association mergers and concluded that of the ten intra research association mergers none had resulted in failure and all but one had produced sustainable growth.

In both of the pair of research associations that are now part of a large commercial organisation, the staff numbers were reduced by some 30% after the takeover, presumably to increase profitability and not to increase size. The success of commercial organisations is measured in terms of return on capital, shareholder value, and not in terms of sustainable growth, the criteria established in this research for success in not for profit organisations. Hence it was not possible to compare the success of the privatised research associations with the not for profit research associations. In the privatised research associations the CEO was appointed from the parent company after the takeover. In both cases a staff member that had been employed by the organisation both before and after the change told the researcher that they welcomed the change which brought about a more focused commercial attitude.

Hence the practical application for this research is that size is important and that growth can be achieved by research associations merging.

9.4 Value of this research to the research associations stakeholders

This research has identified practical considerations for each of the principle stakeholders of the research associations i.e. their boards, their members, their staff and the government.

The executive board

The governance of research associations was originally defined in CD8718(1917), when research associations were undertaking a programme of co-operative research for the benefit of its members and the research associations were controlled by their members through an elected council which represented the membership. As the activities of the research associations diversified from a programme of co-operative research to contract work for clients, the governance needed to develop in order to give greater control to the executive who were responsible for negotiation and execution of this contract work.

In summary the executive board should:

- have free and frank discussions on the governance structure of the research association to ensure that the governance is satisfactory both to the executive and non executive directors.
- take into account the fact that the research association is undertaking contract research over which the non executive directors have no control, and hence authority should be delegated to the executive directors to enable them to be responsible for all single client activities.
- reach agreement on the responsibilities of the executive and non executive directors and ensure that they are mutually respected.
- consider alternative governance structures; one of which, an employee benefit trust, is discussed under the discussion on staff.

Research association members

Historically the members were extremely important stakeholders. They contributed 50% of the research association's income. The other 50% of income was by way of a matching government grant. The membership financial contribution to the research associations has declined over time and the data produced in this report shows that no research association receives more than 20% of income from its membership and many receive less than 5% of total income from the total membership.

Where there is a democratic model of governance Cornforth (2003) the council members who are elected by and from the membership need to prioritise running the organisation over looking for member benefits.

The attitude of the CEOs to membership is that the members are very valuable as loyal customers and make a positive contribution to determining the research association's future research activities. The CEOs also state that an organisation cannot be controlled by its customers and hence the research association cannot now be run by its members who only contribute a small percentage of total income.

The research association staff

Research associations are knowledge based organisations with the staff being the custodians of the intellectual capital. As a consequence of this, a governance structure that reflects the importance of the staff should be seriously considered. One such governance structure is an employee benefit trust where the employees

are in fact the shareholders of the organisation and their contribution to the success of the organisation is reflected in the benefits they receive.

The largest of the case study research associations and the second in ranking with respect to sustainable growth is TRANSPORTRA1 which has adopted the structure of an employee benefit trust where one of the strategic aims is to increase profitability for the benefit of the staff. The case study research association with the highest sustainable growth is TECHNOLOGYRA1 which still maintains the structure of a company limited by guarantee but according to the CEO (7.7.1) the organisation in practice embraces a partnership and an employee benefit trust: The partnership because the three most senior executive directors are called partners and receive bonuses related to the success of the organisation, and an employee benefit trust as all staff benefit from a profit sharing scheme.

Table 8.1 ranks the relative importance of stakeholders as stated by the executive and non executive directors. All the executive directors of the more successful research associations rate staff as the most important stakeholders whilst for the less successful research associations only four put staff in first place. Staff are considered less important by the non executive directors with only two ranking it in first place. This research with the non executive directors ranking staff less highly than the executive directors could result in a difference of opinion should the executive directors propose that the governance of the research association should be changed to an employee benefit trust.

The government

Section 2.2 outlines the historical interaction between the research associations and government. It charts the reduction of government involvement with the research associations from the Rothschild report 1971 which established the customer / contractor principle with the research associations no longer having a special relationship with government to the 1988 white paper which terminated the sixty year partnership between the government and the research associations.

The Department for Business Innovation and Skills report (2011) states that the first proposed approach to implementing the innovation and research strategy for growth is “strengthening the sharing and dissemination of knowledge” What policy should the government develop which would encourage the research associations to participate in this initiative? This thesis provides guidance on how the government might react.

The research associations are now independent organisations who have to sell their expertise to survive and prosper, and the possibility of them sharing and disseminating their knowledge without financial reward would be unlikely. All but one of the sixteen case study research associations has a membership structure with the members receiving information and expert advice as part of their membership subscription. The government would have to devise a scheme which would encourage the research associations to share and disseminate their knowledge to other than their members without destroying the membership base. The attitude of the case study research associations (question 21, 8.2.3) to seeking government money produced mixed results and the conclusion reached was that hankering after public finance can be a disaster however public financial

support can usefully augment income from the private sector. Another factor, highlighted in this research, which the government will have to take into account in sharing and disseminating knowledge is the attitude of the CEOs to collaboration. Question 19 (8.2.3) asks whether the research associations adopted a competitive or collaborative attitude. The answer was that the more successful research association in the pairs was more likely to adopt a competitive rather than a collaborative stance.

The research associations, as this study demonstrates, have a considerable knowledge base and expertise which could contribute to the government desire of sharing and disseminating knowledge. For the research associations to play a part in the government desire to share knowledge – government will have to develop a scheme which would be acceptable to the research associations without conflicting with the research associations existing customer base. A government policy could be to encourage companies to become members of the appropriate research associations.

9.5 The influence of this research on not for profit organisations making the transition from public to private funding.

Section 1.2 of this thesis lists the practical reasons for undertaking this research:

- To provide guidance for other UK based research associations which have not achieved success
- To assist research associations and research institutes in other countries where the reduction in government financial support took place at a later date than in the UK

- To assist other not for profit organisations which are having to make the transition from public to private funding in other sectors such as the arts, museums and universities.

Less successful UK based research associations

This research has clearly identified factors which lead to a research association being successful. The less successful research associations can compare their governance and strategy with the more successful research associations and determine what changes need to take place to bring them in line with the more successful research associations.

Research institutes in other countries

With reference to research institutes in other countries which are currently making the transition from publicly financed organisations to commercial companies, there are expected to be a whole range of local issues which will influence the actions that need to be taken. However from the researcher's experience in advising the Brazilian government on the future of their research institutes, Bennett (1998), two issues were identified which were similar to those encountered in the less successful British research associations. The research institutes had an unsatisfactory governance structure and a lack of market focus. This research provides an insight into the considerations to be taken by both government and research institutes in other countries for research institutes to make the transition from public to private funding.

Other not for profit organisations

This research has produced conclusions which the governing bodies of such organisations may wish to consider.

The first is the governance structure. Is the governance structure considered by both the non executive and executive directors to be satisfactory? Is there a satisfactory balance of responsibilities between the non executives' and executives' responsibilities?

The second point to be considered is - Should the organisation have professional or market control? For example in the case of an art gallery should the board arrange exhibitions which satisfy a market demand as was the case in the 2011 the Leonardo da Vinci exhibition in London which was a sell out before the exhibition opened or should the gallery promote exhibitions with less public appeal but which the curators feel should be arranged to satisfy professional judgment or interests?

This research has shown that when the strategy is plural i.e. in the case of a gallery producing income from commercial exhibitions and also providing exhibition space for less popular art the gallery, it is likely to be less successful than one which has a single strategic aim in terms of growth potential. In the case of a gallery this research does not attempt to advise on whether it should have a singular or plural strategic aim, however if it elects to have a policy incorporating a plural strategic aim it is likely to be less commercially successful than a gallery with a singular commercial aim. The same analysis applies to theatres – should

the productions be commercial (market control) or avant garde (professional control)?

The situation with a university is complex but the overlying judgement is that the strategy should be carefully determined as to whether a university's strategy should be singular to produce growth or plural i.e. growth plus professional interest. Should an individual university undertake research directed towards solving industrial or commercial problems as this research has been or should the academic staff be free to follow their own interests?

There is no general answer to the problems facing art galleries, theatres or universities –this thesis however emphasises the importance of organisations having a strategy which sets the balance between commercial and non commercial activities and also a strategy whose nature is determined on the spectrum between deliberate and emergent.

The case study research associations with an unsatisfactory governance were less successful than those with a satisfactory governance and the only case study which had no strategy was the least successful of all the case study research associations.

The two main lessons learnt from this research are:

- For success the governance structure should be satisfactory to both the executive and non executive directors
- Organisations should have a well considered strategy with respect to both the strategic aim and the strategic process

9.6 Further work

Update of results

The research was carried out in 2008 and the data represents the situation with respect to governance and strategy at that time. This research could be followed up in 2013, that is after a five year gap, the normal period for a strategy plan, to evaluate what changes have taken place, what new governance structures and strategy had been adopted and to relate the performance outcome to the strategies which were stated in 2008.

Mergers

Also since the case studies were undertaken one case study research association has merged with a larger case study research association. Further research could be undertaken on whether this merger has been successful from the view point of the two CEOs, the staff and the members of the two organisations in order to complement the evaluation of recent mergers (6.4.12).

The researcher has observed that mergers have recently taken place in charitable organisations and learned societies. An evaluation of the strategic thinking that brought about successful mergers would be a worthwhile research study.

The CEO

Both Whittington (1991) and Varco (1981) stress the importance of the CEO in the performance of research associations. This research has also demonstrated the

importance of the CEO to the success of the organisation. The research obtained information on the CEO's background on his length of service with the organisation and his length of service as CEO and also whether his appointment was an internal or external one. Since the case studies were undertaken in 2008, four case study CEOs have retired and have been replaced by two internal and two external candidates. Two of the research associations with new CEOs were the superior of the pairs and the other two were the less successful of the pairs. In both cases one internal and one external appointment have been made. Further research should be undertaken to investigate the impact which the new CEO has had on the research association. Has a new strategy been produced? Have governance changes been discussed or implemented? Was the new CEO interviewed and appointed by the board or was an external "head-hunter" employed to produce a short list of candidates? What was the job specification for the new CEO? What was the balance between managerial and technical skills? Were the board looking for a change manager? How have the four research associations performed since the new CEOs have taken over?

Governance

Further research could usefully be undertaken on the division of responsibilities between the board and the executive and whether in fact the board and the executive directors have job descriptions and in practice are these mutually respected.

The research has shown that an unsatisfactory governance structure which manifests itself in an unsatisfactory working relationship did not lead to success and also that success was achieved when the executive director was in charge.

The research also examined what changes if any had been made to improve governance structure where governance was deemed not to be satisfactory and further work needs to be undertaken to establish if these changes have satisfactorily resolved the governance problem.

Research Institutes

This study of the UK research associations could be extended to explore how the national and cultural issues influence the transition from public to private funding, through a European programme of work with possible EU funding to evaluate European research institutes.

9.7 Reflection

This study has given me a valued opportunity to examine and reflect on what has been happening in UK research associations since I retired. I spent many years associated with these organisations as a director of one for nearly twenty years and for a number of years as the secretary general of AIRTO, and naturally retained a continuing interest in their fortunes.

My many colleagues in the field have been very helpful in this research by making available to me an invaluable insight into their organisations.

The role, mission and governance of research associations changed during my career, and continued to change as I have seen from my investigations. Indeed, since the research was completed in 2008, change continues with added

extraordinary pressure from the current economic downturn. Into the future, I wonder how the current organisations will develop – especially where there may now be a possibility of a return to providing a role in supporting innovation stemming from growing political awareness of the need to re-establish British industry. It is for others to explore the possible ways forward.

The study became wide ranging in the issues it touched on, it confirmed some expectations concerning the factors contributing to success but also gave some surprising and perhaps unexpected results.

Some research associations have fallen under the challenging changes in the external environment but it is encouraging to note how many have thrived under good governance, strong perceptive management and above all the ability to identify a successful strategy.

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APPENDICES

Appendix 1 - Semi structured interview questionnaire

Questionnaire used in semi-structured interview with CEOs

1. Introduction

- **Purpose of meeting.**
- To identify how strategies are developed in RAs , the factors that influence strategy development and perhaps the factors that influence strategic success.

- **Areas I would like to cover**
Your approach to strategic development, strategic factors that have contributed to success and problems encountered. I'd also like to touch on one or two issues that have been written about in the literature to gain your views including the effect of governance on performance.

- **Recording and possible correction**
If you have no objection I would like to tape the interview and I will send you a copy of the material I will use in my thesis so any errors can be corrected.

- **Statement of my understanding**

Turnover.....

Number of Employees.....

Company status.....

To be
completed
before interview

2. Governance

- **Director:**
 - Name
 - When appointed
 - Internal / External
 - Professional background

 - Previous experience

- **Governance structure:**
 - Council and or Board
 - Composition of Council – (Representatives of members)

Composition of Board - (Execs / non execs)

Main functions of Board and or **Council**

- **Governance changes**

- have there been any recent changes?

If so....

When?

What?

For what reasons?

And what was the impact?

- are further changes planned or wished for?

If so....

What?

Why?

Have there been tensions between Council / Board and management?

If so how have these tensions been addressed?

Could I have a copy of your organisational chart?

3. Strategy development

Do you have a strategic plan ?

When did the organisation first start strategic planning?

- Planning organisation

How often does strategic planning or review of the strategy take place?

Ongoing / when required / yearly / other

What or who triggers the strategic planning process?

(prompt)

CEO / Council and Board of directors / financial difficulties / regulatory changes / changes in CEO Board etc. / other

Who is involved in the strategic planning process?

(prompt) *CEO / Council / Board / Senior staff / Outside consultants / other*

Who are the principle players?

What is their contribution?

(prompt) *analytical skills, market knowledge, internal strengths, financial, political*

Who are considered the most important stakeholders?

(prompt) *Members / Clients / Government / Staff / Directors / others*

How would those selected be ranked in order of importance? 1 is highest

- Brief walk through the strategy setting process

Timescale

Number and type of meetings

Number of drafts
 Principle tools employed
 (prompt) SWOT, value chain analysis, evaluation of competencies.....

Most valuable tool

4 Strategic Competencies

Strategic competencies	Regulatory	Positional	Functional	Cultural	Other comment
How would the organisation see this?	<i>Contracts Patents Licences</i>	<i>Reputation External networks Membership base</i>	<i>Employee knowledge Skills R&D Skills marketing Skills finance</i>	<i>Team working Customer service Change management Innovation skills</i>	
Which competencies are considered most important 1 very important 5 not important	<i>Contracts Patents Licences</i>	<i>Reputation External networks Membership base</i>	<i>Employee knowledge Skills R&D Skills marketing Skills finance</i>	<i>Team working Customer service Change management Innovation skills</i>	
Strength of position in relation to these 1 strong 5 very weak	<i>Contracts Patents Licences</i>	<i>Reputation External networks Membership base</i>	<i>Employee knowledge Skills R&D Skills marketing Skills finance</i>	<i>Team working Customer service Change management Innovation skills</i>	

5 Analysis of strategy

- Strategic aims – quick overview

(prompt)

Growth or consolidation

Merge with other RAs

Acquisitions

Management buyout

Change in pension commitment

Co-operative / competitive with other organisations

New markets

New services

- Market development

(prompt) reason for focus

Global / Geographical spread

EEC, Government, Industry

Extension up and down supply chain

Members, non members

Other

- Product and service development

Products

(prompt)	Contribution to business success 1 high 5 low	Increase or decreasing importance y/n
machinery		
test equipment		
software		
technical publications		
specialist products		
innovative products		
others		

Services

(prompt)	Contribution to business success 1 high 5 low	Increase or decreasing importance y/n
QA services		
Market research		
Information services		
Consultancy		
Testing and analytical		
Others		

7 Factors influencing strategy

External

(prompt)	<i>Negative influence</i> ←---- 2 1 0	<i>Positive influence</i> ----> 0 1 2
UK Government funding		
EEC Funding		
Downsizing of industry		
Competition from other organisations		
Change in pension legislation		
Access to capital		
Recruitment		
Perception of RAs		
Others		

Internal factors

(prompt)	<i>Negative influence</i> ←---- 2 1 0	<i>Positive influence</i> ----> 0 1 2
Culture		
Staff competencies		
Financial control		
Important assets		
Important intangible assets		
Internal tensions		
Other		

8 Strategic Options

What strategic options did you consider?

What option did you follow?

Why did you follow this option? (*May uncover a technique for evaluating the options?*)

6 How are the user needs understood?

(prompt)

Advisory panels

Liaison visits

Surveys

Open days

Unsolicited feed back

Others

Importance of: (1 high 5 low)
publicity

advertising

lobbying

9 Strategy Implementation

How is the strategy implemented?

Who knows about it?

(Incidentally do you have a copy?)

Appendix 2 - Non executive director's questionnaire

Research Association Study - Questionnaire for a non executive director of

Governance

1. What do you consider to be the main function of a non executive director in a Research Association?

2. Is the present governance structure satisfactory? Yes/No

If no, what changes what changes would you like to see take place?

Strategy

3. What is your involvement as a non executive director in the strategy formulation process?
Please indicate by ticking the stages of involvement:

At first draft level	Commenting on first draft	Commenting on final draft	Approving final draft
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4. What in your opinion is the strategic aim of the Research Association?
Please indicate by ticking the appropriate box:

Survival	Growth	Profitability	Mergers	Change of ownership	Other (please describe)
----------	--------	---------------	---------	---------------------	-------------------------

5. Who are in your opinion the most important stakeholders? Please rank them 1-4 with 1 as the highest.

Members	Clients	Staff	Other (please indicate)
---------	---------	-------	-------------------------

6. What in your opinion are the most important strategic competencies? Please also rank these 1-5 with 1 as the highest rating.

Reputation	Staff knowledge	Customer Focus	Team working	Other (please state)
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7. What is your vision of the organisation in three years time?

8. What major changes are necessary to meet future goals?

9. Please add any other comments you would like to make.

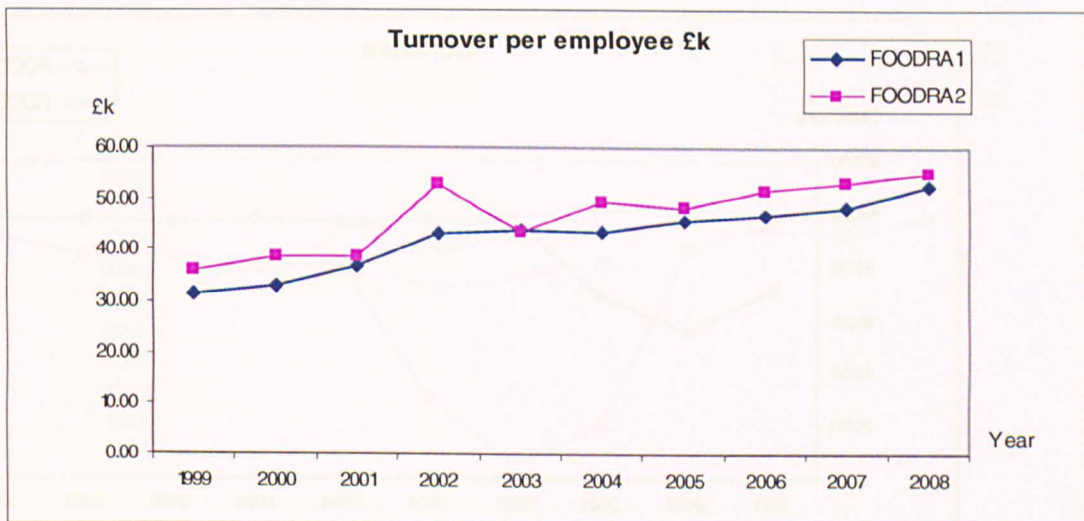
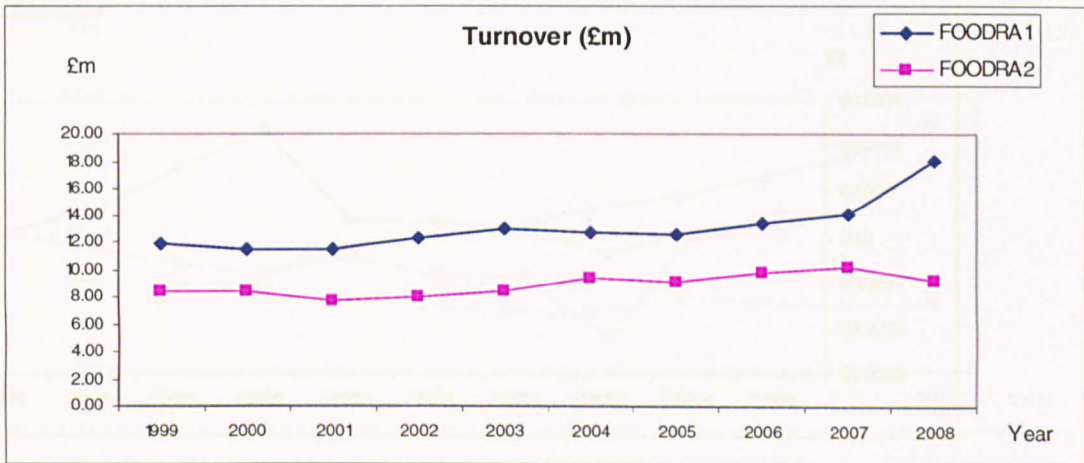
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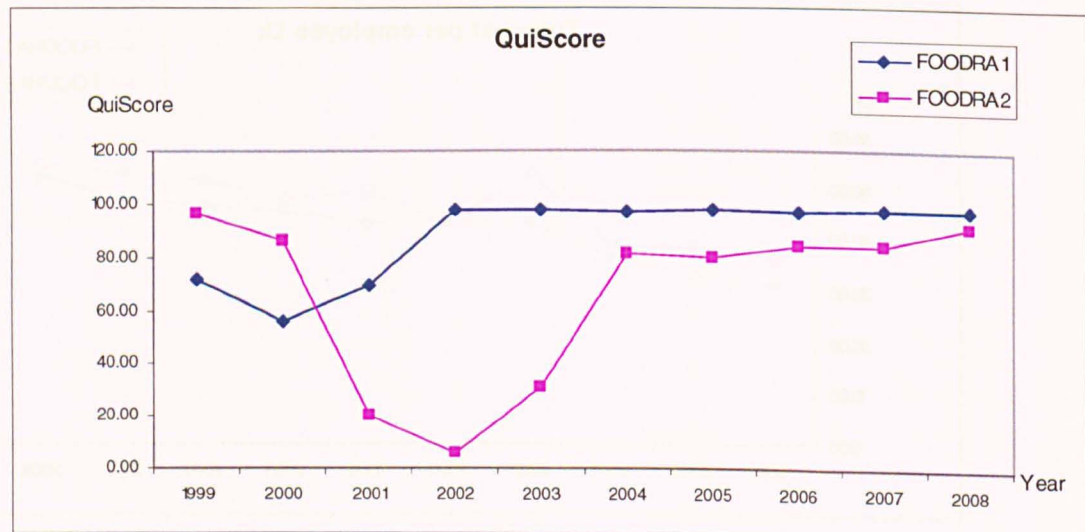
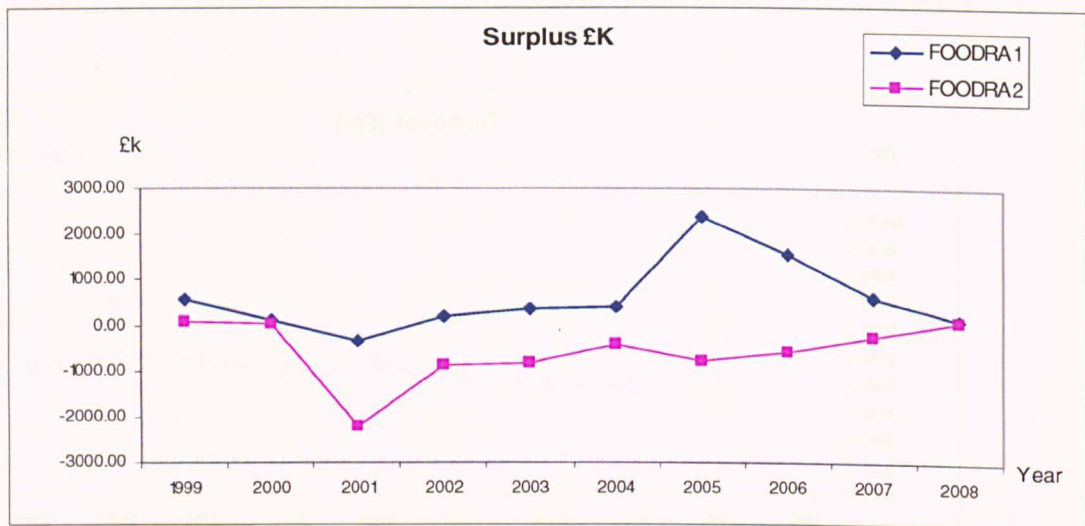
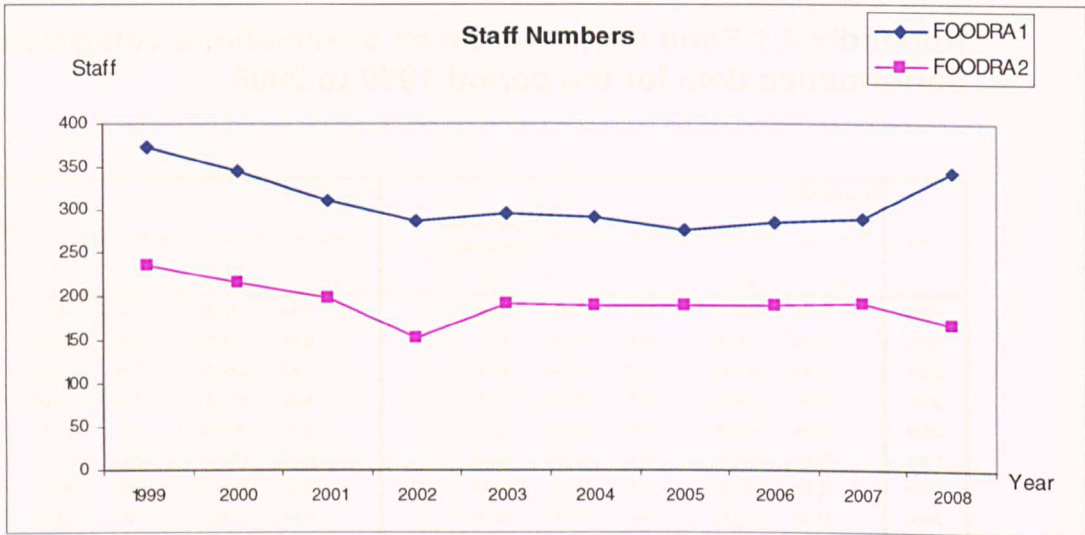
Appendix 4 - Comparative performance data

The performance data comparison for each of the case study pairs is shown in this appendix in tabular and graphical form.

Appendix 4.1 Food sector research associations comparative performance data for the period 1999 to 2008

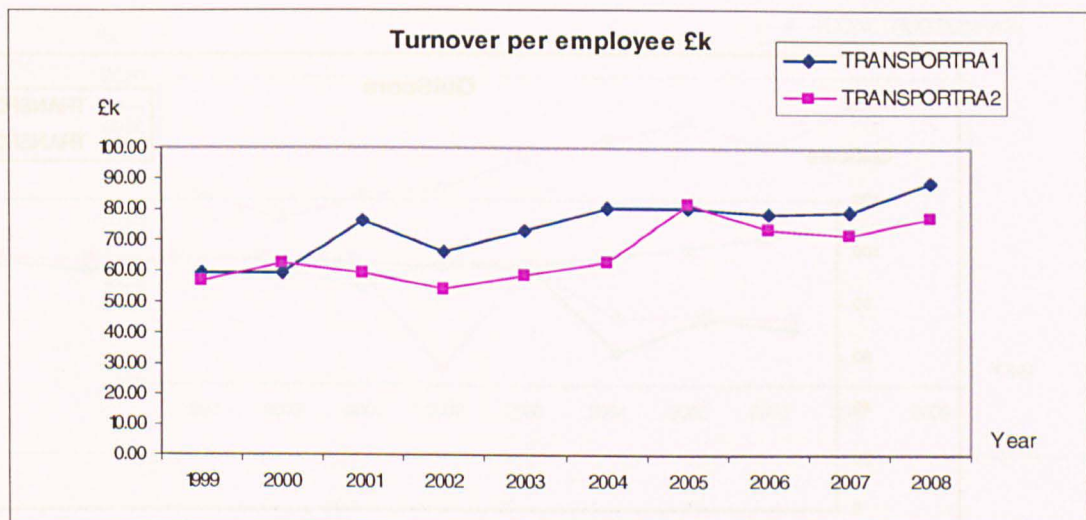
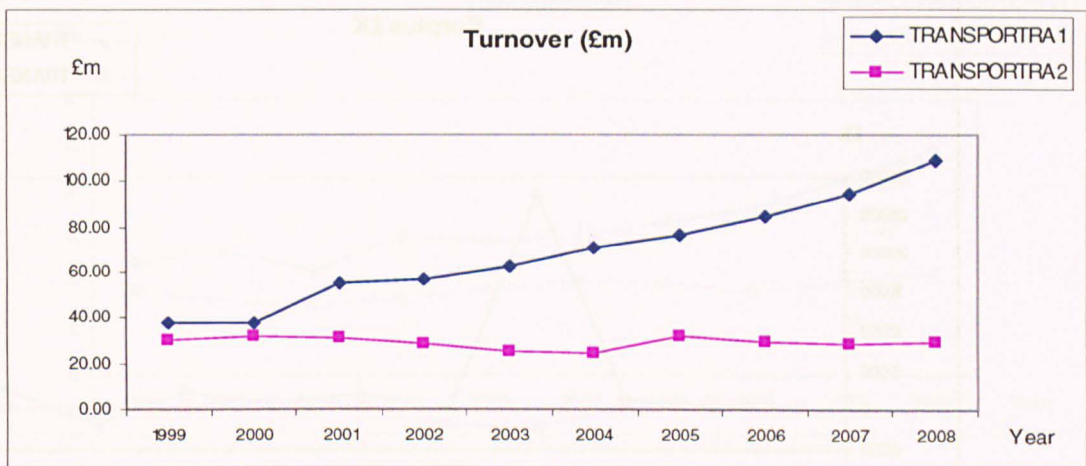
Year	FOODRA1					FOODRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	11.85	542.00	375	72.00	31.60	8.44	77.00	234	96.00	36.06
2000	11.39	122.00	345	56.00	33.01	8.36	11.00	216	86.00	38.72
2001	11.45	-335.00	310	70.00	36.92	7.68	-2226.00	198	20.00	38.79
2002	12.34	204.00	287	98.00	42.98	8.02	-871.00	152	6.00	52.78
2003	12.94	340.00	296	98.00	43.72	8.38	-868.00	192	31.00	43.67
2004	12.64	374.00	291	97.00	43.42	9.33	-440.00	189	81.00	49.37
2005	12.60	2371.00	276	98.00	45.66	9.17	-814.00	190	80.00	48.24
2006	13.38	1546.00	285	97.00	46.94	9.84	-590.00	190	84.00	51.79
2007	14.00	592.00	289	98.00	48.46	10.23	-278.00	192	84.00	53.30
2008	18.08	120.00	344	98.00	52.57	9.20	49.00	167	91.00	55.11

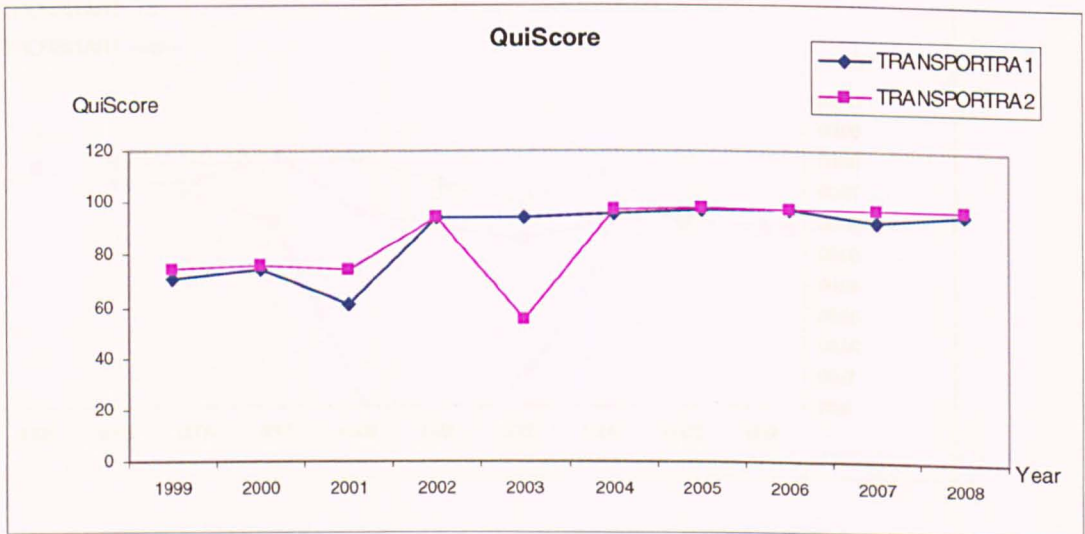
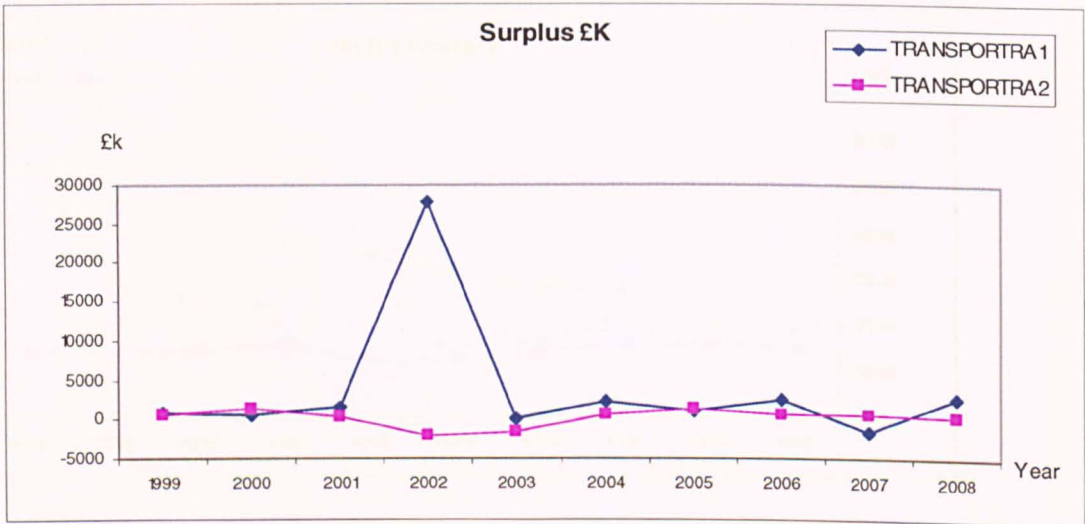
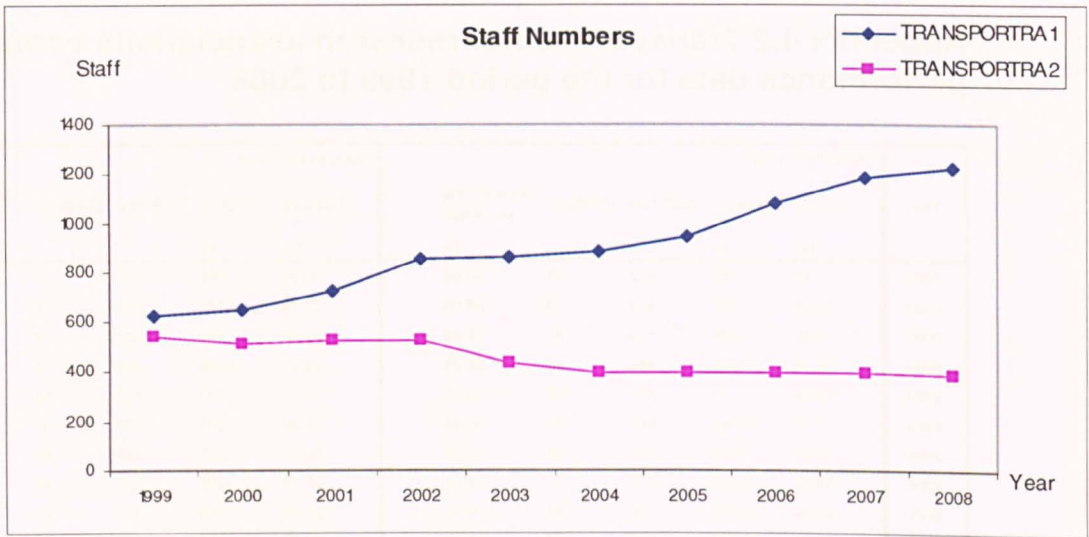




Appendix 4.2 Transport sector research associations comparative performance data for the period 1999 to 2008

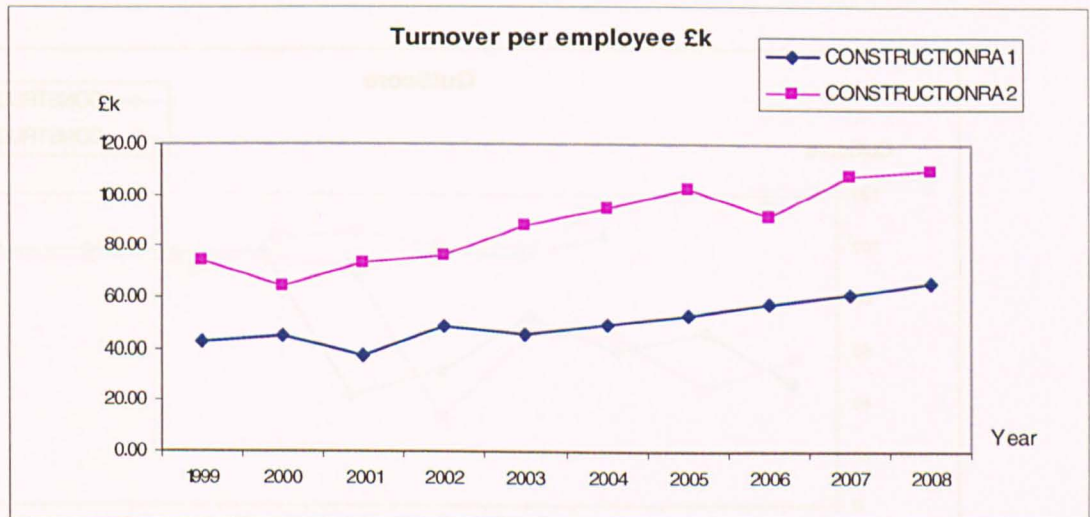
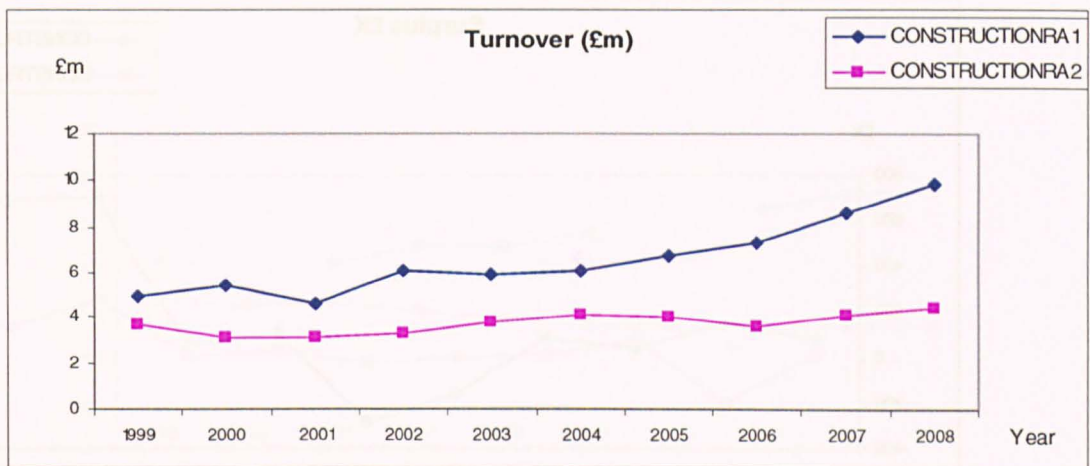
Year	TRANSPORTRA1					TRANSPORTRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	37.41	691	627	71	59.66	30.82	595	539	74	57.17
2000	38.05	649	644	74	59.08	32.19	1,358	513	76	62.74
2001	55.30	1,538	723	61	76.48	31.48	285	528	74	59.62
2002	56.36	27,808	849	94	66.39	28.73	-2,089	528	94	54.40
2003	62.64	-17	858	94	73.01	25.51	-1,737	436	55	58.52
2004	70.72	2,286	880	96	80.36	24.95	531	397	97	62.84
2005	76.30	1,038	947	97	80.57	32.26	1,275	394	98	81.89
2006	84.55	2,532	1,077	97	78.51	29.28	435	398	97	73.57
2007	94.50	-1,642	1,186	93	79.68	28.38	459	395	97	71.86
2008	108.96	2,722	1,228	96	88.73	29.87	417	386	97	77.39

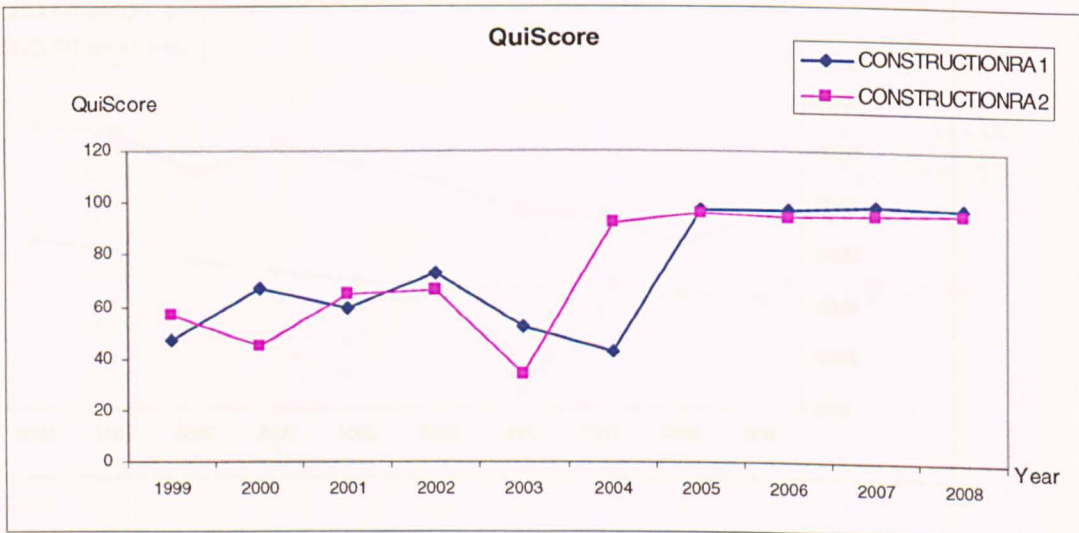
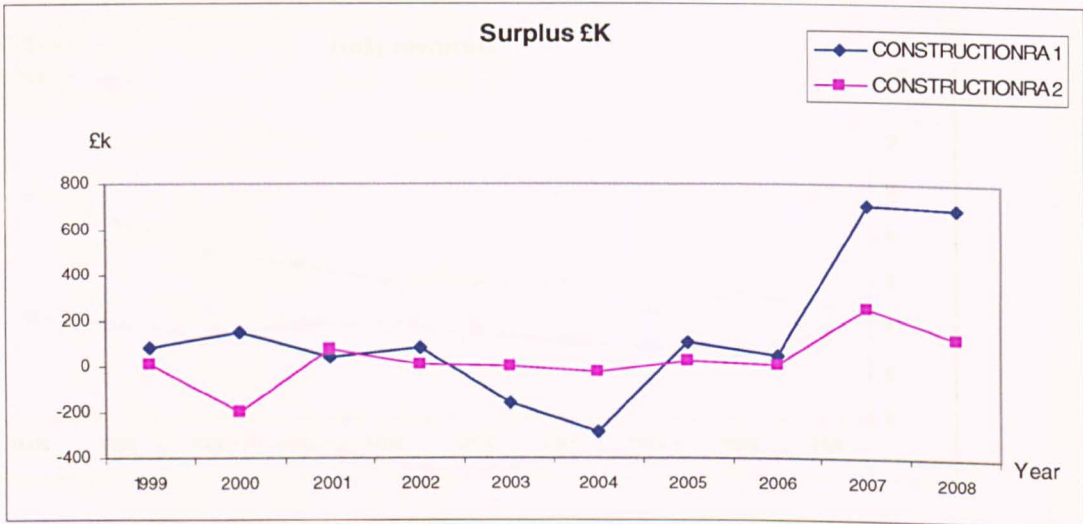
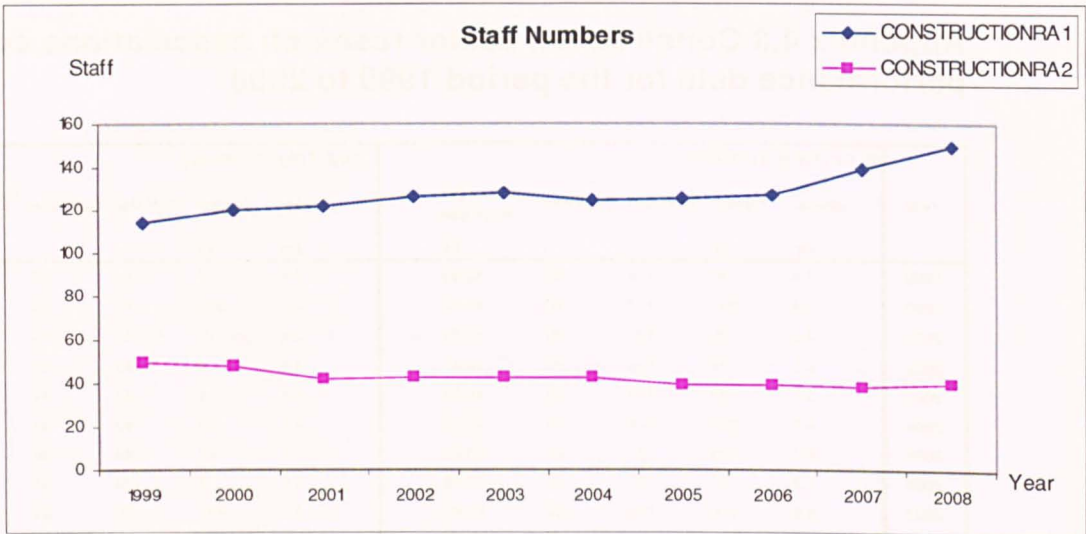




Appendix 4.3 Construction sector research associations comparative performance data for the period 1999 to 2008

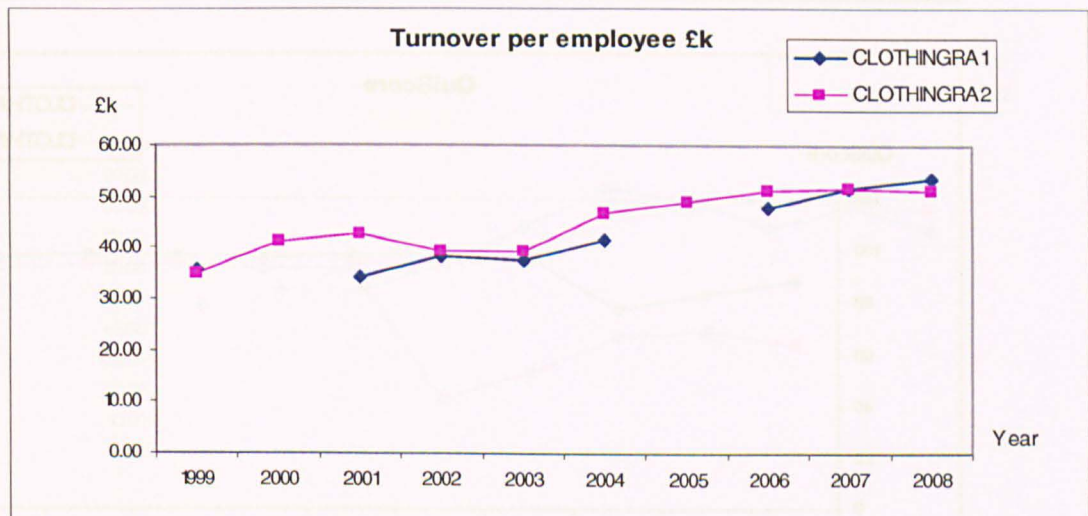
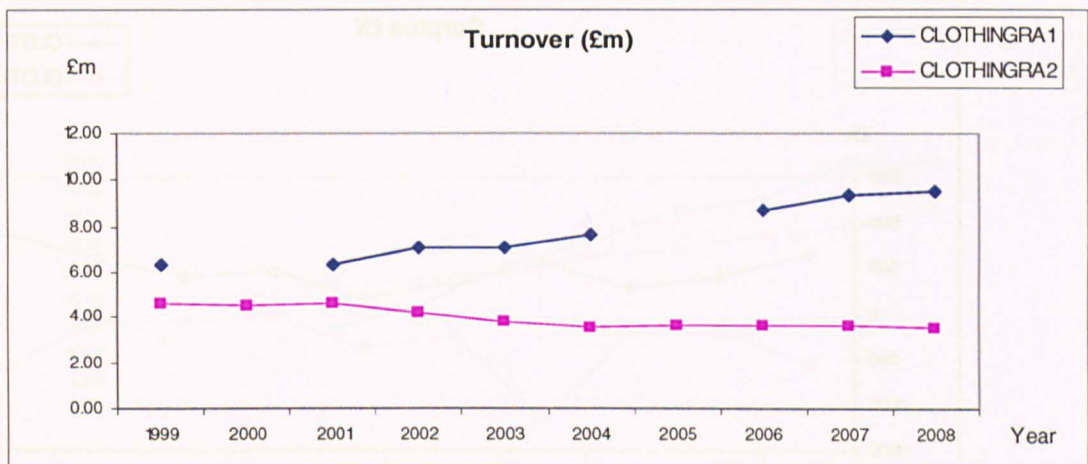
Year	CONSTRUCTIONRA1					CONSTRUCTIONRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	4.9	80	114	47	42.98	3.7	2	50	57	74.00
2000	5.4	143	120	67	45.00	3.1	-200	48	45	64.58
2001	4.6	35	122	60	37.70	3.1	75	42	65	73.81
2002	6.1	78	126	73	48.41	3.3	4	43	66	76.74
2003	5.9	-163	128	52	46.09	3.8	1	43	34	88.37
2004	6.1	-282	124	43	49.19	4.1	-25	43	92	95.35
2005	6.7	104	125	97	53.60	4	22	39	96	102.56
2006	7.3	51	127	97	57.48	3.6	7	39	94	92.31
2007	8.6	706	139	99	61.87	4.1	251	38	95	107.89
2008	9.9	694	150	98	66.00	4.4	121	40	96	110.00

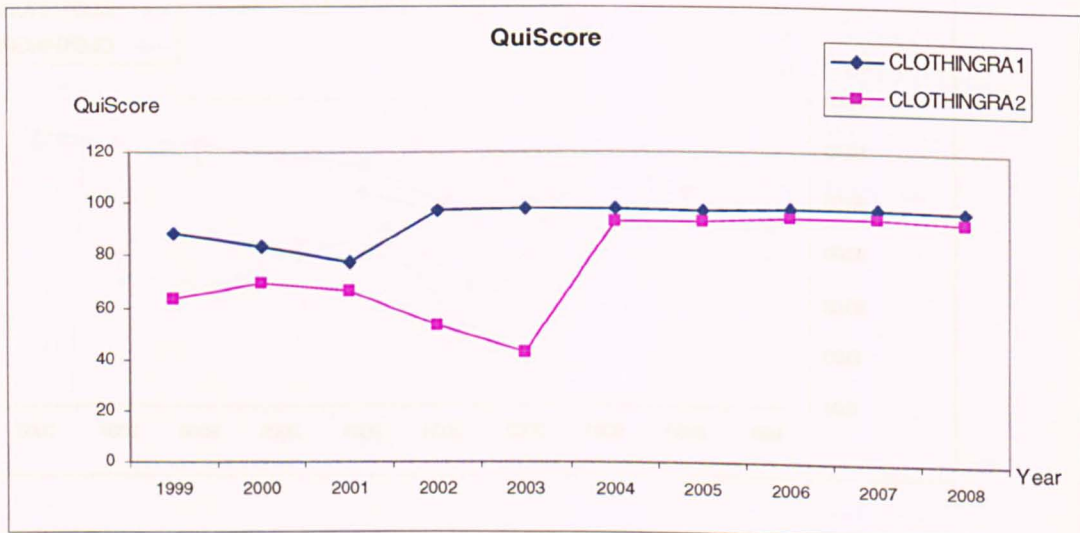
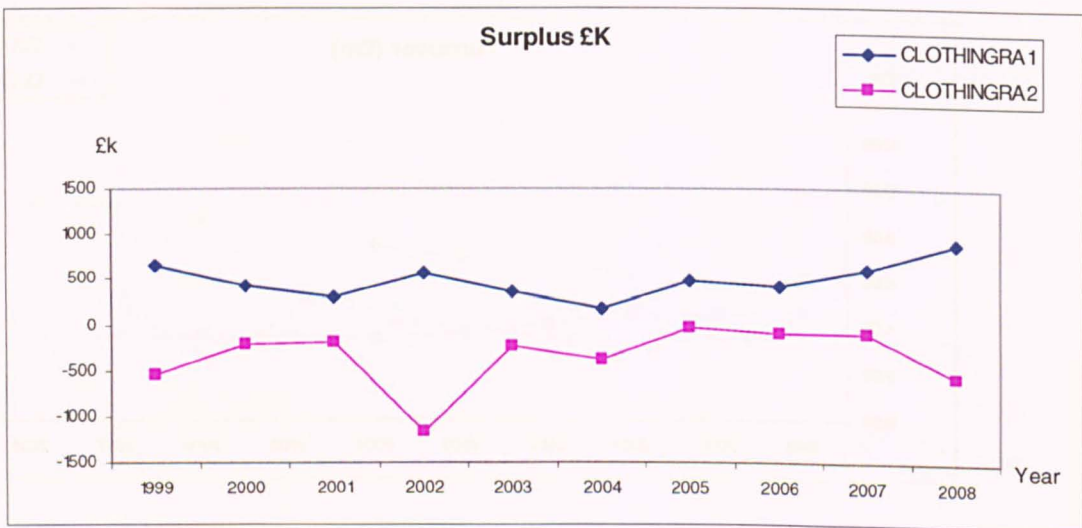
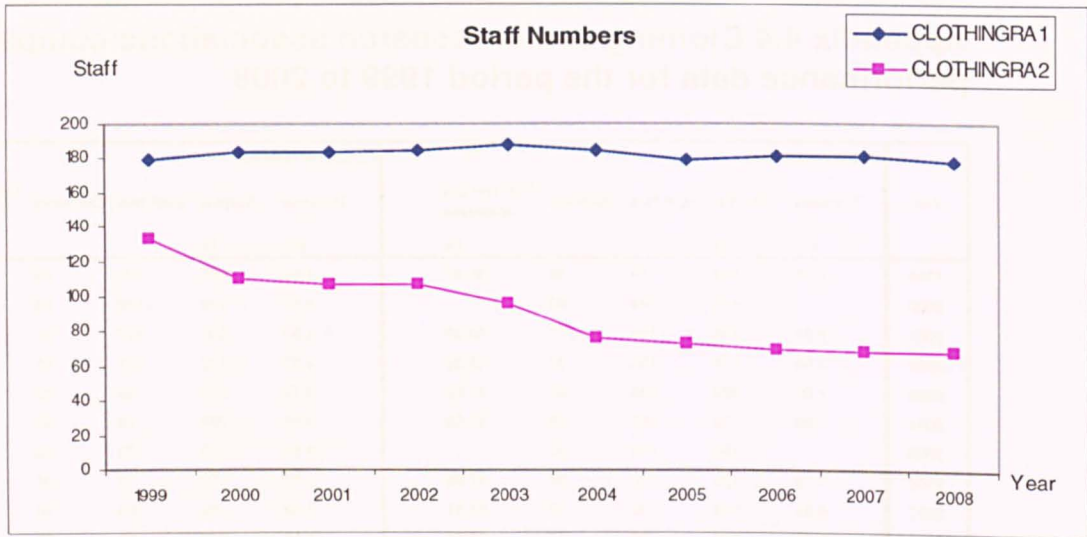




Appendix 4.4 Clothing sector research associations comparative performance data for the period 1999 to 2008

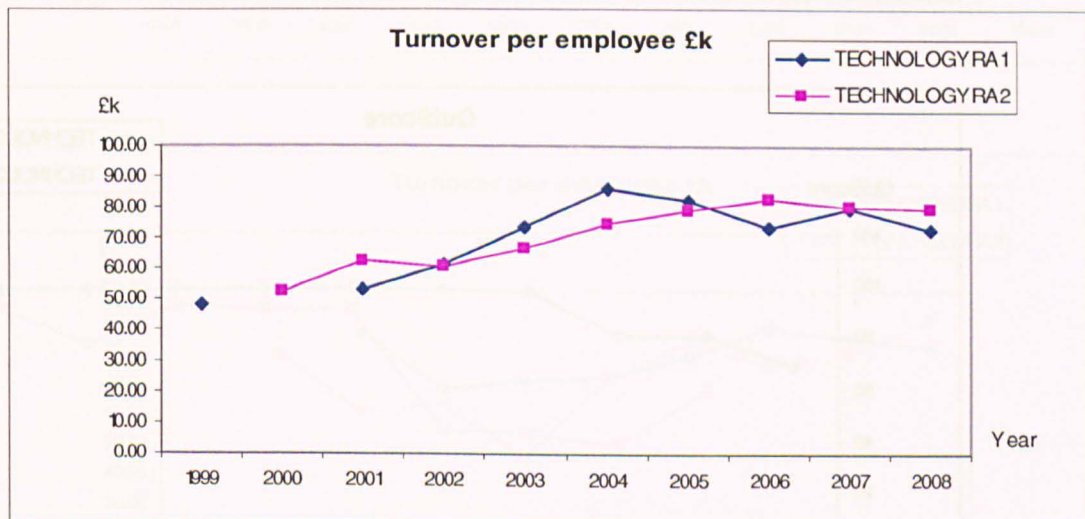
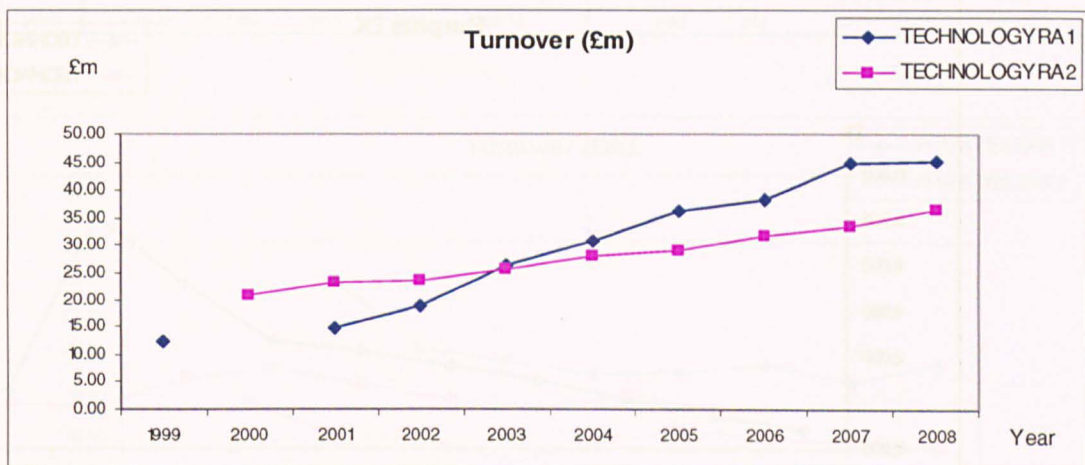
Year	CLOTHINGRA1					CLOTHINGRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	6.36	654	179	88	35.55	4.64	-558	133	63	34.86
2000		416	184	83		4.55	-219	110	69	41.33
2001	6.31	296	184	77	34.30	4.57	-207	107	66	42.76
2002	7.09	576	185	97	38.30	4.21	-1,172	107	53	39.39
2003	7.07	362	188	98	37.62	3.78	-228	96	43	39.37
2004	7.68	170	185	98	41.53	3.55	-379	76	93	46.70
2005		490	179	97		3.59	-23	73	93	49.19
2006	8.73	420	182	98	47.96	3.59	-92	70	94	51.35
2007	9.39	604	182	98	51.61	3.58	-99	69	94	51.84
2008	9.53	909	178	97	53.54	3.56	-578	69	93	51.54

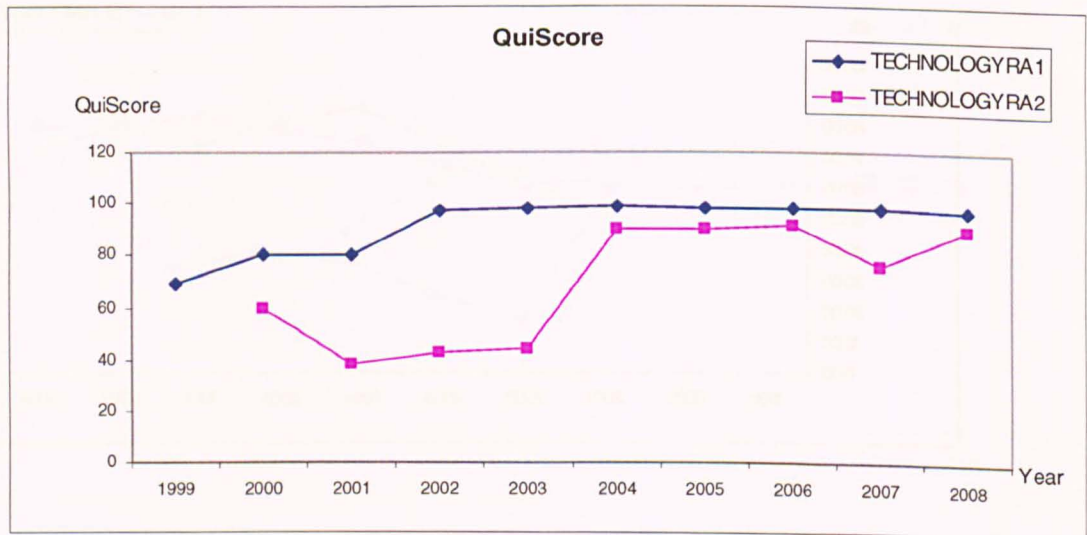
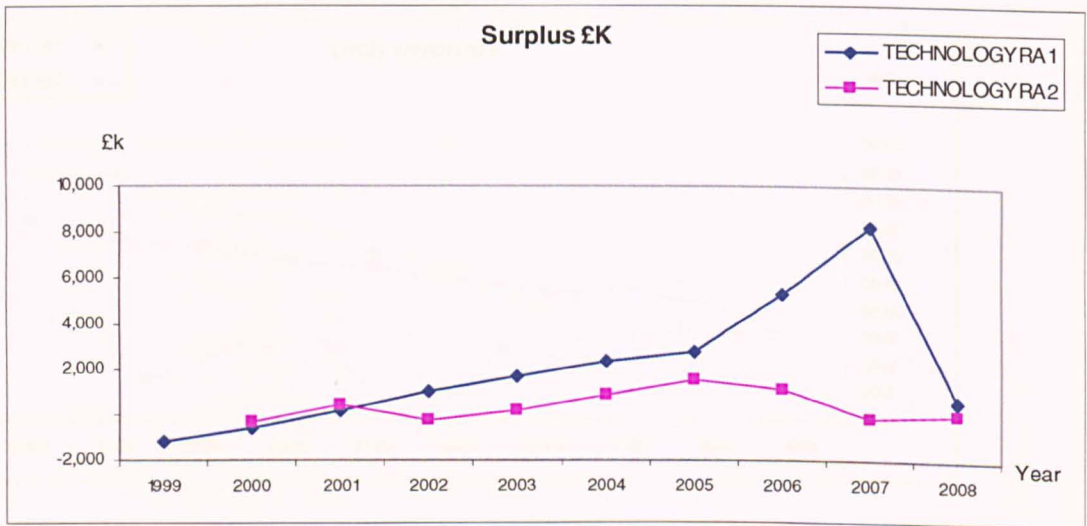
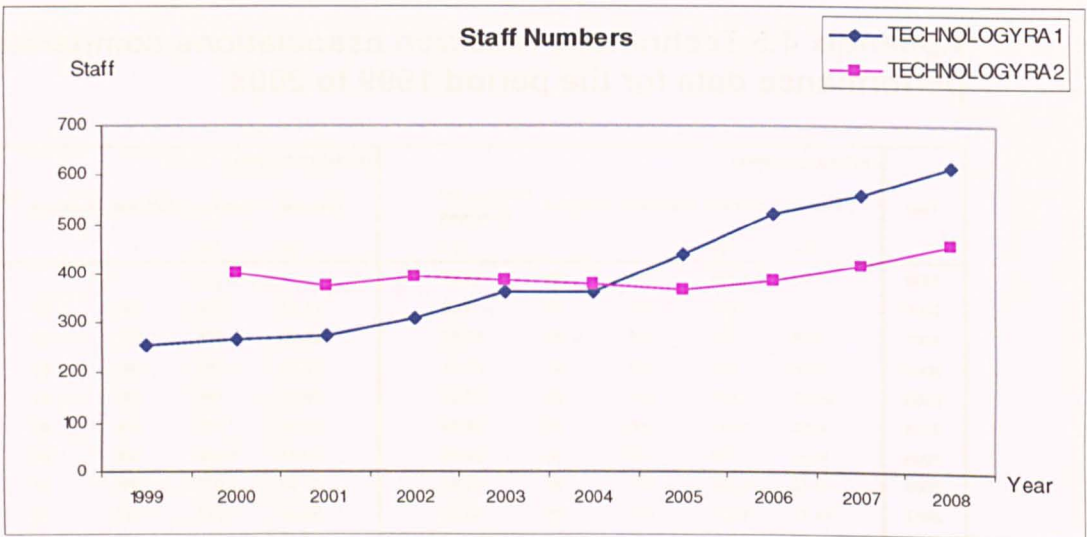




Appendix 4.5 Technology research associations comparative performance data for the period 1999 to 2008

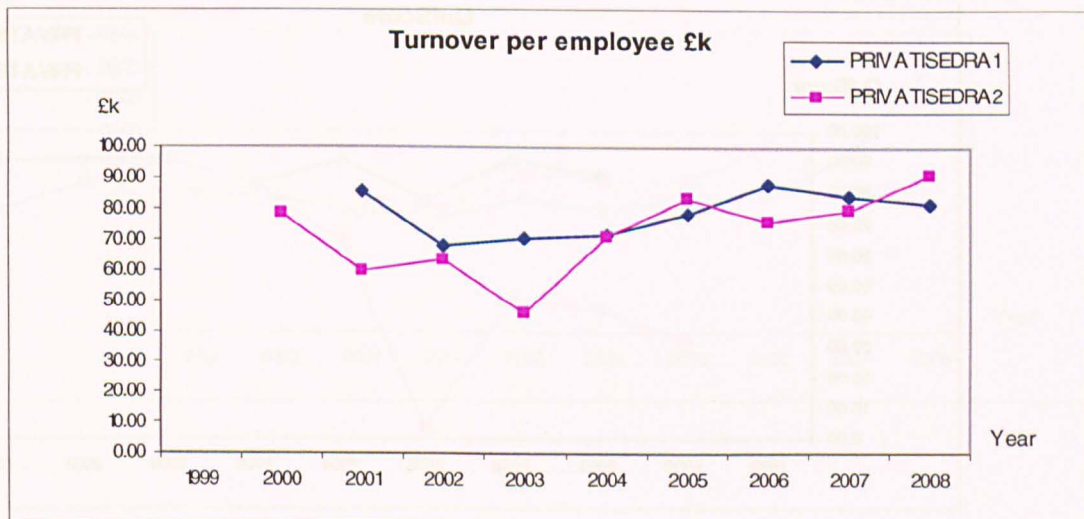
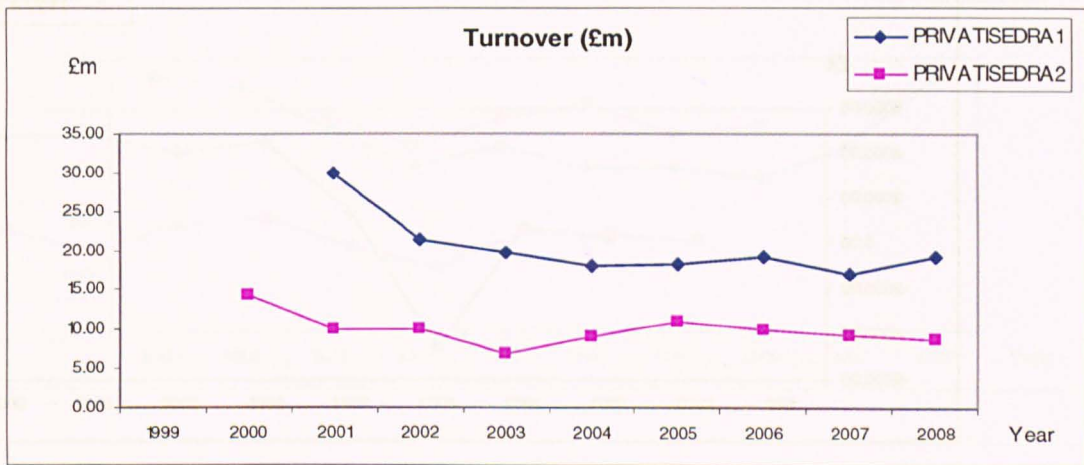
Year	TECHNOLOGYRA1					TECHNOLOGYRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	12.27	-1,153	254	69	48.31					
2000		-632	267	80	0.00	21.01	-376	398	60	52.78
2001	14.56	130	275	80	52.93	23.29	395	372	38	62.60
2002	18.96	956	308	97	61.54	23.80	-252	391	43	60.86
2003	26.52	1,625	360	98	73.68	25.57	185	383	44	66.76
2004	30.99	2,343	360	99	86.09	28.12	787	376	90	74.78
2005	36.30	2,739	439	98	82.68	29.11	1,436	366	90	79.53
2006	38.46	5,262	521	98	73.82	31.93	1,077	385	91	82.94
2007	44.92	8,241	560	98	80.22	33.42	-210	413	76	80.92
2008	45.08	585	615	97	73.29	36.67	-21	458	90	80.07

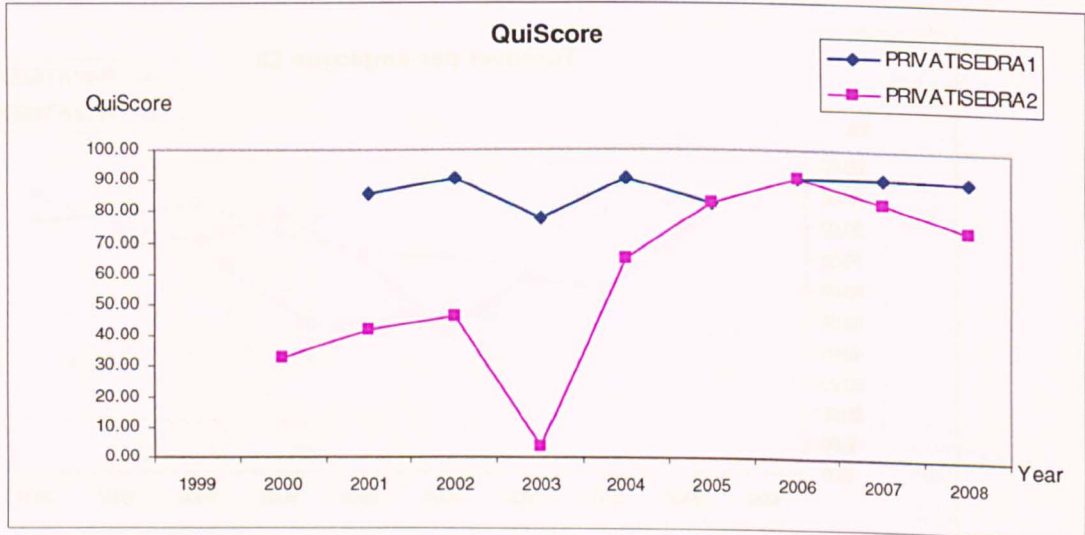
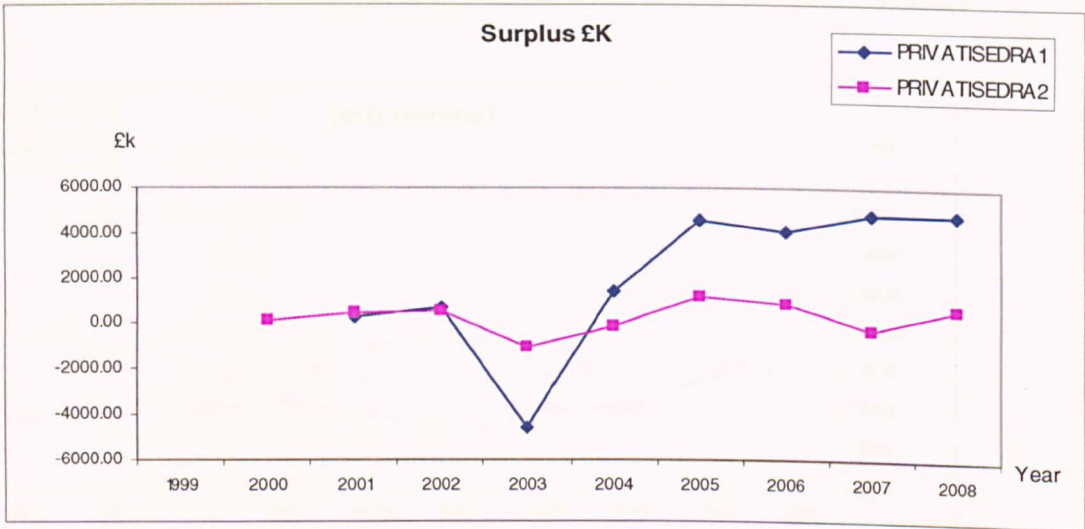
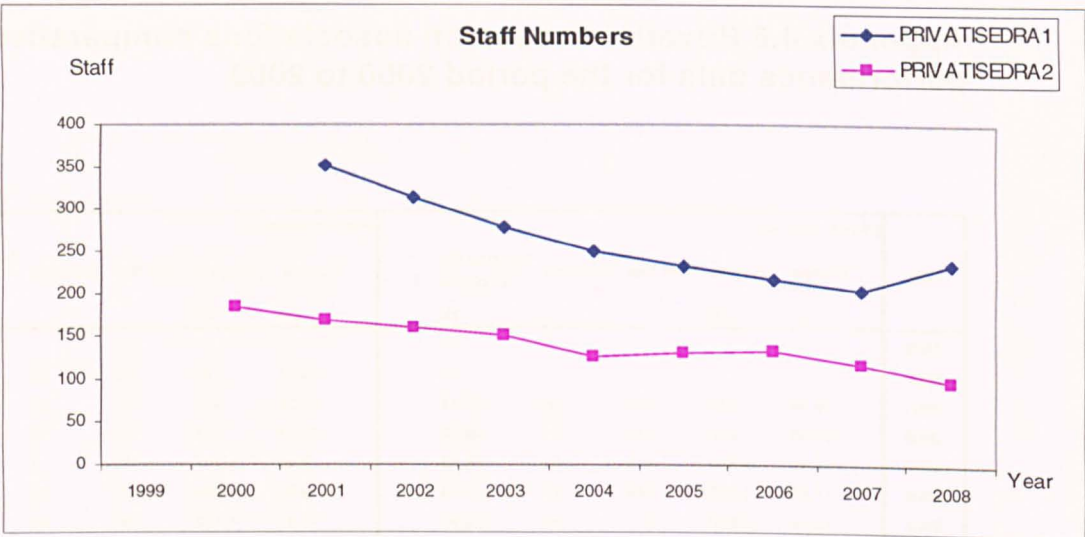




Appendix 4.6 Privatised research associations comparative performance data for the period 2000 to 2008

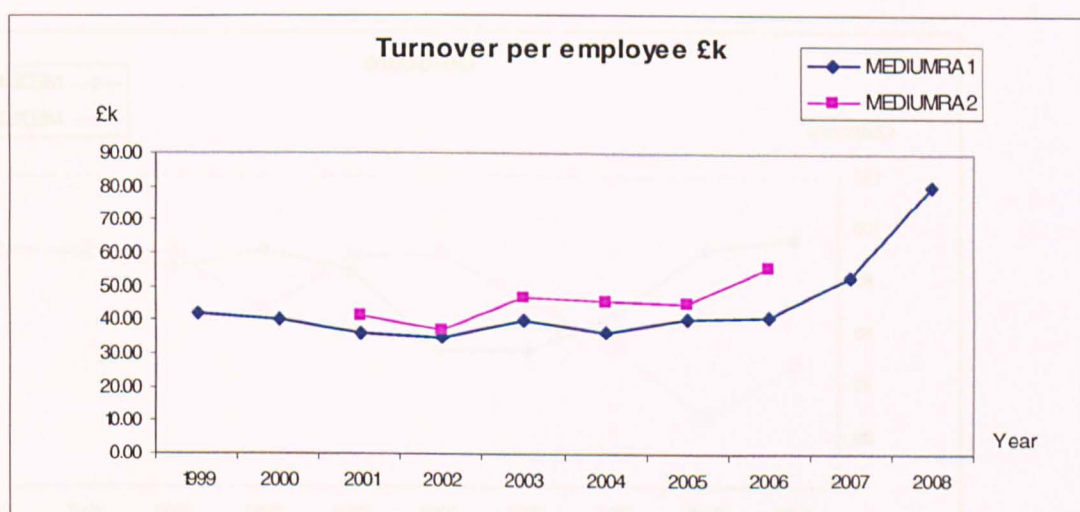
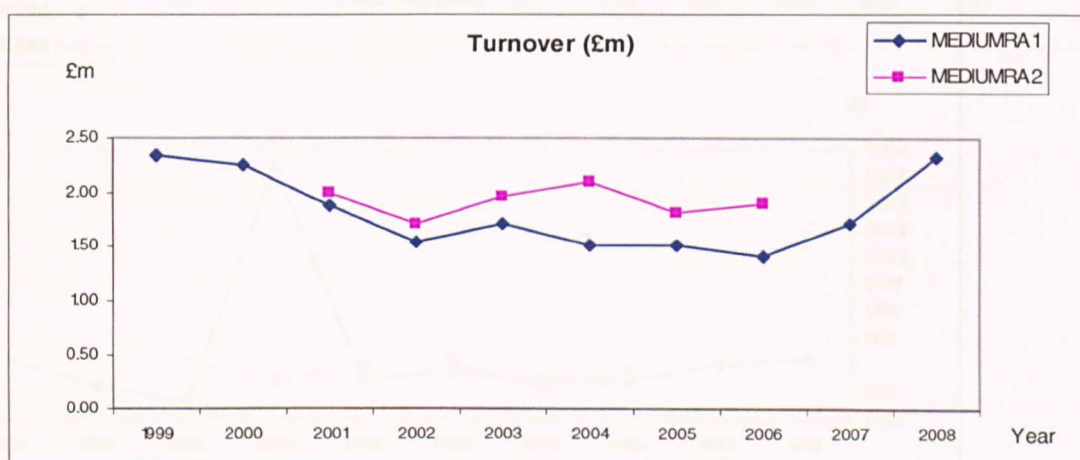
Year	PRIVATISEDRA1					PRIVATISEDRA2					
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	
	£m	£k			£k	£m	£k			£k	
1999											
2000						14.41	75	183	33	78.75	
2001	29.99	210	351	86	85.44	10.05	402	167	42	60.17	
2002	21.38	676	314	91	68.08	10.14	539	159	46	63.77	
2003	19.61	-4,559	278	78	70.53	7.00	-1,047	151	4	46.38	
2004	17.87	1,392	249	91	71.78	9.08	-204	127	65	71.48	
2005	18.24	4,562	231	83	78.94	10.91	1,159	130	83	83.92	
2006	19.13	4,090	217	91	88.15	10.14	857	133	91	76.23	
2007	17.13	4,813	203	91	84.36	9.43	-309	118	83	79.92	
2008	19.28	4827.00	235	90.00	82.04	8.92	551	98	74	91.00	

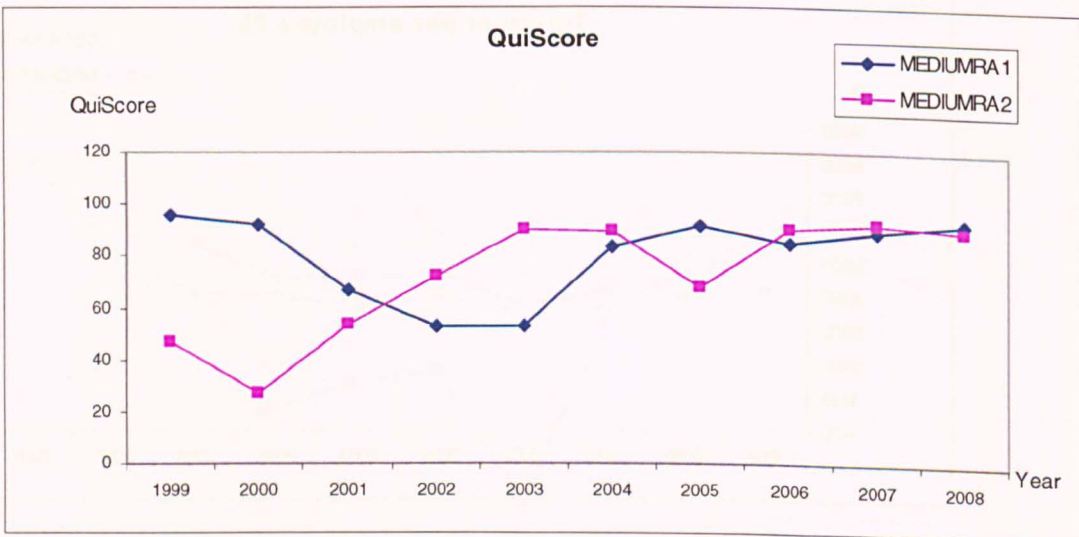
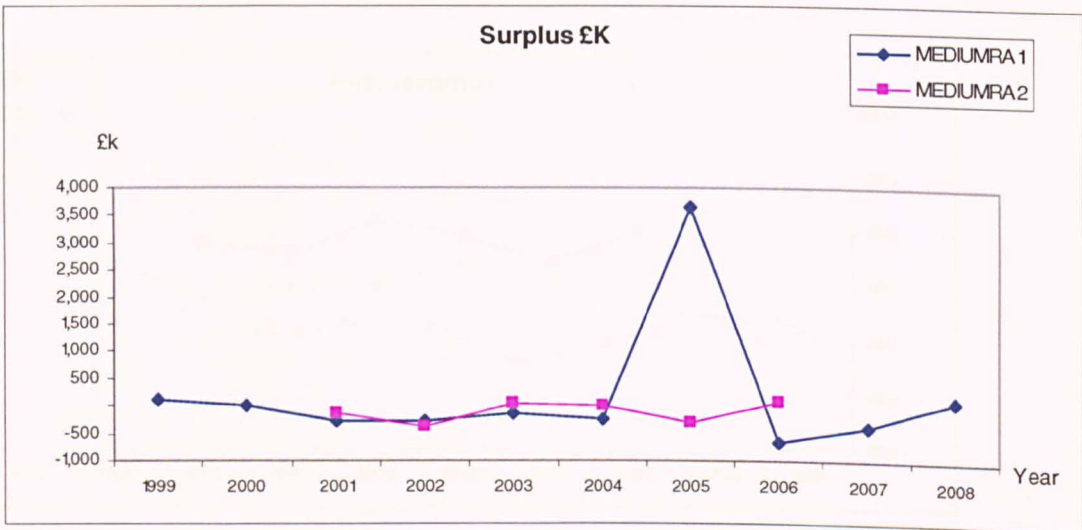
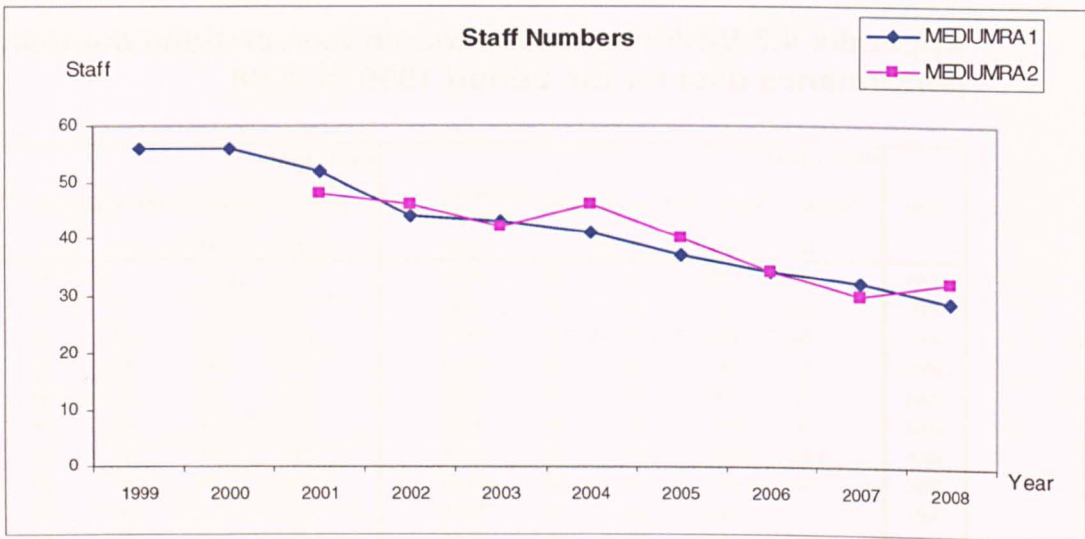




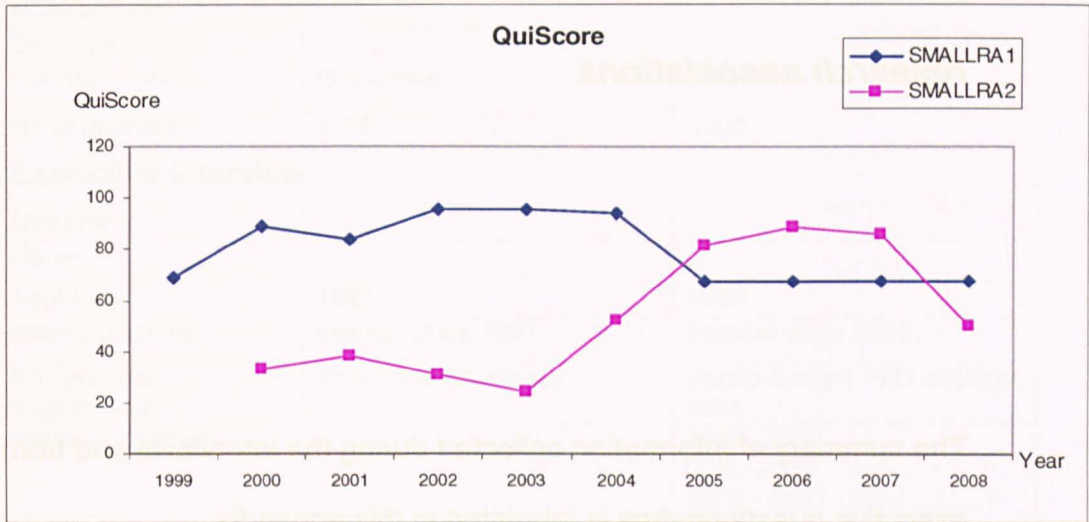
Appendix 4.7 Medium sized research associations comparative performance data for the period 1999 to 2008

Year	MEDIUMRA1					MEDIUMRA2				
	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee	Turnover	Surplus	Staff Nos	QuiScore	Turnover per employee
	£m	£k			£k	£m	£k			£k
1999	2.34	98	56	96	41.77					47
2000	2.26	24	56	92	40.33					27
2001	1.88	-280	52	67	36.17	2.00	-143	48	54	41.58
2002	1.55	-287	44	53	35.19	1.72	-359	46	72	37.35
2003	1.72	-136	43	53	39.93	1.97	28	42	90	46.82
2004	1.50	-251	41	83	36.63	2.11	16	46	89	45.82
2005	1.51	3,638	37	91	40.75	1.81	-291	40	68	45.19
2006	1.40	-645	34	85	41.30	1.91	79	34	90	56.11
2007	1.71	-358	32	89	53.35			30	92	
2008	2.33	97	29	93	80.37			32	90	





Appendix 4.8 Small sized research associations comparative QuiScore data for the period 1999 to 2008



Appendix 5 – Summary of information obtained from the executive and non executive directors for each of the pairs of research associations

The summary of information collected during the interviews and from the non executive questionnaires is tabulated in this appendix.

The background data tabulated does not include the company information that is included in Appendix 4

Company names have been removed as have the names of the executive and non executive directors and their predecessors.

Appendix 5.1 Food sector

	FOODRA1	FOODRA2
Background		
Date of interview		
Company Status	Guarantee	private limited
No of members	2000	1000
Executive interview		
Director		
Name		
Appt Date	1988	2008
Internal/External	internal since 1981	internal since 2005
Professional background	PhD Food Research	Public Analyst PhD strategy MBA
Previous directors		1990- 2000 2000-2002 2002 - 2007
Governance		
Council/Board	Both	Only Board
Composition-Council	26	
Composition-Board	All executives (unique arrangement)	CEO + financial director + 2 non executives
Function of Council	Advisory	
Function of Board	Run organisation	Set strategy and run organisation
Governance changes		
When		Council abolished in 2000
Reason		Prelude to management buy out
Impact		Mistrust - CEO left
Tensions	"Relationship of trust"	none
Strategy		
Strategic Plan Yes/No	Yes	Yes
Start date for strategic planning	1981	2005
Frequency of plan - years	3	3 with annual updates
Trigger for strategic planning	CEO	CEO
Involvement	Senior staff	Senior staff and Board at early stage
Contribution	Technical knowledge	Non executives - marketing skills
Strategy Development		
Timescale - months	3	9
Meetings	ex Boston consultant advisor used	
Drafts	Start with briefing papers	5
Tools	SWOT	SWOT
Strategic competencies (where numbers are given the first indicates importance on scale of 1to 5 and the second the assessed strength on a scale of 1-5 or need to improve)		

	FOODRA1	FOODRA2
regulatory		core research programme
positional	reputation 1, 1, membership base 1, 1	reputation 1, , membership base 1, need to grow
functional	employee knowledge 1, grow	employee knowledge 1, 10% PhD 16% Masters so strong
cultural	Team working 1, grow, customer service 1, grow	Team working important, (good integration of technical and marketing staff), strong Customer service important, could be improved
other competencies		
Strategy Vision		Vision is 'The food industry's preferred partner for scientific and legal solutions'
Strategic aim	Profitable growth	Return to profitability
Strategy considerations		
Merge with other research associations	opportunistic, two mergers to date	no plans
Acquisitions	no plans	no plans
Management buy out	not considered - committed to members	no management buyout - once failed
Change in pension commitment	yes - paying off large pension deficit at 5% of turnover	Final salary for new entrants stopped in 2007 - deficit action agreed action with pension regulator
Co- operative/competitive stance	co-operative	co-operative - joint study with FOOD STANDARDS AUTHORITY
New markets		
New services		
Other strategy considerations	Maintain reputation	Employ marketing experts in each operational platform
	Develop staff	Keep present building - let out surplus space
Membership	Maintain membership base. Stay close to members	
Market Development		
Geographical	Eastern Europe - one institute in Hungary Developing food safety in China and India	50% overseas income - status quo but extend the global coverage
EEC , government, industry	current position EEC Government = 10% - no change	5% government EEC prefer working for private sector - status quo
Supply chain	Yes continual development - farms to consumer trials	Focus on supermarkets and retailers even cooking instructions and label checks
Members	85% of work from members (2000)	80% from members - working to 100%
Other market developments		Nutrition safety and legal help line
Products	Testing and analytical service are of prime importance followed by consultancy growth in both	New products - regulatory approval advice shelf life and manipulating food structure.Weight

	FOODRA1	FOODRA2
	planned	management studies and blood analysis Microbe culture maintenance
Services	200 training courses in yr 2008 produce £2m income - growth planned	Tailored information solutions (new way of marketing what they do currently) online food line databases etc. 50 training courses per year
User Needs	Council sub committees 12000 visitors per year - proactively used	Advisory panels, Liaison visits, two surveys a year. 3 open days per year. Sample feedback on services - considering making it 100%.
Equipment	looking to buy equipment to improve analytical services	new equipment to improve productivity
Factors Influencing Strategy		
External	Recruitment a major problem 'graduates do not understand what they do' Research associations not perceived as commercial organisations	Big drop in government funding from FOOD STANDARDS AUTHORITY Cannot finance growth out of surpluses (Recruitment no problem - good relations in particular with Reading University)
Internal	Continual drive to make staff more market focussed	Culture needs improving - more market focussed Internal flat structure with coaching and mentoring
Strategic Options	Management buyout and EBT dismissed Evolution - no major change with pension pay off Succession planning both CEO and FD retire shortly - likely replacements external	No management buyout. No venture capital finance. Merger advances turned away The option appears to be 'plod on'!!!
Strategy Implementation	All staff have access to 3yr plan, CEO twice annual briefings to all staff, more frequent briefings by senior managers	Strategy documents are sent to all staff (40 pages) CEO briefings and updates annual
Important Stakeholders	Members	members and staff
Non Executive Questionnaire		
Non executive - 1		
Governance		
Non executive function	To represent member companies	To set performance targets for the business and the CEO and be prepared to act in good time if either of these is not satisfactory
Governance satisfactory?	Yes - effective over time	No At present 2 exec and 2 non exec
Changes in governance	none	- need to move to 3 non exec and two exec
Strategy		
Involvement		
At first draft level		Yes

	FOODRA1	FOODRA2
Commenting on first draft		Yes
Commenting on final draft	Yes	Yes
Approval of final draft	Yes	Yes
Strategic Aim		
Survival		
Growth	Yes	
Profitability	Yes	Yes
Mergers		
Change of ownership others		
Stake Holders		
Members	2	1
Clients	1	3
Staff	2	2
Other		
Competencies	Staff knowledge Customer focus	
Reputation	2	4
Staff knowledge	1	1
Customer focus	1	2
Team working	2	3
Other	Research vital	
Future Vision		
3 Years time	A strong / profitable RA that has been adapting to the changing requirements of the market	Delivering 5% profit on turnover. Growing at 2% above inflation High reputation for services it delivers
Major Changes	Willingness to drop sacred cows as necessary and to seek /maximise new opportunities	Over the last 18 months we have concentrated on reorganising the business to focus on fewer strategic areas and to remove costs We have been very successful in this endeavour but our sales during this period have been disappointing. We now need to concentrate our efforts on getting closer to our members to understand their needs and to convert all this to increased sales. We need to improve our profitability to enable greater investment in people skills and facilities
Additional comments		
Non executive 2		
Governance		
Non executive function	To ensure good corporate governance	
Governance satisfactory	Yes	
Changes in	none	

	FOODRA1	FOODRA2
governance		
Strategy		
Involvement		
At first draft level		
Commenting on first draft		
Commenting on final draft	Yes	
Approval of final draft	Yes	
Strategic Aim		
Survival		
Growth	Yes	
Profitability	Yes	
Mergers	Yes	
Change of ownership		
others		
Stake Holders		
Members		
Clients	1	
Staff		
Other		
Competencies		
Reputation	3	
Staff knowledge	2	
Customer focus	1	
Team working	4	
Other		
Future Vision		
3 Years time	Strong growth with greater international spread	
Major Changes	Improved profitability	
Additional comments		
Non executive 3		
Governance		
Non executive function	To assist the management with strategy and corporate governance	
Governance satisfactory?	Yes	
Changes in governance	none	
Strategy		
Involvement		
At first draft level		
Commenting on first draft	sometimes	
Commenting on final draft	Yes	
Approval of final draft	Yes	
Strategic Aim		
Survival		
Growth		
Profitability	1	
Mergers		
Change of ownership		

	FOODRA1	FOODRA2
others		
Stake Holders		
Members	1	
Clients	2	
Staff	3 because they do not exist without 1 and 2	
Other	government agencies 4	
Competencies		
Reputation	1	
Staff knowledge	2	
Customer focus	3	
Team working	4	
Other	Trust and Brand 2	
Future Vision		
3 Years time	Membership based world class recognised internationally	
Major Changes	Integration of BRI - sort out pension issues	
Additional comments	Continued membership - support for new management team	

Appendix 5.2 Transport sector

	TRANSPORTRA1	TRANSPORTRA2
Background		
Date of interview	3 11 08	19 11 08
Company Status	Employee benefit trust	Limited by guarantee
No of members	none	50
Executive interview		
Director		
Name		
Appt Date	2005	1991
Internal/External	Internal - since 1990	External
Professional background	Naval architect	Mechanical engineer
Previous directors		
Governance		
Council/Board	Board	Board
Composition-Council		
Composition-Board	CEO plus financial director plus 3 non executives	4 executives and 5 non executives
Function of Council		
Function of Board	Set targets, Monitor progress - meet 6 times a year	Set Targets, Monitor progress
Governance changes	Employee benefit trust	1997 Council abolished
When	Date 1995	1997
Reason	Knowledge organisation, share holders should be staff Defence against takeover	Board members used to represent member firms - now appointed for their expertise
Impact	good	More emphasis on research association and not its members
Tensions	none	none
Strategy		
Strategic Plan Yes/No	yes	yes
Start date for strategic planning	Previous director had a vision for the research association, formal since 2005	1993
Frequency of plan - years	5 yrs - but is now a continuous process	5 yr review annually
Trigger for strategic planning	CEO	CEO
Involvement	Executive directors produce position papers one day meeting of full board	Department managers plus full day Board meeting
Contribution		Knowledge of organisation and market
Strategy Development		
Timescale - months	6 months	6 months
Meetings	Internal plus one away day with Board	4 internal 3 main board
Drafts	moving towards a score board approach	
Tools	each company has their own approach	European federation of quality management

	TRANSPORTRA1	TRANSPORTRA2
Strategic competencies		
regulatory	Copyright on designs. IPR important	responding to safety regulations
positional	Branding by key values	reputation of research association. Name retained since 2001
functional	Employee knowledge must be captured	employee knowledge good
cultural	team working and training in leadership, marketing and customer services	work challenging and rewarding
other competencies		
Strategy vision	Table 7.3	successful sustainable business providing rewarding employment for the staff'
Strategic aim	Profitability rather than growth	Growth by diversification and staff satisfaction
Strategy considerations		
Merge with other research associations		no plans
Acquisitions	Has grown by acquisitions. Future growth organic	limited by available capital
Management buy out	Employee trust done	not discussed
Change in pension commitment		2006 final salary pension closed
Co-operative/competitive stance	Competitive	both
New markets	Asia Bulk transport, EU framework 7	Diversification into defence and related fields Defence , rail, aerospace
New services	Oil and gas exploration, pipe line welding, rail maintenance spin-off from ships	Simulation, safety 50% of work , legal product liability
Other strategy considerations	rationalisation of the 29 operating companies. profitability as profits go to staff 6% of staff time for developing new technologies	emphasis on job satisfaction not financial reward
Membership		Decreased with consolidation of industry. Membership work contributes to 50% of income
Market Development		
Geographical	Australia next target	Offices in China India and South Korea
EEC , government, industry	Framework 7 important	Government a disaster, 2% income from EEC
Supply chain	to Oil industry	
Members		
Other market developments		
Products		
Services	90% consultancy	Act as godfather to 32 start up companies located on site

	TRANSPORTRA1	TRANSPORTRA2
User Needs	Feedback from subsidiary companies	Market research and enquiry service
Equipment		
Factors Influencing Strategy		
External		Recruitment difficult to get good staff - in house training Business cycle out of phase with research cycle.
Internal		Financial control critical Reputation
Strategic Options		Needs to grow to be sustainable Survival since 9 11 Growth in new areas
Strategy Implementation		Staff briefings
Important Stakeholders	Staff 1	Staff 1 Clients 2 Members 3
Non Executive Questionnaire		
		Not included for reasons given in text (7.4.2)
Governance		
Non executive function	To contribute to the development of company strategy and constructively scrutinise the performance.	
Governance satisfactory?	yes	
Changes in governance		
Strategy		
Involvement		
At first draft level	sometimes	
Commenting on first draft	yes	
Commenting on final draft	yes	
Approval of final draft	yes	
Strategic Aim		
Survival		
Growth		
Profitability	1	
Mergers		
Change of ownership		
others		
Stake Holders		
Members		
Clients	1	
Staff	2	
Other		
Competencies		
Reputation	4	
Staff knowledge	2	
Customer focus	1	
Team working	2	
Other		

	TRANSPORTRA1	TRANSPORTRA2
Future Vision		
3 Years time	Improved profit margin	
Major Changes	A new senior management structure and turning round loss making subsidiaries	

Appendix 5.3 Construction sector

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
Background		
Date of interview	14/10/08	6/11/08
Company Status	Private	Guarantee
No of members	750	70
Executive interview		
Director		
Name		
Appt Date	1998	2006
Internal/External	Internal since 1975	Internal since 2003
Professional background	Physicist	Engineer, Consultant with Atkins
Previous directors		1986 - 2002 2002 - 2006
Governance		
Council/Board	Both	Both
Composition-Council	35 representing divisions of membership	All 70 members
Composition-Board	4 executives (CEO, Marketing Director, engineering director finance director) and 5 non executives	3 executives 4 non executives (members of council)
Function of Council	Industry sounding board	Advisory - recommend programme of work through advisory panels on building construction technology, environment, ground engineering, water engineering, construction processes.
Function of Board	Approves papers prepared by executive directors	'Has full control'
Governance changes		
	None planned but would prefer a council with less rigid structure	Board established in 2004. Also prior to 2004 Council members were elected from the membership
When	Board formed in 1989	2004
Reason	' would have gone bust if Council had remained in control' quote of CEO	So all members can have a say on selection of projects but organisation run by a small board
Impact		
Tensions	see above	None
Strategy		
Strategic Plan Yes/No	Yes	Yes
Start date for strategic planning	1991. Suggested by Marketing Director who has an MBA	started 1990 and abandoned by a director in 2002 resurrected by current director 2007
Frequency of plan - years	5 years now in year 3 often revised after 4 years	3
Trigger for strategic planning	CEO	CEO

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
Involvement	7 business managers - bottom up process. New strategy process workshop all exec board directors and business managers	Executive Board plus senior staff
Contribution	Internal and market knowledge	Non executives - business experience
Strategy Development		
Timescale - months		6
Meetings		2 separate full day workshops and internal and external consultations
Drafts		5 +
Tools	Use SWOT but too restrictive inward looking. Importance of project champions or heroes. - bottom up process. Top down to bring in new ideas. New strategy process workshop all executive board directors and business managers. Each was asked to put forward one new big idea which was not resource limited. These were considered in a brain storming meeting containing market knowledge, knowledge of internal strengths and weaknesses of the organisation, together with financial and political expertise. Note the strategy developed by the executives etc and approved by the board	SWOT but not a mechanical process
Strategic competencies (where numbers are given the first indicates importance on scale of 1 to 5 and the second the assessed strength on a scale of 1-5 or need to improve)		
regulatory		
positional	reputation 1,1	reputation 1,1
functional	employee knowledge 2,1 financial control strong	employee knowledge 1, technically good must improve project control
cultural	Customer service 3,1	Customer service 1, must improve conductivity skills - passing information to members
other competencies		
Strategy vision		Mission - Enable /support the membership to improve in performance and environment
Strategic aim	growth which up to now growth has been organic	no mandate to grow the business
Strategy considerations		
Merge with other research associations		none planned

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
Acquisitions	now looking for growth by acquisitions. This will be done by using income surplus - does not believe in borrowing money for growth.	Recently acquired SME with 11 people
Management buy out		no
Change in pension commitment	Final salary pension scheme closed to all new entrants in 2001 and closed to all staff in 2005. Pension deficit currently estimated at £2.7m - being paid off at £35000 a yr for next ten years in accordance with an agreed schedule.	Final salary closed in 2003 - pay off deficit in ten years
Co-operative/competitive stance	Looks upon other organisations as competitors. Another research association could be a serious competitor when and if government finance is reduced.	Careful not to compete with members
New markets	Successful - has offices in France Germany and China - chiefly in support of the worldwide market intelligence business. Plan to open office in the middle east	Expansion to Hong Kong and middle east
New services		Maintain core programme but develop products, 70 in 2007 covering diverse topics as managing archaeological risk in construction to safer surfaces to walk on
Other strategy considerations	Active decision to separate from Government	Improve information flow to members
		Retain membership fees supporting all or a selection of projects i.e. No work for individual companies
Membership		In addition to 70 core members who constitute the council the research association attracted support from 500 separate organisations who subscribe to 1 or more categories of membership
Market Development		
Geographical	Successful - has offices in France Germany and China - chiefly in support of the worldwide market intelligence business. Plan to open office in the middle east. 18% of income from overseas. Start testing in China	Hong Kong and middle east
EEC , government, industry	Growing potential of government money with initiatives such as 'construction excellence'. EEC income has the potential of increasing under the	Participation in framework programmes

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
	seventh framework programme.	
Supply chain		Greater influence on government policy
Members	750 members only contribute 20% of income and 4500 clients contribute the greater part of income	2009 - New Associate membership with restricted benefits First membership manager appointed. Only work for members.
Other market developments	Sources of income 26% hiring out test equipment to the industry 22% worldwide market intelligence 22% is commissioned research 13% is test and consultation 12% is information and training 4% is co-operative research	Turnover details 58% research 12% core membership 16% publications 14% events including training
Products		Acts as an agent determining needs of industry and packaging the results for industry but all work subcontracted to universities or other bodies - but no change
Services	Growth area - energy - the carbon footprint driven by legislation or cost reduction.	Information service increasing - no growth in consultancy Develop training
User Needs	External networks through professional bodies and government Membership special interest groups. These are self help groups - benefits from them Has a large market intelligence group No advisory panels Very important to be out with top people Council members asked to let research association know what problems they have	Council - all members and advisory groups. Feedback on events such as training
Equipment		all work subcontracted out
Factors Influencing Strategy		
External	Realistic reduction in UK government funding could be offset by EEC funding under Framework 7 Pension legislation a nightmare Very difficult to recruit good people Location is a problem - no room to expand on site	Funding from technology strategy board 20% - i.e.. Availability of funds No need for external capital

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
Internal	Now have an open culture and a flat structure - this took five years to achieve. Very good financial control 'Majority of staff care'	Culture - technology driven not driven by customer service or financial control Pension liability
Strategic Options		Commercial consultancy versus membership - chose membership (credit crunch could affect membership less flexibility than consultancy) No growth (no mandate for growth)
Strategy Implementation	Strategy document and progress towards objectives on intranet	Greater involvement of all staff
Important Stakeholders	1 Staff 2 clients 3 Members	Members
Non Executive Questionnaire		
	Not included for reasons given in text (7.5.1)	
Governance		
Non executive function		To provide an independent source of questioning ,experience and advice with regard to strategic and policy matters
Governance satisfactory?		yes
Changes in governance		no
Strategy		
Involvement		
At first draft level		yes
Commenting on first draft		yes
Commenting on final draft		yes
Approval of final draft		yes
Strategic Aim		
Survival		
Growth		
Profitability		
Mergers		
Change of ownership		
others		To maintain and enhance the quality of applicable and relevant research which is carried out in the service of the UK construction industry
Stake Holders		
Members		1
Clients		has no clients only members
Staff		2
Other		
Competencies		
Reputation		1
Staff knowledge		3

	CONSTRUCTIONRA1	CONSTRUCTIONRA2
Customer focus		2
Team working		4
Other		
Future Vision		
3 Years time		should be seen with enhanced reputation and greater visibility at the board room level of its membership and within the construction industry at large
Major Changes		needs to develop better relationships at higher levels within its constituency of members. The association needs to raise its profile among non member companies

Appendix 5.4 Clothing sector

	CLOTHINGRA1	CLOTHINGRA2
Background		
Date of interview	4 12 2008	3 11 2008
Company Status	Guarantee	Guarantee
No of members	1600	60
Executive interview		
Director		
Name		
Appt Date	39052	2006
Internal/External	Internal since 1963	internal since 1998
Professional background	this research association	Commercial
Previous directors		
Governance		
Council/Board	Board	Board
Composition-Council		
Composition-Board	4 executives 5 non executives including the chairman	5 Directors 2 executive 3 non executive (chairman plus two that represent members)
Function of Council		
Function of Board	Sub committees for audit, remuneration, pensions and nominations	The board legal responsibility for company but elected members take little interest
Governance changes	1990 CEO persuaded Council to restructure and delegate power to the board	Not since merger to create research association in 1988
When	1990	
Reason	More power to exec and professional management structure	
Impact	Good	
Tensions	Nil	
Strategy		
Strategic Plan Yes/No	Yes	No written plan
Start date for strategic planning	Started as business planning in 1990s	
Frequency of plan - years	Five year plan	
Trigger for strategic planning	Built in system	
Involvement	Draft produced by the exec Presented to the board at one meeting, feedback acted upon and document finalised at next meeting.	
Contribution	Bottom up from business managers with CEO incorporating long term plans	Board
Strategy Development		
Timescale - months	4 months	

	CLOTHINGRA1	CLOTHINGRA2
Meetings	two board meetings and number of internal meetings	
Drafts		
Tools		
Strategic competencies		
regulatory		Strong Involved in EU and BSI committees
positional	Continue to strengthen the brand 'Customers trust the brand'	Reputation based on name and customer surveys
functional	Employee knowledge good,	Staff knowledge good with senior staff but not always passed down
cultural	Culture to be even more open Flat structure monthly briefings	The directors identified problems but were reluctant to deal with them having a fear of upsetting key personnel
other competencies		
Strategy vision		
Strategic aim	Growth	Fight for survival
Strategy considerations		
Merge with other research associations	Very flexible approach - respond to opportunities	Talk of forming partnerships with other organisations but value independence
Acquisitions	Growth a mixture of organic and acquisitions 'No need to take risks'	
Management buy out	not appropriate	
Change in pension commitment	Final salary closed in 2004 Deficit manageable with £300K being transferred each yr.	Time consuming activity working on pensions with no foreseeable conclusion pension liability now greater than annual turnover
Co-operative/competitive stance		
New markets	Expanding geographically 60% of income at present comes from overseas Now operate in 72 countries	China and India and SE Asia
New services		Protective clothing
Other strategy considerations		Expanding testing for health and safety requirements
Membership	Grow membership	Decreasing membership. Membership subscriptions less than 1% of total turnover. 90% of income from non members
Market Development		
Geographical	Expanding geographically 60% of income at present comes from overseas Now operate in 72 countries	
EEC , government, industry	No support sought from government or EC	
Supply chain		
Members		

	CLOTHINGRA1	CLOTHINGRA2
Other market developments		
Products	Income 60% testing 20% sale of test equipment 20% membership Have already expanded into clothing and home textiles, cleaning, personnel protective equipment, furniture, bedding and upholstery, floor coverings construction products, toys, home-ware.	Dyeing and finishing pilot plant. Stable contributes £1 Million per year not very profitable Shirley developments producing test equipment was sold in 1986
Services	See above	Testing and certification 50% Some advice (consultancy) connected with testing
User Needs	Feedback from members - is used proactively in developing in developing new areas of activity	Satisfaction surveys. Feedback from EU and BSI committees on future testing needs
Equipment	Sell test equipment	
Factors Influencing Strategy		
External	No government or EU money Purchased facilities from failing research associations.	Downsizing of industry. Pension legislation absorbs time and cash.
Internal	Have moved facilities to a new purpose built laboratory paid for out of profits, retained old building let out on small units generating revenue	Claimed good internal financial control. Staff have good reputation. Governance wrong Internal managers should replace non exec directors Internal tensions
Strategic Options	No government work No management buyout Members no desire to run the business	Ownership. Pension issue must be resolved before ownership options can be considered.
Strategy Implementation		
Important Stakeholders	Staff 1 Directors 2 Members 3	Staff
Non Executive Questionnaire		
Governance		
Non executive function	Strategic leadership	To bring to the board independent judgement and to guide on strategy development performance and appointments
Governance satisfactory?	Yes	Has changed over past 20 years to meet present situation
Changes in governance	No	
Strategy		
Involvement		continuous process - annual business plan produced
At first draft level		
Commenting on first draft	yes	
Commenting on final	yes	

	CLOTHINGRA1	CLOTHINGRA2
draft		
Approval of final draft	yes	
Strategic Aim		
Survival		
Growth	Growth	
Profitability		
Mergers		
Change of ownership		
others		Improve profitability to finance growth
Stake Holders		
Members	2	
Clients		2
Staff	1	1
Other		
Competencies		
Reputation	1	3
Staff knowledge	2	1
Customer focus	4	2
Team working	3	4
Other		
Future Vision		
3 Years time	Diversification into new areas Developing customers in China and India	To be a profitable provider of specialised technical services
Major Changes	Recruitment and development of new talent	Huge obstacle is pension shortfall
Additional comments		Fundamentally sound cash generating business is hamstrung by the demands of the pension fund and it is a strategic issue which at present takes up a huge amount of board time.

Appendix 5.5 Technology based research associations

	TECHNOLOGYRA1	TECHNOLOGYRA2
Background		
Date of interview	3 6 09	3 11 08
Company Status	Limited by Guarantee	Limited by Guarantee
No of members	300	2800
Executive interview		
Director		
Name		
Appt Date	2008	2004
Internal/External	Internal since 1988	Internal since 1991 - previously business development director
Professional background	Engineer	Metallurgist PhD
Previous directors	1998 - 2008	1988-2004
Governance		
Council/Board	Board	Council and Board
Composition-Council		28 Finance and General Purpose Committee - 10 of which 4 are executive directors and 6 non executive who are all council members This committee approves the budget and corporate plans, and supervises the pension scheme
Composition-Board	5 non executives plus the CEO and financial director	12 executive directors
Function of Council		Supervising and guiding - responsible for final approval of annual accounts, appointing council sub committees and appointment of the CEO
Function of Board	CEO considers non executives as 'wise sages'. Advisory	Run the organisation. Is a proposing body - strategy plans are produced by the executive board for approval by the financial and general purpose committee
Governance changes	Council abolished in 1985. Foundation established in 2007	
When	1985	
Reason	Previous CEO abolished council as a preliminary to a management buyout. This was not successful and the CEO resigned. Foundation established working with the Princes Trust to support young entrepreneurs.	
Impact		
Tensions	None	None
Strategy		
Strategic Plan Yes/No	Yes	Yes

	TECHNOLOGYRA1	TECHNOLOGYRA2
Start date for strategic planning	1997	1991
Frequency of plan - years	3 year plan reviewed annually	3
Trigger for strategic planning	CEO	CEO
Involvement	Produced internally with Board approval.	Senior executives
Contribution	Internal process - bottom up. CEO involves all staff.	Technology and market
Strategy Development	Strategy process is from goals through new markets and products to finally the budget	Vision to aims to objectives Deliberate strategy necessary as a first step but emergent in practise Strategy aimed at fitting technology to the market for a range of industrial sectors. Success in meeting client needs.
Timescale - months	5 months	Start in Sept Nov financial and general purpose committee approval Dec Council approval
Meetings		
Drafts		
Tools		SWOT
Strategic competencies		
regulatory	Close working with Governments Technology Policy	Patents - organisation unusual in obtaining 5% of income from patents - seen as important and as a strength
positional	Reputation and networks	membership base crucial - growing 12 % per year
functional	Employee knowledge and marketing skills	employee knowledge CEO 'invest in people this is not just a slogan' improving
cultural		Team working under continual development
other competencies	Income largely derived from running UK Government and EEC schemes	Income 48% from single client research, 4% from group projects, 36% from collaborative research, remainder from training and investments Abandoned spin off companies - conflict of interest with members
Strategy vision		
Strategic aim	Sustainable growth Grow organisation to 1000 employees by 2014	Sustainable growth 10% per annum growth.
Strategy considerations		
Merge with other research associations	yes - recently absorbed a small RA	No
Acquisitions	Could be	No
Management buy out	No. Was tried and failed-never again	No - It would remove the focus on membership
Change in pension commitment		Closed final salary scheme in 2006. £17m deficit

	TECHNOLOGYRA1	TECHNOLOGYRA2
Co-operative/competitive stance		Co-operative
New markets	Continue growth in Europe. European growth 4 times that of UK	Aim to have 50% income from outside UK Present in Brazil, Middle East and Gulf aiming to widen to other geographic areas
New services	Continues to bid for the running of Government schemes both proactively and reactively.	Consultancy increasing from 20% base , test house from 5% base
Other strategy considerations		Challenge is to invest in the continued development of staff. 69 in house courses run in 2007 289 staff attended at least one in house course Importance of the web as publicity material CEO ' standing still is not an option Members will benefit from high gearing'
Membership		Aiming at 12% growth in membership - numbers?
Market Development		
Geographical	Europe	Aim to have 50% income from outside UK Present in Brazil, Middle East and Gulf aiming to widen to other geographic areas
EEC , government, industry	Very important - large percentage of income.	Low importance
Supply chain		All users of joining techniques
Members		Aiming at 12% growth in membership
Other market developments	Is unique in that it acts as an agency for government schemes. These include business support centres learning centres , global knowledge and enterprise centres and seven research centres across Europe for SMEs. Financial support from EEC.	Gives the impression of a traditional research association - However a bold move was made to develop a science park on a 35 acre site the organisation owned in 2006 £3m income obtained.
Products		Software, prototype machinery and bespoke test equipment
Services		
User Needs	Interaction with Government and EEC	Advisory boards Business development visits, Feedback on all work undertaken
Equipment		
Factors Influencing Strategy		
External	Legislation, recruitment	
Internal		Reputation
Strategic Options Strategy		

	TECHNOLOGYRA1	TECHNOLOGYRA2
Implementation		
Important Stakeholders	1 Staff 2 Clients 3 Government agencies	1 Members 2 Staff
Non Executive Questionnaire		
Governance		
Non executive function	To ensure that the RA remains a viable operation	Sounding Board. Non execs can contribute with experience and knowledge in the research area. Non execs network can be of value
Governance satisfactory?	Yes	yes
Changes in governance	none	none
Strategy		
Involvement		
At first draft level		
Commenting on first draft	yes	yes
Commenting on final draft		yes
Approval of final draft	yes approving	no
Strategic Aim		
Survival	yes	
Growth		yes
Profitability		
Mergers		
Change of ownership		
others		
Stake Holders		
Members	3	2
Clients	1	1
Staff	2	3
Other		
Competencies		
Reputation	2	3
Staff knowledge	1	1
Customer focus	2	2
Team working	2	4
Other		
Future Vision		
3 Years time	To be helping more companies to innovate.	To be the most influential global network for stimulation and development of economic value and quality of life through materials joining technologies.
Major Changes	Consolidate existing position and growth	Must develop technical hubs in India and China, which involves considerable risk and careful implementation. To enter the former communist countries where there are large energy resources to explore the most important industry sector for the organisation

Appendix 5.6 Privatised research associations

	PRIVATISEDRA1	PRIVATISEDRA2
Background		
Date of interview	11 12 08	26 11 08
Company Status	Private subsidiary of holdings company. Purchased September 2003. Employee benefit trust established in 2001	Private - subsidiary of holdings company. Acquired in March 2004. Management buyout took place in 1999.
No of members	recently reinvented - 150	200
Executive interview		
Director		
Name		
Appt Date	October 08	2006
Internal/External	Internal from holdings company, had previously worked at research association	Internal from holdings company
Professional background	BTech MBA	Holdings company 25 years
Previous directors		
Governance		
Council/Board	Board plus a leadership team	Board plus a leadership team
Composition-Council		
Composition-Board	Board is CEO and financial director of research association plus holdings company financial director Leadership teams consist of CEO plus financial director plus 5 business managers of research association	Board is CEO plus financial director of research association plus 2 senior directors of holdings company Leadership team consists of CEO and 3 business managers of research association plus 3 holdings company nominees not same people as on board
Function of Council		
Function of Board	Function of board is to set targets and monitor progress Function of leadership team - run organisation	Function of the board is to set targets and monitor progress. Meet 4 times year Function of leadership team - run the organisation
Governance changes		
When	2001 research association restructured to form an employer benefit trust and a foundation 2003 research association sold to holdings company to secure stability and finance foundation	1999 management buyout 2004 sold to holdings company
Reason	2001 research association restructured to form an employer benefit trust and research association foundation 2003 research association sold to holdings company to	1995 - opportunity for senior management 1999 - management buyout 2004 - research association in financial trouble, Holdings company needed to market a management service

	PRIVATISEDRA1	PRIVATISEDRA2
	secure stability and finance foundation	company
Impact	Good for research association staff and foundation	Profit to directors, demise of research association
Tensions	nil	After management buyout - none now
Strategy		
Strategic Plan Yes/No	yes	yes
Start date for strategic planning	not known	1992 with loss of DTI funding
Frequency of plan - years	5 yr financial 3yr strategic	3
Trigger for strategic planning	part of culture	CEO
Involvement	business managers plus CEO	3 business managers of information, consulting and testing groups. Bottom up all staff involved
Contribution	knowledge and analytical skills	Knowledge and analytical skills
Strategy Development		
Timescale - months	4months - ongoing	4 months
Meetings		4 with leadership team and final with board
Drafts		
Tools	PEST SWOT as is to be	
Strategic competencies		
regulatory	Hardware to satisfy new regulations	
positional	Reputation important and improving 'reputation must be safeguarded'.	Reputation important and improving
functional	Employee knowledge key	Employee knowledge upgrading with PhDs
cultural		Customer focus most important and continuing improvement
other competencies		
Strategy vision		
Strategic aim	Profitability and 20% growth in turnover per annum Targets fixed but means flexible	Profitability with sustainable growth Targets fixed but means flexible
Strategy considerations		
Merge with other research associations		
Acquisitions	Possible consulting companies	Holdings company has capital for acquisitions - recently acquired US company of 21 people
Management buy out	has been done	has been done
Change in pension commitment	Annual payments made from revenue	No final salary - sale of research association building transferred to pension fund

	PRIVATISEDRA1	PRIVATISEDRA2
Co-operative/competitive stance	Competitive	Competitive
New markets		60% overseas and growing
New services	New products - Approach is from market research to technology to product - work closely with holdings company	30% testing 40% information 30% events Growth area testing
Other strategy considerations		
Membership	Re invented	Static
Market Development		
Geographical		Overseas
EEC , government, industry		Do not seek public funding
Supply chain		
Members		
Other market developments		
Products		
Services		
User Needs		
Equipment		
Factors Influencing Strategy		
External		
Internal		
Strategic Options		
Strategy Implementation		
Important Stakeholders	1 staff 2 clients	1 staff 2 clients 3 members

Appendix 5.7 Medium sized research association

	MEDIUMRA1	MEDIUMRA2
Background		
Date of interview	20 11 08	28 11 08
Company Status	Ltd. by Guarantee	Private Ltd.
No of members	100	200
Executive interview		
Director		No CEO - run by 2 exec directors
Name		
Appt Date	2006	2005 when previous CEO left
Internal/External	External	Internal since 1994
Professional background	Degree in chemistry and marketing - ex BP	MA MBA
Previous directors		
Governance		
Council/Board	Both	Board
Composition-Council	23 from members	
Composition-Board	3 executive plus 6 non executive	2 executives plus two membership representatives
Function of Council	governance	
Function of Board	executive - meet 4 times a year	Set executive salaries Authorise capital expenditure
Governance changes	No. of council members increased from 16 to 23	Separate technical and trade activities
When	2007	2000
Reason	More membership involvement Customers in Control	To isolate from corporation tax and separate trade association from research association.
Impact		
Tensions		Executive not happy with board setting their salaries
Strategy		
Strategic Plan Yes/No	Yes	Yes
Start date for strategic planning	2006	2005
Frequency of plan - years	5yr horizon 3yr business plan	5 yrs
Trigger for strategic planning	CEO	3 executive directors
Involvement	Board, Council at later stages	Board
Contribution	Started with client survey	knowledge of organisation and market
Strategy Development		
Timescale - months	6 months	3 months
Meetings		5
Drafts		
Tools	SWOT	SWOT
Strategic competencies		
regulatory		
positional	A trusted brand	reputation
functional	employee knowledge to improve	improve marketing and skill base

	MEDIUMRA1	MEDIUMRA2
cultural	better customer focus and more proactive	change to open culture - partly achieved by removing internal partitions flat structure
other competencies	too UK centric	
Strategy vision		
Strategic aim	Profitable growth and need to save 30 jobs and revitalise organisation	Profitable growth
Strategy considerations		
Merge with other research associations	no comment at meeting but subsequently merged with TECHNOLOGYRA1	no plans
Acquisitions		have space and capital
Management buy out	will not serve the industry	possible goal
Change in pension commitment	no problem	no problems
Co-operative/competitive stance	co-operative	competitive
New markets	global	moving downstream to retailers
New services		testing 50% of income - the cash cow
Other strategy considerations		
Membership	needs to grow	Slowly growing overseas
Market Development		
Geographical		Target US
EEC , government, industry		5% income from EU
Supply chain		very strong move downstream
Members		slow growth
Other market developments		
Products		
Services	Technical publications 20% Consultancy 45%	Continue to grow testing New services to industry and environmental monitoring
User Needs	Membership survey	Feed back on all work done
Equipment		Heavy investment on analytical equipment
Factors Influencing Strategy		
External	Control by members	Recruitment of good people very difficult
Internal	Staff motivation to be improved	Culture change Trade Association's emotional attachment to services which they think the organisation should supply
Strategic Options	Merge with TECHNOLOGYRA1 - not discussed	Animal husbandry and health and safety team closed
Strategy Implementation		Through very open and free structure
Important	Staff	Staff

	MEDIUMRA1	MEDIUMRA2
stakeholders		
Non Executive Questionnaire		
Non executive - 1		
Governance		
Non executive function	To oversee and advise on management level decisions and ensure proper governance is in place	To set performance targets for the business and the CEO and be prepared to act in good time if either of these is not satisfactory.
Governance satisfactory?	Yes	No
Changes in governance		2 executive and 2 non executive directors. We need to move to 3 non executive directors plus 2 executive directors.
Strategy		
Involvement		all stages
At first draft level		
Commenting on first draft	yes	
Commenting on final draft	yes	
Approval of final draft	yes	
Strategic Aim		
Survival	1 for members benefit	
Growth		
Profitability		1
Mergers		
Change of ownership		
others		
Stake Holders		
Members	1	1
Clients	3	3
Staff	2	2
Other		
Competencies		
Reputation	1	4
Staff knowledge	2	1
Customer focus	3	2
Team working	4	3
Other		
Future Vision		
3 Years time	<p>1. It will continue to provide competent personnel and experimental facilities to enable it to address the specialist knowledge requirements of its membership.</p> <p>2. To maximise its robustness it will seek to enlarge its membership base but remain within its area of competence. This means improving its capability to service the needs of SMEs in the UK and developing internationally</p> <p>3. For the benefit of its membership it will leverage its</p>	I would like to see an organisation which is delivering a profit of about 5% of sales revenue which is used to reinvest in people and facilities, which is growing at about 2% above inflation and which has a high reputation for the services it is delivering to its members.

	MEDIUMRA1	MEDIUMRA2
	output by participating in European and public funded relevant projects 4.Its size should match the market need.	
Major Changes	It will need to improve its customer focus to achieve the second point above in the response to question 7.	Over the last eighteen months we have concentrated on reorganising the business to focus on fewer strategic areas and to remove costs. We have been very successful in this endeavour but our sales during this period have been disappointing. We now need to concentrate our efforts on getting closer to our members, to understand their needs and to convert all this into increased sales. We need to improve our profitability to enable greater investment in people skills and facilities
Additional comments		
Non executive - 2		
Governance		
Non executive function	To provide strategic direction and governance. To act as a sounding board to executive directors.	
Governance satisfactory	yes	
Changes in governance		
Strategy		
Involvement		
At first draft level		
Commenting on first draft	yes	
Commenting on final draft	yes	
Approval of final draft	yes	
Strategic Aim		
Survival		
Growth		
Profitability		
Mergers		
Change of ownership		
others	Profitable service to its	

	MEDIUMRA1	MEDIUMRA2
	members	
Stake Holders		
Members	1	
Clients	2	
Staff	3	
Other		
Competencies		
Reputation	1	
Staff knowledge	2	
Customer focus	3	
Team working	4	
Other		
Future Vision		
3 Years time	Additional profitable services to the Associations Membership, increased reputation and credibility within the industry.	
Major Changes	Ability to see and respond to the changing needs of the members in a profitable manner.	
Additional comments	We must be able to respond to the times we are in and stay profitable.	

Appendix 5.8 Small research associations

	SMALLRA1	SMALLRA2
Background		
Date of interview	27 10 08	27 10 08
Company Status	Limited by Guarantee	Private limited
No of members	<10	200
Executive interview		
Director		
Name		
Appt Date	1988	2005
Internal/External	Internal	External
Professional background	Engineer	Metallurgist
Previous directors		
Governance		
Council/Board	Council	Council
Composition-Council	3 Council members plus CEO	7 council members plus CEO
Composition-Board		
Function of Council	Acts as a board	Changes from giving CEO a free hand to Council running the organisation
Function of Board		
Governance changes	Number of council members reduced in line with membership	Before appointment of CEO in 2005 council adopted a hands on approach - now CEO has a free hand
When	2002	2005
Reason	Insufficient members	Previously running without a CEO
Impact	None	
Tensions	None	due to unsatisfactory performance
Strategy		
Strategic Plan Yes/No	No formal plan - in head of CEO	Yes
Start date for strategic planning		2002
Frequency of plan - years		5
Trigger for strategic planning	CEO	CEO
Involvement	No involvement from Council	Senior staff and Council members
Contribution		Staff internal knowledge Council members market knowledge
Strategy Development	Not Applicable	
Timescale - months		6 months
Meetings		Informal
Drafts		NB Council approve draft with minor alterations
Tools		SWOT
Strategic competencies		
regulatory		
positional	reputation and external contacts	Reputation and membership base

	SMALLRA1	SMALLRA2
functional	employee technical knowledge	employee knowledge
cultural	striving to improve customer focus lack of team working	team working good Customer service improving
other competencies		
Strategy vision		
Strategic aim	Sustainable growth	Survival
Strategy considerations		
Merge with other research associations	No	No
Acquisitions	No	No
Management buy out	Possible employee benefit trust	No
Change in pension commitment	Already changed to pension based on contributions	Has been done
Co-operative/competitive stance	Joint projects with other research associations	
New markets	China Move from manufacturers to users	India , China and Brazil
New services	Publications	Newly designed software
Other strategy considerations	Provide good service to 1500 clients	
Membership	Reduce membership	Grow membership
Market Development		
Geographical	Focus on China	India , USA, China and Brazil Also new Europe
EEC , government, industry		
Supply chain	Move down the supply chain	Move up and down the supply chain
Members	Clients replacing members	Grow membership
Other market developments		
Products	Machinery	Machinery sales / not profitable but cover overheads
Services	Testing	Testing and analytical services - 60% of sales Training 12% of income
User Needs	Re-active to clients	Research Committee visited 100 members. Customer satisfaction surveys.
Equipment		
Factors Influencing Strategy		
External	Reduction in UK industry - replaced by overseas clients	70% reduction in UK industry Competition from other software producers Short of capital - difficult to sell site
Internal	Pension scheme under control. Difficult to recruit engineers with commercial experience	Growing awareness of customer importance.
Strategic Options		
Strategy		Staff briefing

	SMALLRA1	SMALLRA2
Implementation		
Important stakeholders	Clients	Members
Non Executive Questionnaire		
		Non executive directors comments integrated into 7.10.2
Governance		
Non executive function	To monitor business operations	
Governance satisfactory?	Yes	
Changes in governance	support change to employee benefit trust	
Strategy		
Involvement	Informal	
At first draft level		
Commenting on first draft		
Commenting on final draft		
Approval of final draft		
Strategic Aim		
Survival	Yes	
Growth		
Profitability	Yes	
Mergers		
Change of ownership	Yes	
others		
Stake Holders		
Members	1	
Clients	3	
Staff	2	
Other		
Competencies		
Reputation	3	
Staff knowledge	1	
Customer focus	2	
Team working	4	
Other		
Future Vision		
3 Years time	Employee benefit trust	
Major Changes		
Additional comments	Huge potential growth in product testing - particular chemical and safety testing	