

CHAPTER 3 METHODOLOGY

Introduction to Methodology

The methodology has been developed to allow consideration of three areas of which literature has been identified and explored in Chapter 2 - namely, strategy, human behaviour (specifically attribution and its associated bias), and the airline industry. The involvement of the three is not in the conventional set of three areas which neatly overlap in a Venn diagram. Rather, they are three dimensions and sets of issues which imbue the Central Research Question and which shape the process of positing and enacting a methodology to answer this question and to achieve the aims and objectives of the research (see Table 13).

Academic field	Relationship with other fields
Strategy	The business process at the core of the study
Human behaviour (attribution and bias)	The human processes which shape the business process
The airline industry	The context in which the humans shape the business process

Table 13 Dimensions of the study

The study is thus one which looks at a sector, the organisations in that sector, and the individuals who are the effective players (from a strategic perspective). The study is not equally focused on these three dimensions. The main thrust of the exploration is at the level of the individual – an investigation into the constructs of those individuals. There is thus an underlying assumption that strategy at an organisational level should be considered from the perspective of individuals who input to strategic decisions rather than from the more familiar perspectives (Bowman and Ambrosini, 1997a; Bowman and Ambrosini, 2000).

Finally, the study is designed to enable some measure of interpretation of that personal perspective, and to seek evidence of correlation or otherwise between individuals' notions of 'success' and 'failure', the factors which they believe contribute to that 'success' or 'failure', and objective measures of 'success' and 'failure'.

Unit of Research

The focus of the current research is on the senior executives of airlines, and there is therefore a potential for confusion between the executive as unit of analysis and the airline as unit of analysis. Patton has argued that:

"The key factor in selecting and making decisions about the appropriate unit of analysis is to decide what unit it is that you want to be able to say something about at the end of the evaluation."

(Patton, 1987)

Since different objectives of the research seek to say different things, Patton's advice does not lead to a clear-cut global decision. Rather, the unit of analysis needs to be clarified with specific reference to each of the objectives. This argument is developed further in the next section, Research Context and Questions.

The term 'senior airline executive' requires definition in the context of this thesis. It was considered that the population under investigation should be those senior airline executives who might be considered to have a sense of ownership of strategic decision-making and thus might be expected to assume a personal responsibility for 'success' or 'failure' of their airline. The term is therefore defined as those executives who sit on the airline's Board of Directors. It excludes those executives who have the word 'Director' in their job title but do not have Board status. This excluded group would include those who have operational responsibility for the implementation of strategy but who lack the accountability for particular decisions that Board members have.

Contribution

The contribution sought is classifiable as within strategy, and is concerned with the strategic process. The process as envisaged by Mintzberg is the underpinning model

which is assumed (Mintzberg and Waters, 1985; Mintzberg, 1990; Mintzberg, 1991), with two refinements.

The first is the uncontroversial view that the model as posited lacks a feedback loop. It implies that the strategy process is started, enacted and concluded. In fact, the process is one of constant iteration, sometimes evolutionary and true iteration, sometimes revolutionary and involving redefinition of intended strategy. The distinction between these two is not critical for the present study, but the constant potential for intended strategy to change is important.

The second refinement is the assumption that a variety of factors have a bearing on the decisions made in defining or revising strategies. These may be internal, such as the functional bias of the managers involved, or external, such as the influence of counter-strategies by competitors. Some will bridge the two, such as the perceptions managers hold of their competitors.

The intended contribution will therefore be a deeper insight into the perceptions of strategy shapers - airline executives at the level of Board of Directors - and a better understanding of what managers consider to be desirable strategic goals should emerge. In short, this research will aim to contribute to answering the generally unasked but fundamental question that strategists should consider - 'what are the underpinning notions of 'success' and its causes held by senior managers?'

Research Context and Questions

Central Research Question

If it is accepted that bankruptcy, the ultimate form of commercial failure, is a simplistic basis for defining failure of an organisation, then the search for a more satisfying description must begin. Is a barely-surviving organisation - for example one with repeated losses, repeated failure to add any financial value, or repeatedly declining market share - a 'failure'? Is an organisation that is taken over and hence disappears to be treated as a 'failure' on the grounds that it failed to survive? A little reflection shows that seeking a prescriptive definition of 'failure' is problematic.

At the other end of the spectrum lie the organisations which are deemed to be successes. Are they successes on the grounds that they are not failures, that they survived? In a highly competitive sector, such as the UK and Irish airline market following deregulation, is longevity a ready and effective measure of success? Is profit the only effective measure of success? Over what period? Averaged out or at spot times?

Are 'success' and 'failure' in fact opposites? Is one simply the lack of the other? Is there a continuous spectrum between the two? Are the same factors relevant in determining one or the other?

All the above questions except the last one, which we shall return to, are offered rhetorically to point out that the matter of prescriptively defining 'success' and 'failure' is fraught with difficulty. Different researchers are likely to opt for different definitions depending on their perspective. Argenti was one of the first to point out the difficulty of finding a widely acceptable definition of failure (Argenti, 1976), but entrenched versions of a definition can still be found, as in the Kay definition quoted above (Kay, 1993), which defines the key measure of corporate success as added value, which Kay sees also as the proper motivation of corporate activity.

An approach to 'success' such as that of Kay is problematic. The problem lies with the objectivity and hence impersonality of the approach. While objectivity has clear benefits, any approach to UK and Irish airlines which is impersonal and is not a 'rich picture' approach will be inadequate in the sense that it does not take account of the notions of 'success' held by industry practitioners. This not to argue that the Kay approach is in any way wrong or not useful, rather that on its own it fails to give a complete and thus adequate picture. It is also unknown whether airline executives actually use the concept of Added Value in perceiving success, and this issue is investigated. The ramifications of this approach are discussed below.

To cover the part of understanding strategy that Kay and similar approaches miss, it is necessary to add the individual, and hence differentiating, dimension of strategy. We need to understand why some airlines are successful and why other airlines fail, rather than just identify the conditions that ensure a buoyant or depressed market. To do this

it is important to research into what the individual players perceive as ‘success’ and ‘failure’ in the airline industry and what they attribute this ‘success’ or ‘failure’ to.

The Central Research Question underpinning this investigation is:

What do UK and Irish airline executives perceive as ‘success’ and ‘failure’, and to what do they attribute ‘success’?

This Central Research Question can be broken down into two more specific aims and a number of associated objectives.

Aims and Objectives

1 What notions of ‘success’ and ‘failure’ are held by senior UK and Irish airline executives?

1.1 The main objective within this aim is to establish the perceived parameters of ‘success’ and ‘failure’ (separately), in other words, to determine the attributes that are seen as contributing to ‘success’ or ‘failure’. This involves building a rich picture of the beliefs of senior airline executives which reflects the complexity of those perceptions.

Surfacing the beliefs is achieved through a series of semi-structured interviews. Initially a set of 15 to 20 interviews was planned, but as can be seen below in Chapter 4, this grew to a total of 30 (see p.118).

1.2 A second objective is to determine whether the airlines which senior executives who make strategic decisions perceive as successful correspond to the airlines which emerge as successful in objective measures of success, in particular measures of added value, referred to as ‘Kay factors’, as the sole effective determinant of success . Other objective measures, both financial and operational, are used as alternative benchmarks, details being given in Chapter 5.

Recognising that there is a longitudinal dimension to perceptions of ‘success’ in particular, Kay factors and other objective measures have been prepared for the most recent four years for which financial data was available at the time of writing, 1996 to

1999, this being the most recent four-year period since the enactment of stage 3 of the liberalisation of the air transport market in the European Union (Williams, 1994), with the exception of data for the measure Tonne Kilometres Flown, where the most recent four years available was for the period 1997 to 2000 (see p.125).

There is therefore a slight lack of overlap between the time periods of the two data sets, notwithstanding both sets cover the time period defined as appropriate in the Introduction. The lack of overlap is attributable to the different speeds which financial data and operational data are submitted to the CAA and processed and published by its Economics Research Group. In both cases they represent the four most recent years of data in the public domain, and hence the four most recent years available to senior airline executives. They are thus in each case the four most recent years' data which might shape the executives notions of the 'success' or 'failure' of their competitors (see p.158 & Appendix I for a more detailed discussion on the issue of concurrence of data sets.

A comparison will be made below between, on the one hand, those airlines perceived as successes or as failures by airline executives, and, on the other, the airlines 'objectively' defined as successful or not by their Kay factors. Differences between the two will be reviewed and how the two differ will be determined. This will establish what needs to be added to a consideration of 'success' and 'failure' by 'objective' measures in order to establish a rich picture. The underlying approach is not that Kay factors, or indeed objective measures in general, are in any sense 'wrong', rather that they are insufficient to give a helpful or sufficient definition of 'success' and 'failure'.

1.3 A third objective is to see whether executives in different types of airline (using the industry standard classification by type of operation and market - passenger/cargo, scheduled/charter, 'low-cost'/not 'low-cost', new entrant/established) have significantly different notions. For example, are executives working in scheduled carriers more prone to perceive success as profit-defined whereas their counterparts in charter airlines see it as a matter of survival rather than achieving profit? This will be achieved by analysing responses in appropriate groupings. It is recognised that this objective is unlikely to be met comprehensively as some categories, particularly

executives working in cargo airlines, will be small. Nonetheless, attempting to achieve this objective will add to the rich picture.

2 To what do they attribute ‘success’?

2.1 The first objective within this aim is to determine the executives’ embedded notions of the causes of ‘success’ and to place these in a perceived hierarchy of causation. This will be achieved through causal mapping by individual executives. Initial plans included the production of aggregated maps. The utility of aggregated mapping is clearly set out by Huff and Fletcher (1990), who cite Schneider (1987) and Stubbart and Ramprasand (1990). Bougon (1992) argues the case for congregate cognitive maps and Langfield-Smith (1992) develops a map of collective beliefs. The production of such maps, however, proved problematic and is discussed below (see p.186)

2.2 A further objective is to explore the relative importance of different causal factors, including the perceived significance of operational and industry-specific factors in the causes of ‘success’.

2.3 The third objective within the second aim is to identify the relationship between the various perceived causes.

For these three objectives the data includes that gathered causal mapping - the mapping of an individual’s personal hierarchy of causation. Decision Explorer is used for the analysis of this data and use made of its mathematical functions for cluster analysis - the analysis of nodes in the causal maps to identify those which are critical in terms of the number of inward and outward causal links - and other analytical functions.

In order to relate the two main aims more closely, a comparison will be made between causal maps of those executives having different views of the primary definition of ‘success’.

2.4 The final objective is to compare and contrast causal maps produced by executives from different industry sectors, and hence determine, if possible, a typology of airline industry executives’ approaches to strategy, as determined by their notions of

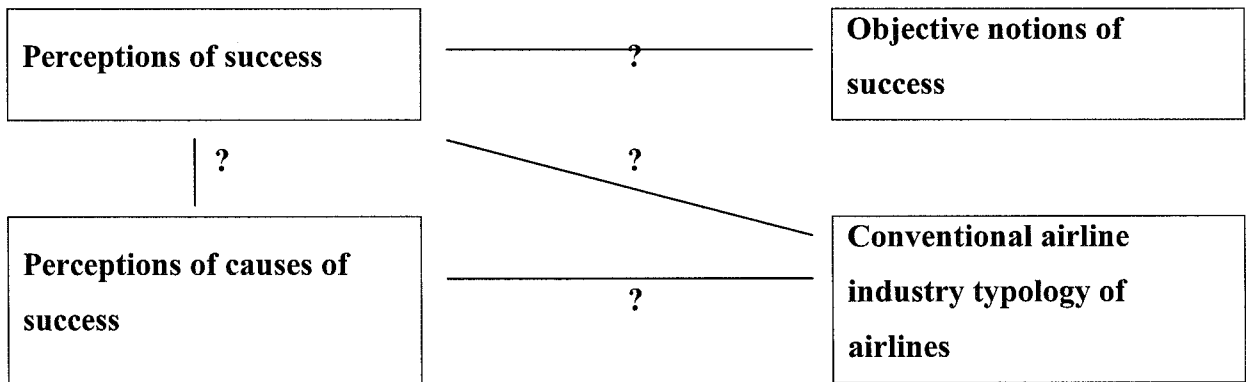
‘success’ and ‘causes of success’, and to see whether such a typology is in any way related to the conventional typology of airlines based on operational and marketing considerations.

The specific intended research outcomes may be summarised thus:

- RO1. To establish whether senior airline executives share a generalised descriptive definition of ‘success’ and ‘failure’, seeking any different definitions that might be applicable in different sectors.
- RO2. To identify if and how industry executive views of which airlines are successful differ from an objective measure of success in terms of operational measures and added value and other financial measures.
- RO3. To identify whether executives in different sectors of the airline industry share a view of what constitutes ‘success’ and ‘failure’.
- RO4. To establish an airline industry ‘recipe’ for the perceived causes of ‘success’, the term ‘recipe’ being used in a therefore much more restricted way than Spender’s usage (see page 77).
- RO5. To investigate the significance of industry-specific factors in the attribution of the causes of ‘success’.
- RO6. To investigate the existence of linkages between executives’ perceptions of ‘success’ and their perceptions of the causes of ‘success’.
- RO7. To establish whether a typology of airline executives’ views of the causes of ‘success’ exists by looking for patterns in the individuals’ cognitive maps.

In other words, the research is investigating whether there are similarities between perceived patterns of causation and their classes and conventional functional patterns and their classes. If they are similar, detail of the industry recipe will have been added to; if they are different, an alternative typology will have been established.

Investigations of linkages between objectives are identified in Figure 3.



[Developed from Whetten's heuristic (Whetten, 1989)]

Figure 3 Linkages between objectives

Focus

Because of a) the exploratory nature of the intended research and b) the content of the subject under consideration, it is not surprising that a number of academic literatures underpin the research. These include success/failure literature, attribution literature, industry recipe literature, for example, Grinyer and Spender (1979a), Grinyer and Spender (1979b), Spender (1989), Reger (1990), Spender (1998), Spender (forthcoming), and airline management literature.

However, in terms of intended contribution, the focus of the research is more precise. The intended contribution is to success/failure literature in general and to the attribution of causality of 'success' in an organisational context in particular (Grønhaug and Falkenberg, 1994; Grønhaug and Falkenberg, 1998).

From a process perspective rather than a content perspective, a contribution is also intended to be made to the growing body of literature on causal mapping (Huff, Narapareddy and Fletcher, 1990; Eden, Ackermann and Cropper, 1992; Laukkanen, 1994; Jenkins, 1995; Eden and Ackermann, 1998; Jenkins, 1998; Laukkanen, 1998).

The sharpening of focus raises the issue of defining the industry and hence defining the scope of the research in that respect. The problems of industry definition were raised by Robinson, who pointed out the difficulties of defining an industry in terms of either

its commodity or its market (Robinson, 1958). Reger defines a strategic group as a 'group of firms within an industry following similar strategies along key strategic dimensions' (Reger, 1990) and prefers the term

“ ‘competitive space’: explicitly defined within the scope of a research project to include those firms, business units or activities which are deemed close enough competitors to warrant interest in their competitive positioning vis-à-vis each other” (p.73).

Spender's approach is

“...we need first to establish the recipes and see how they define industry membership.”

(Spender, 1989)

The Reger approach is the more practical, and while the use of 'UK and Irish airlines' as a fully prescriptive definition may seem satisfactory, one is excluded except in so far as respondents mention it - British Airways. It is explicitly excluded from the nomination as one of the three 'most successful UK and Irish airlines' as a result of this, but not from nomination as the 'most successful airline ever' (since there is no geographical, or historical, restriction at all).

British Airways is different from all the other airlines which *will* be considered. It is a national flag carrier that competes globally and even since privatisation operates on a scale that makes comparison with other UK and Irish airlines inappropriate. Its competitive space is shared with airlines such as American Airlines, Cathay Pacific, Qantas and other major partners in the Oneworld alliance, rather than the other UK and Irish airlines, which are regional as opposed to global in their operations. During the period 1997 to 1999 its total assets employed as a percentage of the total assets employed by all British airlines fell slightly from 87.3% to 84%. In operational terms, its share for the same period is given in Table 14. (All data is derived from Civil Aviation Authority Economic Research Group (2002) data.)

Measure	1997	1998	1999
Passenger tonne-kilometres	55.3%	54.1%	52.9%
Aircraft-kilometres	49.1%	47.4%	45.5%
Seat-kilometres available	55.0%	54.3%	53.5%

Table 14 British Airways' market share (operational measures)

As a separate issue it was considered whether the senior executives of British Airways should be considered as part of the population under consideration. In the light of the fact that British Airways operates in an entirely different market from other UK airlines and on an entirely different scale from other British airlines, both operationally and financially, it was decided that its senior executives would make a contribution that was inconsistent with the views of other UK airline executives, since their notions of 'success' and 'failure' would be engendered in a different market place. It should also be noted that notwithstanding British Airways' domination of UK airline operations in terms of financial and operational measures, they would have added only eleven individuals to the population of nearly 350 executives being studied.

In the light of the comments above, it should be noted that Aer Lingus *has* been included, but its unique role among those within the competitive space, i.e. as a designated flag carrier, would again suggest that comparisons should be handled with caution. Problems of comparison between UK and Irish airlines because of differences in reporting currency and differences in reporting standards are considered below.

Research Methodology

Philosophical Perspective

The primary distinction between philosophical perspectives is between what Patton describes as:

“two fundamentally different and competing inquiry paradigms: (1) logical-positivism, which uses quantitative and experimental methods to test hypothetical-deductive generalizations, versus (2) phenomenological inquiry,

using qualitative and naturalistic approaches to inductively and holistically understand human experience in context-specific settings.”

(Patton, 1990)

This view of two contrasting approaches is widely shared although Neuman argues for three basic approaches: positivist, interpretive, and critical, where the third and most recent option implies a strongly directed approach with altruistic motives (Neuman, 1997). This ‘third way’ is appropriate where a case is to be argued within a set of political beliefs and need not concern us as useful to the present project.

Blaikie offers a set of choices regarding the fundamental issues which lead to a distinction between the two approaches (Blaikie, 1993), and these, together with the author’s preferences for this project, are given as Appendix K. He does not label the two columns which cover the two approaches, but the thrust of his argument is that the two approaches are ones which share a bundle of characteristics which might be summarised (by this author) as:

Approach 1 Positivist, quantitative;

Approach 2 Phenomenologist, qualitative.

The two approaches offer two paradigms, but researchers have adopted other positions rather than just these two broadly opposed positions. Bryman suggests a similar distinction between two sets of approaches, where one is quantitative, functionalist, positivist and based on enquiry from the outside, and the second is qualitative, interpretive, naturalist and based on enquiry from the inside (Bryman, 1989).

It can be seen from Appendix K that this research project is allied strongly with the phenomenologist position, but is not 100% identifiable with it. More specifically the approach is one which Blaikie defines as ‘Interpretivism’. The ontological position is one in which social reality is regarded as the product of processes by which participants negotiate meanings and actions. There is thus a complex set of socially constructed meanings. At the epistemological level, everyday concepts and meanings are seen as the source of knowledge, and the researcher may develop accounts of the everyday world into theories. Neuman’s summary of interpretive social science is particularly pertinent:

“The interpretive approach is the foundation of social research techniques that are sensitive to context, that use various methods to get inside the ways others see the world, and that are more concerned with achieving an empathic understanding of feelings and world views than with testing laws of human behaviour.”

(Neuman, 1997)

Methodological Approach

Neuman views the two basic methodological approaches, quantitative and qualitative, as styles, as set out in Table 15:

Quantitative style	Qualitative style
Measure objective facts	Construct social reality, cultural meaning
Focus on variables	Focus on interactive processes, events
Reliability is key	Authenticity is key
Value free	Values are present and explicit
Independent of context	Situationally constrained
Many cases, subjects	Few cases, subjects
Statistical analysis	Thematic analysis
Researcher is detached	Researcher is involved

**Table 15 Neuman’s distinctions between quantitative and qualitative approaches
(Neuman, 1997)**

With respect to analysis of quantitative and qualitative data, he points out that there are similarities:

- the form of analysis for both involves inference;
- both forms involve a public method or process;
- comparison is a central process to *all* data analysis;
- in both cases, researchers strive to avoid errors, false conclusions, and misleading inferences;

and there are differences:

- qualitative data analysis is less standardised than quantitative data analysis;
- researchers rarely know the specifics of data analysis when they begin a [qualitative] project;
- qualitative analysis is less distinct as a final phase in a research project, as researchers begin to seek patterns and relationships while still collecting data;
- qualitative researchers create new concepts and theories rather than test hypotheses;
- qualitative analysis is less abstract and closer to the raw data, but does not draw on a large, well-established body of formal knowledge (i.e. statistics).

(Neuman, 1997)

These differences reveal strengths of qualitative research, such as the closeness to the raw data, but they also reveal what devotees of positivism perceive as a weakness - the lack of a pure science rigour.

Patton identifies ten themes of qualitative inquiry (Patton, 1990), and it is worth considering their implications for this project:

1. Naturalistic Inquiry

This is entirely appropriate to a study of the UK and Irish airline industry, a complex scenario over which the researcher has no control, and about which he should have an open-minded view regarding outcomes.

2. Inductive Analysis

To quote Patton, “*Immersion in the detail and specifics of the data to discover important categories, dimensions, and inter-relationships*” reflects the open-endedness of the objectives.

3. Holistic Perspective

Again, the complexity of the subject matter encourages such a perspective.

4. Qualitative Data

Patton’s definition - “*detailed, thick description; inquiry in depth; direct quotations capturing people’s personal perspectives and experiences*” - more eloquently

expresses the view of the current author than his own phrase used above: “*rich text picture*”. It also clearly demonstrates the alternative to the impersonal view of many researchers which he seeks to avoid.

5. Personal Contact and Insight

This reflects the current author’s desire to investigate a sector in which he was immersed for twenty-two years, and to take advantage of that experience.

6. Dynamic Systems

Patton explains this as “*attention to process*” and assumes constant change, a scenario which is wholly appropriate to the UK and Irish airline sector over the last decade.

7. Unique Case Orientation

Patton clarifies this as meaning that each case is unique. The differences between organisations rather than the common factors of the sector provide a theme running throughout this project.

8. Context Sensitivity

The implication here is to do with generalisability, which will be considered below.

9. Empathic Neutrality

As Patton argues, “*Complete objectivity is impossible; pure subjectivity undermines credibility; the researcher’s passion is understanding the world in all its complexity*”. Qualitative inquiry thus provides the opportunity to build on the researcher’s involvement with the subject sector, rather than try to adopt an awkward pose of objective neutrality.

10. Design Flexibility

Given the complexity of the subject matter, inherent flexibility must be a design pre-requisite. Any other approach would lead to an unrealistic hope of achieving objectives.

The case for qualitative inquiry is thus a strong one, but to a positivist there remains the problem of ‘lack of scientific rigour’. One way to meet this objection would be to take

an essentially phenomenological perspective, but with a mixed-methods strategy, incorporating at least some quantitative methods. This approach has been argued before by the author (Beech, Chadwick and Tapp, 2000), where such a mixed-methods approach was used to investigate the complex and constantly changing world of the emergent Premiership website as a marketing and merchandising tool. Bryman argues that by blending quantitative and qualitative research a synergy can be achieved: one will facilitate the other; they will combine to produce a general picture; and a 'logic of triangulation' will emerge (Bryman, 1988). Layder suggests that:

“a multistrategy approach actively encourages the use of quantitative data and forms of measurement in order to complement the central core of qualitative analysis.”

(Layder, 1993).

Patton also advocates the use of so-called 'mixed paradigm' approaches (Patton, 1990).

Within this thesis, one of the main tasks has been a comparison of objective measures of 'success' and airline executives' perceptions of 'success'. Establishing the former is a positivist exercise using quantitative secondary data, whereas the latter have been established through interviews and questionnaires as an essentially phenomenological exercise. The comparison which follows from the data establishment is not therefore an act of triangulation in the conventional sense. It is not an attempt to confirm the validity of a single outcome by using multiple sources and approaches. Rather, it is an exploration into whether in fact the two outcomes are the same. There is no reason to assume that the two outcomes would be the same other than a simplistic assumption that all airline executives act as Rational Economic Men. Indeed stated Research Outcome 2 (p.75) is to identify whether there are differences and, if there are such differences, to explore them.

Bryman (1988) has argued the case for comparing qualitative and quantitative research. He notes that *“the two traditions can be seen as contributing to the understanding of different aspects of the phenomenon in question”* (Bryman, 1988, p.170). He also cautions that it is necessary, for purposes of conventional triangulation and in order to establish a 'true' picture, to ensure that the two sets of results are not in fact addressing

different issues. In the current research, they *are*, with respect to the two measures mentioned above, different, but the purpose of comparison is not to triangulate and establish a ‘true’ picture, to use Bryman’s terminology, of ‘success’, but simply to explore any differences between objective measures and industry recipe perceptions.

Introduction to Research Design

This chapter concludes with a major section on research design. First the key issues of the research design and how they were addressed are set out. Following a consideration of the issue of respondent bias and its implications, the issue of choice of research methods is addressed, introducing the three methods used - interviewing, questionnaires and processing of standardised secondary numerical data (financial and operational). The question of the sample is next considered.

The process of analysis is then explained and details of coding procedures are given. Initial findings from a pilot with two senior airline executives are reported and the implications for the design of subsequent research are considered.

Finally the issue of potential generalisability is introduced.

Bias

1. Theoretical Considerations

The three main forms of bias in data collected from airline executives that might affect the project are functional bias, individual bias and hindsight bias – the inaccurate recollection from a retrospective view.

There is a body of literature looking closely at the issue of functional bias. The major early work in this area (Dearborn and Simon, 1958) focused on managers’ reactions to a case study where they might be expected to adopt a company-wide view. There was clear evidence, however, that they tended to perceive those aspects of a situation that related specifically to the activities and goals of their departments. These departments fell into four groups - sales, production, accounting and miscellaneous (legal, research

& development, public relations, industrial relations, medical and purchasing) - and departmentalisation was therefore along entirely functional lines. This work was repeated and extended (Walsh, 1988), but Walsh found that, while managers' belief structures extended further than their functional experiences, there were few relationships between belief structures and information processing. Further research confirmed linkages between managers' cognitive processes and organisational performance (Thomas, Clark and Gioia, 1993) and the influence of perceptions on executives' actions (Waller, Huber and Glick, 1995). Thomas, Clark and Gioia established the need for further research into the nature of the linkages between the relative impact on sense-making of individual characteristic, cross-level effects such as organisational strategy and top management team structure, and multilevel constructs such as image and identity. In particular they argue that:

“Moving beyond single-level approaches [as used by earlier researches] to sense-making research ...may help researchers address the key question of how organizations can perform differently despite facing the same environment.”

(Thomas, Clark and Gioia, 1993)

Waller, Huber and Glick (1995) found that the functional background of top executives did not affect which changes they perceived in their organisations' environment, but that it did influence their perceptions of their organisations' effectiveness.

A later study (Beyer et al., 1997) investigated the differences between the earlier studies of Dearborn and Simon and of Walsh, and concluded that belief structures did not mediate the relationship between functional experience and selective perception; Beyer et al. also suggested that differences between the findings of the earlier studies could be attributed to differences in experimental procedures. Research by Nystrom found evidence of functional bias in decisions made by mostly middle managers, with managers of production and finance departments tending to favour low-cost strategies, whereas those in marketing and research departments were more inclined to strategies which lead to product differentiation (Nystrom, 1994).

Work in the United Kingdom (Bowman and Daniels, 1995) found further evidence of functional bias in perceptions of strategic priorities. The role of functional bias is thus a contested one, but there is nonetheless agreement that it exists. The design of the

research methodology of this project must recognise both its existence and its potential for disruption. As will be argued below (p.96), recognising its existence tends to favour the selection of a methodology which recognises the inevitability of bias but works with the bias rather than against it, one which investigates it rather than denies it.

Other biases are evident as ones which may mitigate against successful research - individual bias and hindsight bias.

Hambrick and Mason were early in the development of top management theory and in a 1984 paper considered the influences that the individual members of top teams wielded (Hambrick and Mason, 1984). They concluded that the individuals played significant and different roles as a result of differing managerial background characteristics. This theme has not been widely developed; although there has been an attempt to justify the use of individual key informants in market research as a sound methodology (Mitchell, 1994), there has not been a great deal of research conducted to see whether using single respondents lowered validity. Bowman and Ambrosini highlighted the increasing use of single respondents in management research, and expressed concern at the problems in using this approach (Bowman and Ambrosini, 1997b). They found that individual members of top teams gave responses showing wide variation and that this single respondent approach was therefore probably unreliable as a method of surfacing strategic dimensions of the respondent's organisation. Stevenson points out that the position of the manager within the hierarchy also influences his/her view of strategy, specifically the perception of 'strengths' and 'weaknesses' (Stevenson, 1976).

Since this current research looks at 'failure' as well as 'success', it must by definition have a historical dimension. The effect of memory perspective on retrospective causal attribution has long been recognised - by Frank and Gilovich (1989) for example - and Golden has specifically looked at the assumption that retrospective accounts of business strategy are reliable and viable (Golden, 1992). He found that 58% of chief executives misremembered their strategy of two years previously. This he attributed either to faulty memory or to attempts to cast behaviours in a positive light. Later research re-examined the study and concluded that retrospective reporting is viable as a research methodology (Miller, Cardinal and Glick, 1997). Golden responded to this (Golden, 1997) and there appears to be consensus that retrospective data can be used

with care. Ericsson and Simon have also noted the level of inaccuracy that can arise over time when recalling simple factual data (Ericsson and Simon, 1993). The problems associated with misremembering are effectively avoided in this thesis, even though one of the airlines that interviewees were asked to comment on (Laker Airways) ceased to trade in 1982, because the key data sought is not historical factual data but current perceptual data, which by definition cannot be misremembered - it may well be unreasonable, twisted by time, highly prejudiced, but *not* misremembered. The issues surrounding Laker Airways may however be forgotten, or for younger executives simply unknown.

2. Application

At the research design stage attempts have been made to reduce the possibility of respondent bias, or to accept its possibility and choose to investigate it. The three specific forms of bias noted above - functional bias, individual bias, and retrospective bias - are discussed below with regard to their implications for research design.

In the case of functional bias, its existence is recognised and part of the research will be to investigate it through the use of a questionnaire (see page 212).

The danger with individual bias is that different respondents will give different accounts of organisational activity. To avoid this problem, it is proposed to use, as much as possible, methods which relate individual respondents to individual rather than organisational issues. This will not be completely possible, but the major unit of analysis will be the top manager (see Table 16, which relates objectives of analysis, research methods and units of analysis). In none of the research objectives presented are individual respondents being used to surface organisational dimensions. A further device for limiting the problems of individual bias is to ask respondents about other airlines more often than about their own, and to segregate the analysis where practical.

Retrospective bias is inevitable, so it is important to use a technique which avoids the need for individual respondents to reflect retrospectively. While respondents cannot be forbidden from considering historical events and reporting on them, it is possible to avoid the *necessity* for this. To this end, the only part of the research which requires a

Objective of Analysis	Research method	Unit of Analysis
1. What notions of 'success' and 'failure' are held by senior UK and Irish airline executives?	15 - 20 interviews	Top Manager
2. What are the drivers of airline strategy which senior UK and Irish airline executives admit to?	30-40 questionnaires	Top Manager
3. Are senior UK and Irish airline executives subject to functional bias in their assessment of strategy?	Cross-tabulation in questionnaire responses	Top Manager
4. What is the relationship between 'perceived success' and 'objective success'?	Calculation of Kay factors and other objective measures Comparison with questionnaire responses	Airline Top Manager
5. Can airlines be classified in perceived strategic terms rather than by reference to existing typologies?	Development of a typology	Airline
6. Is there a 'hierarchy of causation' that senior executives perceive to exist?	Interviews and questionnaires	Top Manager

Table 16 Overview of analysis objectives, research methods and units of analysis

retrospective dimension is the assessment of 'success' of defunct airlines, and in any cases it is the current perceptions of those airlines that is being researched.

A final objective from the synthesis stage will be the development of a typology of 'strategic styles' perceived to be adopted by airlines. The conditions for the development of a typology as a valid research process have been spelt out by Doty and Glick (1994). In particular, they argue that for such a development to meet the criteria for being accepted as theory, the typology must be both properly developed and fully specified.

Rhoades and Lush have developed a typology of strategic airline alliances, with an emphasis on differentiation by complexity of the alliance and commitment of resources (Rhoades and Lush, 1997). Only Aer Lingus, British Midland and Virgin Atlantic of the airlines under consideration are, however, members of airline alliances.

Research Methods

Introduction

Bryman, in a discussion of issues in organisational research, argues that:

“...the use of more than one method can greatly enhance the process of fusing problem and method, by allowing the researcher to reap the opportunities presented by two or more techniques. However, resource and access considerations...reduce the likelihood that such integration of methods will occur.”

(Bryman, 1989)

Choice of research methods was strongly influenced by both the research question and the unit of analysis. Given a population of just under 350 senior airline executives (see p.119), who because of their status might be expected to present problems of access, it was necessary to adopt methods that would provide sufficient useful data per contact, whether through interview or from completed questionnaire for example, in sufficient numbers of contacts as to allow meaningful analysis.

Bryman (1989) also notes that for key informant research:

“Data are collected either by interview (personal or telephone) or by questionnaire (usually postal.”

(Bryman, 1989)

1. Structured Interviews

In deciding the form of interview, two dimensions were considered : personal/telephone and structured/unstructured.

Given a) the quantity of data sought and b) the need to surface this in a way that was not overly direct and thus potentially ineffective, it follows that interviews were likely to last up to an hour. This was not considered realistic for a telephone interview as:

- It would be extremely difficult to achieve and maintain any successful rapport between interviewer and interviewee for such a length of time without face-to-face contact, especially given that with almost no exceptions interviewer and interviewee would be unknown to one another.
- Interviewees would probably be reluctant to commit themselves to arranging a one-hour telephone interview, but would be less unwilling to agree to a face-to-face interview for such a period.
- Maintaining continuity of the interview for an hour would be easier in a face-to-face situation, with the physical presence of the interviewer helping to inhibit interruptions.

Personal interviewing also facilitated the mapping exercise which was included after the initial two interviews had been carried out (see p.185 below).

Burns sets out a number of arguments for and against the use of interviews (Burns, 2000). Those of particular relevance to the present study include:

- flexibility, in particular with respect to clarifying responses;
- better response rate than questionnaires;
- establishment of rapport;
- more complete responses.

The main disadvantage he sees as:

- expense and time commitment, and hence a limit on their number.

In order to collect the data sought, interview questions included open-ended questions, fixed-alternative (i.e. closed) questions and scale items. Questions were designed to elicit purely qualitative data and also quantitative data. The production of quantitative data enabled the correlation between perceived success among airlines and the objective success of airlines as indicated by both financial and operational performance data. The inclusion of some less-structured items is appropriate to the naturalistic approach of surfacing data (Wilson, 1996) such as definitions of ‘success’ and ‘failure’.

The overall form of the interviews is what Powney and Watts term ‘respondent interviews’, which are designed with the intention of the interviewer remaining in control of the interview, as opposed to informant interviews (Powney and Watts, 1987).

The aim of the interview is to surface the following issues:

- descriptive scope of ‘success’ and ‘failure’;
- underpinning criteria for inclusion in definition;
- attributed causes of ‘success’ and ‘failure’, and any perception of deeper causation;
- exemplars of airline ‘success’ and ‘failure’;
- perception of ‘success’ and ‘failure’ as opposites or otherwise;
- perceived controllability of ‘success’ and ‘failure’.

Questions are designed either to elicit qualitative data by being open-ended or to generate quantitative data as Likert-scale data.

The earliest version of the structured interview schedule has been much modified to become the version used as a pilot. The driving forces of these changes have been two-fold, the reasons being inter-related.

The original version spent a considerable length of time establishing organisational characteristics such as culture and leadership style. As the research design evolved and was developed, so the feasibility for this deep investigation diminished. As pre-pilot interviews were simulated with colleagues, it became clear that in order to complete the original schedule, an interview would need to last the best part of two hours, which was probably an unrealistic target for an interview with the senior executive of any organisation - indeed one person approached responded that in the airline industry “we work an eight-day week”, and personal assistants of those agreeing to be interviewed never offered more than a one-hour slot. The first part of the interview, which had been based on a published schedule (Harrison, 1994) which was designed as a tool for diagnosing organisations, was drastically cut.

Statements in the public domain which are senior airline executives’ statements relevant to this research were considered in the preparation of the content of the structured interview. These included, for example, biographies and autobiographies, and also statements made in television programmes.

The interview also contains questions which establish respondents’ ratings of their own and other airlines in terms of success, and open-ended responses on why these ratings have been ascribed. The value of having interviewees assess their own airlines is the facility to see whether respondents attribute success differently to other airlines than their own.

The interview is at the heart of much qualitative research (Patton, 1987; Patton, 1990; Maykut and Morehouse, 1994; Rubin and Rubin, 1995; Kvale, 1996; Mason, 1996; Silverman, 1997), and the widely known sources of advice on designing interview questions and conducting interviews have been consulted in producing the pilot version, with particular respect to:

- check questions (Foddy, 1993);
- contextual influence (Foddy, 1993);
- formulation (Foddy, 1993; Cassel and Symon, 1994);
- interview technique (Denzin and Lincoln, 1994);

- probing (Oppenheim, 1992);
- question order (Oppenheim, 1992);
- rapport establishment (Oppenheim, 1992; Weisberg, Krosnick and Bowen, 1996).

The need for considering the analysis at the design stage has also been an important consideration (Rose, 1982; Patton, 1990; Silverman, 1993; Denzin and Lincoln, 1994).

A copy of the final interview schedule is given as Appendix B.

2. Questionnaires

A general theme of the questionnaires has been to extend the range of respondents to key questions, and therefore much of what has been argued above under 'Interviews' applies. The main additional consideration was the issue of how the questionnaires should be conducted - through personal calling, through telephone interviewing or through self administration. Access issues, considering the senior status of potential respondents and the degree to which they are protected by 'gate guardians' in the guise of personal assistants and secretaries, mitigated very strongly against the choice of telephone interviewing.

Burns (2000) makes a convincing case for the advantages of questionnaires as a research method, citing *inter alia* their cost, their appropriateness for gathering relatively simple data, their standardisation, the reduced level of error recording, their convenience for the respondent and the better geographical spread that can be obtained (in the present context, making surveying of Irish respondents a practical possibility when compared with the alternative method of interviewing).

Subject matter falls into three parts:

- Likert-scale response intended to assess functional bias of respondent with respect to both training and experience;
- Likert-scale response to rating of key factors of either success or failure;
- multiple identification of causal relationships between success factors.

The questionnaire is attached as Appendix C. The design has, as with the questions of the structured interview, been influenced by a variety of sources on research methods, primarily Oppenheim (1992), Foddy (1993) and de Vaus (1993). Oppenheim raises the issue of the length of a questionnaire and its implications for response rate (Oppenheim, 1992). In the light of the difficulty experienced in gaining access to interviewees and the premium value they placed on their time, it was decided to restrict the length to four sheets of A4, a decision which meant that the duplication of questions in positive and negative forms to enable cross-checking was not practical as it would have meant leaving out questions vital to the research. For the same reasons, the questions on individuals' biographical details were kept to a minimum.

3. Calculation of Kay Factors and Other Objective Measures

Although accountants, for many years, have used a number of financial ratios as indicators of the well-being of a commercial organisation, (Sizer, 1969; Mearns, 1981; Watson and Head, 1998)⁵, the tightest argument for using one particular measure, that of 'added value', has been made by John Kay (Davis and Kay, 1990; Kay, 1993). In order to calculate a figure for added value for an organisation it is necessary to have access to the following data:

- pre-tax operating profit;
- operating assets;
- capital costs.

Of these, the first two are objective figures prepared by airlines in their financial returns, and published by the CAA, but the latter is a notional figure which must be based on market conditions. It is therefore necessary to conduct some sensitivity analysis to see whether the decision to opt for a particular value is critical or not.

With respect to the choice of airline sample, UK airlines present no problem because of the single source of data. Irish data is more problematic in that the Irish Aviation

⁵ In an airline context, see Morrell, P. S. (1997), *Airline Finance*, Ashgate, Aldershot..

Authority (IAA), the Irish equivalent of the CAA, does not publish financial data on Irish airlines. The only airlines that are of significant size and therefore likely to attract comment are Aer Lingus and Ryanair (the latter in particular likely to attract some attention simply on the basis of its strong financial performance). Both Aer Lingus and Ryanair publish financial data on their websites, and the problems of validity of comparison with UK airlines is thus essentially one of consistency in reporting, plus the issue of conversion rates.

Sample

Two decisions regarding sample structure are necessary: choice of airline and choice of senior executive.

Given the small size of the UK and Irish airline industry, the issue with choice of airline is not the usual one of how to cut down from a population to a much smaller representative sample. Rather, it is one of the practicality of bringing the 'sample' up to the full level of 'population'. The practical definition of UK population for the use of secondary financial data is the set of airlines whose data is reported to the CAA (Civil Aviation Authority Economic Research Group, 2002), with only very small airlines falling outwith this list. It is therefore possible to prepare 'added value' calculations for all within the CAA-listed group. These are used in correlation with airlines mentioned by interviewees.

The choice of senior executives to be interviewed is bounded by practicality in the sense that access is a critical issue. In addition to personal contacts and unsolicited mail approaches, as the interviews took place interviewees were asked to suggest colleagues who might be willing to be interviewed. The choice of airline from which to interview a senior executive emerged through response to mail approaches rather than through interviewees' responses, however. The latter did provide opportunities for supplementary approaches to a few specific executives already approached by mail-shot. By choosing to interview an initial fifteen to twenty executives representing different airlines, picked from the population of approximately forty airlines (the precise number changing from year to year as airlines start up and close down), the question of biased selection of respondents within the sample with respect to airlines should be severely reduced.

As noted above, there may well be an issue of functional bias. Rather than attempt to eliminate this bias, it was decided to investigate the extent to which it is relevant. The questionnaire assesses respondents' backgrounds with respect to business function, both with regard to training and to experience. This allows cross-tabulation with responses to core questions on 'success' and 'failure'.

Given the seniority of the sample individuals, there is always the danger of some self-selecting bias emerging, arising as a result of the individual choice whether to grant an interview or return a questionnaire. Early indications were that, perhaps surprisingly, it seemed easier to gain access for a three-quarters of an hour interview than to persuade someone to spend fifteen minutes completing a questionnaire. An explanation might be that senior airline executives enjoy giving their views to a captive audience of one face-to-face, but find the anonymity of a questionnaire unattractive.

Analysis

The specific instruments are thus:

- structured interview (see Appendix B);
- questionnaire with emphasis on quantitative responses in the form of Likert scales (see Appendix C);
- Kay determinations of added value and other objective measures (financial and operational).

The outputs of these instruments were used in the ways described below.

1. Structured Interviews

The interviews were transcribed and then coding was conducted as described on p.98.

A set of codes was thus established, based on a need to define these categories:

- component of definition of 'success';
- component of definition of 'failure';

- perceived causal factor of ‘success’;
- perceived causal factor of ‘failure’.

A further distinction was expected to appear between those factors which are seen to be within the executive’s control and those which are not. This can be defined to be in a range from those deriving entirely from the decision of the senior executive, through those that are only perceived as indirectly within his/her control, to those which are perceived as a matter of luck, a factor which had appeared already in the pilot scheme detailed below. Since this research is essentially exploratory, it is difficult, and arguably self-destructive, to anticipate too clearly what would emerge from the interviews.

2. Questionnaires

The questionnaire as finalised after the pilot interviews (see Appendix C) falls into two parts with regard to analysis.

The larger part calls for responses using Likert scales on respondent’s experience, training, functional bias and on strengths of key factors for success. The identification of the single most important key factor is also elicited.

It is thus possible to quantify the strengths of the perceived key factors, and to investigate how strongly they are linked, to one another and to personal factors such as the executives’ background and operating context, by use of bi-variate analysis.

Other parts elicit current roles that respondents fill, and an indication of their training and experience

3. Key Factors and Other Objective Measures

These calculations were produced for a series of recent years. As perceptions may change over time, a longitudinal dimension has been included and a sensitivity analysis conducted to see the extent of variation over a four-year period. Measures are ranked and

then compared to the rankings of airlines nominated by the interviewees and questionnaire respondents as ‘successes’ or ‘failures’.⁶

Coding

Two key sets of data required coding:

1. Notions of ‘Success’

The raw data was produced during the set of interviews. Throughout the structured interviews, respondents reported examples of successes within their own organisation and were asked to nominate examples of airlines which were considered to be successes. They were also asked to explain why they considered these airlines to be successes, and to justify success ratings for six specific airlines. Finally they were asked to specify the parameters of success. These parameters were then used as the starting point for producing causal maps.

The parameters were abstracted into a list, which developed as the number of interviews increased. Meetings were held with the two coders after the 9th and 19th interviews. At the first meeting a schema was negotiated for coding the parameters into what became Table 34, a schema which was confirmed at the second meeting. Coders were given copies of the interview scripts and the causal maps as some of the defined parameters need a context to facilitate interpretation. Disagreements on coding, which were small in number, were resolved by a delphic decision-making process.

2. Notions of ‘Failure’

Data for this set was produced by interview again, and the raw data was produced by a similar process to that for Notions of ‘Success’, but without the setting down of the parameters for a mapping exercise. The relevant sections of interview scripts were cut

⁶ Harrigan has written on the problem of incorporating the longitudinal dimension in studying the evolution of business strategy, but her recommendations relate to case study approaches (Harrigan, 1983).

and pasted into a single document from which the coders worked. Harmonisation was achieved, again, by two meetings and delphic decision-making. This process was more complex than for the Notions of ‘Success’ as it required a measure of linguistic transformation, whereas, in the case of Notions of ‘Success’, the linguistic transformations had been made in the interviewee’s presence.

The outcome of this process is Table 36.

Further data coding, for example for ‘Single Most Important Success Factor’ and rating of the strengths of Key Success Factors, was based on the structure which emerged from the above process, and any minor discrepancies were resolved by a meeting with the two coders.

Processing of Primary Data

The process of handling primary data is outlined in Appendix M.

Initial Findings

1. Interviews

Participants were assured of protection under the Chatham House protocol, i.e. what they say may be quoted but must not be in any way attributable to them, a convention that was used throughout all the interviews, and which all interviewees were willing to accept. The following executives, listed in alphabetical order, acted as both pilot interviewees and questionnaire respondents:

Danny Bernstein, currently Managing Director of Monarch Airlines, and formerly Managing Director of Dan Air;

Peter Villa, formerly Managing Director of British Island Airways (pre-merger with Air Anglia), of Air UK and of the second manifestation of British Island Airways.

Together therefore they, as the senior executive associated with each of five airlines, represent, in so far as that is possible with a sample of two, a cross-section of airlines –

successful, merged, failed, large by UK standards, small by UK standards, scheduled carrier and charter carrier.

Both interviews lasted approximately forty-five minutes, and the transcripts run to 7,000+ and 5,000+ words respectively. They were conducted during August 2000. Both pilot interviewees were willing to act as pilot questionnaire respondents, and this provided a basis for noting any irregularities which might emerge using different research methods.

Factors coded included those given in Table 17. Neither respondent was particularly helpful at identifying any hierarchy of causation, but see below for their responses to the questionnaire.

Airlines considered as 'successes' were:

Britannia; British Midland; Easyjet; Monarch; Ryanair (x2).

Airlines considered as 'failures' were:

Britannia; Go; Virgin Express.

(One of the two interviewees declined to name 'failures', but this did not prove to be a common reaction. In the few subsequent future instances of non-response, interviewees were asked to name 'least successful' or 'weakest' airlines, and all subsequent interviewees produced acceptable responses.)

Clearly Britannia is an interesting case as it has been listed as both a 'success' and a 'failure'.

A larger pilot scheme might have compromised the main set of interviews given the relatively small population and concerns over access. With only two respondents involved in the piloting and given the small population involved, it was impossible to draw any very firm conclusions, but two comments are appropriate:

- The initial responses on definitions and causes of success and failure were encouragingly diverse, and suggested that the main set of interviews would yield rich and interesting data.

<p>Factors which contribute towards a definition of ‘success’</p> <p>Flotation</p> <p>Growth</p> <p>High level of customer satisfaction (x2)</p> <p>High load factors</p> <p>Offering value for money</p> <p>Profitability (x4)</p> <p>Reliability (x2)</p> <p>Safety (x3)</p> <p>Surviving (x4)</p> <p>Tour operator flexibility</p>	<p>Factors which contribute towards a definition of ‘failure’</p> <p>Customer dissatisfaction</p> <p>Lack of focus</p> <p>Low load factors</p> <p>Receivership</p> <p>Wrong planes on wrong routes</p>
<p>Factors which are seen as causes of success</p> <p>[Persuasive marketing]</p> <p>“A very special ability”</p> <p>Becoming efficient</p> <p>Being focused</p> <p>Conservative management</p> <p>Gaining a tour operator customer</p> <p>Good financial backing (x2)</p> <p>Good staff</p> <p>Good staff relations</p> <p>Having lots of slots</p> <p>High aircraft utilisation</p> <p>High level of customer satisfaction</p> <p>High load factors</p> <p>Personality of CEO</p> <p>Safety (x2)</p> <p>Technical innovation</p> <p>Vertical integration (x2)</p>	<p>Factors which are seen as causes of failure</p> <p>ATC delays (x2)</p> <p>Being too honest with the CAA</p> <p>Change of tour operator ownership</p> <p>Lack of financial backing (x2)</p> <p>Lack of information</p> <p>Lack of vertical integration</p> <p>Not enough resources (x2)</p> <p>Not enough routes</p> <p>Poor image of aircraft</p> <p>Vertical disintegration</p>

Table 17 Factors identified which define success, failure and their causes from initial interviewees

- The majority of factors are general, although a minority are heavily industry-specific; broadly, ‘failure’ seems more difficult for senior executives to talk about than ‘success’.

Both initial interviewees were given the questionnaire for piloting purposes, but their questionnaires were discarded from analysis, the purpose of giving them questionnaires being solely for piloting purposes – redrafting of the questionnaire into its final version made direct comparison of results impossible.

Significant conclusions from the two interviews included:

- The same item can be a factor both in defining ‘success/failure’ and in causing ‘success/failure’ - a potential initiator of both a virtuous spiral and a vicious spiral relating to either ‘success’ or ‘failure’ respectively.
- Interviewees were not especially good at verbalising any hierarchy of causation, tending to argue more often that causation is circular rather than hierarchical. This is not the case with questionnaire respondents (the same two people in the pilot) where there is strong evidence for hierarchical causation and lesser, but significant, evidence for circular causation.
- Both interviews had been booked on the basis that they would take half an hour, both ran to forty-five minutes, and neither person was concerned at the over-run, seeming to enjoy participating. They both suggested that it would be difficult in general to arrange a meeting of more than an hour with senior airline executives. As the total time for the interview and the completion of the questionnaire was approximately an hour and a half in both cases, it was decided to shorten the questionnaire by focusing on ‘success’ and ‘failure’ issues.
- Both interviewees were willing to suggest further potential interviewees and indicated that ‘names may be mentioned’.

The quantitative data which emerged from the two interviews is given in Table 18, and the following points are of note:

Factors relevant to 'success'		
Interviewee:	A	B
Right routes		1
Right airport slots		5
Right operating base	5	3
Right aircraft	4	4
Right aircrew	5	2
Right groundcrew	2	1
Right administration	4	4
Right marketing	5	3
Ratings of particular airlines		
Air UK and Irish	2	1
Brymon Airways	1	1
Easyjet	5	3
Dan Air	3	2
1st Laker Airways	3	2
Suckling Airways	1	3

Table 18 Ratings from pilot interviews

- The factors relevant to success show both similarity (e.g. right aircraft; right administration) and diversity (e.g. right aircrew), which suggests that the full set of data will show sufficient similarity to be able to generalise, but with sufficient variety to avoid a statement of the obvious.
- The success ratings for the named airlines show diversity, with the exception of Brymon Airways. On the basis of these results it was considered reasonable to continue with this particular set, which has been selected to represent different kinds of airlines with different strategic outcomes.

The missing data was as a result of 'it all depends' answers - the variable in this case being whether an airline was a scheduled carrier or a chartered carrier. While most carriers would tend to be instinctively characterised as one or the other, many carriers in fact perform in both modes. For example, Monarch is essentially a charter airline, and is

seen as such by both the public and the industry, but Monarch has and does operate scheduled services. Clearly the bigger ‘chartered’ carriers operate on a scale which would suggest to a neutral observer that they in fact operate an ‘all but scheduled’ service. The potential for missing data is thus recognised, but it seemed more likely to fail to appear in interviews than in the numerically larger set of questionnaires - this proved to be the case, with 100% responses to questionnaire questions on ‘right routes’ and on ‘right airport slots’.

2. Questionnaires

Data from the initial questionnaires is given in Table 19, Table 20 and Figure 4, which correspond to the three sections.

Respondent	A	B
Professional training		
Finance/Accounting	4	5
HRM	2	1
Marketing	1	1
Operations - Flying	1	1
Operations - Engineering	1	1
Operations - Cabin Crew	1	1
Professional experience		
Finance/Accounting	4	5
HRM	4	3
Marketing	4	4
Operations - Flying	2	1
Operations - Engineering	2	1
Operations - Cabin Crew	1	1
Mainly worked in airlines?		
Yes	1	1
Other	0	0

Table 19 Quantitative ratings from initial questionnaires - respondent data

Key success factors	A	B
Adequate financial backing	5	4
Controlling general costs	4	4
Differentiating your airline	3	3
Flying the right aircraft	4	4
Getting the right routes	4	3
Having the right staff	5	5
Influencing government policy	5	2
Keeping margins sufficiently high	5	5
Maintaining a positive staff culture	5	5
Maintaining a brand image	3	3
Making sure you offer the right products	4	4
Monitoring the business environment effectively	4	4
Motivating your staff	5	4
Promoting the airline effectively	5	3
Putting the customer first	5	5
Reducing debt	5	4
Setting and meeting business targets	4	3
Utilising your aircraft to the maximum	5	5
Mean :	4.44	3.89

Table 20 Quantitative ratings from initial questionnaires - response data

Four features are evident:

- Both respondents gave themselves higher ratings for experience than for training. This is perhaps a reflection of their seniority and thus their high level of experience, rather than an indication of low levels of training, and is a pattern that will probably be repeated.
- Both respondents felt that they were multi-functionally experienced in respect of business functions, although not with respect to airline operation.

- Both respondents, by professional training, were accountants. With a sample of two, it is hard to estimate the significance of this. One suggested that the majority of the Chief Executive Officers (CEOs) of the major charter carriers were accountants by training, but by broadening from CEO/Managing Director to other board members, it should be possible to obtain a range of respondents for questionnaires.
- Both respondents had mainly airline backgrounds. This was not unexpected at the level of seniority being researched, but it would be necessary to look at any significantly different responses from any board members who have come into the airline industry comparatively recently.

The second set of data from the pilot questionnaires relates to perceptions of the key success factors. The results are given in Table 20.

Again, a sample of two is merely indicative in a very loose way, but it can be noted that:

- One respondent tended to rate almost every factor highly. Only one response (3%) from either respondent rated at less than 'neutral', although a further 19% of responses scored 3 on the scale 1 to 5. The majority of discrimination was therefore between ratings of 4 (fairly significant) and 5 (highly significant). It was necessary to revisit the wording of the grades to encourage a wider range of response in the subsequent questionnaires.
- There was a broad measure of agreement between the two respondents, except with respect to the significance of influencing government policy, and, to a lesser extent, promoting the airline effectively.

The final data set obtained from the pilot questionnaires is in some respects the most interesting - the identification of causal relationships, or rather, the respondents' belief that causal relationships exist. Eighteen possibilities are offered, and there is an option in the questionnaire allowing two further write-in factors. This data was obtained in section 3 of the initial questionnaire, shown in Appendix O. These two sets of responses have been aggregated, and the resulting flow diagram is given as Figure 4 with a key on the following page. Double thickness of a line indicates that both respondents had identified the same specific relationship.

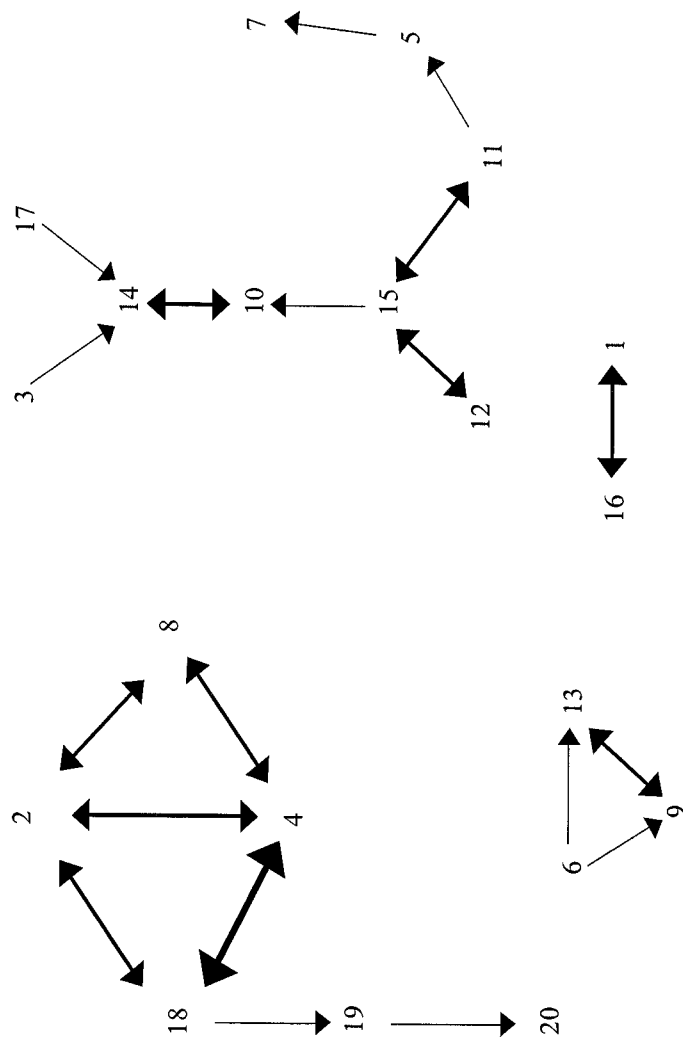


Figure 4 Aggregated hierarchies of causation of success for the two pilot interviews

1. Adequate financial backing	2. Controlling general costs	3. Differentiating your airline	4. Flying the right aircraft
5. Getting the right routes	6. Having the right staff	7. Influencing government policy	8. Keeping margins sufficiently high
9. Maintaining a positive staff culture	10. Maintaining a brand image	11. Making sure you offer the right products	12. Monitoring the business environment effectively
13. Motivating your staff	14. Promoting the airline effectively	15. Putting the customer first	16. Reducing debt
17. Setting and meeting business targets	18. Maximum aircraft utilisation	19. Vertical integration	20. Getting the right slots

Key to Figure 4

These very early results showed already quite complex hierarchies of causation. So far, two separate networks had emerged, with nine and six nodes respectively. Two simpler networks of three and two nodes had also been identified. It was expected that these networks might develop as the research progressed, with thickening links, as other respondents identified the same causal links, and possibly the loose connection at least of the four currently separate networks.

It was recognised at this stage, however, that aggregation or congregation of such causal maps from individual data sets might prove highly problematic, an issue which is further discussed below (see p.186). The aggregation process would depend totally on coding to 'equate' any additional factors written in where appropriate, and the absence of the researcher would increase errors arising from any ambiguity in the written response. Notwithstanding that issue, further problems emerged using this approach. From a methodological perspective, the prescription of key factors was undesirable, and an approach which left the subject free to offer his/her notions of 'success' factors would be distinctly preferable. At a practical level, the use of thickness of arrow to indicate the number of respondents, the possibility of subjects indicating a relationship of causality between two factors in one direction, the other direction, or even both directions created difficulties.

This approach of gathering data through questionnaires to build a single aggregated map was therefore abandoned following the pilot stage. For all subsequent interviews it was decided to adopt a process of direct, rather than deduced, causal mapping. Interviewees were asked to produce causal maps on the basis of the essential parameters for defining 'success' which had emerged during interview. These causal maps were transferred post-interview into Decision Explorer to allow further analysis. Details of this process of data to produce causal maps are given in Appendix M.

3. Kay Ratings and Other Objective Measures of Success

The CAA provides data which allows such calculations (Civil Aviation Authority Economic Research Group, 2002).

Irish data is more problematic. Both Aer Lingus and Ryanair publish annual reports on the internet (Aer Lingus, 2002; Ryanair, 2002), and Ryanair Holdings, the parent of

Ryanair, registers financial data with the United States Securities and Exchange Commission (Ryanair, 1999). It should be noted however that:

- The accounts are mutually unstandardised, and unstandardised with respect to the UK data, which the CAA publishes in a highly standardised form; the only Irish data garnered is from the year following the year of the UK data.
- Irish data, in both cases, is expressed in punts rather than pounds.

These factors make direct exact comparison invalid. Irish data is however used for rough comparison where possible, but with caution.

Issue of Generalisability

An area where research has the potential to be limited is that of generalisability. This research is primarily into the strategic process and is clearly set in one specific sector. The issue of generalisability must therefore be addressed.

The airline industry can be defined in a number of dimensions, as outlined in the Introduction (see p.2) which give it a distinctive flavour. Indeed, it is this distinct flavour that drew the author to base the research in the particular sector. The first specific question that must be addressed is: do either the individual factors or their unique combination establish an analysis of an industry that places it in a category which can be considered distinctly untypical as a whole?

Analysis of the italicised bullet-points on p.2 above suggests that, with arguably two exceptions, they constitute just one possible and unexceptional combination of the variables.

The first possible exception is that of the scale of safety. Airlines have to operate in a legal environment of safety regulations, but this they share with a number of other industries - other forms of public transport, car manufacturing, pharmaceuticals, food producers, manufacturers of electrical equipment etc. What makes airlines seem to be especially constrained by safety issues, however, is not the extreme outcome of failure, which is potentially shared by any of the mentioned industries, but the high public profile of failure. Safety should not therefore be considered an issue that makes airlines unique, and the results of the research are not therefore ungeneralisable in principle.

The second possible exception concerns competition between players in the market - the way that they are constrained to compete by infrastructure, the fact that historically they

have been constrained to compete directly in duopolies, and their tendency to try and avoid such head-to-head direct competition.

A second specific question must be asked: does the research investigate processes that depend on industry-specific situations which are not the same in other industries? This research certainly recognises that there are industry-specific factors, but it identifies clearly what they are and they will clearly be identified as such in the outcomes. Rather than hide them and attempt to seek a potentially specious argument that the findings can be generalised, the research is designed to identify the inter-relationship between generic and industry factors. The potential weakness has thus been turned into a strength of the research, and forms part of its contribution.

The issue of generalisability is revisited in the final chapter (p.236). The possible limits of generalising the findings of the research are considered, as are the possible limitations that resulted from operationalisation, arising through the actual sample size of interviewees and questionnaire respondents and the resultant sample structure (p.234).

“The upper reaches of management are a land of mystery and intrigue. Very few have ever been there, and the present inhabitants frequently send back messages, incoherent both to other levels of management and to the world in general.”

(Wrapp, 1967)