Business School

Operations Management Division

THE DETERMINANTS AND IMPACT OF OUTSOURCING ON AIRLINES' PERFORMANCE

by

Mamdouh Taher Tayeb, BSc Dip MBA

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TO MY MOTHER AND IN THE LOVING MEMORY OF MY FATHER

TO MY CHILDREN TAHER, MOHAMMED AND TALA

TO MY WIFE HALA ASHI

ABSTRACT

This thesis is concerned with the impact of outsourcing within the airline industry. There are conflicting viewpoints on the impact of outsourcing and a scarcity of empirical studies examining its influence on the airlines' performance. In order to fill in this gap, the research process was divided into three stages: (1) Literature review and an exploratory case study; (2) Analysis of secondary data; and (3) Qualitative analysis of 14 interviews, representing 12 different airlines. Through the study, the determinants of outsourcing and current outsourcing practices within the airline industry were identified. Cost reduction and enhancing the focus on core activities were identified as the main motives for outsourcing. Local authorities' legislation is regarded as the main influential external factor while demand level for a given function, criticality of the activity being considered for outsourcing, and current capability status of performing the activity are identified as the main influential internal factors. Most outsourcing arrangements are being made outside the airlines' home bases. The implications of outsourcing in the performance objectives (cost, delivery, quality, and flexibility) as well as in the airlines' overall operational performance were also evaluated. The evaluation of the airlines' performance was based on the 'passenger load factor' and 'daily aircraft utilisation'. The former captures the airlines' operational efficiency. The latter refers to maximising aircraft utilisation, one of the main tasks for the airline management. Although a positive impact on the cost objective was found, it is strongly correlated with the demand level for the outsourced function. The delivery objective is negatively influenced by outsourcing. The outsourcing influence on quality varies, depending on the nature of the outsourced function. The flexibility objective is positively influenced by outsourcing. The study revealed that there is no direct impact of outsourcing on the airlines' overall operational performance. Two main contributions were provided through the research: theoretical and practical. On a theoretical level, a more in-depth understanding of the outsourcing determinants, current practices, and performance implications in the airline industry was provided. The study also represents practical guidance for new entrants in devising their supply chains and assisting managers in terms of supply chain restructuring by predicting the determinants and impact of outsourcing on the airlines' operational performance.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AEA	Association of European Airlines
ATAG	Air Transport Action Group
CT	Contingency Theory
EVP	Executive Vice-President
GM	General Manager
IATA	International Air Transport Association
MGR	Manager
NPA	New Paradigm Airlines
PAX	Passengers
PRM	Passengers with Reduced Mobility
RBV	Resource-Based View
SBU	Strategic Business Unit
SLA	Service Level Agreement
SR MGR	Senior Manager
TCT	Transaction Costs Theory
VP	Vice-President
WATS	World Air Transport Statistics

CHAPTER 1

INTRODUCTION

1.1 STUDY BACKGROUND

The current competitive business environment is defined by intense global competition, shortening product life cycles, and increasingly demanding customers. Within this environment, the importance of supply chain management has become more and more recognised, taking into consideration the challenges of reducing costs while improving service levels significantly. Purchasing and supply management is one of the supply chain management areas, which promises better costs control and resources utilisation (Kocabasoglu and Suresh, 2006). Outsourcing has become a highly recognised business tool, whereby competitive advantage may be gained when products or services are produced more effectively and efficiently by outside suppliers (McCarthy and Anagnostou, 2004; Leavy, 2004). During the 1980s and 1990s, many organisations engaged in corporate restructuring. A significant number of companies disintegrated to become more competitive (Bergh *et al.*, 2008; Mpoyi, 2003). Even though most outsourcing historically took place in the manufacturing industry, it is now spreading rapidly within service industries. It has become increasingly cross-national and global (Barrar and Gervais, 2006).

The management teams of organisations have faced important and strategic questions of what activities their organisations should keep in-house and what activities should be outsourced. Although the strategic implications of outsourcing have been discussed for many years, more often outsourcing decisions are made purely on a cost basis (Yang *et al.*, 2007; Momme and Hvolby, 2002; Canez *et al.*, 2000; Probert, 1997; McIvor *et al.*, 1997; Ford *et al.*, 1993). More emphasis has been placed on providing practical structured guidance on outsourcing decisions, considering other dimensions (Yang *et al.*, 2007; Espino-Rodriguez and Padron-Robaina, 2006; Coe, 2000; Canez *et al.*, 2000). Davis and Heineke (2005) suggested that while cost is a major factor in outsourcing decisions, other factors also need to be considered, including the need of

alignment with competitive priorities and the core competencies of the organisation, the need to maintain control, and the need for flexibility to react rapidly to changes in the marketplace.

Issues related to domestic and global outsourcing, benefits and drawbacks of outsourcing, the extent of outsourcing being practised, which activities it is better to outsource, and comparisons of all of the abovementioned in different countries have been researched and remain far from settled (Apte *et al.*, 1997). Barrar and Gervais (2006) argue that the global perspective in the study of outsourcing has been driven by the fact that, in today's market, many of the outsourcing relationships involve two or more countries. In addition, outsourcing as an organisational practice has spread across the world. The current outsourcing research scope can be identified by three areas: the outsourcing determinants 'why?', the outsourcing process 'how?', and the outsourcing result, 'what did it bring to the organisation?' (Jiang and Qureshi, 2006). Gilley *et al.* (2004) stated that the vast majority of the research on outsourcing has focused on the understanding of outsourcing determinants and the decision-making process, with very little on outsourcing results.

Although, it is generally believed that outsourcing has become an attractive option, the result of outsourcing is still vague and has not been confirmed by research (Jiang and Qureshi, 2006). Espino-Rodriguez and Padron-Robaina (2004) argued that given its tactical and strategic characteristics, outsourcing has an impact on the operations objectives and organisational performance. In that regard, the most commonly stated performance objectives are: cost, delivery, quality, and flexibility (Stonebraker and Leong, 1994; Wheelwright, 1984). Nevertheless, Kotabe and Mol (2009) suggested that scholars working on the implications of outsourcing for organisational performance have been divided into three camps: arguing for a positive or negative impact or no direct impact at all. A number of advantages have been associated with outsourcing such as focus on core activities, reduction of production costs, increased flexibility, and increased possibility of obtaining rents from the relations with suppliers. In this case, a positive impact is related to outsourcing (Kotabe and Mol, 2009). Conversely, the authors discuss how outsourcing increases transaction costs for the co-ordination and management of activities performed by external suppliers,

making innovation and learning difficult ventures. Hence, a negative impact on organisational performance is suggested. In other studies, it is not possible to identify a direct relationship between outsourcing and performance as in Gilley and Rasheed (2000) and Leiblein *et al.* (2002). As Kotabe and Mol (2009) summarised, the evidence on the influence of the make or buy decision in organisational performance is still unclear and inconclusive. Moreover, "there has been little research to date on services supply chains" (Ellram *et al.*, 2004).

Machuca *et al.* (2007) argued that the importance of the services sector for the economy, both in employment and production, cannot be denied. Consequently, there has been a demand for an increase of research in Service Operations Management. However, there is an evident contradiction between the importance of the services sector in the real world and the little attention paid to it in Operations Management research. The air transport industry plays a fundamental role in advancing the progress of the world economy. The industry has a substantial economic impact, both through its own activities and as a facilitator of other industries. Its most important economic contribution is through its impact on the performance of other industries and as an enabler of their growth (Air Transport Action Group, 2005; 2008). The airline industry is a segment or part of the broad air transportation industry. It has faced several challenges such as globalisation, deregulation of its industry, privatisation of state-owned airlines, and the entrance of low-cost carriers. These challenges, in addition to competition in fares among airlines have forced the airlines' management to reconsider their supply chain structures and sourcing strategies. Thus, the pace and scope of outsourcing has been on the rise within the airline industry (Ghobrial, 2005). Nevertheless, Taneja (2004) suggested that the airlines' supply chain restructuring is a poorly examined area. Empirical studies on outsourcing practices and their implications within the airline industry are in short supply.

1.2 RESEARCH AIM AND ASSOCIATED OBJECTIVES

Considering the context of the airline industry in terms of outsourcing, this study aims to examine the outsourcing phenomenon within this particular industry. Firstly, the study seeks to identify the outsourcing determinants: motives, external and internal factors affecting the outsourcing decision. Second, it aims to examine the current

practices of outsourcing in the airline industry. Finally, through a better understanding of the outsourcing process, the study aims to evaluate the implications of outsourcing on the performance objectives of *cost, delivery, quality, and flexibility*, as well as on the airlines' overall operational performance measures represented by *passenger load factor* and *daily aircraft utilisation*. 'Passenger load factor' and 'daily aircraft utilisation' represent the most commonly used measures to assess overall performance in the airline industry as shown in previous studies (Lazzarini, 2007; Dai *et al.*, 2005; Davila and Venkatachalam, 2004; Lapre and Scudder, 2004; Gudmundsson, 2002; Behn and Riley, 1999). Based on the three main areas of outsourcing research mentioned in the study background, the scope of the research on the airline industry is defined in Figure 1.1.

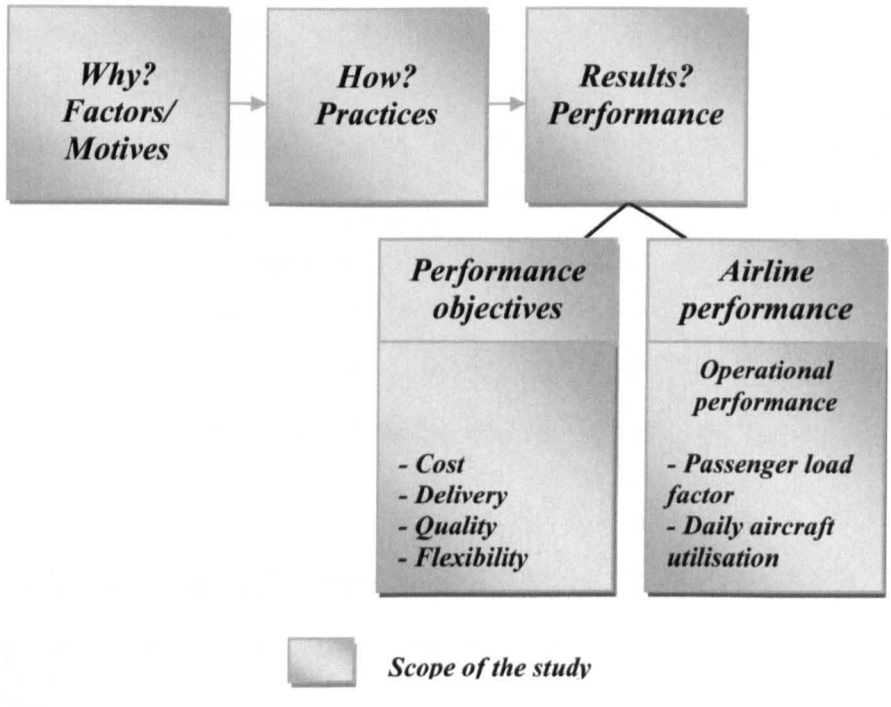


Figure 1.1: The Scope of the Study

In order to fulfil this aim, the following research objectives were devised:

- Identify the airlines' management motives behind outsourcing;
- Identify the airlines' external environmental factors influencing outsourcing decisions;
- Identify the airlines' internal factors shaping outsourcing decisions;

- Examine the airlines' current practices in regards to the main activities being outsourced;
- Evaluate the implications of outsourcing in the airlines' performance objectives: cost, flexibility, quality, and delivery;
- Evaluate the implications of outsourcing in the airlines' overall operational performance.

1.3 RESEARCH CONTRIBUTIONS

Building upon the research objectives, the study aims to contribute to the academic understanding of the subject and the improvement of industrial practices. While most existing research related to outsourcing has focused on the determinants and the decision-making process, little is known about the outsourcing outcomes (Gilley *et al.*, 2004). Hence, this thesis aims to fill this knowledge gap by empirically evaluating the outsourcing results. Additionally, there is also a shortage of literature pertaining to the airline industry supply chain (Taneja, 2004). The study aims to provide another theoretical contribution by examining empirically the determinants and impact of outsourcing in the airline industry. In terms of a practical dimension, it is envisaged that the outcomes of the study will be of great use for the management of traditional airlines in terms of restructuring their supply chain. Finally, as regards new entrant airlines, this study will also benefit them by providing practical guidance for decisions on the construction of their supply chain.

1.4 STRUCTURE OF THE THESIS

Considering the research objectives, the structure of the thesis is defined as follows (Figure 1.2):

- Chapter 1 introduces the research topic, scope, objectives and proposed contributions;
- Chapter 2 offers a comprehensive literature review on outsourcing;
- Chapter 3 contains the review of literature related to the airline industry;
- Chapter 4 illustrates the design of the research methods;
- Chapter 5 describes the findings of the exploratory case study represented by Saudi Arabian Airlines (SAUDIA);

- Chapter 6 discusses the analysis of secondary data of the airlines' performance;
- Chapter 7 summarises the feedback obtained from the interviews with managers of several airlines on the outsourcing determinants and current practices;
- Chapter 8 describes the feedback obtained from interviews with managers on the outsourcing impact on the performance objectives (cost, delivery, quality, flexibility) and the overall airline operational performance;
- Chapter 9 presents the discussion of the research findings and main contributions. The study limitations and suggestions for further research are also discussed.

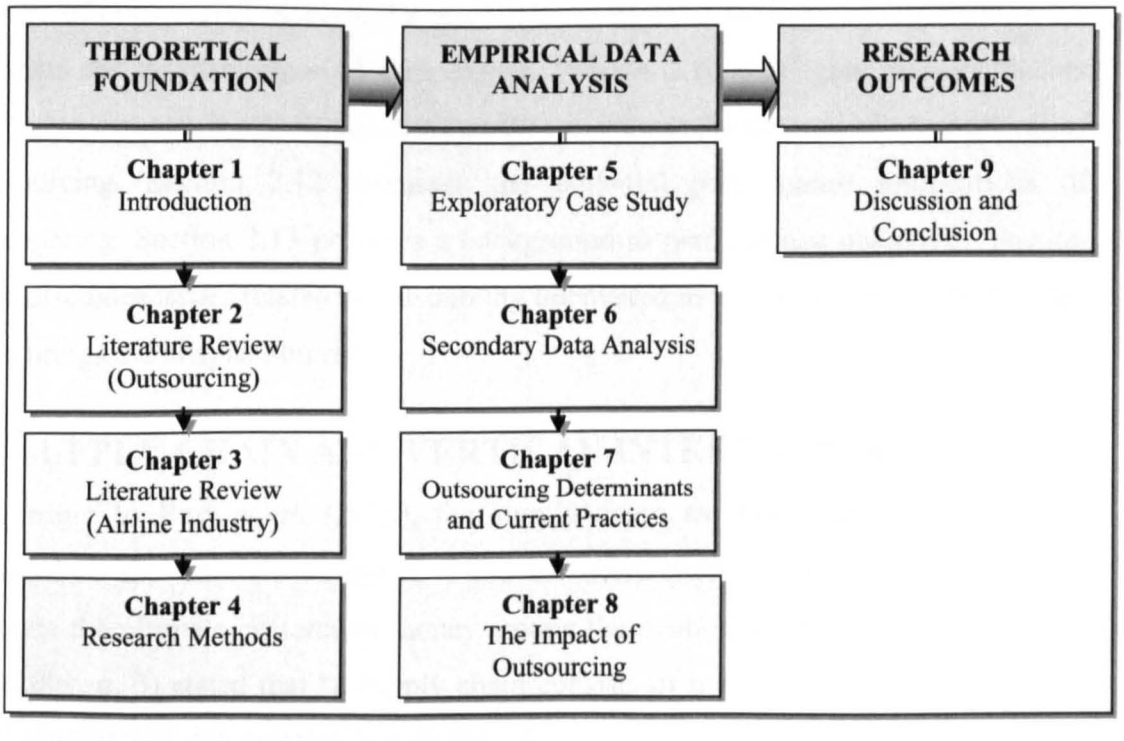


Figure 1.2: Summary of the Structure of the Thesis

CHAPTER 2

LITERATURE REVIEW – OUTSOURCING

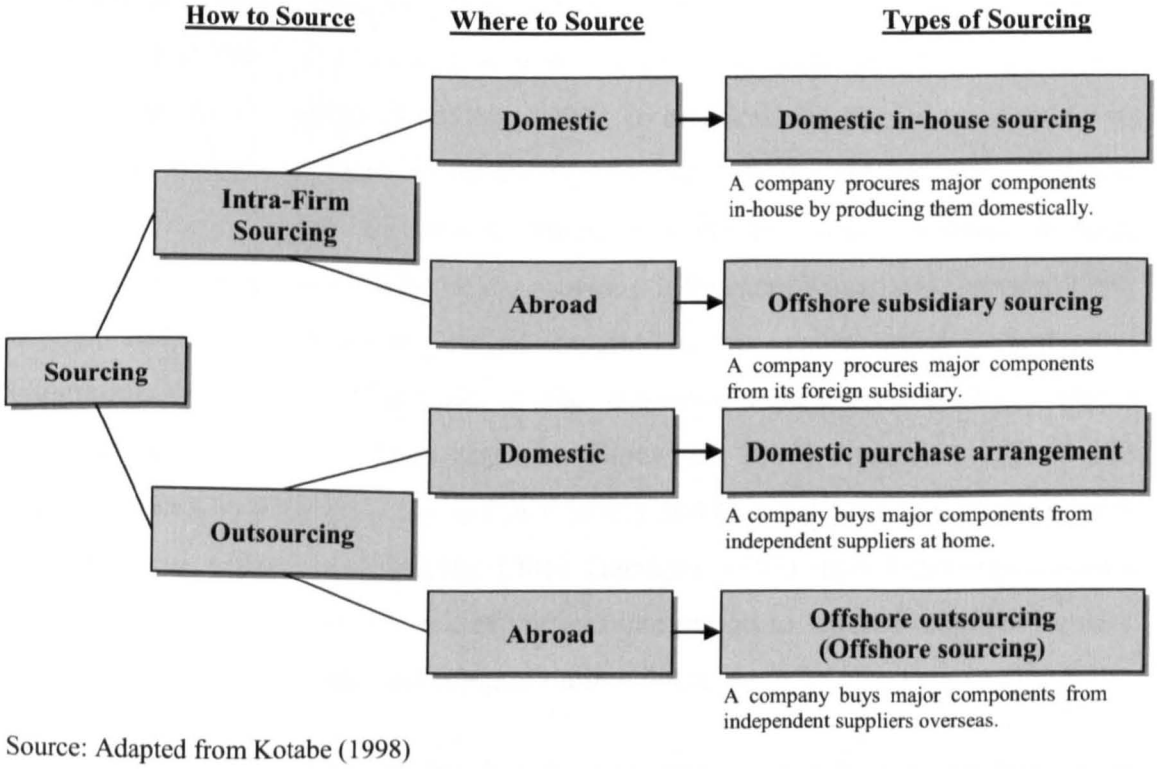
2.1 CHAPTER OVERVIEW

Chapter 2 provides an overview of the management literature related to outsourcing in addition to relevant considerations on operations performance. Section 2.2 provides an overview of supply chain and vertical integration. Section 2.3 discusses outsourcing. Section 2.4 explains the evolution of outsourcing to strategic outsourcing. Section 2.5 presents the levels of outsourcing. Section 2.6 explains the difference between substitution and abstention outsourcing. Section 2.7 highlights the drivers of outsourcing. Section 2.8 discusses the motives for outsourcing. Section 2.9 presents the disadvantages of outsourcing. Section 2.10 highlights relevant factors related to outsourcing decisions. Section 2.11 discusses the theoretical perspectives of outsourcing. Section 2.12 discusses the potential performance implications of outsourcing. Section 2.13 provides a background to performance objectives. Section 2.14 discusses issues related to outsourcing uncovered in the literature review. Section 2.15 brings the chapter summary.

2.2 SUPPLY CHAIN AND VERTICAL INTEGRATION

According to Burt *et al.* (2003), the supply chain extends from 'Mother Earth' forward to the ultimate customer. Financial transactions within the supply chain allocate the ultimate customer's money among the members of the chain. Mentzer *et al.* (2001, p. 3) stated that "a supply chain consists of multiple firms, both upstream (i.e. supply) and downstream (i.e. distribution), and the ultimate consumer". Li *et al.* (2005, p. 618) concluded that "it is widely argued that competition is no longer between organizations, but among supply chains". The importance of supply chain management can be attributed to the fact that many companies are achieving significant competitive advantage by the way they configure and manage their supply chain operations (Chase *et al.*, 2004). Christopher (2005, p. 5) defined supply chain management as "the management of upstream and downstream relationships with

suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole". The value a supply chain delivers is the difference between the costs the supply chain incurs in satisfying the customer's request and what the final product is worth to the customer. Hence, the objective of a supply chain is to maximise the overall value delivered (Chopra and Meindl, 2007). The focus of supply chain management is upon the management of relationships between all parties in the pipeline, i.e. suppliers and customers, and the organisation itself, to generate a more profitable outcome for all parties in the chain (Christopher, 2005). Burt *et al.* (2003) stated that World Class Supply Management involves purchasing, yet is far more strategic. In that sense, a firm's boundaries are among the main issues considered in supply chain management. Strategic sourcing has been identified as one of the most important trends in supply management (Quinn, 2000; Narasimhan and Das, 1999). Figure 2.1 shows different sourcing strategies.



Source: Adapted from Kotabe (1998)

Figure 2.1: Schematic View of Different Sourcing Strategies

Besanko *et al.* (2003) argued that the boundaries of the company should be considered in any successfully formulated strategy. The boundaries of the firm define what the

firm does. There are three different directions of the firm boundaries: horizontal, vertical, and corporate. Mpoyi (2003, p. 44) defined vertical integration as "the extent to which a firm controls the production of its supplies and the distribution of its outputs or finished products". Vertical integration is concerned with how much of the supply chain is controlled by the organisation. Backward integration involves purchasing or controlling the suppliers; whereas forward integration involves purchasing or controlling the customers. An example of forward integration is the airline's purchase of a company providing tour services in the city to which the airline flies (Davis and Heineke, 2005).

Besanko *et al.* (2003) stated that the fact that vertical integration is one of the first diversification strategies organisations should consider cannot be denied. Achieving a successful degree of vertical integration requires sound knowledge of what is involved at each level, taking into consideration the timeframe in terms of current decisions and future changes (Hill, 2000). It has not been proven that vertical strategies that may have worked well in the past can work as well when certain competitive factors change (Harrigan, 1983). In addition, the significant trend of an aggressive increase in outsourcing during the last two decades presents a radical departure from vertical integration, which was the prevailing wisdom in large industrial organisations for most of the previous 100 years (Barrar and Gervais, 2006; Mpoyi, 2003). In contrast to vertical integration, the general trend is horizontal integration. Horizontal integration is the emerging competitive strategy, which supports outsourcing non-critical activities (Burt *et al.*, 2003). Accordingly, Ford sold a sheep farm that grew wool for car seat covers and General Motors sold their paint manufacturing capability (Thackray, 1986). Harrigan (1983) argued that organisations ought to transfer some of the risk of vertical integration to external suppliers unless strategic requirements make full integration inevitable.

Broadened outsourcing has meant that most companies have become specialised in fewer activities within their value chains, and increasingly outsource other components and services (Grant, 2002). Jennings (2002, p. 30) suggested that outsourcing relationship arrangements might vary, "from arm's length contracting through to long-term relationships based upon partnership". In addition, Besanko *et*

al. (2003) stated that Close to 'Buy', organisations might enter into a long-term contract. Close to fully integrated 'Make', integrated organisations can spin off partly- or wholly-owned subsidiaries. In between are joint ventures and strategic alliances. Ito (1995, p. 431) defined a spin-off as "a firm that is partially owned by the parent, but independently managed and sometimes listed on the various stock markets". This relationship is represented in Figure 2.2.

Arm's-length market transactions	Long-term contracts	Strategic alliances and joint ventures	Parent/subsidiary relationship	Perform activity internally
Less integrated		⇨	**More integrated**	

Source: Adapted from Besanko *et al.* (2003)

Figure 2.2: Make or Buy Continuum

2.3 OUTSOURCING OVERVIEW

Barrar and Gervais (2006) suggested that there is significant diversity in the terminology used in outsourcing research. Terms such as 'outsourcing', 'de-verticalisation', 'dis-integration', 'farming-out', 'subcontracting' have often been used interchangeably. Moreover, several authors referred to outsourcing as 'make or buy' (Espino-Rodriguez and Padron-Robaina, 2006). Yet, Ghobrial (2005) suggested that outsourcing is different from subcontracting business concepts by transferring 'internal' activities beyond the organisational boundaries. This is not inevitably the case with subcontracting. In addition, Momme *et al.* (2000, p. 132) suggested that Make-or-Buy is "the cost-based decision either to produce commodity items in-house or to acquire them from suppliers".

Lonsdale and Cox (2000) stated that a number of the pioneering outsourcers have been in the IT sector. For instance, at the beginning of the 1980s, IBM™ outsourced many of the major components for its early PC to Intel™ and Microsoft™. Yang *et al.* (2007) indicated that Information Systems outsourcing forms the foundation of Business Process Outsourcing as a management concept. The term 'outsourcing' was first coined for the subcontracting of information systems in the late 1980s. Therefore,

several authors identify 'outsourcing' with the information systems function (Yang *et al.*, 2007; Espino-Rodriguez and Padron-Robaina, 2006). For instance, Loh and Venkatraman (1992, p.336) defined outsourcing as "the significant contribution by external vendors of the physical and/or human resources associated with the entire or specific components of the IT infrastructure in the user organisation". Cheon *et al.* (1995, p. 209) defined outsourcing as "the organisational decision to turn over part or all of an organisation's IS function to external service provider(s) in order for an organisation to be able to achieve its goals".

Moreover, there seems to be a lack of consensus in the management literature about what is meant by the term 'outsourcing' (Barrar and Gervais, 2006; Gilley and Rasheed, 2000). Differences in outsourcing definitions can be attributed to different propositions made by the authors, based on the purpose of their studies. However, most authors agree that outsourcing means going outside the organisation to acquire determined activities (Espino-Rodriguez and Padron-Robaina, 2006). For example, Lei and Hitt (1995, p. 836) defined outsourcing as "the reliance on external sources for manufacturing components and other value-adding activities". Alternatively, Maltz and Ellram (1999, p. 4) defined outsourcing as "the transfer of responsibility to a third-party of activities which used to be performed internally". Lankford and Parsa (1999, p. 310) defined the term as "the procurement of products or services from sources that are external to the organisation". Whereas Ghobrial (2005) suggested that outsourcing corresponds to an arrangement whereby a company contracts with another organisation to perform one or more of its value-creating activities on the company's behalf. Furthermore, Kotabe and Mol (2009, p. 205) defined outsourcing as "the transfer of activities to an external source". Outsourcing can be viewed as a compromise between vertical integration and the reliance on market mechanisms (Beaumont and Khan, 2005). Gilley and Rasheed (2000) argued that defining outsourcing simply in terms of procurement activities does not capture the strategic nature of the concept, as all organisations purchase some inputs for their operations. On the contrary, outsourcing is a fundamental strategic decision to reject the internalisation of an activity. Finally, Bettis *et al.* (1992) concluded that although

many managers view outsourcing as an operational defensive means to reduce costs, failure to view outsourcing strategically is a critical mistake.

2.4 STRATEGIC OUTSOURCING

Franceschini *et al.* (2003) suggested that there has been an evolution from traditional to strategic outsourcing. The authors argued that outsourcing becomes more strategic as activities being outsourced are critical for the organisation. Outsourced activities are no longer limited to peripheral functions, such as gardening and security. Outsourcing includes a growing number of the organisation's activities and functions, especially those that substantially contribute to its added value (Quelin and Duhamel, 2003). In addition, Lonsdale and Cox (1998) argued that organisations are now engaged in the outsourcing of activities, some of which are ever closer to the core activities that constitute the heart of the business. For instance, Nike™ has become a prime example of an organisation that successfully outsourced a substantial part of its activities. Nike™ focuses on research and development and the post-production activities of marketing, distributing and sales. The organisation relies on outsourcing for all of its production activities, except for its technical footwear components (Lonsdale and Cox, 1998; Quinn and Hilmer, 1994).

According to Quelin and Duhamel (2003), the notion of strategic outsourcing was first introduced by Quinn and Hilmer (1994). Their seminal work argued that it is significantly beneficial to organisations to achieve a good combination between utilising the organisation's own resources on a set of clearly defined core competencies on the one hand, and strategically outsourcing other activities, for which the organisation has neither strategic need nor special capabilities on the other hand. In that sense, Espino-Rodriguez and Padron-Robaina (2006, p. 32) define outsourcing as "a strategic decision that entails the external contracting of determined non-strategic activities or business processes necessary for the manufacture of goods or the provision of services by means of agreements or contracts with higher capability firms' to undertake those activities or business process, with the aim of improving competitive advantage". Alexander and Young (1996) argued that not all core activities have the same characteristics. Core activities critical to performance should be distinguished from activities that create current or potential competitive

advantage. Activities that are important to the smooth running of the business, but not unique elements of the overall product, can be safely outsourced (McIvor *et al.*, 1997). The strategic approach to outsourcing offers the firm information about the main activities that can potentially be outsourced (Quelin and Duhamel, 2003). Empirical studies suggest that many industrial companies suffer from competitiveness decline as a result of improper outsourcing. Choosing the right sourcing strategy, considering a given situational analysis, is very important (Momme *et al.*, 2000).

2.5 LEVELS OF OUTSOURCING

According to Probert (1997), organisations face outsourcing decisions at three levels: strategic outsourcing, tactical outsourcing, and component outsourcing. Strategic outsourcing decisions involve the rationale regarding investments in long-term capabilities, and provide the framework for short-term tactical and component decisions. Tactical outsourcing decisions are concerned with the issues of temporary capacity imbalance and demand fluctuation. At this outsourcing level, managers need to make their decisions among the options open to them, within the guidelines of the strategy. Component outsourcing decisions usually arise at the design stage. Component outsourcing is the decision about whether a particular component of the product, or the process, should be performed in-house or outsourced. Momme and Hvolby (2002) suggested that in organisational terms outsourcing involves converting strategic decisions into operational actions, and transferring functions from one organisation to another. Burt *et al.* (2003) argued that organisations should analyse outsourcing issues at two levels: strategic and tactical (operational). Yet, as far as the future of the firm is concerned, the strategic level is the more important of the two.

2.6 SUBSTITUTION VS. ABSTENTION OUTSOURCING

Gilley and Rasheed (2000) stated that outsourcing can arise in two ways: substitution and abstention. Substitution outsourcing is the substitution of internal activities by external purchases. This involves a discontinuation of internal production, whether it is a production of goods or services, with an intention of procurement from external suppliers. This type of outsourcing, 'substitution-based outsourcing', is the most commonly understood type of outsourcing, and it can be viewed as vertical

disintegration. On the other hand, outsourcing may also arise when the organisation purchases goods or services from external suppliers; even when those goods or services have not been produced inside the organisation in the past that is abstention outsourcing. The authors suggest that the difference between abstention outsourcing and basic purchasing decisions is that, in abstention outsourcing, it is within the organisation's managerial and/or functional capabilities to internalise the production of the outsourced activity. Hence, both substitution-based outsourcing and abstention-based outsourcing reflect the decision of rejecting internalisation. Nevertheless, when the only choice for organisations to acquire a particular good or service is to purchase that good or service from an external supplier (e.g. due to a lack of capital or expertise), then the organisation is not considered to be engaged in outsourcing (Gilley and Rasheed, 2000).

2.7 DRIVERS AND FACILITATORS OF OUTSOURCING

Several factors have been driving the trend towards outsourcing. Advancements in telecommunications and information technology, including the arrival of internet services, have been the major facilitator of the trend towards outsourcing (Yang *et al.*, 2007; Barrar and Gervais, 2006). Moreover, Grant (2002) stated that the development of the internet has made a significant impact on reducing the transactions costs. Developments in supply chain technology and inter-firm electronic integration have enabled many organisations to realise the benefits of vertical control without being vertically integrated (Barrar and Gervais, 2006). Other drivers behind outsourcing include globalisation, public sector reform, organisational restructuring, and more demanding and cost-conscious customers (Yang *et al.*, 2007; Barrar and Gervais, 2006; Rothery and Robertson, 1995).

2.8 MOTIVES FOR OUTSOURCING

Many potential advantages of outsourcing have been identified in the management literature. Such advantages include financial and non-financial effects. Besanko *et al.* (2003) suggested that it is conventional wisdom that outsourcing organisations can perform most activities more efficiently than highly integrated ones. There are three main reasons behind that logic. The first reason is that suppliers may possess

proprietary information or patents that enable them to perform certain activities at lower cost. Second, suppliers might be able to aggregate the needs for several organisations, thus achieving economies of scale. The third reason is that suppliers might obtain learning economies by exploiting their experience in producing for many organisations. Quelin and Duhamel (2003) suggested that outsourcing may be utilised by the top management to spread the risk in a more optimal manner and to avoid large, and often irreversible investments. Ghobrial (2005) stated that a survey of the attendees at the 2004 Outsourcing World Summit revealed that cost reduction was the main advantage sought through outsourcing followed by improved focus, variable cost structure, access to skills, growth of revenue, improvement of quality, conservation of capital, and innovation, respectively. Hence, besides cost reduction, organisations are aiming at a more strategic perspective, to attain and maintain competitive advantage (Espino-Rodriguez and Padron-Robaina, 2005). The next subsections elaborate on the main advantages, which can be gained through outsourcing.

2.8.1 Cost Reduction

Apte *et al.* (1997) suggested, based on their study of IS (Information Systems) outsourcing in three different countries – USA, Japan, and Finland – that cost reduction was the most important advantage witnessed by managers in all three countries. Hill (2000) suggested that a reduction in operating costs can be achieved through outsourcing, since process technology requirements, support costs, and operations management and control are reduced. Through outsourcing, organisations can benefit from emerging technologies without investing significant amounts of capital (Gilley and Rasheed, 2000; Quinn and Hilmer, 1994). Moreover, Barrar and Gervais (2006) suggest that the advantage of economies of scale cannot be achieved in all activities performed by any given organisation. Hence, contract companies can witness the benefits of an economy of scale by doing the repetitive functions for several organisations at any given time. Some of that cost reduction achieved by the contract organisation could be passed to the outsourcing organisation (Ghobrial, 2005).

Lonsdale and Cox (1998) stated that one of the main sources of cost saving through outsourcing is labour, as outsourcing fundamentally affects the employment patterns. Cost savings could be obtained by hiring or rehiring some workers from an external supplier on a part-time basis as an alternative to hiring them for permanent jobs and paying other additional costs such as pension fees and healthcare insurance (Barrar and Gervais, 2006). Another aspect of cost reduction is the change of some of the large fixed capital costs into variable costs (Quelin and Duhamel, 2003; Lonsdale and Cox, 1998). Considering that, it must be noted that Jennings (2002) reported that although cost reduction has been the principal motive for outsourcing, failure to achieve expected cost improvements is a frequently occurring feature of outsourcing. Lam and Han (2005) concluded that several studies found that, in some cases, outsourcing increases costs. Vining and Globerman (1999) indicated that three types of costs are included in the outsourcing choice: production, bargaining, and opportunism costs. According to the authors, strategic managers should seek to minimise the sum of these costs, since often bargaining and opportunism costs are expected to be higher with outsourcing.

2.8.2 Quality Improvement

Barrar and Gervais (2006) suggested that quality improvement is one of the main motives for outsourcing. Organisational specific capabilities, expertise or core competences are not always possible to imitate; and it may be costly or not feasible for an organisation to acquire another organisation, because of that specific capability. Hence, through outsourcing an organisation could acquire the capabilities from other organisations (Barrar and Gervais, 2006; Hill, 2000; Quinn and Hilmer, 1994; Venkatesan, 1992). Organisations can choose to outsource activities to suppliers whose services or products are considered to be among the best in the market (Gilley and Rasheed, 2000). Consequently, a company can improve the quality of the outsourced activity (Burt *et al.*, 2003). Nevertheless, Jennings (2002) argued that, in the absence of fully developed service level monitoring, quality might be occasionally diluted.

2.8.3 Focus on Core Competencies

Focusing on an organisation's core activity is another significant advantage associated with outsourcing (Dess *et al.*, 1995). Through outsourcing non-core activities, organisations increase resource allocation and managerial time and attention to the core activities performed in-house (Burt *et al.*, 2003; Gilley and Rasheed, 2000; Rothery and Robertson, 1995; Quinn and Hilmer, 1994). The significance of clearly defining and improving an organisation's core competences has attained great attention among practitioners and management researchers. For instance, Nike™ has identified its core competencies as design and marketing of athletic shoes rather than their manufacturing. Thus, the company has focused on those aspects of the industry and relied on outsourcing for manufacturing activities (Gilley and Rasheed, 2000).

2.8.4 Flexibility

Flexibility refers to the organisation's capability to respond to environment changes (Phillips and Tuladhar, 2000). Flexibility to respond properly to changes in the competitive environment is essential if an organisation is to succeed in this increasingly global marketplace (D'Souza and Williams, 2000). The authors suggested that manufacturing flexibility includes four main dimensions: volume flexibility, variety flexibility, process flexibility, and materials handling flexibility. Moreover, Carlsson (1989) argued that an organisation is flexible in the operational sense if it has built-in procedures, which permit a high degree of variation in sequencing and scheduling. On the other hand, an operational inflexible organisation is one which does not permit variation from a predetermined schedule or sequencing changes. According to Coe (2000), low or irregular demand may cause the internalisation of service supply to be unfeasible or inefficient. Moreover, Harrigan (1985) suggested that vertical integration increases organisational commitment to a specific type of technology and can constrain flexibility. However, outsourcing has been identified as a tool to increase an organisation's flexibility to meet rapidly changing market conditions (Burt *et al.*, 2003; Gilley and Rasheed, 2000; Dess *et al.*, 1995). As new and/or more cost effective technologies become available, outsourcing organisations can switch suppliers (Gilley and Rasheed, 2000). In addition, time-to-market can also be reduced through outsourcing (Quinn and Hilmer, 2004). Jennings

(2002, p. 27) stated that "outsourcing presents organisations with the opportunity to avoid the constraints of their own productive capacity in meeting changes in the volume of scales. In a situation where the pattern of scales displays seasonal or cyclical characteristics, the penalties of under used in-house capacity may be avoided".

2.9 OUTSOURCING DISADVANTAGES

Although potential advantages of outsourcing are numerous, some authors have suggested that outsourcing is not a risk-free management practice. Hill (2000) emphasised that one of the main disadvantages of outsourcing is the possibility of losing control of key capabilities. For instance, dimensions such as quality conformance, delivery speed, and delivery reliability become partially within the suppliers' processes and systems. Quinn and Hilmer (1994) stated that the main concerns of management with regard to outsourcing include the risk of loss of critical skills or developing the wrong skills and loss of cross-functional skills. Although outsourcing of core activities sounds unlikely, it does actually happen, mostly for one of two reasons. First, some organisations may be inappropriately motivated to outsource, often by short-term cost cutting through headcount reduction. The other reason is that activities, which may appear non-core at the present time, might turn out to be far more important in the future (Lonsdale and Cox, 1998). According to Quinn and Hilmer (1994), in some cases, outsourcing a key component can lead to a loss of strategic flexibility, as the organisation loses its flexibility to introduce a new product. Moreover, Taneja (2004) stated that one of the concerns among outsourcers is that suppliers might enhance their competitive advantage within their function area, leave the original customer, and take those capabilities to a competitor. In addition, Besanko *et al.* (2003) suggested that private information about the outsourcer organisation might be leaked when an activity is performed by an independent supplier. Barrar and Gervais (2006) pondered that outsourcing can be described as an alliance that implies that the contracting parties may have conflicting interests, and the outsourcing organisation can be placing part of its destiny in the hands of other organisations that are seeking to maximize their profits. When one or more parties act

opportunistically, transaction costs will arise (Besanko *et al.*, 2003). This discussion of the advantages and risks of outsourcing can be illustrated in Figure 2.3.

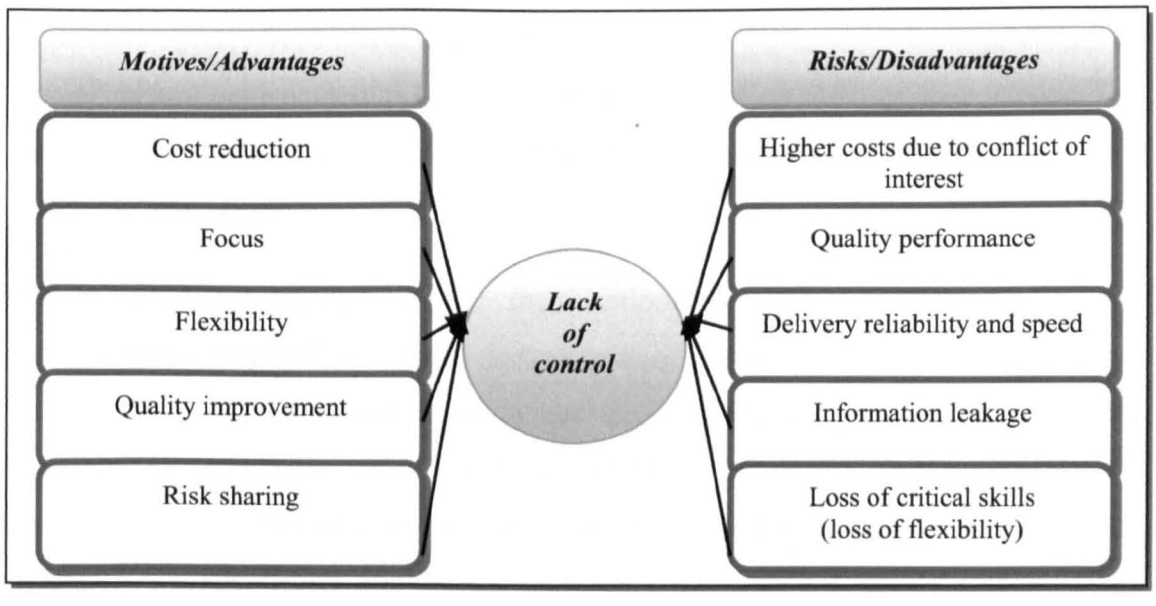


Figure 2.3: Motives and Risks of Outsourcing

Furthermore, outsourcing may lead to poor employee morale and loyalty, and negatively impact the quality of the service provided to the customers (Lam and Han, 2005; Ghobrial, 2005). Many organisations report that outsourced employees are not prepared to go beyond their immediate duties and take the time to work out ideas that may be beneficial (Momme *et al.*, 2000). Some managers regret that the supplier's employees, often working full-time inside the outsourcing organisation, do not display the same commitment and dedication shown by the internal staff. One of the managers in the study of Bryce and Useem (1998, p. 639) articulated the problems as "a mercenary may shoot a gun the same as a soldier, but he will not create a revolution, build a new society, or die for the homeland". Jennings (2002) argued that it is not uncommon for outsourcing to exert a negative impact upon cost and other aspects of performance.

2.10 FACTORS RELEVANT TO OUTSOURCING DECISIONS

In addition to the previously discussed motives behind an organisation's decision to outsource, organisational environmental factors can prove to have an influence on the

management when considering outsourcing decisions (Quelin and Duhamel, 2003). Outsourcing-related decisions were historically made primarily on a cost basis. Yet, other factors, including internal factors and environmental factors that affect the organisation, have been increasingly considered (Yang *et al.*, 2007; Leavy, 2004). The organisational environmental factors considered in the decision-making process can be divided into internal and external environment (Bolumole *et al.*, 2007; Harrigan, 1983; Duncan, 1972).

Duncan (1972) suggested that the organisational internal environment comprises those relevant physical and social factors within the boundaries of the organisation that are taken into consideration in the decision-making process. The external environment comprises those relevant physical and social factors outside the boundaries of the organisation that are considered in the decision-making process. Grant (2002) stated that the business external environment comprises those factors that influence organisational decisions and performance. Furthermore, the definitions of business environment, in the management research, can be classified into three categories: objects, attributes, and perceptions. The focus of the objects perspective is on the factors external to the organisation, which have an impact on the organisation's activities. Such factors include customers (distributors and users), suppliers (of materials, equipment, labour, capital, and workspace), and regulatory groups (government agencies and union). In the attributes perspective, researchers focus on the attributes of external forces, mainly complexity and dynamism. The perception perspective research treats the environment in terms of the managerial perception of environmental uncertainty (Ward *et al.*, 1995; Bourgeois, 1980). The following section explores theoretical perspectives related to outsourcing.

2.11 THEORETICAL PERSPECTIVES OF OUTSOURCING

The importance of outsourcing has been realised for many decades. Due to its multidisciplinary nature, outsourcing has been approached from different perspectives such as economics, purchasing, operations research, accounting, and strategic management. Approaches to outsourcing can be categorised into two main streams. The first stream addresses outsourcing decisions purely from a cost perspective. The second stream approaches outsourcing decisions from a strategic perspective taking

into account other factors in addition to cost (Canez *et al.*, 2000). Although there has been no general theory of outsourcing until now, a review of recent research on outsourcing shows an evident increase of theoretical sophistication. Commonly used theoretical approaches include the resource-based view, the transaction cost theory, and the contingency theory (Barrar and Gervais, 2006).

2.11.1 The Resource-Based View (RBV)

According to the resource-based view (RBV) of the firm, organisations' resources can be classified into three main categories: tangible, intangible, and human resources. Tangible resources include financial and physical resources. Intangible resources include reputation and culture. Human resources include skills and know-how, capacity for communication and collaboration and motivation (Grant, 2002). Resources are treated in terms of what they will generate, benefits and competitive advantages, and consist of a sticky bundle of potential services (Penrose, 1968). The resources controlled by a company allow the creation of strategies and support their efficient and effective implementation (Barney, 1991). Momme *et al.* (2000) suggested that an organisation is defined as a unique bundle of resources and capabilities which mostly determine what activities should be outsourced and how this relationship should be established and managed. Newbert (2007) stated that the RBV owes its widespread appreciation to the publication of two influential papers, the first by Prahalad and Hamel (1990), "The Core Competence of the Corporation", the second by Barney (1991), "Firm Resources and Sustained Competitive Advantage".

Barney (1991) highlighted two fundamental assumptions of the RBV: (a) that resources and capabilities are distributed in a heterogeneous form among organisations within an industry; (b) that heterogeneity tends to be stable over time. Therefore, the RBV focuses on this heterogeneity of resources, and seeks to illustrate competitive success based on the resources characteristics possessed by organisations. Lowson (2002) argued that organisations' resources and capabilities might be easily restructured to consider market opportunities. Hence, organisations must define market opportunities because of existing internal resources and their unique expertise, and outsource any activity not central to this. Prahalad and Hamel (1990) suggested that an organisation should focus on its identified core competences and outsource

non-core/peripheral activities. The RBV suggests that inputs that are traded should be bought from the market, because investments in their production do not have the potential to lead to any competitive advantage (Gilley and Rasheed, 2000).

Besanko *et al.* (2003) argued that if an organisation believes that an activity is a source of competitive advantage, but that activity can be easily obtained from the market, then the organisation ought to reconsider its belief. In that sense, McIvor *et al.* (1997) indicate that the core activities of an organisation cannot be easily identified. The organisation should consider the processes in which the necessary resources and capabilities are not available internally; these can be outsourced. Complementary capabilities can be acquired from external providers while no significant advantage can be achieved if performed by the organisation (McIvor, 2008). In that sense, Kotabe and Mol (2009, p. 206) summarised that the RBV "predicts that firms with a rich competence base that can be deployed for undertaking a given activity may internalise that activity. For those firms that are less well prepared internally, outsourcing is more viable".

2.11.2 The Transaction Cost Theory (TCT)

The transaction cost theory (TCT) can be traced back to Coase (1937) in an effort to answer the question 'why do firms exist?' in his famous paper "The Nature of the Firm". Subsequently, Williamson (1975) has been responsible for developing the concept and its introduction to organisational theory (Yang *et al.*, 2007; Barrar and Gervais, 2006; Canez *et al.*, 2000). The TCT defines markets and hierarchies as alternative ways of completing a set of transactions. The outsourcing decision is based on which governance mechanism will yield minimum cost, transaction costs versus internalisation (Williamson, 1979). Hence, the idea of transaction costs is proposed to explain why organisations choose to produce some products and services internally and purchase others. The cost of the internal production is termed a production cost while the cost of purchasing a product or service is termed a transaction cost (Thouin *et al.*, 2009).

One of the main strengths of the TCT in the study of outsourcing is that it takes into account both the production costs and the transaction costs (Barrar and Gervais,

2006). According to Cheon *et al.* (1995), outsourcing leads to lower production costs, mainly due to the economy of scale that suppliers enjoy in providing an activity. On the other hand, outsourcing generally leads to higher transaction costs that arise from negotiating, monitoring, and enforcing contracts. Transaction costs include the time and expenses of negotiating, writing and enforcing contracts (Besanko *et al.*, 2003). Three factors have been identified as causing increase in transaction costs: asset specificity, uncertainty, and infrequency (Cheon *et al.*, 1995). The first factor is asset specificity, which refers to the uniqueness of the assets or skills required to the extent that they generate less value outside the contractual relationship (Williamson, 1985). The second factor is uncertainty. Uncertainty may be a result of an unpredictable market, technological and economic trends, and quality of outputs (Cheon *et al.*, 1995). Aubert *et al.* (1996) stated that uncertainty is at the root of all market failures or transactional difficulties. The third factor is the frequency of the transaction (Thouin *et al.*, 2009). Frequency factors relate to the frequencies that the two parties contract to gather (Cheon *et al.*, 1995). When contracting parties, the organisation and its supplier interact frequently; it may be more economical to design a governance mechanism that is specifically adapted to a specific situation. Detailed contracts can be drawn up to specify the obligation of each party and the allocation of costs and benefits in every possible situation. However, for low frequency transactions, the organisation will prefer to bear the risk associated with opportunism and uncertainty (Aubert *et al.*, 1996). This perspective holds that outsourcing will be greater in the presence of low asset specificity, low uncertainty, or low frequency; each of these factors is considered in turn (Lamminmaki, 2007).

2.11.3 The Contingency Theory (CT)

The contingency theory (CT) suggests that different strategies are appropriate for different competitive business settings (Hambrick and Lei, 1985). An appropriate organisational structure is dependent upon a set of contingency factors (Tosi and Slocum, 1984). Contingency theories differ from the classical theory 'one best way' of managing and organising (Hambrick and Lei, 1985) by emphasising 'it all depends' (Tosi and Slocum, 1984). Furthermore, Tosi and Slocum (1984) suggested that central to all contingency approaches is the assumption that performance is a

consequence of the fit between several organisational factors. Hence, effective strategies are those that achieve a fit between organisational factors and environmental conditions (Cheon *et al.*, 1995).

The contingency approach has been utilised in much of the research on outsourcing even when contingency labels have not been formally used (Gilley and Rasheed, 2000). The basic principle of the contingency theory is that outsourcing strategy is only one of several types of economic restructuring (Cheon *et al.*, 1995). The contingency approach presents a significant potential to arrive at prescriptive findings, as it is helpful in identifying the specific environmental and organisational attributes that can lead to successful outsourcing (Barrar and Gervais, 2006). Even though the RBV and the TCT focus on two different issues – the search for competitive advantage and an efficient governance structure – organisations have to deal with both issues to establish a successful outsourcing strategy (McIvor, 2008). Furthermore, location-specific advantages and other organisational factors are part of the decision on where to source or market as indicated by the contingency theory (Murray *et al.*, 1995). Ultimately, the performance of outsourcing and the effect of outsourcing on the performance of organisations are not determined by a single factor (Hätönen and Eriksson, 2009).

2.12 OUTSOURCING AND OPERATIONS PERFORMANCE

The relationship between operations strategy and organisational performance has long been assured (Ward *et al*, 1995; Skinner, 1969). Outsourcing is one of the major strategies adopted by organisations to improve their performance (Mpoyi, 2003). Several authors have suggested that organisational performance can be enhanced through outsourcing (Elmuti, 2003; Quelin and Duhamel, 2003; Bettis *et al.*, 1992). Management researchers relate such performance improvements to the advantages attained through outsourcing such as focus on core competences, cost reduction, and improved quality (Espino-Rodriguez and Padron-Robaina, 2004).

It has been stated that concentrating resources on selected activities that have the potential to provide competitive advantage is a key principle of strategy (Gilley *et al.*, 2004). Thus, in order to attain competitive advantage, organisations need to identify

activities in which they will concentrate their resources (Hamel and Prahalad, 1994). By applying the same principles to outsourcing, it can be argued that the focus on activities providing a source of competitive advantage will improve the performance of the organisation (Gilley *et al.*, 2004). Hayes *et al.* (2005) identified several dimensions on which organisations can choose to focus. Such dimensions include product lines, process technologies, customer groups, or geographies. Skinner (1974, p. 116) stated that "the focused factory does a better job because repetition and concentration in one area allow its work force and managers to become effective and experienced in the task required for success. The focused factory is manageable and controllable". Several studies have confirmed the positive impact of being focused on operating performance improvements at a divisional and organisational level (Huckman and Zinner, 2008).

Espino-Rodriguez and Padron-Robaina (2004) argued that given its tactical and strategic characteristics, outsourcing has an impact on the objectives of the operations and organisational performance. McIvor *et al.* (1997) suggested that sourcing decisions could have an impact on flexibility, customer services and the core competences of the organisation. Strategic outsourcing can provide an organisation with greater flexibility, higher quality, lower capital investment and better focus (Quinn and Hilmer, 1994). According to Espino-Rodriguez and Padron-Robaina (2006), outsourcing would only 'make sense' when it positively influences organisational performance objectives and the organisation's performance. Nevertheless, Kotabe *et al.* (2008, p. 39) stated that "conflicting predictions have arisen over outsourcing performance implications with varying attentions for its benefits and drawbacks". Moreover, the analysis of the relationship between outsourcing and the operational performance of organisations constitutes a neglected research area (Bustinza *et al*, 2010).

2.13 PERFORMANCE OBJECTIVES

Ward *et al.* (1995) suggested that performance objectives and competitive priorities are a convenient device for measuring operations strategy, regardless of the strategy-making process. Slack and Lewis (2002, p. 18) defined operational performance objectives as "the aspects of operations performance that satisfy market requirements

and therefore that the operation is expected to pursue". According to Espino-Rodriguez and Padron-Robaina (2004), understanding how to create or add value for the customer is the foundation of developing an efficient operations strategy. Added value can be attained through stressing the different operations objectives. Many operations strategy scholars have defined their own set of performance objectives. There is no consensus on the terminology used when referring to these objectives or on what they are. Operations objectives can be referred to as "performance criteria, operations strategic dimensions, performance dimensions, competitive priorities, strategic priorities" (Slack and Lewis, 2002, p. 18). Nevertheless, the most commonly stated performance objectives are cost, delivery/dependability, quality, and flexibility (Espino-Rodriguez and Padron-Robaina, 2004; Badri *et al.*, 2000; Ward *et al.*, 1995; Stonebraker and Leong, 1994; Wheelwright, 1984). These performance objectives are briefly described next.

2.13.1 Cost Objective

Stonebraker and Leong (1994, p. 63) defined the cost objective as "the production and distribution of a product or delivery of a service with a minimum of expenses or wasted resources such that you have a cost advantage in the market". Slack and Lewis (2002, p. 48) define cost, as it is applied in operations strategy, as "any financial input to the operation that enables it to produce its products and services". Slack and Lewis (2002) stated that financial inputs can be classified into three categories: the first one is the operating expenditure which comprises the financial inputs to the operations required to support the ongoing production of goods or services. Such costs include expenditure on labour, materials, rent, energy, etc. The second category is capital expenditure. This comprises the financial inputs to the operations required to acquire the facilities required for production. Those costs include investments in land, buildings, machinery, vehicles, etc. The third category is represented by working capital. This comprises the financial inputs to finance the time difference between the expected outflow and the inflow of cash. Lowering the costs can be translated into the organisation's ability to offer its customer lower prices which will lead to an increase in demand for the products or services (Badri *et al.*, 2000). Moreover, through cost

reduction organisations can increase their profit margins (Lowson, 2002; Badri *et al.*, 2000).

2.13.2 Delivery Objective

Stonebraker and Leong (1994, p. 63) defined the delivery objective as "the dependability in meeting requested and promised delivery schedules or speed in responding to customer orders". There are two dimensions of delivery: delivery dependability and delivery speed. The delivery dependability dimension relates to honouring the promised delivery due time given to the customer. The delivery speed dimension relates to the time between the customer request of a service or product and the time the customer receives it (Chase *et al.*, 2004; Slack and Lewis, 2002).

2.13.3 Quality Objective

Stonebraker and Leong (1994, p. 63) described the quality objective as "the manufacture of products or delivery of a service in conformance with specifications or meeting customer needs". Chase *et al.* (2004) stated that quality could be divided into two categories: product quality and process quality. Product quality relates to the product specification. Process quality relates to the absence of defects.

2.13.4 Flexibility Objective

Stonebraker and Leong (1994, p. 63) defined the flexibility objective as "the ability to respond to rapid changes of product, service, or process, often identified as mix or volume". Thus, operational flexibility can be demonstrated through the ability to produce a greater variety of products or services, product flexibility, or to operate at different demand levels and/or volume flexibility (Slack and Lewis, 2002; Wheelwright, 1984). Organisational ability to respond quickly and profitably to market demands is critical to success in today's competitive business environment (Gunasekaran and Kobu, 2007; Narasimhan and Das, 1999). Swamidass and Newell (1987) argued that the greater the flexibility, the better the performance.

2.14 ISSUES RELATED TO OUTSOURCING

The literature indicates that one of the main topics in supply chain management is identifying the organisation's boundaries and that includes outsourcing. Scholars have

suggested that outsourcing has been increasingly grabbing the attention of managers as one of the management tools by which organisations' boundaries can be strategically defined. Potential advantages of outsourcing include cost reduction, quality improvement, focus on core competences, and flexibility. However, several authors have stated that outsourcing is not a risk-free management tool. Possible disadvantages of outsourcing include losing control of key capabilities, leakage of outsourcers' private information, and poor employee morale and loyalty. Although many researchers have suggested that outsourcing could exert a positive impact on organisations' performance, other studies suggest otherwise. Scholars have suggested that the implications of outsourcing in organisational performance have not been confirmed by research. Theoreticians have been divided into three main camps: those who argue for a positive impact related to outsourcing, those who claim it has a negative impact on firms' performance and a group that assumes outsourcing has no direct impact on performance. Conflicting viewpoints and the scarcity of studies examining this relationship can be identified in the review of literature on outsourcing. Considering the importance of outsourcing as a management tool, the lack of studies focusing on the impact of outsourcing on an organisation's main performance objectives (cost, delivery, quality, and flexibility) and overall performance has been indicated. Furthermore, the service sector has been overlooked in this context (Espino-Rodriguez and Padron-Robaina, 2004). In the airline industry, for instance, even though outsourcing has been on the rise, empirical studies on outsourcing practices, determinants and implications for performance are scarce. "In practice, the advantages of outsourcing are not always clear; contracting-out key elements of a business can be risky, difficult to implement and manage, and there have been instances where we hoped for advantages have not materialized" (Rieple and Helm, 2008, p. 280). In light of the importance of outsourcing for the service sector, especially in the airline industry, a review of literature was conducted and it is presented in Chapter 3.

2.15 CHAPTER SUMMARY

Chapter 2 focused on the management literature related to outsourcing. The chapter commenced by highlighting the importance of supply chain management in achieving

competitive advantage. It has been suggested that there has been an evolution from traditional to strategic outsourcing, as activities critical to organisational success are being outsourced. Theoretical approaches suggested for outsourcing were introduced. The approaches covered were the resource-based view, the transaction cost theory, and the contingency theory. Although advantages are mentioned in the literature, specific risks and disadvantages are also suggested. While several researchers state that outsourcing can exert a positive impact on organisations' performance, other studies suggest the contrary. The lack and conflicting nature of studies related to the implications of outsourcing in terms of performance objectives (cost, delivery, quality, flexibility) and overall operational performance of organisations were identified. Moreover, the research on the outsourcing implications on performance in the service sector, especially the airline industry, has been somewhat neglected. Chapter 3 will be dedicated to exploring the management literature on the airline sector and its relationship with outsourcing.

CHAPTER 3

THE AIRLINE INDUSTRY

3.1 CHAPTER OVERVIEW

This chapter presents an overview of relevant literature related to the airline industry. Section 3.2 provides an overview of the air transportation industry. Section 3.3 discusses the challenges for the airline industry. Section 3.4 explains the need for change in the airline industry. Section 3.5 provides an overview of outsourcing practices in the airline industry. Section 3.6 describes three prevailing business models of airlines. Section 3.7 highlights the performance measures utilised by airlines. Section 3.8 discusses the identified research gap and research questions; the research framework is also presented. Section 3.9 contains the summary of the chapter.

3.2 AIR TRANSPORTATION INDUSTRY OUTLINE

The air transportation industry drives economic and social progress. The industry has a substantial economic impact, both through its own activities and as a facilitator for other industries. Its most important economic contribution is through its impact on the performance of other industries and as an enabler of their growth. In general, the air transport industry plays a vital role in advancing the performance of the world economy (Air Transport Action Group, 2005 and 2008). For instance, the air transport industry directly generates 5.5 million jobs globally, distributed as follows:

- 0.78 million work in the civil aerospace sector involved in the manufacture of aircraft systems, frames and engines, etc.;
- 0.38 million people are employed by airport operators, in airport management, maintenance, security, etc.;
- 2.3 million have other jobs on-site at airports – for example, in retail outlets, restaurants, hotels, etc.;

- 2.0 million work for airlines or handling agents, including flight crew, check-in staff, maintenance crew, etc.

Furthermore, the air transportation industry supports 17.1 million jobs within tourism. In total, airlines transport over 2.2 billion passengers annually (Air Transport Action Group, 2008). In 2009, there were 1,715 airlines worldwide (IATA, 2010). Wensveen (2007, p. 148) defined an industry as "a number of firms that produce similar goods and services and therefore are in competition with one another". The author states that the airline industry is a segment or part of the broader air transportation industry.

3.3 THE AIRLINE INDUSTRY: CHALLENGES

In 2004, Giovanni Bisignani, Director General and CEO of the International Air Transport Association (IATA), revealed that the number of air transported passengers had reached its highest-ever level: 1.8 billion passengers. There had been an increase of about 14% over the number of passengers in 2003. The IATA estimated that the number of passengers would continue to increase at a rate of 6% per year, for the period from 2004 to 2008 (Bisignani, 2004). Despite those encouraging increments in the number of passengers, the period between 2001 and 2005 saw losses of US$40 billion in the worldwide airline business (Philips, 2006). The airline industry has faced many challenges. The implications of globalisation constitute one of the major challenges for the industry. Other challenges include the spread of low-cost carriers, soaring fuel prices (Ghobrial, 2005), the implications of September 11th on the high costs associated with new security directives (Wang, 2004), and customers' demand for cheaper travel (Bisignani, 2004). In short, the challenges faced by the airline industry could be categorised as environmental (external) challenges comprised of jet fuel prices, globalisation, liberalisation/deregulation of the air transportation industry, privatisation of state-owned airlines, and entrance of low-cost carriers. In addition, the industry faces internal challenges. These items are described next.

3.3.1 Jet Fuel Prices

Rising prices of jet fuel have been a major factor in the airlines' business loss (Philips, 2006). Bisignani (2004) stated that "fuel is the enemy this year that will steal our return to profitability". Although there was an increase in the number of world travellers, that increase has not been translated into profitability because of dramatically increasing fuel costs (Civil Aviation, 2005). Historically, fuel has accounted for 10-15 percent of the industry's total operating costs. However, by early 2008 about 30% of the IATA carriers' total operating costs were attributed to fuel, having risen from 13% in 2001 (Holloway, 2008). Moreover, Campbell (2004) argues that it is one of the gravest mistakes for any airline to assume that fuel prices will go down soon. Several factors have influenced the price of fuel, mainly: the war in Iraq, terrorist actions in Saudi Arabia, political unrest in Nigeria and Venezuela, the rapidly growing economies of China and East Asia, and the Chinese government's decision to create a strategic oil reserve. The cost of fuel prices shows no sign of decreasing in the near future (Philips, 2006). Many airlines tried to pass this rise in fuel price on to customers, by announcing price increases. However, due to global competition in the air transportation market, those airlines were quickly forced back to lower prices. Airlines should get used to the new fuel prices and adopt effective and efficient strategies to tackle this issue (Campbell, 2004). In that regard, Wensveen (2007) stated that since deregulation, pricing has become a major competitive variable.

3.3.2 Globalisation

Globalisation can be defined as "the integration of spatially separate locations into a single international market" (Blyton *et al.*, 2001, p. 447). Organisations with superior performance establish integrated global networks (Ferdows, 1997). Such integration encompasses both economic and political dimensions. The economic dimension ultimately involves a reduction in the cost of conducting business on an international basis. The political dimension includes privatisation initiatives, free trade agreements, and the relaxation of capital controls in order to facilitate foreign direct investment. Although, air transport services are an important enabler for such integration, they have been significantly affected by the process of integrating into a single international market (Blyton *et al.*, 2001). Conventionally, the air transportation

market was categorised as one of the most highly regulated. For instance, air transportation controls used to include market entry permission, which was restricted through a bilateral control of traffic rights. In addition, a pre-agreed formula controlled the capacity available to all airlines sharing any particular route. Prices were also set through multilateral negotiations with the International Air Transport Association (IATA) (Blyton *et al.*, 2001).

Generally, the air transportation market, with a high degree of state regulation, was fairly stable and predictable. Therefore, the incentives for the top management to undertake major changes and innovations were negligible. Any increase in cost could be easily passed to the customer in the form of higher prices due to the monopoly position those airlines enjoyed. Furthermore, state ownership with the absence of the private shareholder reduced the pressure on those airlines to seek productivity improvements in order to reduce costs or increase profits. In consequence, under those conditions, there was often an absence of a rigorous efficiency strategy. However, because of globalisation, those privileges that used to be enjoyed by many major airlines were not preserved. Open markets, deregulation and privatisation are being pushed progressively forward in many countries around the globe. Airlines have been adopting more commercially-oriented strategies. Cutting costs and boosting profits have become the prevailing themes (Holloway, 2008; Blyton *et al.*, 2001).

3.3.3 Liberalisation/Deregulation of the Air Transportation Industry

The governments' use of legislation to control their rapidly expanding transport industries, including air transportation, was the norm during the 1930s. It was widely believed that government control over natural monopolies was needed to prevent inefficient or destructive competition, safeguard the transportation industry's development, and ensure safe operations. However, in the 1970s, the prevailing view of the majority of academics and analysts was that the control of governments over airlines was no longer necessary or desirable. Fares and costs would be lower if the market were liberated. Consequently, the US government introduced its Airline Deregulation Act of 1978 (Hooper *et al.*, 1996). That was the trigger for civil aviation reforms around the globe followed by Canada, the UK, Australia, and New Zealand in the 1980s. The completion of deregulation within the European Union took place in

April 1997 (Genc *et al.*, 2006), in Canada (beginning in 1984), New Zealand (1986), Australia (1990), and Europe (1992-1997) (Gillen, 2006). In addition, in some of the developing countries, the International Monetary Fund and the World Bank convinced governments to take serious steps towards liberalising their economies and to invite the private sector to become more heavily involved and to participate in areas previously reserved for government corporations. During the 1990s, a large number of developing countries were either considering or accelerating the liberalisation of domestic airline competition (Hooper *et al.*, 1996). Furthermore, the International Air Transport Association (IATA) is now acting as an agent of change for the air transportation industry. The IATA is aiming to shift to a 'business-like' environment 'at different speeds in different regions'. However, outdated regulations and inconsistent policies are examples of external obstacles to change coming from governments (Bisignani, 2003). The IATA believes that governments and airports have much to do in order to improve efficiency. Hence, the IATA plans to push for industry deregulation. Bisignani, the General Director of the IATA, stated that "airlines moved fast after September 11th, reengineering, restructuring... But governments have not played a role" (Civil Aviation, 2005, p. 31).

3.3.4 Privatisation of State-Owned Airlines

State-owned airlines enjoyed the 'national flag' status and privileges. Those privileges included preferential access to their country's main airports and dominion over their domestic market. In addition, through bilateral agreements between national governments, those airlines also enjoyed preferential access to international markets (Blyton *et al.*, 2001). However, while the liberalisation of international air transport was growing in the mid-1980s, the privatisation of state-owned airlines became part of the government's agenda (Doganis, 2006). Privatisation has been defined as "the transfer by governments to private sectors of the assets of publicly-owned enterprises, so that the new entity gains a legal status that enables it to act as a private company" (Humphreys *et al.*, 2003, p. 31). It is generally accepted wisdom that privatisation is driven by the belief that public ownership is cost inefficient (Willner and Parker, 2007). In that regard, Backx *et al.* (2002) investigated the influence of the ownership structure on the airlines' performance. The study concluded that public airlines under-

perform compared to private airlines. Airlines with mixed ownerships tend to perform better than public airlines, but worse than private airlines. Most of the state-owned airlines suffer to varying degrees from many internal difficulties and financial difficulties are at the top of the list. The cause of such difficulties can be attributed mainly to the slow response to the market crisis. Other difficulties include a lack of clearly defined development strategies in addition to bureaucratic and over centralised management. Moreover, most of those distressed state-owned airlines are also characterised by being overstaffed with poorly delivered services, both on the ground and in the air (Doganis, 2006).

Motives for ownership restructuring through privatisation include enhancing airline financial performance and operating efficiency (Humphreys *et al.* 2003; Backx *et al.*, 2002) in addition to the introduction of commercially-focused management (Humphreys *et al.* 2003). There was a growing political view that efficiency improvement, service quality enhancement, and cost reduction could be achieved through privatisation of state-owned utilities, including transportation companies (Doganis, 2006). However, government airlines need to be properly prepared for privatisation. Preparing an airline for privatisation, and preparing its management team and staff to work on a fully commercial basis is a long process, which can take many years (Hooper *et al.*, 1996). For example, the German government privatised the first division of Lufthansa in 1994. The full privatisation of the airline was completed in October 1997 (Doganis, 2006). Over the past 15 years, many publicly-owned and operated airlines have been either fully or partially privatised (Backx *et al.*, 2002). Nevertheless, in spite of the growing trend toward privatisation, a surprisingly large number of state-owned airlines still existed in the middle of 2004. More than 70 international airlines were majority owned by their governments; about 40 of them were 100 percent state-owned (Doganis, 2006). A detailed list of airlines and corresponding shareholding is shown in Table 3.1.

3.3.5 Entrance of Low-Cost Carriers

Radical changes have taken place in the airline industry since deregulation in 1978. The form of these changes includes the wave of new entrants encompassing the low-cost, no-frills carriers (Ghobrial, 2005).

Table 3.1: Government Shareholding in International Airlines (July 2004)

1 Fully (100%) government-owned		
Adria Airways	Ethiopian	Olympic
Air Algerie	Garuda	Royal Brunei
Air China	Ghana Airways	Royal Jordanian
Air India	Gulf Air	Royal Nepal
Air Malawi	Indian Airlines	Saudi Arabian
Air Niugini	Iran Air	Sierra National
Air Seychelles	Iraqi Airways	Sudan Airways
Air Zimbabwe	JAT	Syrianair
Bangladesh Biman	Libyan Arab	TAAG Angola
Cubana	Kuwait Airways	TAP – Air Portugal
Egyptair	LAM (Mozambique)	Tajikistan Airlines
El Al	Lithuanian	Vietnam Airlines
Emirates	Mandarin	
2 More than 50% government-owned		
Middle East Airlines 99.0%	Air Madagascar 89.6%	China Eastern 61.6%
Turkish Airlines 98.2%	PIA 85.1%	Alitalia 62.3%
Malev 97.9%	Air New Zealand 82.0%	SIA 54.0%
Air Malta 96.4%	Air Gabon 80.0%	Yemenia 51.0%
Cameroon Airlines 96.4%	Tunis Air 74.4%	Aeroflot 51.0%
Royal Air Maroc 95.0%	China Airlines 71.3%	Air Mauritius 51.0%
South African 95.0%	Cyprus Airways 69.6%	Sri Lankan 51.0%
Aer Lingus 95.0%	Malaysian 69.3%	Air Tanzania 51.0%
Tarom 95.0%	China Southern 68.1%	SAS 50.0%
Czech Airlines 94.9%	LOT Polish 68.0%	Qatar Airways 50.0%
Thai Airways 92.9%	Finnair 66.0%	
3 Less than 50% but over 10% government-owned		
Pluna (Uruguay) 49.0%	Luxair 36.1%	
BWIA 48.9%	Estonian Air 34.0%	
Lloyd Aereo Boliviano 48.3%	Oman Air 33.8%	
Air France 44.7%	Swiss 32.6%	
VASP 40.0%	LIAT 30.8%	
Air Namibia 40.0%	Air Jamaica 25.0%	
Austrian 39.7%	Kenya Airways 22.0%	
	Aeroperu 20.0%	

Source: Adapted from Doganis (2006)

Low-cost carriers have grown rapidly in North America, Europe, Asia, and Latin America. Their market share of seats in 2007 stood at about 30 percent intra-Europe, 25 percent intra-North America, 20 percent intra-Latin America, and 12 percent intra-Asia (Airbus, 2008). By 2003, low-cost carriers were present in 2304 of the top 5000 US domestic cities (Holloway, 2008). Although, low-cost carriers have been slow to step into long-haul routes, they may have used the experiences and skills they built in the domestic and short-haul markets in achieving cost advantages in the long-haul

markets (Francis *et al.*, 2007). In the early 1990s, most major airlines were reporting losses while low-cost carriers were posting profits. As a result, the message was that trimming costs has become essential for airlines in order to operate profitably and survive in today's hyper-competitive market (Ghobrial, 2005). Cost cutting and control have become obsessions for all airlines around the globe. Prices are now largely influenced by the low-cost carriers in North America, Europe, and Asia. Airlines are forced to provide better service at lower cost (Bisignani, 2003). Therefore, with the entrance of low-cost airlines, the only option for traditional carriers to survive remains to become more cost effective and creative (Taneja, 2004).

3.3.6 Internal Challenges

In addition to the mentioned external challenges, specifically industrial and global challenges, airlines face several internal, mainly operational, challenges. Schedule planning presents a consistent challenge for almost all airlines around the globe. Schedule planning comprises optimum aircraft and crew scheduling to maximise airline profitability. The challenge of schedule planning involves several complexities such as flight networking, varying aircraft types, gate coordination, airport slots, air traffic control restrictions, noise curfews, maintenance requirements, and crew work rules (Barnhart *et al.*, 2003). Aircraft are the most limited resources in the airline industry. Thus, airlines strive to construct aircraft routes such that the aircraft utilisation is maximised (Abdelghany *et al.*, 2004). Although schedule planning has been a long-term challenge for almost all airlines, many complexities related to the problem have not yet been solved together by one single optimum model. Instead, the schedule planning problem has been divided into sub-problems. These sub-problems are usually defined as follows: "1. *Schedule design*: defining which market to serve and with what frequency, and how to schedule flights to meet those frequencies; 2. *Fleet assignment*: specifying what size aircraft to assign to each flight; 3. *Aircraft maintenance routing*: determining how to route aircraft to ensure satisfaction of maintenance requirements; 4. *Crew scheduling*: selecting which crews to assign to each flight to minimize crew costs" (Barnhart *et al.*, 2003, p. 369).

3.4 THE NEED FOR CHANGE

Because of these challenges, airlines are faced with the need to rethink their business strategies. Reducing costs and boosting profits top the priority list of major airlines. It is generally believed that privatisation will lead to a more commercially-oriented culture within airlines, management efficiency and freedom from government constraints. Nevertheless, privatisation by itself is not enough. Fundamental restructuring of every aspect of each activity of the airline is also required. The aim is to reduce costs and improve the quality of the services being delivered. In order to be privatised, state-owned airlines must become financially attractive to prospective buyers or partners. For instance, before being restructured, as part of its privatisation plan, Air France accumulated losses of over US$3 billion in the eight years up to 1997 (Doganis, 2006).

Airlines tend to be burdened with significant fixed costs (Vasigh and Fleming, 2005; Behn and Riley, 1999). Operating costs usually represent about half of an airline's expenses (Ghobrial, 2005). In the past, as a response to the cyclical downturn, airlines aimed to reduce costs through reduction of staff numbers, wage freezing, advertising and attaining budget cutting, fleet renewal delay, and cutting of unprofitable routes (Doganis, 2006). Cost cutting initiatives have yielded results, however, greater efficiency is essential. The focus should be on simplifying industry processes in all aspects along with safety and security. Bisignani (2004) stated that "business processes become complex through time. Our customers want value, not complexity". Although most airlines have taken steps to simplify their processes, more dramatic changes and a supply chain revision are still needed (Taneja, 2004). Therefore, airlines are urged to focus on their core business processes and continue to outsource other activities (Bisignani, 2003; Feldman, 1997). Wensveen (2007) argued that the top three costs for airlines are fuel, labour and maintenance.

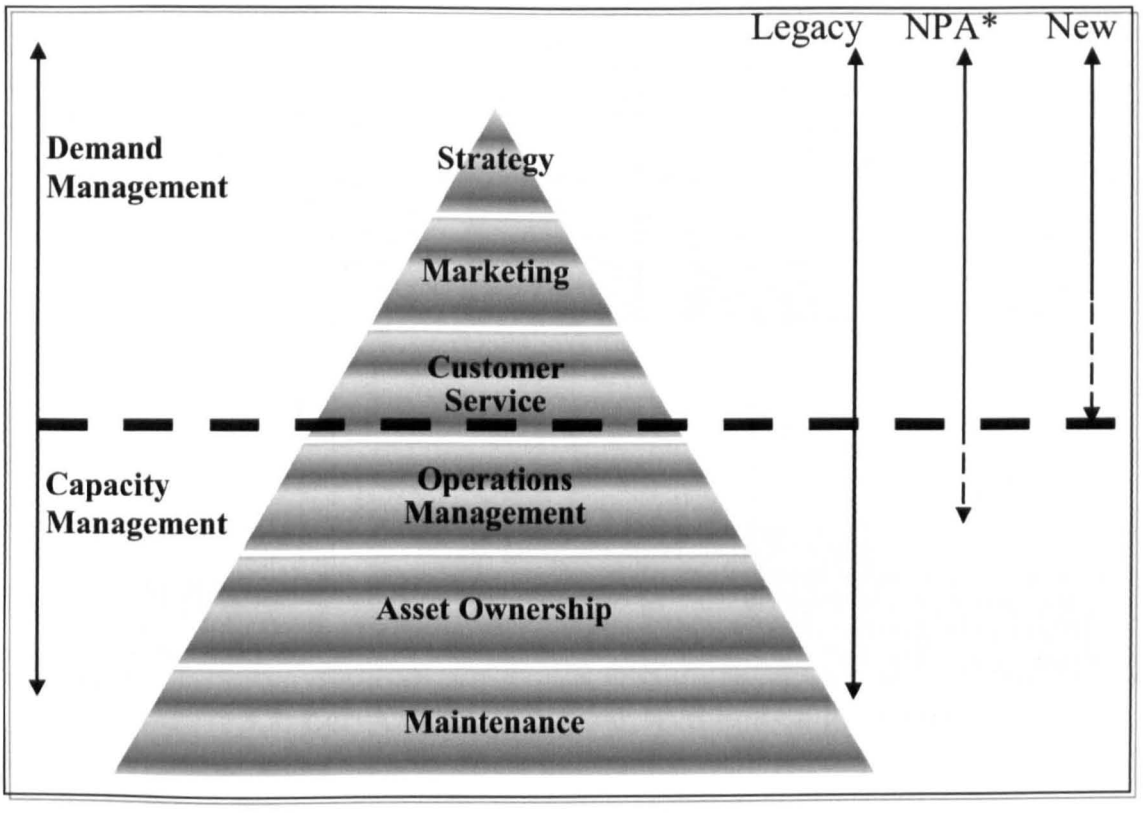
Due to the increased pressure put on airlines in recent years to implement cost-cutting strategies, one of the areas that has been hit is labour. Holloway (2008) stated that, in general, airline staff are highly paid in comparison with other workers in their local economy. Holloway (2008) suggested that since the deregulation of the US passenger market, the airline industry is clearly in a period of fundamental structural change.

Such change is accelerated by the European deregulation and the broad spread of both domestic liberalisation and less restrictive bilateral agreements in the 1990s. The author concluded that the significant increase in fuel prices and the development of the internet have provided further momentum to the structural change. The creation of Star Alliance[1] in 1997 and subsequent launch of the Star Alliance Fuel Co. in 2003 represent good examples of strategies that evolved from the structural change demanded from the airline industry (Doganis, 2006). This strategic alliance included code sharing, joint services, block seats, joint marketing, joint fares, franchise agreements, schedule coordination, frequent flyer benefits, airport slot sharing, joint purchase and repairs of spare parts, shared use of hangars, joint development of technical and training procedures, baggage handling, and ground maintenance (Weber, 2005). Using this strategy, reportedly, the member airlines have obtained cost reduction in several operational areas and wider global coverage (Taneja, 2005). Other well-known strategic alliances include Wings, Oneworld, and SkyTeam (Iatrou and Alamdari, 2005).

3.5 OUTSOURCING IN THE AIRLINE INDUSTRY

Conventional airlines are historically vertically integrated. They have taken more risk than necessary by managing capacity and demand. Performing non-core activities in-house could increase the risk of performing them ineffectively. However, new entrants tend to spread the risk by focusing on core activities that relate more to the demand side than the capacity side. These new entrants tend to outsource as many activities as possible. New airlines will engage more and more in managing the demand side and develop strategic alliances with a limited number of suppliers to manage capacity as illustrated by Figure 3.1. In the early 1990s, the airline industry witnessed the growth of specialist suppliers (Ghobrial, 2005). Therefore, with the broad spectrum of efficient and effective suppliers available in today's market to handle almost all non-core activities of an airline, it would be more logical for an airline to outsource non-core activities.

[1] Five airlines initially formed Star Alliance: Air Canada, Lufthansa, Scandinavian Airlines, Thai Airways International, and United Airlines (Tagliabue, 1997). Nowadays, Star Alliance includes 27 airlines: Air Canada, Air New Zealand, Austrian Airlines, British Midland, Lufthansa, Mexicana, Scandinavian Airlines, Singapore Airlines, TAM Airlines, and United Airlines, among others (Star Alliance, 2011).



* NPA = New Paradigm Airlines

Source: Adapted from Taneja (2004)

Figure 3.1: Core Competency-based Strategy

An organisation that finds itself less than best in performing a given activity should outsource that activity to a supplier who delivers superior value and focus on its core activities. As every non-core outsourced activity is the core activity of a specialised supplier, the risk will be shared with those suppliers who can better perform such activities (Taneja, 2004). The airline support services represent attractive opportunities for other specialist companies to compete by providing consistent and high-quality services through investments in the operations of those services as core businesses. Functions outsourced more frequently include in-flight catering, ground handling, training, maintenance, security, information technology, reservation services, technical services, meteorological services, and travel services (Ghobrial, 2005). Taneja (2004, p. 150) related the airlines core competences to the "identification of customer needs, design of the product to meet customer needs, and the services offered to build customer loyalty". Figure 3.2 shows the generic functions in an airline.

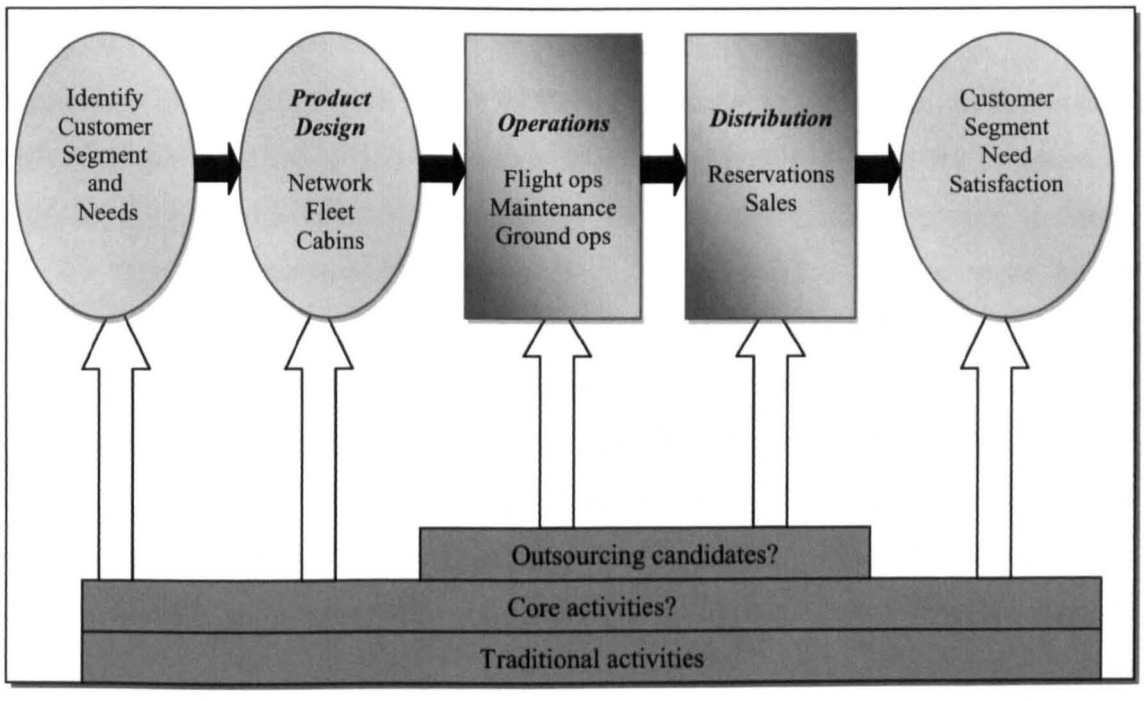


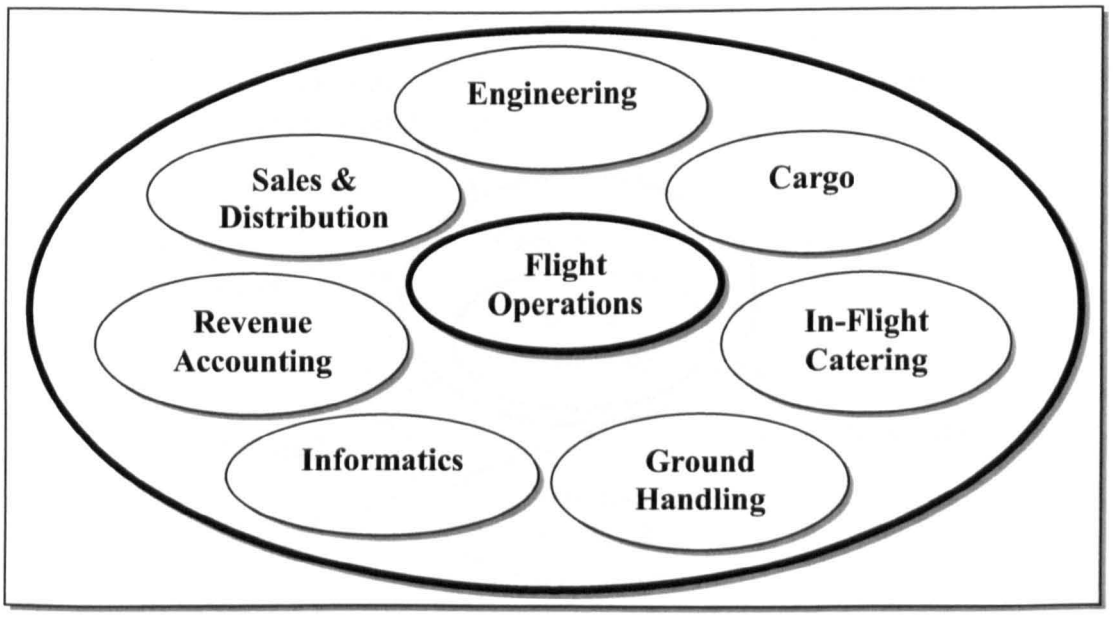
Figure 3.2: Core Competency Analysis Based on the Value Chain

Outsourcing has become a popular option for the world's airlines as a means of returning to their core businesses and reducing costs (Ghobrial, 2005; Nelms, 1999). For instance, in the period between 1985 and 2000, the ten largest US airlines witnessed a tenfold increase in their maintenance and overhaul outsourcing (Ghobrial, 2005). This trend has been growing rapidly among airlines. While most airlines continue to perform line maintenance in-house to ensure punctuality, half of the US airlines outsource heavy-overhaul to outside suppliers in the US and overseas. Low-cost carriers and freight carriers have always outsourced maintenance, yet older carriers have felt the pressure to follow this practice (Carey and Frangos, 2005). Holloway (2008) stated that one of the low-cost carrier's strategies was the heavy reliance on external suppliers of services such as airplane and passenger handling and airplane maintenance. The outsourcing of activities traditionally delivered in-house is a strategy that many 'legacy carriers' have followed. It is worth highlighting that the author suggests that although there is no universally accepted definition, the expression 'legacy carriers' is frequently used to refer to the airlines that existed before the Deregulation Act 1978. In addition, Wensveen (2007) stated that low-cost carriers and new entrants have an advantage over legacy carriers when it comes to efficiency through the establishment of a lean structure.

3.6 NEW AIRLINE BUSINESS MODELS

According to Lonsdale and Cox (1998), outsourcing practices are fundamentally affecting the structure of organisations. Performing required activities in-house by internal departments and cost centres has been the traditional approach in large, highly integrated airlines (Holloway, 2008). Traditionally, airlines were highly vertically integrated. They have performed most of the services and functions required in-house; their departmental structure reflects this. There were, and still are in most airlines, separate departments dealing with maintenance, ground handling, in-flight catering, information technology, marketing and sales, and so on. Because these functions were considered important and critical for the efficient running of the airline, the airlines' management felt that they had to control them directly, although some work is provided by other suppliers that usually occurs in destinations away from an airline's home base (Doganis, 2006). Figure 3.3 shows the conventional airline structure.

Author's comments:
Airlines are self-sufficient, with most functions/services provided internally

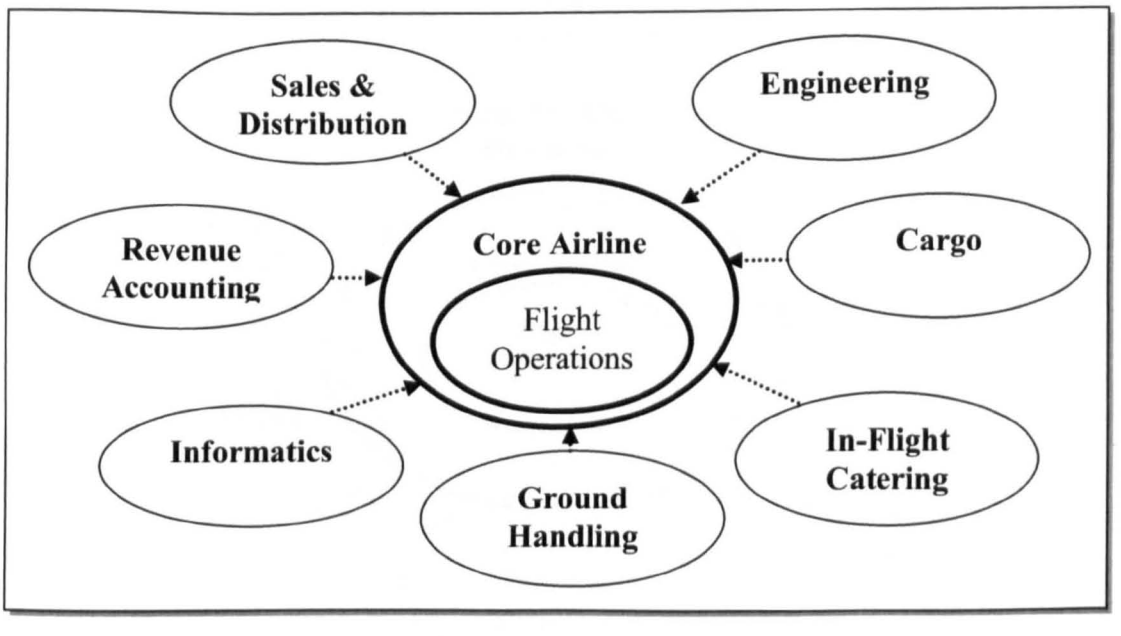


Source: Adapted from Doganis (2006)

Figure 3.3: Traditional Airline Model

However, airlines have started to examine different business models. The differences in business models pursued by different airlines depend partly on the resources and capabilities of each airline (Taneja, 2004). There is a trend towards the utilisation of more complex networks of inter-firm relationships (Holloway, 2008). Since the mid-1990s, two alternatives and different internal business models have emerged, namely the 'virtual airline' and the 'aviation business'. In terms of the virtual airline model, the underpinning concept is that an airline should focus on its core competences, operating a network of air services, and rely on outsourcing as many non-core activities and functions as possible. Hence, an airline could significantly reduce costs, especially in activities where it is over-staffed. In addition, future costs could be also achieved by obtaining competitive bidding from alternative suppliers. This type of airline structure is illustrated by Figure 3.4. The notion of a virtual airline has been launched by the senior management of British Airways, among others (Doganis, 2006).

Author's comments:
Airlines outsource some or most functions/services

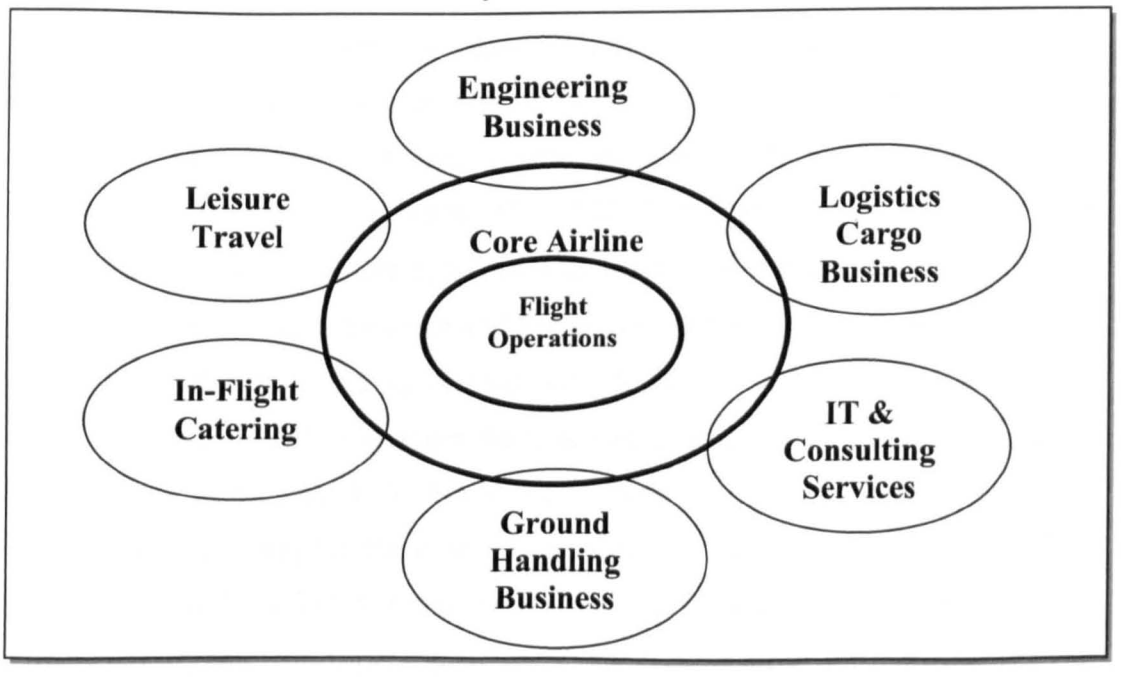


Source: Adapted from Doganis (2006)

Figure 3.4: Virtual Airline Model

The second alternative is the aviation business model. Through the lens of this model, airlines are not viewed just in the core airline business, but are seen in the wider aviation business. In other words, many airlines are too small to perform all the critical activities economically in-house; these activities could include in-flight catering, maintenance, ground handling, and air transport related informatics. In addition, large airlines may wish not to perform some of these activities in-house and outsource them. Providing these activities for other airlines can constitute separate business activities in their own right. Furthermore, some of these services such as catering may be also provided to non-airline customers. Consequently, internal departments performing such activities have become specialised companies, strategic business units, with their own accountable management teams. The Aviation Business Model is shown in Figure 3.5. Lufthansa and Swissair in Europe and Singapore Airlines in Asia were the pioneers among the few airlines, who have seen the potential value of the provisions of these activities as businesses in their own right.

Author's comments:
Airlines have separate business units that support the passenger core, but generate most revenue from external clients



Source: Adapted from Doganis (2006)

Figure 3.5: Aviation Business Model

The traditional model is usually adopted by airlines that share common features such as large fleet sizes, operation of ranges of aircrafts, and a large range of destinations globally (Al-Kaabi *et al.*, 2007). The model allows wide control of the activities performed by the airline and the development of a large knowledge base (Doganis, 2006). However, the airlines that adopt the model present a rather inflexible structure, greatly unfocused (Al-Kaabi *et al.*, 2007). Some of these traditional airlines have created low-cost subsidiaries, since their potential to produce innovation is poor compared to low-cost carriers. Some examples include Air France and Alitalia (Doganis, 2006). Airlines that use the virtual model are very efficient and cost focused; they take advantage of the supplier's pool of services (Al-Kaabi *et al.*, 2007). These companies reduce costs by concentrating on their core competences. The model is known to be suitable for low-cost carriers and new entrants; some examples include Ryanair and easyJet (Doganis, 2006). Nonetheless, these airlines are very dependent on the supplier's availability and performance measures are mostly based on cost (Al-Kaabi *et al.*, 2007). The aviation business model can be considered a development of the traditional model, where activities/functions are independent subsidiaries in their own right (Al-Kaabi *et al.*, 2007). The airlines, in this case, increase their profitability by providing services to other companies (Doganis, 2006). At the same time, the control over activities is enhanced through the existence of direct accountable management teams. For instance, Lufthansa created Lufthansa Technik for 'Maintenance, Repair and Overhaul', LSG SkyChefs for 'Catering', and GlobeGround for 'Ground Services' in Germany and worldwide, among other independent business units. Swissair and Singapore Airlines have followed the same model. Considerable risks are associated with this model as indicated by Doganis (2006). If an airline is to buy services from its own business units, it may not always obtain the best or cheapest deals. Furthermore, during an economic downturn, non-core businesses that compose the independent units, but are still related to the airline industry, may also be affected. Even though the virtual model seems to be the most attractive, considering that operational costs are significantly reduced, the risk of losing control over key functions is also present (Doganis, 2006). Table 3.2 presents a comparison of the models in terms of advantages and disadvantages.

Table 3.2: Traditional, Virtual and Aviation Business Models (comparison)

Models	*Advantages*	*Disadvantages*	*Examples*
Traditional	- Wide control over activities - Large knowledge base	- Inflexible structure - Lack of focus - Low potential to produce innovation	Air France Alitalia
Virtual	- Efficient - Cost focused - Suitable for low-cost carriers and new entrant airlines	- Very dependent on the supplier's availability - Performance measures mostly based on cost	Ryanair easyJet
Aviation Business	- Increased profitability by providing services to others - Enhanced control over activities through separate management structures	- Dependency on deals offered by its independent business units; - In an economic downturn, the non-core businesses may be affected	Lufthansa Singapore Airlines Swissair

3.7 PERFORMANCE MEASURES IN THE AIRLINE INDUSTRY

Alongside the importance of outsourcing in the structure of airlines, the need to measure its impact has also arisen. Performance measurement is essential as it provides important inputs for decision-making and action. It is important to measure the right things at the right time in the supply chain (Gunasekaran and Kobu, 2007). One of its main purposes is identifying areas of improvement in organisational activities (Schefczyk, 1993). The importance of performance measurement to monitor operational, financial, and safety dimensions has long been recognised (Francis *et al.*, 2005). Neely *et al.* (2005, p. 1229) defined performance measurement as "the process of quantifying the efficiency and effectiveness of action". Whereas, a *performance measure* can be defined as "a metric used to quantify the efficiency and/or effectiveness of an action". Moreover, the same authors state that effectiveness refers to "the extent to which customer requirements are met". Efficiency is "a measure of how economically the firm's resources are utilised when providing a given level of customer satisfaction" (Neely *et al.*, 2005, p. 1228).

A study was undertaken by Francis *et al.* (2005) to identify the relative use of different performance measurement practices by airlines. The study revealed that, in terms of operational performance measurements, punctuality/on-time performance per

operation, load factor per flight, and daily aircraft utilisation were the most commonly used operational performance measures. Table 3.3 reproduces the findings of the study related to the measures of operational performance. Referring to the quality of service performance measures, the study revealed that consumer complaints and lost baggage were the most widely utilised measures, followed by level of service, check-in waiting time and baggage delivery time.

Table 3.3: Operational Performance Measures

Operational performance measure	*Used (%)*	*Not used (%)*	*Do not know (%)*	*Usefulness of measure*[a]	
				Mean	*S*[b]
Punctuality/on-time performance per operation	100	0	0	4.6	0.9
Revenue passenger kilometres	95	5	0	4.2	1.1
Load factor per flight	100	0	0	4.5	1.0
Average fleet age	80	17	3	3.0	1.1
Available seat kilometres	93	7	0	4.2	0.9
Available tonne kilometres per employee	49	49	2	4.0	0.9
Average turnaround time	76	21	3	4.1	0.9
Labour cost as % of total operating cost	87	11	2	3.9	1.0
Cost per seat kilometre	90	8	2	4.7	0.7
Daily aircraft utilisation (hours)	98	0	2	4.3	1.0
Total revenue per work load unit	43	40	17	4.5	0.5
Other	78	11	11	4.8	0.5

[a] Scale: 1 = not useful to 5 = very useful
[b] *S* = standard deviation

Source: Adapted from Francis *et al.* (2005)

In terms of overall operational performance, two main measures have been used to assess the overall operational performance of airlines: the *passenger load factor* and the *daily aircraft utilisation*. The 'passenger load factor' was utilised by Lazzarini

(2007), Dai *et al.* (2005), Davila and Venkatachalam (2004), and Behn and Riley (1999). These authors indicated that the main advantage of the passenger load factor measure is its simplicity and standard industry metric for airline performance. It also captures the operational efficiency of an airline. It is more of a current indicator of the organisation's performance. Similarly, the 'aircraft utilisation indicator' has been used in previous studies (Lapre and Scudder, 2004; Gudmundsson, 2002). Aircraft are the most limited resources possessed by airlines, considering the large associated costs and capital expenditure. Maximising aircraft utilisation is a major objective for airlines and it is one of the most important tasks for the airline management (Abdelghany *et al.*, 2004; Gudmundsson, 2002). Thus, 'daily aircraft utilisation' constitutes an important indicator of the overall performance of the airlines. Table 3.4 represents the findings of Francis *et al.* (2005) related to service performance measures.

Table 3.4: Quality of Service Performance Measures

Performance measure	***Used (%)***	***Not used (%)***	***Do not know (%)***	***Usefulness of measure[a]***	
				Mean	***S*[b]**
Level of service	86	7	7	4.5	0.9
Baggage delivery time	78	17	5	4.1	0.9
Lost baggage	98	2	0	4.3	0.8
Check-in waiting time	85	13	3	4.1	0.9
Consumer complaints	98	2	0	4.4	0.9
Other	89	11	0	4.8	0.4

[a] Scale: 1 = not useful to 5 = very useful
[b] *S* = standard deviation

Source: Adapted from Francis *et al.* (2005)

3.8 RESEARCH FRAMEWORK

Gilley *et al.* (2004) stated that the vast majority of the research on outsourcing has focused on the understanding of outsourcing determinants and the decision-making

process, especially in manufacturing firms. Little attention has been paid to the outsourcing results in the service sector (Espino-Rodriguez and Padron-Robaina, 2004). A few observations have been made in the literature about the implications and outcomes of outsourcing within the airline industry. However, these observations often tend to focus on the scope and nature of outsourcing and the type of business model adopted by an airline. There is a notable absence of literature exploring the extent and type of outsourcing, and the specific motives and factors behind outsourcing decisions in the airline industry. A holistic view of the determinants of outsourcing for the airlines, i.e. *external and internal factors and motives*, is deemed necessary. Moreover, outsourcing practices and their implications within the airline industry have not been studied in detail. Taneja (2004) has highlighted that restructuring airlines' supply chains has been a poorly examined research field. Although it is generally believed that outsourcing has become an attractive option for many organisations, *current outsourcing practices* in the airline industry have not been thoroughly understood. Finally, the implications of outsourcing in organisational performance have not been confirmed. Conflicting viewpoints and the scarcity of studies examining this relationship can be identified in the review of literature on outsourcing. The lack of empirical studies focusing on the impact of outsourcing on an organisation's main *performance objectives* (cost, delivery, quality, and flexibility) and its *overall operational performance* has been indicated.

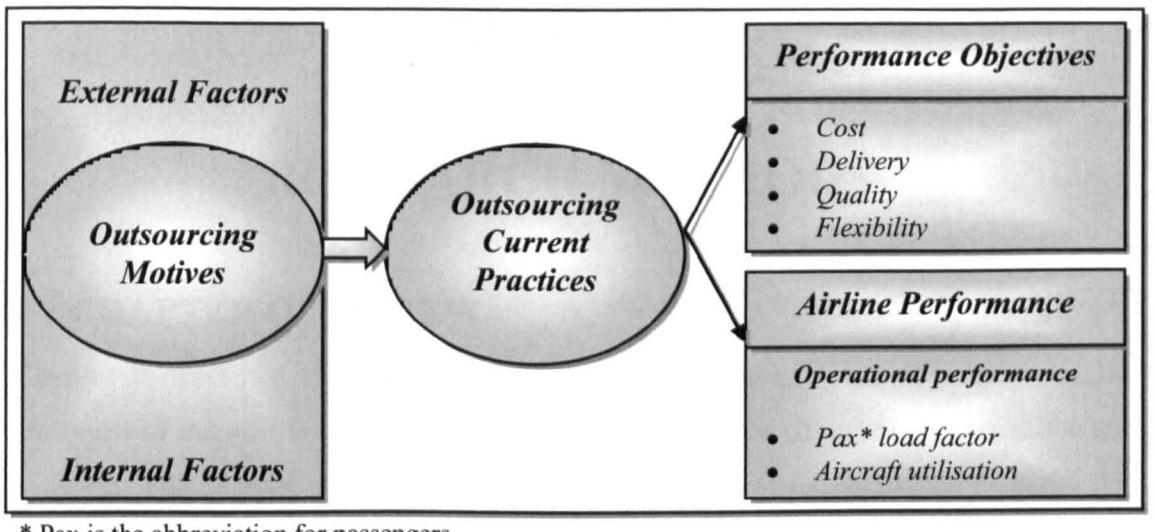
The present study seeks to fill in the research gaps by examining the role of outsourcing within the airline sector. In particular, the study aims to identify the determinants of outsourcing and examine current outsourcing practices within the airline industry. It further seeks to evaluate the implications of outsourcing in specific performance objectives – *cost, delivery, quality, and flexibility* – as well as in the airlines' overall operational performance represented by *passenger load factor* and *daily aircraft utilisation*. In addition to this theoretical contribution, it is envisaged that the results of the study will be useful to managers and decision makers in the airline industry. Table 3.5 summarises the research gaps identified in the literature review on outsourcing in the airline industry. Figure 3.6 illustrates the research framework built on the research objectives.

Table 3.5: Research Gaps Found in the Literature on Airline Industry Outsourcing

Topic	*Research Gaps*	*Proposed Objectives*
Outsourcing motives, internal and external factors	Lack of a holistic understanding of the determinants of the outsourcing decision	Identify the motives behind outsourcing
		Identify the internal and external factors affecting the outsourcing decision
Current practices	Lack of a more in-depth understanding of current outsourcing practices	Examine the current outsourcing practices in the airline industry
Outsourcing results	Conflicting viewpoints and scarcity of studies on the impact of outsourcing on performance	Evaluate the impact of outsourcing on performance through the performance objectives: 'cost', 'delivery', 'quality' and 'flexibility'.
		Evaluate the impact of outsourcing on the overall performance of airlines through the performance measures: 'passenger load factor' and 'daily aircraft utilisation'.

The research objectives can be articulated in the following research questions:

- What are the motives behind outsourcing in the airline industry?
- What are the other factors shaping outsourcing decisions in the airline industry?
- What are the airlines' current practices in regards to the main activities being outsourced?
- What is the impact of outsourcing on the performance objectives cost, delivery, quality, and flexibility in the airline industry?
- What is the impact of outsourcing on an airline's overall performance?



* Pax is the abbreviation for passengers.

Figure 3.6: The Research Framework

3.9 CHAPTER SUMMARY

In this chapter, an overview of the air transportation industry was provided. Challenges to the airline industry were discussed, including jet fuel prices, globalisation, deregulation of the industry, privatisation of state-owned airlines, the entrance of low-cost airlines, and internal challenges. Based on these challenges, required changes in the airline industry were highlighted. Similarly, outsourcing in the airline industry has been discussed. The airlines' business models have been overviewed, namely the traditional business model, the virtual business model, and the aviation business model. Performance measures utilised in the airline industry have been discussed, including operational performance measures and quality of service performance measures. In the final part of the chapter, the research framework, objectives, and questions were presented, aiming to fill in the gap in knowledge identified in the review of relevant literature. Chapter 4 elaborates on the research design and process adopted to achieve the study objectives.

CHAPTER 4

RESEARCH METHODS

4.1 CHAPTER OVERVIEW

Chapter 2 described the literature review on outsourcing. Chapter 3 presented an overview of the airline industry and related issues in terms of outsourcing practice and research. The chapter was concluded by a presentation of the identified research gap and framework. Aiming to bridge the gap identified in the literature, Chapter 4 elaborates on research design and methods. Section 4.2 provides an overview of four main research paradigms. Section 4.3 discusses existing approaches to research, briefly justifying the approach adopted in the study. Section 4.4 describes different types of research design while Section 4.5 briefly describes designs used in similar studies. Section 4.6 describes and justifies the design and methods used in the research. Section 4.7 covers validity and reliability issues and the tactics adopted in the study to address them.

4.2 MAIN RESEARCH PARADIGMS

Creswell and Clark (2007, p. 21) described 'worldview' and 'paradigm' as "how we view the world and, thus, go about conducting research. They contain a basic set of beliefs or assumptions that guide our enquiries. They are a philosophy deeply rooted in our personal experiences, our culture, and our history (Guba and Lincoln, 2005). They may change during our lives and be shaped by new experiences and new thought". According to the authors, there are four different worldviews: *Postpositivism, Constructivism, Advocacy and Participatory, and Pragmatism.* These research paradigms are briefly described next:

- **Postpositivism:** generally associated with quantitative research. Postpositivism researchers develop knowledge through a postpositivist lens that is based on careful observation and measurement of existing objective reality. Knowledge is claimed on the basis of cause-and-

effect thinking, empirical observations and measurement of variables, continuous theory testing, and reduction and focusing on selected variables to interrelate (Creswell and Clark, 2007).

- **Constructivism:** generally associated with qualitative research and the researcher's subjective views form the meaning of the phenomena. When researchers elaborate their understanding, they speak about meanings based on their social interaction and their personal histories. Research is formed "from the bottom up and from individual perspectives to broad patterns and, ultimately, to theory" (Creswell and Clark, 2007, p. 22). Moreover, social constructivism is usually combined with interpretivism (Creswell, 2003).
- **Advocacy and Participatory**: research is more likely to be associated with qualitative approaches, rather than quantitative. The worldviews are influenced by political concerns. The views are characterised by the need to improve society to incorporate issues such as marginalisation, hegemony, empowerment, and other issues affecting marginalised groups. The aim for the researchers is to see the world changing for the better (Creswell and Clark, 2007).
- **Pragmatism:** generally associated with mixed methods research. The main concern is the question and the consequences of research, rather than the methods. Data collection is done through multiple methods. Hence, it is pluralistic and based on 'what works' in practice (Creswell and Clark, 2007). Thus, researchers exploit all approaches to clearly understand the problems and ultimately propose solutions.

The main aim of the present study is to explore the outsourcing phenomenon in the airline industry, especially, as previously mentioned, considering the lack of studies that empirically examine the outcomes of outsourcing. A more pragmatic view is adopted in this case. In similar studies found in literature, the Positivist paradigm is still predominant. The Pragmatic paradigm, however, allows a more pluralistic view of the phenomena. Since a more holistic understanding of outsourcing practices is sought, the pragmatic view seems more appropriate for the study. The practice on

'what works' in the field establishes the guidelines for the adoption of a research approach and the development of the study design. These topics are thoroughly explained next.

4.3 RESEARCH APPROACHES

The two basic approaches in social sciences research are qualitative and quantitative orientation. However, the literature suggests a growing interest in a mixed method approach (triangulation) following on from the argument that 'one is used to strengthen the other'. Table 4.1 depicts the main differences and practices of these approaches. Qualitative approaches are those "in which the inquirer often makes knowledge claims based primarily on constructivist perspectives or advocacy/participatory perspectives or both. It also uses strategies of inquiry such as narratives, phenomenologies, ethnographies, grounded theory studies, or case studies. The researcher collects open-ended, emerging data with the primary intent of developing themes from the data" (Creswell, 2003, p. 18). A qualitative approach to research involves the observation of individuals in their natural setting (Pope and Mays, 2006). These approaches allow the observation on how processes change over time as claimed by Easterby-Smith *et al.* (2008). In the present study, the qualitative orientation seems adequate for two different stages of the study. In the first stage of the investigation, since qualitative methods are useful in gaining insights into research areas where little is known about the topic – in this case, the outsourcing phenomenon in the airline industry. Qualitative methods such as case research can also generate initial theories and/or important variables as claimed by Eisenhardt (1989). Case research, for instance, allows the analysis of internal documents and direct observation of the participants' behaviour (Yin, 2003). Second, qualitative interviews seem appropriate to establish causal relationships between these variables and results obtained in practice. In the study, the determinants, current practices, and impact of outsourcing on performance can be accessed through semi-structured interviews with airline managers, examining outsourcing through a practitioners' point of view.

Table 4.1: Qualitative, Quantitative, and Mixed Methods Approaches

Tend to or Typically	*Qualitative approaches*	*Quantitative Approaches*	*Mixed Methods Approaches*
Use these philosophical assumptions	Constructivist/ Advocacy/ Participatory knowledge claims	Postpositivist knowledge claims	Pragmatic knowledge claims
Employ these strategies of enquiry	Phenomenology, grounded theory, ethnography, case study and narrative	Surveys and experiments	Sequential, concurrent, and transformative
Employ these methods	Open-ended questions, emerging approaches, text or image data	Close-ended questions, predetermined approaches, numeric data	Both open and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
Use these practices of research, as the researcher	Positions himself or herself Collects participant meanings Focuses on a single concept or phenomenon Brings personal values into the study Studies the context or settings of participants Validates the accuracy of findings Makes interpretations of the data Creates an agenda for change or reform Collaborates with the participants	Tests or verifies theories or explanations Identifies variables to study Relates variables in questions or hypotheses Uses standards of validity and reliability Observes and measures information numerically Uses unbiased approaches Employs statistical procedures	Collects both quantitative and qualitative data Develops a rationale for mixing Integrates the data at different stages of enquiry Presents visual pictures of the procedures in the study Employs the practices of both qualitative and quantitative research

Source: Adapted from Creswell (2003)

In quantitative approaches, "the investigator primarily uses postpositivist claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables

and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data" (Creswell, 2003, p. 18). One of the main strengths of these approaches corresponds to their wide coverage of situations (Easterby-Smith *et al.*, 2008). In the study, these approaches are used to create relationships among the variables initially accessed in the exploratory stage. Using data sets related to the performance of the airlines, the researcher is able to start the evaluation of the impact of outsourcing on their performance. In this case, an analysis of secondary data is used to supplement the qualitative research as discussed in Jick (1979).

The mixed approaches are those "in which the researcher tends to base knowledge claims on pragmatic grounds. It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information as well as text information so that the final database represents both quantitative and qualitative information" (Creswell, 2003, p. 18). Often, combining qualitative and quantitative methods, also known as the triangulation of methods, can capture a more holistic, complete and contextual view of a phenomenon (Jick, 1979). The 'most effectiveness' is sought, as suggested by Teddlie and Tashakkori (2003). In the study, a holistic analysis of the outsourcing determinants, current practices and impact on performance is envisaged. Even though a qualitative orientation is predominant, the quantitative analysis contributes to produce a more in-depth understanding of outsourcing in the airline industry. Therefore, a mix-method approach is adopted, as described in Jick (1979) and Creswell (2003).

The objectives of the research, as stated in Chapter 1, are:

- Identify the airlines' management motives behind outsourcing;
- Identify the airlines' external environmental factors influencing outsourcing decisions;
- Identify the airlines' internal factors shaping outsourcing decisions;

- Examine the airlines current practices in regards to the main activities being outsourced;
- Evaluate the implications of outsourcing in the airlines' performance objectives: cost, delivery, quality, and flexibility;
- Evaluate the implications of outsourcing in the airlines' overall operational performance.

Considering the emphasis on the understanding of current practices, the main activities being outsourced and the implications of outsourcing in performance objectives and the overall performance of airlines, it seems appropriate to utilise mixed methods. The study seeks to empirically examine the outsourcing phenomenon in the airline industry. Thus, the combination of quantitative and qualitative approaches tends to lead to a better understanding of research problems than either approach alone (Creswell and Clark, 2007; Mangan *et al.*, 2004). While quantitative approaches measure objective facts and focus on variables, qualitative approaches construct social reality, cultural meaning and focus on interactive processes and events (Neuman, 2006). Denzin (1989) and Babbie (2007) suggest that combining more than one method often overcomes the inherent weaknesses of single measurement instruments and takes advantage of their different strengths. Moreover, according to Mintzberg (1979, p. 587), 'hard' data helps researchers to uncover all kinds of relationships, yet it is only through the use of 'soft' data that they are able to explain them, and explanation is, of course, the purpose of research. The author suggests that "the researcher who never goes near the water, who collects quantitative data from a distance without anecdotes to support them, will always have difficulty explaining interesting relationships (although he may uncover them)".

Meredith (1998) notes that case and field studies continue to be rarely published in operations management journals, in spite of increased interest in reporting such types of research and results. Furthermore, taking into consideration the shortage of systematic research in outsourcing within the airline industry, there is a need to establish an integrated and holistic view on outsourcing practice in the airline sector. This study combines published statistical data reports, secondary data, to be used as the selected quantitative method (hard data), and an exploratory case study and semi-

structured interviews to be used as the selected qualitative method (soft data). As Mangan *et al.* (2004, p. 565) summarised, "methodological triangulation, using quantitative and qualitative methodologies, increasingly provides multidimensional insight into many management research problems". Following the discussion on research approaches and the approach adopted in the study, different types of research design are reviewed next.

4.4 TYPES OF RESEARCH DESIGN

Churchill (1999, p. 98) explains research design as "the framework or plan for a study, used as a guide in collecting and analyzing data. It is the blueprint that is followed in completing a study. It resembles the architect's blueprint for a house". Nachmias and Nachmias (1987, p. 75) also indicate that research design is the "blueprint of research that enables the investigator to come up with solutions to the problems". Cooper and Schindler (2008, p. 711) propose that research design is the "blueprint for fulfilling objectives and answering questions". However, there is no single perfect design of conducting research. A research method for a given research problem is never like the solution to a problem in algebra (Simon, 1969). The selection of research design may be complicated by the availability of a large number of methods, techniques and sampling plans (Cooper and Schindler, 2008). There are different classifications of research design reported in the literature. The most useful classification is based on the objectives of the research: exploratory, descriptive, or causal (Cooper and Schindler, 2008; Churchill, 1999).

- **Exploratory research:** the objective of exploratory research is to gain insights into the topic, particularly in situations where nothing or little is known about the research area (Cooper and Schindler, 2008). Moreover, exploratory research can also be utilised to enhance the researcher's familiarity with the problem and to develop future research tasks (Babbie, 2007, Churchill, 1999). Thus, exploratory research becomes the foundation for good research (Churchill, 1999). Furthermore, although exploratory studies rely mostly on qualitative techniques, quantitative techniques are also applicable. The essential distinction of exploratory studies is the

propensity toward loose structures (Cooper and Schindler, 2008; Robson, 2002).

- **Descriptive research:** the objectives of descriptive research are to describe the phenomena associated with a subject population or to estimate the proportions of the population that possess certain characteristics. Objectives of descriptive research can also include the discovery of associations among different variables (Cooper and Schindler, 2008). Descriptive research is guided by the initial hypotheses or research questions (Cooper and Schindler, 2008; Churchill, 1999).
- **Causal/explanatory research:** the objectives of causal research are to discover the effect that a variable(s) has on other variable(s) or why certain outcomes are attained. The logic of hypothesis testing forms the foundation for the concept of causality. Consequently, inductive conclusions can be obtained. Causal/explanatory studies may be qualitative and/or qualitative, according to Robson (2002).

This study evolves through the aforementioned three types of research design. Since very little is offered by the management literature about the determinants and the implications of outsourcing in the airline industry, an exploratory case study is conducted during the first stage of the study. During the second and third stages, the study fulfils the objectives of both the descriptive research and the causal research by getting an in-depth knowledge of the outsourcing determinants and outsourcing current practices in the airline industry and investigating the implications of these variables in the performance of the airlines.

4.5 RESEARCH METHODS USED IN SIMILAR STUDIES

Voss *et al.* (2002) stated that most of the research conducted in the operations management field has primarily utilised quantitative research methods such as statistical survey analysis and mathematical modelling. Likewise, the vast majority of previous studies on outsourcing implications in performance have attempted to explain outsourcing consequences through the utilisation of quantitative approaches. Table 4.2 illustrates the research method, sample, focus, performance criteria, and findings of those studies. Table 4.2 suggests three main issues related to the research

on utsourcing. First, the prevalence of quantitative methods such as survey (Khong, 2005; Espino-Rodriguez and Padron-Robaina, 2004; Elmuti, 2003; Gilley and Rasheed, 2000) and statistical analysis of data (Chong *et al.*, 2009; Jiang *et al.*, 2006; Gorg and Hanley, 2004; Mpoyi and Bullington, 2004). There is a clear absence of studies of a more qualitative nature, examining the effects of outsourcing from a practitioner's point of view.

Table 4.2: Research Methods Used in Previous Studies of Outsourcing Effects

Study	*Focus of the Study/Performance Criteria/Findings*	*Research Method(s)/Sample*
Chong *et al.* (2009)	**Focus of the study** • The effect of outsourcing public sector audits on cost-efficiency. **Performance criteria** • Cost-efficiency **Findings** • Outsourcing small statutory authority audits are more costly. • Outsourcing large and complex statutory authority audits is equally efficient as the in-house supply.	**Research method(s)** • Statistical analysis of secondary data. **Sample** • 178 public agencies (Western Australia). **Data** • Internal records of the Office of the Auditor-General. • Public sector agencies' year-end 1998 annual reports. • Questionnaires.
Jiang *et al.* (2006)	**Focus of the study** • The effect of outsourcing on firm level performance metrics. **Performance criteria** • Cost-efficiency, productivity, and profitability. **Findings** • Outsourcing can improve a firm's cost-efficiency. • The research reveals no evidence that outsourcing will improve a firm's productivity and profitability.	**Research method(s)** • Statistical analysis of secondary data. **Sample** • 51 publicly traded firms. **Data** • Publicly available accounting data.
Khong (2005)	**Focus of the study** - The impact of successful outsourcing on customer service management in Malaysian companies. **Performance criteria** - Customer service management. **Findings** - Successful outsourcing can positively affect customer service management.	**Research method(s)** • Mail survey. **Sample** • 124 companies in Malaysia. **Data** • Respondents' perception.

Espino-Rodriguez and Padron-Robaina (2004)	**Focus of the study** - Influence of the propensity to outsource hotel services operations on competitive priorities and hotels' organisational performance, as perceived by managers **Performance criteria** - Competitive priorities: cost reduction, improved quality, flexibility, and service - Hotel performance: financial performance and non-financial performance. **Findings** - The outsourcing strategy can influence operations strategy, in particular the abovementioned competitive priorities. - The hotel organisational performance can be improved through outsourcing of service operations.	**Research method (s)** • Personnel survey. **Sample** • Managers of 50 hotels in the Canary Islands. **Data** • Respondents' perception.
Gorg and Hanley (2004)	**Focus of the study** - The relation between outsourcing and profitability, at the plant level. **Performance criteria** - Profitability, calculated as the ratio of net profits (i.e. total sales – total costs) over total output. **Findings** - The relationship between profit and outsourcing depends on the characteristics of the plant, in particular its size. - Large plants, those substantially larger than mean employment size, benefit from outsourcing, while this is not the case for small plants.	**Research method (s)** • Statistical analysis of secondary, plant level, data. **Sample** • 215 plants of the electronics industry in the Republic of Ireland. **Data** • The data utilised is taken from the *Irish Economy Expenditure Survey.*
Mpoyi and Bullington (2004)	**Focus of the study** • The impact of changes in vertical integration levels on costs. **Performance criteria** • Production cost and inventory cost. **Findings** • Vertical integration changes significantly lower production costs. • Inventory costs are not affected by the changes in vertical integration.	**Research method (s)** • Statistical analysis of secondary data. **Sample** • 293 company from the manufacturing sector. **Data** • The data utilised are taken from *Compustat Tapes.*
Elmuti (2003)	**Focus of the study** - The relationship between outsourcing strategies and organisational performance. **Performance criteria** - Organisational performance, productivity, quality, satisfaction, and performance. **Findings** - Organisations achieved significant improvement in organisational performance. Yet, they have not reached the magnitude of improvements ascribed to outsourcing.	**Research method (s)** • Mail survey. **Sample** • 402 organisations in the United States. **Data** • Respondents' perception.

Gilley and Rasheed (2000)	**Focus of the study** • The influence of outsourcing both peripheral and near-core tasks on firms' financial and non-financial performance. **Performance criteria** • Financial and non-financial performance indicator. **Findings** • No significant direct effect of outsourcing on firm level performance.	**Research method (s)** • Mail survey. **Sample** • 94 non-diversified manufacturing firms employing more than 50 employees. **Data** • Respondents' perception.

The second issue regarding the research on outsourcing is the scarcity of studies focused on the implications and outcomes of outsourcing within the airline industry (Table 4.2). The third issue refers to the contrasting results obtained in the studies. In the findings reported by Khong (2005), Espino Rodriguez and Padron-Robaina (2004) and Elmuti (2003), for instance, outsourcing seems to have a positive effect on organisational performance. In the case of Chong *et al.* (2009) and Gorg and Hanley (2004), outsourcing tends to increase costs (negative effect) when the process involves smaller enterprises/plants while presenting no direct effect (Chong *et al.*, 2009) or a positive effect (Gorg and Hanley, 2004) on large statutory authority audits and larger plants, respectively. Similarly, in the study conducted by Jiang *et al.* (2006), outsourcing can exert a positive effect on the one hand and present no direct impact on productivity and profitability on the other. These issues highlight the relevance of the present study.

4.6 RESEARCH DESIGN AND PROCESS

Considering the research designs and approaches discussed in the previous sections and aiming to achieve the objectives for the research, the study is divided into three stages. The first stage consists of the literature review (presented in Chapters 2 and 3) and the exploratory case study (Chapter 5). The second stage comprises the quantitative analysis of secondary data (Chapter 6). Finally, the third stage involves the qualitative analysis of semi-structured interviews, corresponding to the primary data (Chapter 7 and 8). Figure 4.1 represents the process envisaged for the study and Table 4.3 summarises the research methods. Each stage of the process is also detailed within the following subsections.

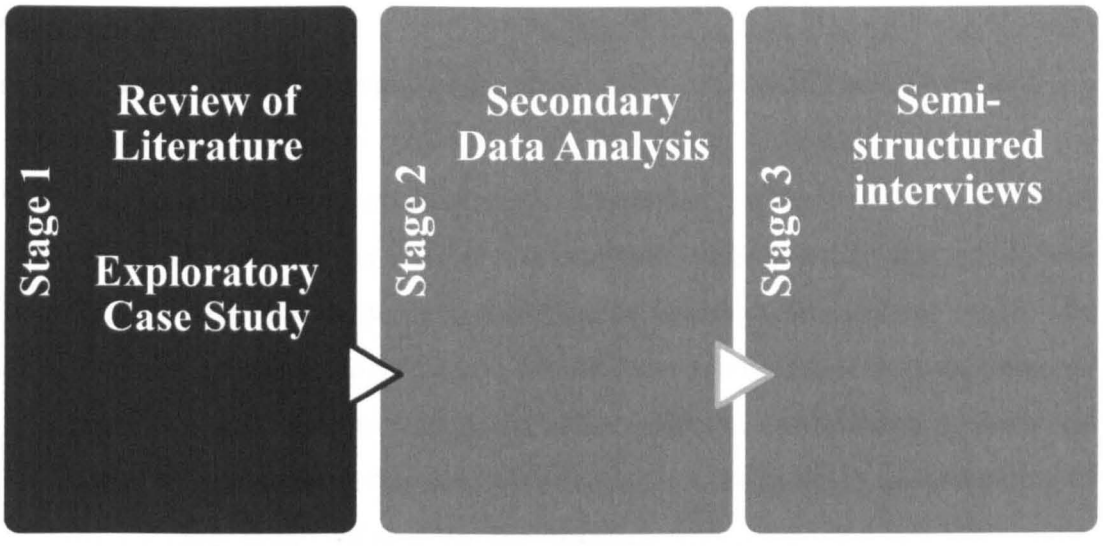


Figure 4.1: The Research Process

Table 4.3: Research Methods Used in the Study

Stages	*Methods*	*Purposes*
Stage One	- Literature review - Exploratory case study	- Identify initial trends in airline outsourcing; - Obtain insights into airline outsourcing; - Identify the motives for airline outsourcing; - Identify environmental factors affecting the airlines' outsourcing decisions, internal and external factors; - Analyse the airlines' management perceptions on outsourcing implications in the airlines' operational performance.
Stage Two	- Regression analysis of secondary data	- Evaluate the implications of outsourcing in airlines' operational performance; - Evaluate the impact of outsourcing different types of activities on different performance measures.
Stage Three	- Semi-structured interviews with practitioners (managers of airlines)	- Identify motives for the airlines' outsourcing; - Identify environmental factors influencing the airlines' outsourcing decisions, internal and external factors; - Examine current outsourcing practices within the airline industry; - Evaluate the impact of outsourcing different activities on the airlines' operational performance.

4.6.1 Stage One

The first stage involves the review of literature and an exploratory case study:

- **Literature Review**

  The literature review establishes the foundation for the study. An extensive review of literature on outsourcing and the airline industry was conducted. Sources from the literature included online journal databases and books. The literature review mainly focused on the most relevant topics to the research objectives, such as outsourcing, the airline industry, and research methods and design. Consequently, this strategy provided a more in-depth understanding of outsourcing issues related to the research objectives and assisted in the identification of key elements to be considered in the research framework.

- **The Exploratory Case Study**

  One of the purposes served by case research is the exploratory purpose. Yin (2003, p. 6) considers exploratory case studies a "prelude to much social research". Voss *et al.* (2002) remarked that case research has constantly been one of the most powerful research methods in operations management. It can lead to new and creative insights and its results can have a very high impact. According to the authors, many of the breakthrough concepts and theories in operations management have been developed through field case research. Furthermore, the authors suggest that case research is not only beneficial to the research, but also to the researchers themselves. By conducting research in the field, researchers are being exposed to real problems, the creative insight of people at all levels of organisations, and the diverse context of cases.

Voss *et al.* (2002) suggest that, at the early stages of many studies, exploration is required to develop new ideas and questions. Similarly, many doctoral theses begin with one or more case studies. As noted earlier, the empirical work of this study commences by conducting an exploratory case study. The main purposes of the case study include gaining insight into airline outsourcing and exploring issues related to the key elements comprised by the research framework introduced in Chapter 3. The study also benefits from the loose structure of an exploratory study to discover new research tasks as claimed by Cooper and Schindler (2008). The case study, in this

case, is followed by the quantitative analysis of secondary data seeking to understand the implications of outsourcing in the operational performance of airlines and to explore the impact of outsourcing different types of activities on different performance measures. The exploratory case study also assists in the development of the semi-structured interviews guide and structure. Saudi Arabian Airlines (SAUDIA) was chosen to fulfil the purposes of the exploratory study. The selection of SAUDIA was mainly motivated by two factors. The first is that as part of its privatisation programme, the airline is currently implementing a radical organisational restructure. As a result, the airline is to rely heavily on outsourcing. Moreover, a profusion of documents related to its restructuring process is available to the researcher (e.g. directives of restructuring). The document analysis is an important part of the case study notes and becomes vital to the data analysis (Yin, 2009). The other factor is the convenient access to the airline management for the researcher, being one of the airline's staff members since 1991.

4.6.2 Stage Two

Thietart (2001, p. 191) states that "secondary data is the data that already exists". The author suggests that it is recommended that a researcher begin the research project by asking whether any appropriate secondary data is available. Utilisation of secondary data is useful for establishing comparisons and evaluation of primary data. The secondary data format does not always correspond with the format required for the study, in which case it has to be changed from its original form into a format that better suits the purpose of the study. The utilisation of secondary data is often called secondary analysis. Secondary analysis is defined by Babbie (2007, p. 277) as "a form of research in which the data collected and processed by one researcher are reanalysed, often for a different purpose, by another". Stage 2 comprises the regression analysis of secondary data. The main goal behind the use of the regression analysis is to gain accurate measurements of the social phenomenon under investigation by explaining causal relationships between the selected variables, as stated by Nettleton and Taylor (1990). The World Air Transport Statistics report, published annually by the International Air Transport Association (IATA) is the main source for the secondary data utilised in this study. The report includes operational

and non-operational statistics about IATA member airlines, 261 airlines as of 31st December 2006 and 236 airlines as of 31st December 2007. The statistics include: employees and aircraft data, and other key performance data, such as load factor and aircraft daily utilisation. The broad aim of IATA is "to provide a means for collaboration among air transport enterprises engaged directly or indirectly in international air transport service; to promote safe, regular, and economical air transport for the benefit of the people of the world; to foster air commerce and study the problems connected therewith; and to cooperate with ICAO, the International Civil Aviation Organisation, and other international organisations" (Wensveen, 2007, p. 470). It is deemed that this stage can serve as a foundation for the descriptive and explanatory dimensions of the study.

Staff functions of airlines have been grouped into seven categories by IATA: (1) Pilots and co-pilots, (2) Other cockpit personnel, (3) Cabin attendants, (4) Maintenance and overhaul, (5) Ticketing, sales and promotion, (6) Airport handling, (7) 'All others', which encompasses employees not included in the other six categories such as finance, legal, personnel and corporate planning staff. For the purposes of this study, four categories are taken into consideration: maintenance and overhaul, ticketing, sales and promotion, airport handling, and a fourth category, which corresponds to 'all others'. According to Rutner and Brown (1999), these functions are very likely to be outsourced and that is the reason why they are being utilised in the research. Moreover, a study was undertaken by Francis *et al.* (2005) to identify the relative use of different performance measurement practices by airlines. It revealed that load factor per flight, daily aircraft utilisation, punctuality/on-time performance per operation, and lost baggage are the most commonly used measures. Hence, those measures and operating profit indicators have been used in the data analysis. In addition, the data on on-time departures and number of bags delayed indicators is drawn from reports published by the AEA (Association of European Airlines). The AEA brings together 35 major airlines, and has been the voice of the European airline industry for over 50 years. One of the main roles of the AEA is to give its members the support they need to focus on their businesses and make them prosper, by following all aero-political issues, analysing their impact, recommending

strategies, networking with all relevant stakeholders and influencing the legislative process (AEA, 2010). The data set, performance measures used as dependent variables, the measurement of variables and strategy adopted for the quantitative analysis are briefly described next.

The data set and strategy for the quantitative analysis

As mentioned, the data utilised in the regression analysis involves data on the airlines' performance during 2006 and 2007, published by the IATA and the AEA, in 2007 and 2008, respectively (Appendix A). SPSS™ (Statistical Package for the Social Sciences) was used for the statistical treatment of the data. The software was employed to perform the linear regression analysis. A multiple regression analysis was performed. This is a widely used approach (Robson, 1993). According to Babbie (2007, p. 458), "very often, social researchers find that a given dependant variable is affected simultaneously by several independent variables. Multiple regression analysis provides a means of analyzing such situations". Multiple regression can be adopted to explore the relationships between one dependent variable and a number of independent variables or predictors. It is based on correlations, yet it allows a more sophisticated exploration of the interrelationship among a set of variables. It can identify how well a set of variables is able to predict a particular outcome. Several types of multiple regression analysis are available (Pallant, 2007). However, for the purposes of the study, standard multiple regression was used. Standard multiple regression analysis was employed to identify how much unique variance in the dependent variable each of the independent variables explained (Pallant, 2007). In this case, the collection of data raised complex issues.

It has been noted that studies examining international airlines face data availability and comparability issues (Backx *et al.*, 2002; Schefczyk, 1993). The quantitative analysis aims to fulfil two research objectives. The first objective of the stage was to evaluate the implications of outsourcing in airlines' operational performance. Second, the analysis aimed to evaluate the impact of outsourcing different types of activities on different performance measures. In order to achieve these objectives, it was deemed that the IATA and AEA statistical report was the only suitable source for the quantitative data required for this study. The sample involved in the regression

analysis included the statistical operational data related to 181 airlines for 2006 and 160 airlines for 2007. The main reason for choosing IATA reports as the main source of data was the comprehensiveness of its database. It constitutes the main data source for the majority of previous studies in the airline industry. Nonetheless, statistics related to 'on-time performance' and 'baggage delivery' are not included in the IATA reports. Therefore, on-time performance and baggage delivery statistics reported by AEA were utilised. It should be noted that statistical data from IATA and AEA have been used in other studies (e.g. Francis *et al.*, 2007; Francis *et al.*, 2005; Davila and Venkatachalam, 2004).

Performance measurements (Dependent variables)

The appropriateness of the performance measures to be utilised may depend on the circumstances unique to the study (Badri *et al.*, 2000). Based on the literature review on performance measures used in the airline industry, presented in Chapter 3, the performance indicators employed for the purposes of the regression analysis are: *passenger load factor, daily aircraft utilisation, operating profit, on-time departures,* and *number of bags delayed.* It must be noted that the secondary data utilised in the study comes mainly from the World Air Transport Statistics report, published annually by the International Air Transport Association (IATA), including data on the performance of airlines represented by *passenger load factor, daily aircraft utilisation*, and *operating profit.* Although not all airlines are included in this report, the bulk of the main airlines are represented. It is worth highlighting that the World Air Transport Statistics report was used in previous research (e.g., Dai *et al.*, 2005).

In addition, *on-time departures* and *number of bags delayed* indicators data are drawn from the AEA (Association of European Airlines). IATA defines the passenger load factor indicator as 'passenger-kilometres expressed as a percentage of available seat-kilometres'. Daily aircraft utilisation is also defined by IATA as the 'average hours flown (on a block-to-block basis) per aircraft, per day, in hours (HH:MM)'. The passenger load factor was utilised in previous studies conducted on the airline industry as the measure of assessing the airlines' operational performance (e.g., Lazzarini, 2007; Dai *et al.*, 2005; Davila and Venkatachalam, 2004; Behn and Riley, 1999). The authors of these studies suggest that the main advantage of the passenger

load factor measure is that it is a simple and standard industry metric of airline performance. The passenger load factor also captures the operational efficiency of an airline and, thus, it is more of a current indicator of firm performance. The 'passenger load factor' is a fundamental operating metric and it differentiates the airline performance. Furthermore, aircraft are the most limited resources possessed by airlines, considering the large associated costs and capital expenditure. Hence, maximising aircraft utilisation is a main objective for airlines and is of greatest importance in airline management (Abdelghany *et al.*, 2004, Gudmundsson, 2002). The 'aircraft utilisation' indicator was used in previous studies to assess the performance of airlines (e.g., Lapre and Scudder, 2004; Gudmundsson, 2002). Thus, in addition to the 'passenger load factor' indicator, the 'average aircraft utilisation' is also used in the study to assess the overall performance of the airlines.

Measurement of Variables

Identifying outsourcing implications in the airlines' performance is the objective of regression analysis. Thus, the analysis aimed to assess the correlation between outsourcing intensity at the functional level and the airline level on the one hand, and the performance indicators on the other. The functional level investigation includes four staff categories: a) Maintenance and overhaul, b) Ticketing, sales and promotion, c) Airport handling, and d) 'All others'. The organisational level outsourcing intensity was obtained by applying the 'breadth and depth' concept used by Gilley and Rasheed (2000). According to the authors, breadth refers to the number of outsourced activities and depth refers to the extent to which organisations outsource large portions of their activities. Thus, breadth and depth are multiplied together to form a single indicator of organisational level of outsourcing intensity. Likewise, the airlines' level of outsourcing intensity was obtained based on the breadth and depth of outsourcing of the four staff categories: maintenance and overhaul, ticketing, sales and promotion, airport handling, and 'all others'. The analysis of secondary data, as previously mentioned, was used to identify the implications of outsourcing in the airlines' operational performance and explore the impact of outsourcing different types of activities on different performance measures. However, as also stated by Mintzberg (1979), 'hard' data can be used to uncover relationships, but only through the use of 'soft' data it is possible to explain them. Stage 3 comprises the qualitative analysis of

semi-structured interviews. The selection of interviewees, the development of the interview guide and the procedures for the analysis of the data collected through the interviews are described next.

4.6.3 Stage Three

Thietart (2001, p.180) defines interviewing as "a technique aimed at collecting, for later analysis, discursive data that reflects the conscious or unconscious mind-set of individual interviewees". Patton (1990) classifies approaches to collecting qualitative data through open-ended-question interviews into three main types: the informal conversational interview, the general interview guide approach, and the standardised open-ended interview. "Traditionally, a distinction is drawn between two types of interview: unstructured and semi-structured" (Thietart, 2001, p. 180). Robson (2002) suggests that the distinction is commonly based on the degree of the structure of the interview. In that regard, the author suggests that there are three types of interviews, fully-structured interviews, semi-structured interviews, and un-structured interviews. According to Robson (2002, p. 270), the fully structured interview "has predetermined questions with fixed wording, usually in a pre-set order". The semi-structured interview "has predetermined questions, but the order can be modified based upon the interviewer's perception of what seems most appropriate. Question wording can be changed and explanations given; particular questions which seem inappropriate with a particular interviewee can be omitted, or additional ones included". In unstructured interviews, "the interviewer has a general area of interest and concern, but lets the conversation develop within this area. It can be completely informal".

Barriball and While (1994, p. 330) state that semi-structured interviews "are well suited for the exploration of the perceptions and sometimes sensitive issues and enable probing for more information and clarification of answers". Unlike survey interviews where questionnaires are rigidly structured, in qualitative interviews the interviewer has a general plan of enquiry, including the issues to be investigated, but not a specific list of questions that must be asked with specific words and order. In other words, qualitative interviews are based on an in-depth discussion of a set of topics rather than on the utilisation of standardised questions. Moreover, the

continuous nature of qualitative interviewing suggests that the questioning is re-designed throughout the research (Babbie, 2007). As noted in the literature review chapters, the subject of outsourcing in the airline industry has received little attention in the management research. Thus, qualitative approaches appear to be more suitable to cover the exploratory dimension of the study. The choice of in-depth semi-structured interviews seems adequate because it allows the respondents to elaborate their perceptions and experiences about the topics being discussed. Robson (2002) suggests that open-ended questions are the most commonly used in interviews. The advantages of the open-ended questions include their flexibility and comprehensiveness. This type of question allows the interviewer to gain in-depth information and clarify any misunderstandings, can generate unanticipated answers, and allows a true assessment of what the interviewee really believes. For this reason, open-ended questions are used in this case, aiming to obtain in-depth insights into the topic under study and allow the respondents to elaborate on the answers.

The selection of interviewees

Taking into consideration geographical constraints as well as the costs and time associated with the research process, it would not be feasible to conduct the interviews in the airlines' head offices located in their country of origin. Therefore, as an alternative, the UK offices of the airlines operating from Heathrow Airport were approached. The interviews were carried out at Heathrow Airport mainly in English; however, two interviews were conducted in Arabic (birth language of the researcher and of two of the interviewees). The access to the airlines was gained through SAUDIA, since the researcher is an employee of the company. The management of the UK head office of that airline introduced the researcher to another airline. This dynamic was followed throughout the study, creating a network of airlines that learned about the study and were motivated to participate in the research. The airlines were interested in the impact of the outsourcing decision in their activities and performance, which in many cases facilitated access for the researcher. Fourteen interviews with managers were conducted, representing twelve different airlines. Table 4.4 describes the experience of the managers that participated in the study with their airline and in the airline industry.

Table 4.4: The Experience of the Managers who Participated in the Study

*	Airline experience (years)	Aviation experience (years)	*	Airline experience (years)	Aviation experience (years)
A	3.5	19	H	35	35
B	22	22	I	23	25
C	36	43	J	31	34
D	1.5	20	K	35	44
E	10	39	L	35	35
F	2	12.5	M	20	20
G	39	39	N	5	32

* indicates the managers interviewed in the study (Manager A, Manager B, etc.)

The targeted respondents are the regional managers responsible for the operations of their airline in the UK. The choice of interviewees is based on purpose and the researcher's judgement. As suggested by Babbie (2007), in the case of purposive sampling, the units chosen for observation are selected according to the researcher's judgement about which ones are most useful or representative. Respondents were assured that the purpose of the interviews was purely academic and no individual responses could be identified. No low-cost and/or regional carriers were included in the study. Using the managers' perception measures of the impact of outsourcing was a strategy employed in several studies of outsourcing (e.g., Khong, 2005; Elmuti, 2003). Gonzalez-Benito and Gonzalez-Benito (2005) note that the consistency between objective and subjective measures has been confirmed by research. All airlines included in the study are passenger, scheduled, international and full service airlines. The researcher sought geographical coverage. The approached airlines cover Africa, Asia, North America, Middle East, and Europe (as per the IATA regions classification of airline-members). Table 4.5 summarises the profile of the airlines that participated in the study in terms of fleet sizes and number of employees. An interview guide was developed and used in the interviews. It contained five main parts/sections designated as Part A, Part B, Part C, Part D, and Part E. Part A covered the identification of the respondent. Part B addressed current sourcing strategies and Part C explored the main motives behind outsourcing decisions. Part D aimed to evaluate the impact of outsourcing while Part E addressed the weaknesses and strengths of the decisions.

Table 4.5: Profile of the Airlines that Participated in the Study

Airline	Number of aircraft	Number of employees
Airline 01	36	3,849
Airline 02	36	5,911
Airline 03	158	22,025
Airline 04	60	7,402
Airline 05	87	19,747
Airline 06	12	3,125
Airline 07	150	19,723
Airline 08	210	15,103
Airline 09	655	70,981
Airline 10	29	3,741
Airline 11	42	2,425
Airline 12	46	22,635

Source: WATS (2007)

The interview guide

Semi-structured interviews guide respondents in the right direction to cover all topics without hindering the respondents' ability to bring some relevant issues they deem might be of interest in the research. The interviews were driven by a questionnaire, containing open-ended questions (Appendix B). Each of the interviews lasted about 60 minutes and they were recorded, transcribed and coded by topic, using content analysis. An interview guide was developed, including: (a) introductory comments, (b) a list of topics and key questions based on the study research questions, (c) a set of associated prompts such as different levels of outsourcing, locations, and time frames, and (d) closing comments/final thoughts. Robson (2002) suggests that the interview guide consists of a set of questions, suggestions for probes and prompts, and a proposed question sequence, which may be subject to change during the course of the semi-structured interview. According to Barriball and While (1994), an extensive review of the literature informs the early stages of the development of the interview guide. In addition, the authors recommend that the final draft should be judged for its content validity by experts to assess the appropriateness and completeness of the interview guide regarding study domain and purpose. The interview guide used in the present study was based on the research framework and developed to match the study objectives. In addition, the interview guide draft was analysed and reviewed by experts for its content validity, as suggested by Barriball and While (1994).

The guide was divided into four main sections (parts). **Part A** contained the identification of the respondent, his/her experience in the airline and in the aviation industry. The airline home base was also identified. **Part B** sought to assess current sourcing strategies practised by the airline, i.e. *how* the airlines structure their supply chain. The outsourcing structure, breadth and depth were measured through three different levels of sourcing:

- Functions internally managed and produced (code: T);
- Functions outsourced from independent suppliers (code: V);
- Functions outsourced from an independent strategic business unit owned by the airline (code: A).

The three different codes aimed to identify the level of integration of the airline supply chain, going from a vertically integrated airline to a de-verticalized structure. The functions examined in the study are critical to the operations of airlines. Functions such as aircraft maintenance, ground handling, and in-flight catering were examined in terms of the outsourcing practices and performance outcomes for the airline participants in the study. These functions emerged in the exploratory case study conducted with SAUDIA and represented the main activities more likely to be outsourced by the airlines. The outsourcing strategies of the airlines were discussed in terms of three different locations: their home base, the Heathrow station where the interviews took place and the airlines' outstations in general (locations away from their home base). In addition, the researcher aimed to examine the sourcing strategies of the airlines over time; another reason behind the predominantly qualitative orientation of the study as previously mentioned (Section 4.3). Hence, the sourcing strategies of the 'past few years' and those proposed 'for the future' were also explored in the interviews. The managers were asked to indicate if the outsourcing levels were to be increased, decreased or maintained.

Part C examined the main motives and other factors shaping the outsourcing decisions. This section sought to identify *why* the outsourcing is adopted. A short list of motives found in the literature review was prompted to the interviewees to trigger the identification. Nonetheless, the respondents were freed to mention any relevant

motives during the semi-structured interviews. The most influential internal and external factors shaping current/future sourcing decisions were also explored. **Part D** aimed to evaluate the impact of outsourcing strategies on the organisational performance, their *results*. Initially, the interviewees were asked to evaluate the impact of outsourcing on the performance objectives: cost, delivery, quality, and flexibility. After this initial assessment, two main measures of airline performance were explored: 'passenger load factor' and 'daily aircraft utilisation'. **Part E** contained the assessment of weaknesses and strengths of the sourcing strategies adopted by the airlines in comparison with alternative strategies. This section was also left open to suggestions in terms of the functions discussed in the interview. Current trends in outsourcing were explored from the practitioners' point of view. Finally, suggestions on other respondents were requested.

Content analysis

The transcripts of the interviews were analysed through 'content analysis' (Berelson, 1952). The content analysis is a broadly used qualitative research method (Hsieh and Shannon, 2005). It is "the study of recorded human communication" (Babbie, 2007, p. 320). A fundamental feature of qualitative data analysis is data reduction. As stated by Miles and Huberman (1994, p. 10), "data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions". Content analysis is an appropriate method for analysing data that entails reduction, sampling, abstracting and categorising. The method classifies textual material and reduces it to more relevant and manageable 'bits' of data (Krippendorff, 2004; Weber, 1990).

As defined by Weber (1990, p. 9), content analysis is "a research method that uses a set of procedures to make inferences from text. These inferences are about the sender(s) of the message, the message itself, or the audience of the message". According to Krippendorff, (2004, p. 18), it is "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use". The method is also represented by "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (Patton, 2002, p. 453). A broader definition

of the method is offered by Holsti (1969). The author defines content analysis as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (Holsti, 1969, p. 14). Hsieh and Shannon (2005) highlighted the method applicability in the case of a subjective interpretation of data (text) using systematic classification and coding for the identification of themes/patterns. According to Schilling (2006, p. 28), the qualitative content analysis is "an approach of empirical, methodological controlled analysis of text within their context of communication, following content analytic rules and step by step models, without rash quantification". The goal of the content analysis is "to provide knowledge and understanding of the phenomenon under study (Downe-Wamboldt, 1992, p. 314). Krippendorff (2004) cited four functions for the content analysis:

1. Confirming what is already believed;
2. Correcting the 'optical illusions' of specialists;
3. Settling disagreements among specialists;
4. Formulating and testing hypotheses about symbols.

Babbie (2007, p. 328) stated that, "not all content analysis results in counting. Sometimes a qualitative assessment of the materials is most appropriate". Weber (1990) suggests that the specific type of content analysis approach chosen by the researcher depends on the theoretical and substantive interests of the problem being studied. Zhang and Wildemuth (2009) compared qualitative content analysis with quantitative content analysis. A summary of their findings is provided in Table 4.6. Furthermore, Hsieh and Shannon (2005) discussed three distinct approaches to qualitative content analysis. The authors base their discussion on the degree of involvement of inductive reasoning. The utilisation of each of these approaches depends on the specific research purpose (Hsieh and Shannon, 2005). The approaches are presented in Table 4.7.

Table 4.6: Comparison Between Quantitative and Quantitative Content Analyses

Characteristic	*Quantitative Content Analysis*	*Qualitative Content Analysis*
Research Area	It is widely used in mass communication to count manifest textual elements. It is often criticised for missing text embedded syntactical and semantic information.	It was developed primarily in anthropology, qualitative sociology, and psychology, in order to explore the meanings underlying physical messages.
Reasoning	Deductive, intended to test hypotheses or address questions generated from theories or previous empirical research.	It is mainly inductive, grounding the examination of topics/themes, as well as inferences drawn from them, in the data. In some cases, the qualitative content analysis attempts to generate theory.
Data Sampling Techniques	It requires that the data is selected using random sampling or other probabilistic approaches to ensure the validity of statistical inference.	It consists of purposively selected texts, which can inform the research questions being investigated.
The Products	It produces numbers that can be manipulated with various statistical methods.	It produces descriptions or typologies, along with expressions from subjects reflecting how they view the social world. By these means, the perspectives of the producers of the text can be better understood by the investigator as well as the readers of the study results.
Focus/pays attention to	The statistical significance of the occurrence of particular texts or concepts.	The unique themes that illustrate the range of the meanings of the phenomenon.

Table 4.7: Three Approaches to Content Analysis

Conventional qualitative	*Directed content analysis*	*Summative content analysis*
Coding categories are derived directly and inductively from the raw data.	Initial coding starts with a theory or relevant research findings. During data analysis, the researchers immerse themselves in the data and allow themes to emerge from the data.	It starts with the counting of words or manifest content, and then extends the analysis to include latent meanings and themes.
This is the approach used for grounded theory development.	It is used to validate or extend a conceptual framework or theory.	This approach seems quantitative in the early stages, but its goal is to explore the usage of the words/indicators in an inductive manner.

Qualitative content analysis is often used to analyse interview transcripts in order to reveal or model people's thoughts (Zhang and Wildemuth, 2009; Schilling, 2006). Zhang and Wildemuth (2009) and Schilling (2006) propose some guidelines for qualitative content analysis. In general, the authors suggest that the main steps of the qualitative content analysis process start with transferring the data into written text. The second step is defining the units of analysis. In this sense, the unit of analysis refers to the basic unit of text to be classified during the analysis of content. Qualitative content analysis usually uses individual themes as the unit of analysis. Tesch (1990, p. 116) defines such a unit as "a segment of text that is comprehensible by itself and contains one idea, episode, or piece of information". The following step involves developing categories/structuring the content analysis. Structuring means that each statement is attached to one of the categories previously defined. Researchers usually have at least a preliminary model guiding their data-driven approach; the enquiry of the study is based on this model. Hence, the list of coding categories can be generated from it.

The preliminary model should be made explicit and used for structuring the materials to improve the transparency of the analysis (Schilling, 2006; Miles and Huberman, 1994). Ritchie and Lewis (2003, p. 220) state that "the name 'framework' comes from the 'thematic framework' which is the central component of the method. The thematic framework is used to classify and organise data according to key themes, concepts and emergent categories. As such, each study has a distinct framework comprising a series of main themes, subdivided by a succession of related subtopics". The following steps involve assessing the coding scheme and consistency, and coding the whole text. In that regard, Schilling (2006) states that revisiting the categories after 10 to 15 percent of the material has been coded is recommended for a formative check of reliability. In addition, coding all the statements and re-coding them by the same person assists the internal reliability. When sufficient consistency has been achieved, all statements can be coded and attached to the identified categories, based on their semantic similarity. Consequently, themes within each category can be identified and ranked based on their importance (Zhang and Wildemuth, 2009; Schilling, 2006).

The next step is to draw the conclusions and report the findings. Drawing conclusions involves inferences and presenting reconstructions of meanings derived from the data. Schilling (2006) states that descriptive numerical analysis, in the context of qualitative content analysis, such as the basic measures of absolute topic frequency, may help the researcher to avoid 'weighing single comments too heavily'. Frequency analysis can help to critically appraise how representative the statements are for the entire sample. Nevertheless, the goal of the qualitative content analysis is not to produce counts and statistical significance, but rather to fracture the data and rearrange it to facilitate drawing and verifying conclusions. Qualitative content analysis uncovers patterns, themes, and categories important to a social reality (Zhang and Wildemuth, 2009; Schilling, 2006). While quantitative results can be displayed in the form of tables and statistical values, the display of the qualitative results is still an unsolved problem (Schilling, 2006). Miles and Huberman (1994, p. 11) state that "the most frequent form of display for qualitative data in the past has been extended text". Although it is a common practice to use quotations to support conclusions, other options of data display, including matrices, graphs, and charts can also be incorporated. The exact form of the display is greatly reliant on the questions the researcher wants to answer (Schilling, 2006). Zhang and Wildemuth (2009) conclude that qualitative research is fundamentally interpretive, and interpretation represents the researcher's personal and theoretical understanding of the phenomenon under investigation. Schilling (2006, p. 35) stated that, "qualitative methods have their especial strength in the discovery and generation of hypotheses, but also to get a more in-depth understanding of the ideas and views of a person". A qualitative research process cannot be pressed into a clear-cut model with distinctive phases. Nonetheless, it has to follow systematic and transparent ways for data collection, analysis and reporting (Schilling, 2006).

The use of IT in qualitative content analysis

"It was not until the early 1980s that qualitative researchers discovered that the computer could assist them in working with their data" (Kelle, 1995, p. 1). Traditionally, index cards and files were used in qualitative analysis. Nowadays, several computer programs are being utilised within the framework of qualitative analysis to support the analysis process. Word™ and Excel™ have been employed by

qualitative researchers to support their analysis (Denzin and Lincoln, 2011). Excel™ can be utilised to summarise and sort key points under the predetermined heading and/or categories (Bazeley, 2007). "Excel is often viewed as a number cruncher and it is therefore associated with quantitative data analysis, but we have also found it useful as a qualitative tool. It can handle large amounts of data, provide multiple attributes, and allow for a variety of display techniques" (Meyer and Avery, 2009, p. 91). In this case, Microsoft Word™ is used for the data transcription and for the initial preparation of the data for the qualitative analysis, including the transcription of the interviews. Moreover, because the amount of data from the interviews was regarded as manageable, Microsoft Excel™ was adopted to summarise and sort key themes. Excel™ was used to categorise the data using the headings established in the interview guide, which in turn were based on the research objectives. The guidelines for qualitative content analysis proposed by Zhang and Wildemuth (2009) and Schilling (2006) were adopted for the qualitative analysis of the transcripts of the interviews. Appendix C contains a sample of the content analysis in Excel™.

Saturation point

As for the number of interviews, in the present study, the notion of degree of saturation drives the data collection effort. As devised initially by Glaser and Strauss (1967), saturation is obtained when the collection of new data does not aggregate any more to the topic being investigated. Similarly, the approach of degree of saturation proposed by Strauss and Corbin (1998) refers to reaching the point when it is counter-productive to continue with data gathering, since the 'new data' does not add to the theory or framework. In this case, considering the focus on main airlines operating from Heathrow and their geographical coverage, 14 was considered a sufficient number of interviews to observe the saturation point. This is also in line with the numbers proposed by Morse (1994), at least 6 (six) and Creswell (1998), between 5 and 25. Furthermore, it corresponds to the achievement of saturation observed by Guest *et al.* (2006). In that study, the saturation point was achieved after 12 (twelve) interviews and main themes emerged as early as 6 (six) interviews. Along with the concerns related to the achievement of data saturation, specific tactics were adopted to address validity and reliability issues. Creswell (2003) highlighted the importance of

taking the necessary steps to check the validity of quantitative methods and the accuracy of qualitative findings. The software SPSS™ (Statistical Package for Social Sciences) was adopted for the quantitative analysis of data. Due to its traditional use and the existence of previous studies attesting its appropriateness, the programme was selected for this purpose. Validity and reliability subprograms within the tool were regarded as sufficient to cover these items. As for the qualitative methods used in the study, case research and qualitative interviews, the tactics utilised in the study to address them are discussed next.

4.7 RELIABILITY AND VALIDITY

Four tests are usually used to determine the quality of empirical social research: construct/content validity, internal validity, external validity, and reliability (Yin, 1994). Construct or content validity corresponds to the extent to which the operational measure for a construct reflects the construct's observable effects, appears to describe a single construct and correlates with operational measures of the other constructs (McCutcheon and Meredith, 1993). Yin (2009) emphasised the difficulties in dealing with this issue in case research. Mainly, because subjective judgments are used to collect the data and researchers fail to develop operational measures. Among the tactics to overcome these issues, establishing a clear chain of evidence is mentioned by McCutcheon and Meredith (1993) and Yin (2009). In the exploratory case study with SAUDIA, personal interviews conducted with its management team were tape-recorded while notes were made by the researcher. Internal documents were also analysed and kept on file for future reference (e.g. Appendix D). The interviews were transcribed and analysed to produce the case report. Another tactic suggested by the authors is the review of the draft version of the report on the findings by key informants. After the exploratory study, the draft of the case study report was submitted to the interviewees for their analysis and approval. Moreover, multiple sources were used to ensure the content validity as suggested by McCutcheon and Meredith (1993). Members of the airline management from different departments were interviewed, seeking multiple viewpoints related to the restructuring process. The Senior Manager for Administration and Coordination, the Vice-President for Corporate and Development, the Executive Vice-President, the Senior Specialist in

Human Resources, the General Manager of Industrial Engineering and Systems, the General Manager of the Reservations Call Centre, the General Manager of Operations, and the Manager of Human Resources participated in the study. Furthermore, internal documents and direct observation were part of the data collection. For the qualitative interviews, conducted in the third stage of the research process, similar tactics were adopted. Establishing the chain of evidence was the main concern in this case. The existence of the interview guide contributed to organise the data collection and maintain accurate records of the discussions. Similar to the case research report, the interview transcripts were submitted to the interviewees for analysis and approval.

The internal validity is concerned with whether the right causal relationships are established in the data analysis (Yin, 2009). McCutcheon and Meredith (1993) indicated pattern matching as one of the main tactics to deal with this issue. Previous studies on outsourcing in other industries were used as means of comparison with the logic of the analysis of the exploratory case study and the qualitative interviews. The external validity refers to the results' generalisability, i.e. how the results obtained in one group are applicable to other groups or settings. It is particularly important during the research design as indicated by Yin (2009). In fact, Yin (1994) suggested the use of theory in single case studies to address external validity issues. The empirical literature on outsourcing in other industries was used as a template for the research design. McCutcheon and Meredith (1993) suggested the use of the replication logic of multiple case studies for case research. In the case of the qualitative interviews, the interview guide created a set of procedures that were replicated for every interview. Each interview was conducted as an independent unit, recorded, transcribed, and coded. The content analysis was conducted through Microsoft Excel™. The data obtained in every interview was summarised, following the interview guide sequence to compose individual worksheets. The worksheets were analysed and common patterns were grouped. The common patterns were analysed and supported through additional excerpts from the transcripts. Excel™ is used in the qualitative analysis due to its structure, data manipulation and display features. The tool allows the organisation of data and serves as a database suitable for the qualitative analysis

(Meyer and Avery, 2009). Research has shown that Excel™ can produce powerful and reflexive representations based on simplicity and creativity (Amozurrutia and Servos, 2011).

The reliability refers to the extent to which data would be duplicated if collected at another time or through other means (McCutcheon and Meredith, 1993). Yin (2009) indicated the use of a case study protocol, which was developed by the researcher (Appendix E). The author recommends four main components to compose the protocol:

1. The case study project overview;
2. The field procedures;
3. The case study questions;
4. A guide for the case study report.

Yin (2009) suggested a case study database for multiple case studies; a comparable logic was adopted for the interviews conducted with the airline managers. The main objective of keeping a database is maintaining a raw version of the data for an independent inspection (Yin, 2009). For instance, it can be used by a critical reader to examine the data that led to the study conclusions. The spreadsheet created for the content analysis represented this database, since a summarised version of the interview transcripts was individually reported in the Excel™ file.

Finally, McCutcheon and Meredith (1993) indicated the importance of using more than one data gathering method to increase the reliability of social research. In the present study, a mix of quantitative (linear regression analysis) and qualitative (case research and qualitative interviews) methods was adopted to overcome the potential deficiencies of each method. Moreover, as reported by Jick (1979), the triangulation of methods can increase the data reliability, since a more holistic and complete understanding of the phenomenon may be achieved. Table 4.8 presents the tactics used in the study to address reliability and validity issues. Different tactics were adopted according to the phase of the research: research design, data collection, data analysis, and composition. Section 4.8 presents the summary of Chapter 4 (Research Methods).

Table 4.8: Tactics Used in the Study to Address Reliability and Validity Issues

TESTS	*PHASE*	*TACTICS USED IN THE STUDY*	*CASE STUDY*	*INTERVIEWS*
Construct/Content Validity	Data Collection	Establish chain of evidence	✓	✓
	Composition	Have key informants review the draft report	✓	✓
	Data Collection	Use multiple sources of evidence	✓	-
Internal Validity	Data Analysis	Do pattern-matching	✓	✓
External Validity	Research Design	Use theory in single-case studies	✓	-
	Research Design	Use replication logic for multiple-case studies	-	✓
Reliability	Data Collection	Use case study protocol	✓	-
	Data Collection	Develop case study database	-	✓

4.8 CHAPTER SUMMARY

Chapter 4 described the research design and methods used in the study. A mixed methods approach was adopted in terms of design and a three-stage process was devised. *Stage 1* involves the review of literature and an exploratory case study. *Stage 2* encompasses the regression analysis of secondary data. *Stage 3* corresponds to 14 (fourteen) semi-structured interviews with managers of 12 (twelve) airlines. The three stages of the research process were thoroughly explained and the research methods utilised were justified. Reliability and validity issues and tactics used to address them were discussed. Chapter 5 describes the exploratory case study background and associated findings.

CHAPTER 5

THE EXPLORATORY CASE STUDY

5.1 CHAPTER OVERVIEW

Chapter 4 discussed the research design and methods. As stated, an exploratory study of the outsourcing process of one airline and the review of relevant literature related to outsourcing and the airline industry constitute the first stage of the research. Chapter 5 discusses the exploratory study of the airline outsourcing. Section 5.2 contains the description of the case. Initially the objectives behind the exploratory study are introduced. Next, some background on SAUDIA and its current decision-making hierarchy are presented. Section 5.3 discusses the main challenges faced by SAUDIA. Section 5.4 explains the restructuring process the company went through. Section 5.5 examines the motives behind outsourcing as reported by the company executives. Subsection 5.5.1 discusses the factors affecting SAUDIA's management outsourcing decisions. Subsection 5.5.2 refers to the impact of outsourcing on specific performance objectives: cost, delivery, quality, and flexibility, as viewed by the airline executives. Subsection 5.5.3 explores the views of SAUDIA's ground services. Section 5.6 presents the key findings of the exploratory study.

5.2 THE EXPLORATORY STUDY – SAUDI ARABIAN AIRLINES

The objectives of the exploratory study were twofold: 1) build on the researcher's knowledge of the motives and other determinants influencing outsourcing decisions, and 2) understand the airline's top management team expectations related to outsourcing that influence the airline's operational performance, including the performance objectives: cost, delivery, quality, and flexibility along with the airline's overall operational performance. Saudi Arabian Airlines (SAUDIA) was chosen as the exploratory study mainly due to its current major restructuring, as part of the preparation for a privatisation plan. The second reason refers to the researcher's convenient access to the management

team, being one of the airline's employees since 1991. The findings of the exploratory study derive from a series of interviews with SAUDIA's management team. Table 5.1 presents the list of interviewees who took part in the study. The Senior (SR) Manager (Mgr) for Administration and Coordination, the Vice-President (VP) for Corporate and Development, the Executive Vice-President (EVP), the Senior (SR) Specialist in Human Resources, the General Manager (GM) of Industrial Engineering and Systems, the General Manager (GM) of the Reservations Call Centre, the General Manager (GM) of Operations, and the Manager (Mgr) of Human Resources were interviewed.

Table 5.1: List of Interviewees of the Exploratory Study

Organisation	Position
Saudi Arabian Airlines	**SR. Mgr. Administration & Coordination**
Saudi Arabian Airlines	**VP Corporate Training & Development**
Saudi Arabian Airlines	**EVP Privatisation**
Saudi Arabian Airlines	**SR Specialist Human Resources**
Saudi Arabian Airlines	**GM Industrial Engineering & Systems**
Saudi Arabian Airlines	**GM Reservations Call Centre**
Saudi Arabian Airlines Ground Services (SBU)	**GM Operations**
Saudi Arabian Airlines Ground Services (SBU)	**Mgr. Human Resources**

As part of the exploratory case study, directives and memorandums related to the airline privatisation were analysed by the researcher. These documents included the airline privatisation strategy, goals and path. However, given the confidentiality nature of the material, publishing these documents in the thesis appendices was deemed inappropriate. Instead, excerpts of the employees' manual related to the privatisation are included in the appendices (Appendix D). The privatisation manual was published by the airline in 2008 and made accessible electronically for all the airline staff. The document explains the

goals of the privatisation programme and the airline restructuring process. It also gives details of the new structure. Additional information such as the impact of the privatisation programme on the employees, their jobs and benefits is also included. The manual was published in the Arabic language, the official language of the airline's home base, Saudi Arabia, and the communication between the organisation and its employees.

5.2.1 Airline Background

Saudi Arabian Airlines, referred to as SAUDIA, is a state-owned organisation established from the gift of a small aircraft, a DC-3, given to King Abdulaziz by American President Roosevelt in 1945. It is one of the pioneer airlines in the Middle East. Since then, SAUDIA has grown rapidly to become one of the largest international airlines in the region. In 2006, SAUDIA was operating 151 aircraft with a workforce of 22,025. It must be noted that being a state-owned organisation, the Saudi citizen employees of SAUDIA enjoy lifetime job security as per the government employment policy. Salary scale and compensation are based on employee seniority and time spent on the job. For instance, apart from job promotions, the airline has no influence on the employees' total income, irrespective of their performance and productivity. Moreover, in 2006, SAUDIA carried about 17 million passengers, ranking 27th in a list of IATA members worldwide, according to the total number of scheduled passengers flown in 2006 (WATS, 2007). SAUDIA operates the latest and most advanced aircraft: B747, B777, Airbus A300-600s, MD11s and MD90s. The airline network includes 55 international and 27 domestic destinations. Table 5.2 presents summarised key statistics for SAUDIA.

Table 5.2: Key Statistics of Saudi Airlines

Fleet Size	151	IATA Members Ranking (Worldwide 2006)	27
Employees	22,025	Domestic Stations	27
Passengers Flown (2006)	16,830,838	International Stations	55
Passenger Load Factor (%)	71.1%	Total Stations	82

Source: These figures are based on WATS (2007).

5.2.2 Current Structure of SAUDIA

As with almost all legacy carriers, the organisational structure of SAUDIA consists of several divisions such as human resources, maintenance, flight operations, training, and customer services. Each division is managed by a vice-president (VP) who reports to one of the three executive vice-presidents: EVP Marketing, EVP Operations, and EVP Finance & Administration. All of them report directly to the general director of SAUDIA. In each division, there are several general managers, who report to one of the division's Assistant Vice-Presidents. Each general manager is responsible for supervising several managers, who are in charge of the daily operations of their departments. Figure 5.1 illustrates SAUDIA's current organisational structure. Each circle in the figure represents one of the airline divisions. Figure 5.2 illustrates the airline's decision-making hierarchy.

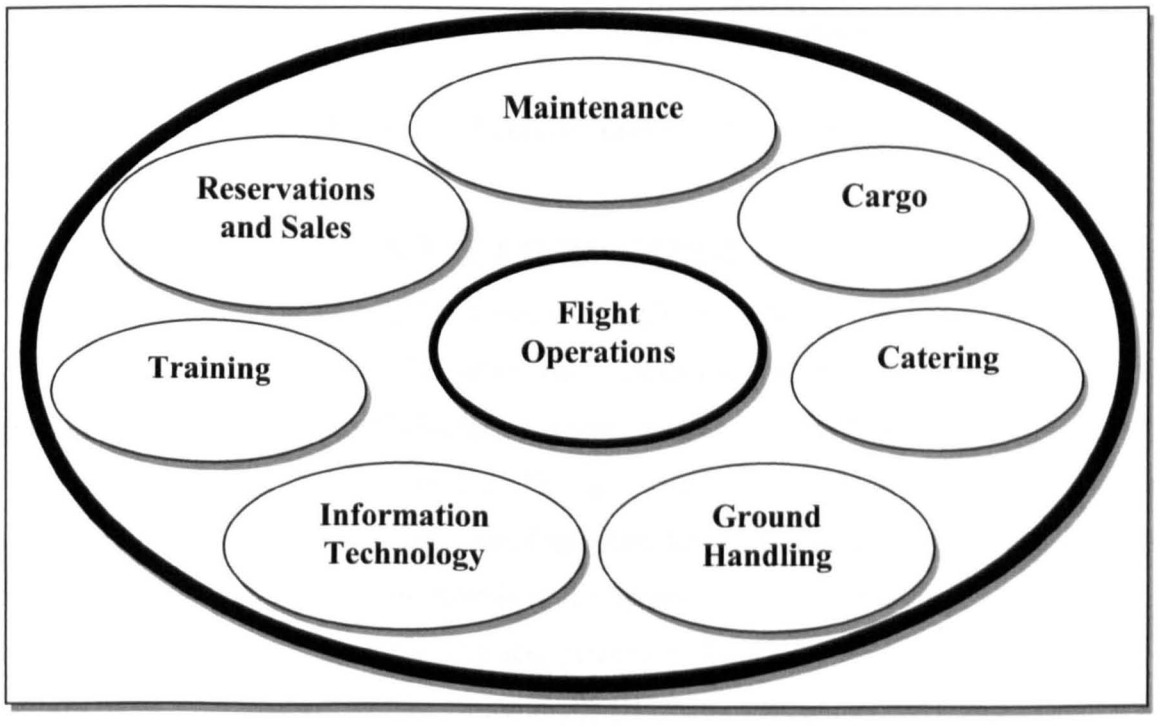


Figure 5.1: SAUDIA's Structure Before the Corporate Restructuring

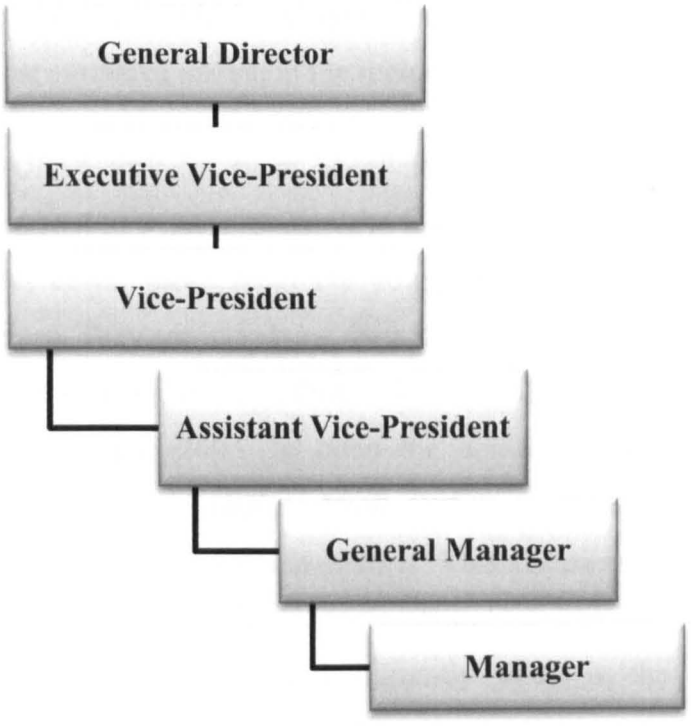


Figure 5.2: Decision-making Hierarchy

5.3 THE CHALLENGES FACED BY SAUDIA

In addition to the challenges airlines around the globe are facing, including globalisation and deregulation (see Chapter 3), SAUDIA is experiencing additional new regional and local challenges. The regional challenges comprise intensive competition with relatively young but fast-growing airlines such as Emirates Airlines and Qatar Airways, in addition to its conventional regional competitor, Gulf Air. The regional competition refers to the fact that the Kingdom of Saudi Arabia is the largest country in the region, in land and population terms. The population of Saudi Arabia is about 26.7 million, made up of 19.7 million Saudis plus 7 million foreign nationals (Bureau of Near Eastern Affairs, 2004). In addition, a significant number of Muslims from around the world visit the country to

perform the Hajj[2] and visit the two holy mosques. Thus, the air transportation market in Saudi Arabia is the most attractive market in the region.

For a long time, SAUDIA was the main beneficiary of this market. However, this attractive market has started to witness an increase in competition from other air carriers in the region. In most cases, those relatively young airlines are able to offer their passengers cheaper prices. They are increasing their share of the Saudi market at the cost of SAUDIA's share. Furthermore, SAUDIA's local challenges include the Saudi government's decision, in June 2003, to open the domestic aviation sector up to competition amongst national companies. Until that year, SAUDIA was the sole beneficiary of the Saudi domestic aviation market. This decision has attracted other national companies to provide domestic and international air transportation services in Saudi Arabia. Another challenge SAUDIA currently faces is the Saudi Arabian government's fast-progressing plan to privatise the airline, announced in 1994. Privatisation will bring an end to government subsidies, meaning that the airline needs to be prepared to operate on a fully commercial basis. In the early steps toward privatisation, a committee constituted by selected businessmen and airline executives headed by the General Director of SAUDIA was formed. The objective of the privatisation committee was to set the strategies for the privatisation of the airline. The committee decided that the airline was not ready for privatisation and did not present an attractive investment opportunity for the private sector with its operational and financial performance at the time. Therefore, an improvement plan was deemed necessary.

5.4 THE RESTRUCTURING OF SAUDIA

Saudi Airlines is proceeding with its privatisation programme in light of the executive approval obtained from the Supreme Economic Council of the Kingdom of Saudi Arabia. The privatisation programme includes the following main dimensions:

[2]Hajj is one of the five pillars or central duties of Islam. It is a pilgrimage to Makkah. A Muslim is expected to perform Hajj at least once in his/her lifetime.

- Transfer all non-core divisions of Saudi Airlines to become commercial strategic business units (SBUs) owned by a newly created holding company and complete its privatisation process;
- Comprehensively restructure of the airline in terms of its financial, organisational, operational, and human resources structure;
- Restructure the flying division to become a commercial strategic business unit, operating on a commercial basis, corresponding to the foundations of the air transportation industry, locally, regionally, and internationally.

As the EVP Privatisation explained, when the airline decided on privatisation, two different approaches were considered. The first was to offer the airline for privatisation with its existing structure. The second option was to restructure the organisation and divide it into several organisations, strategic business units (SBUs). The decision made was to pursue the second option, as it was believed that it would improve organisational performance and increase the value of the overall corporation. A new holding company was established and each of the main divisions is set to be transferred to a strategic business unit in its own right. According to the GM Industrial Engineering & Systems, "all the activities currently performed by the airline's department were evaluated according to the activities evaluation decision tree". Figure 5.3 represents the decision tree mentioned by the executive. The same respondent further suggested that, "Saudi airlines invested a lot in many functions, core and non-core, and built experience and it is better to be utilised". For instance, maintenance, catering, ground handling, cargo, training, and airlines have been restructured to become an independent SBU with their own boards of directors and management teams. In consequence, the government is attracting the private sector to become a strategic partner of each of those SBUs. The EVP Privatisation stated that, "the invitation of the private sector, as strategic partner in the newly created SBUs, is to bring the commercial mentality in the business which will lead to better efficiency and resources utilisation and eliminate existing bureaucracy".

The main purpose of the newly established holding company is to represent the government's share in each of the new SBUs. The restructuring was made based on what is core and non-core to the airline. Flying people in addition to scheduling and marketing have been identified as the airline's core businesses, the remainder are considered non-core. As the EVP Privatisation explained, "the restructuring was made based on what is core and non-core business for the airline. The core business for the airline is to fly people in addition to scheduling and marketing; the rest is non-core. Therefore, the other functions, such as catering, ground handling, maintenance, training, etc., become an SBU by themselves and the airline will outsource all the functions to those SBUs".

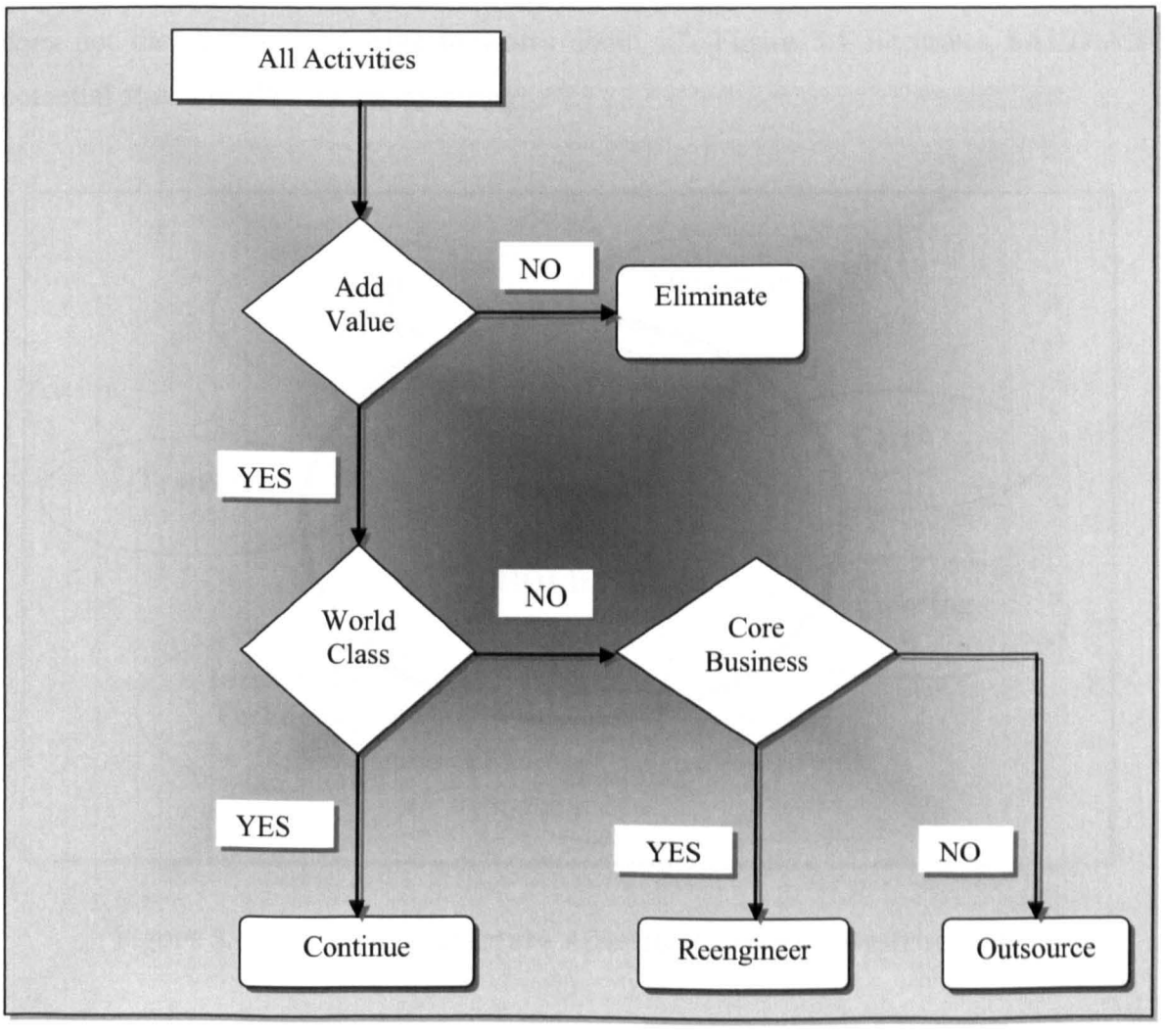


Figure 5.3: Activities Evaluation Decision Tree

In addition, before being restructured, non-core divisions had been dealt with as cost centres. However, the airline management team proposed that the newly developed SBUs were sources of revenue for the holding company. As the VP Corporate Training & Development (formerly VP Marketing Planning) explained, "it is more efficient to have the ground handling, for instance, to have its own identity and provide the service to others. For example, Dnata, a ground handling business unit, is a source of revenue for the Emirates Group. Having those non-core activities to prove their own identity is the best model for legacy airlines, we are not talking about newly established airlines. In summary, if the airline has the capability, in those non-core activities, then it is better to have it as SBUs and maybe invite strategic partners to share in the investment. But, if it does not then it does not have to worry about it". Figure 5.4 illustrates SAUDIA's potential structure after the restructuring.

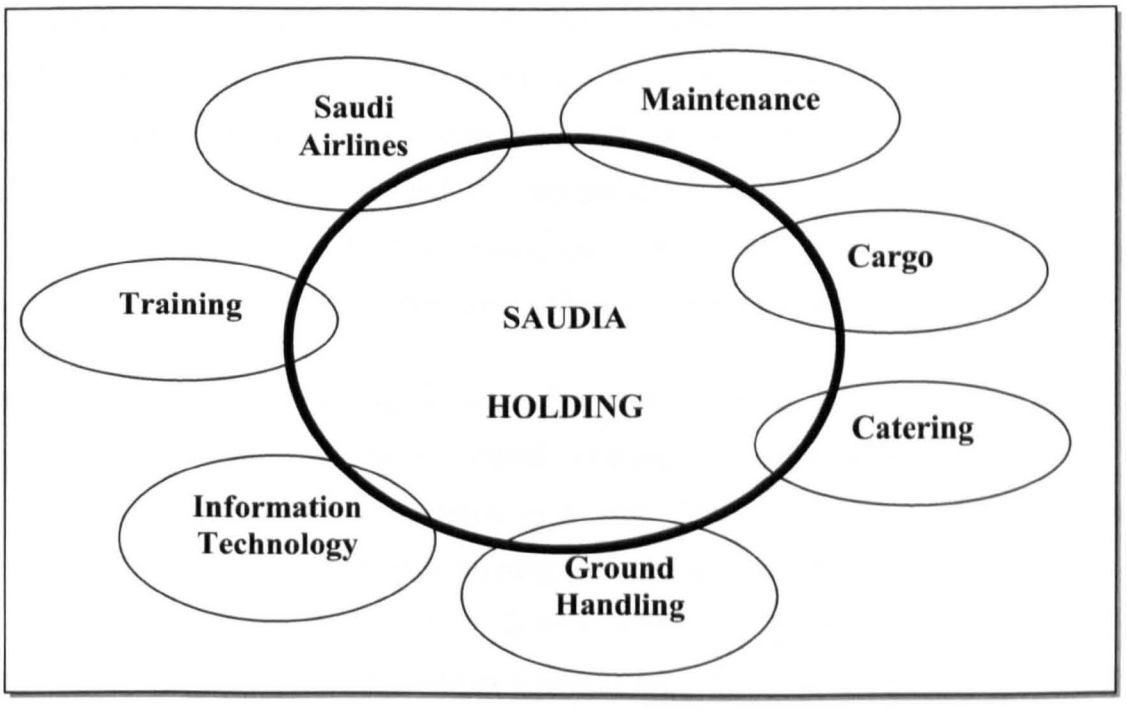


Figure 5.4: SAUDIA's Structure After the Corporate Restructuring

5.4.1 Motives Behind Outsourcing

The findings of the exploratory study suggest that the main motives behind outsourcing can be summarised as the focus on core activities and cost reduction. The main reason behind outsourcing in the airline industry is to focus on core activities. The Vice-President Corporate Training & Development stated that "it is very clear in the aviation business that the core business of airlines is selling seats and flying them. The rest can be produced by others in more efficient ways. And it is good to concentrate on the core business". In addition, the Senior Manager Administration & Coordination suggested that "one advantage that motivates outsourcing is the fact that through outsourcing an airline can eliminate the excessive work generated by non-core activities. For instance, it is not an airline business to do the ramp services and hire more employees". Another motive is the aspired cost reduction. As suggested by the airline's top management team, cost reduction can be attributed to several factors, the first of which is abandoning some of the balance sheet fixed costs to convert them into variable costs. The airline will pay the suppliers based on the actual utilisation of the services. As remarked by the Vice-President Corporate Training & Development, "when you outsource you take the fixed costs out of your balance sheet and you pay per flight, which is more efficient". Similar views were expressed by the Senior Manager Administration & Coordination: "when outsourcing you just pay the contractor based on your number of flights".

Another source of cost savings is through the reduction of the airline workforce. In general, airlines employees are considered to be highly paid, more than the suppliers of the non-core activities pay their employees. On top of the cost of salaries, there are other associated costs, such as employee training, pension, and health insurance. Therefore, it is more efficient to get the service of those employees from external suppliers. As the Executive Vice-President Privatisation commented, "when focusing on core activities you will bring the cost down. Why should you take the cost of highly paid employees? For example, the salary scale for the ground handlers is less than the salary scale for the airline". Similarly, the Senior Manager Administration & Coordination stated that, "the other non-core activities are an industry by themselves with cheaper salaries and better

utilised employees". In addition, the Vice-President Corporate Training & Development suggested that, "it is more efficient to get the non-core activities outsourced to external providers, taking into consideration the employees' salaries, overtime, and training".

5.4.2 Factors Influencing Outsourcing Decisions

The exploratory study also suggests that the main factors influencing outsourcing decisions can be classified into two categories: internal factors and external factors. Internal factors are mostly associated with whether the activity under consideration is a core or non-core activity. Additionally, an airline's current capability in performing non-core activities would also influence the nature of outsourcing. In that sense, if the activity is not one of the airline's core activities and the airline has the capability to perform it then it is best to create a new SBU, and maybe share the investment with a strategic partner. However, if the airline does not possess the capability then it is better to outsource it. SAUDIA has invested in most of the activities and built significant experience in performing them. Therefore, the decision to establish new SBUs has been deeply influenced by the existing capability of SAUDIA. For instance, the Senior Manager Administration & Coordination stated that, "the existing capability of Saudi Airlines in the non-core activities influenced the decision of creating the new SBUs. And, before being restructured, Saudi Airlines used to sell its services for other airlines through its different divisions, yet in a low profile". In that regard, the Vice-President Corporate Training & Development suggested that "there is a possibility for the ground handling, for instance, when it becomes an SBU, to grow and improve their business".

The main external factors identified were government legislation and supplier availability. As the Vice-President Corporate Training & Development explained, in several countries provisions of several activities such as ground handling are only accessible to the national carrier, as per governmental policy. Thus, all airlines operating to those countries' airports are obligated to outsource such activities to the national operator, irrespective of the service levels provided. As an example, Tunis Air and Dnata, part of the Emirates Group, are the sole players in the ground handling market in their

countries, through local government legislation. The services provided by Dnata are acceptable for almost all airlines, including SAUDIA. However, the services provided by Tunis Air are below the acceptable level. Yet the only choice available for airlines operating to Tunis airport is to continue outsourcing activities to them, despite the airlines' many complaints. Another external influential factor is the service provider availability. As the same respondent suggested, it is not always possible to locate capable suppliers to perform an activity at the airline's required standard. According to the General Manager Reservations Call Centre, the airline has failed to allocate a call centre in Saudi Arabia capable of handling reservation calls overflow during high season. Another example, as indicated by the Vice-President Corporate Training & Development, is the ground handling services provider in the Cairo station (Egypt). The service standards provided by the service providers did not meet SAUDIA standards. Thus, the airline decided to build its own capabilities to perform the ground handling activity in Cairo. Nevertheless, the same respondents further suggested that, nowadays, there is no absence of capable suppliers of ground handling in Cairo. As a result, SAUDIA's internal provision of such activity should come to an end despite the airline's current capability and high demand. In situations where more than one supplier is available and there are no government restrictions, the external influence on the outsourcing decisions is the level of service provided by each supplier and their offers. For instance, there are two ground handling providers in Kuala Lumpur airport, Malaysia. The service quality and the price they offer were the main factors taken into consideration in the sourcing decision.

5.4.3 The Impact of Outsourcing

It is generally believed, among SAUDIA executives interviewed for the purposes of this study, that outsourcing will have a positive impact on performance objectives such as cost, delivery, quality, and flexibility. The envisaged positive impact was attributed to the fact that every outsourced non-core activity is the core activity of the service provider. Thus, the suppliers are expected to invest in those activities and adopt more efficient and effective ways to perform them. Moreover, all service levels are guaranteed through the service level agreement (SLA). The other factor is the ability of the airline to pay based

on the demanded services. Bearing in mind that in the airline industry demand is highly seasonal, the airline is no longer concerned with the common problematic of an idle workforce and facilities during low season and shortage during high season. Through outsourcing, the airline can pass the fluctuation of demand on to its supplier. Outsourcing will provide the airline with the advantage of volume flexibility.

5.4.4 Saudi Airlines Ground Services (SBU)

SAUDIA's Ground Handling Service is one of the first newly established SBUs. As explained by the respondents, the purpose of this SBU is to sell its services to SAUDIA and other airlines, local and international, which fly to Saudi Arabian airports. As the General Manager Operations stated, "Saudi Airlines Ground Handling started to sell its services to 26 airlines. In addition, Saudi Airlines is inviting other strategic partners to share in the investment, mainly the other two ground handlers operating in Saudi Arabian airports". Discussing the advantages of SAUDIA's ground handling services, the GM Operations revealed that when ground handling was part of the airline, they had difficulties getting all the required equipment. This occurred because they had to go through a long process of planning their budget for the division and getting many higher approvals. However, with the new structure, these decisions are taken within the SBU and they do not have that bureaucracy, and no obstacles in paying for any required equipment. The respondents stated that being a private organisation the employees are hired on renewable two-year contracts. Hence, employees who do not meet the work standards can be replaced at the end of their contracts. Furthermore, the interviewees stated that the airline's staff are costly. The SBU is paying its employees much less than the airline was paying its ground handling employees. Therefore, the total cost is lower, which was the main motive for the airline to outsource the function, as suggested by the General Manager Operations.

The GM Operations stated that "although some airlines consider the quality of the services offered by the available ground handlers, the dominating influential factor in service provider selection is the prices offered". The Mgr. Human Resources explained

that "for the international airlines it is more feasible, when it comes to cost, to outsource the ramp services to a local service provider, taking into consideration the cost of the required equipment. However, the terminal service outsourcing depends on the quality standards required by each airline. Some airlines prefer to have their own employees adhering to their specific service standards and servicing their customers in their airline uniform. Nevertheless, even when an airline is outsourcing the function, the supervision of the process remains in the hands of the outsourcer. Hence, on each flight our employees work under the supervision of a supervisor employed by the client airline, who is in charge of all non-routine decisions and to monitor the workflow". Moreover, the respondents suggested that fluctuating demand, required equipment, and workforce planning are no longer concerns for the airlines. It becomes the service provider's duty to ensure all manpower and equipment required are available when needed. The executives stated that the service levels required by each airline, such as the number of check-in counters and the turnaround time, are included in the standard level agreement, which is closely monitored by the airline. The Mgr. Human Resources stated that it must be noted that SAUDIA Ground Handling is still the only ground handler authorised by the Saudi government to provide ramp services in one of the main airports in Saudi Arabia.

5.5 THE EXPLORATORY STUDY KEY FINDINGS

The exploratory case study of SAUDIA suggested that the airline executive management team believes that the airline's concurrent internal provision of all required activities, core and non-core, has to come to an end to enhance the airline operational and financial performance. It has been suggested that the airline needs to focus on its core business activities and outsource all other non-core activities. The airline's core business is to sell seats and fly them and other activities are considered non-core. Moreover, identified motives behind outsourcing are a focus on core activities and cost reduction. In terms of the factors influencing outsourcing decisions, they can be grouped into two categories: external and internal factors. External factors comprise the government legislation and availability of capable service providers. On the other hand, the main internal factor is whether or not the activity under consideration is one of the core activities. In addition,

the airline's current capability can also influence the nature of the activity outsourced. In general, the airline executives believe that outsourcing will have a positive impact on the performance objectives: cost, delivery, quality and flexibility. The findings of the exploratory study derive from a series of interviews with the airline's executives and the review of internal documents, directives and memoranda of the airline in regards to the privatisation and restructuring programme.

5.6 CHAPTER SUMMARY

This chapter established the background of the airline correspondent to the exploratory case study, SAUDIA. The challenges the company has faced and the restructuring process it has been through were discussed. Chapter 5 described the findings of the exploratory case study based on the interviews with key executives belonging to the airline. The case study suggests that the focus on core activities and the reduction of costs are the main motives behind outsourcing for the airline. In terms of outsourcing determinants, they can be divided into internal and external. Internal determinants include the criticality of the activity under consideration and the current airline production capabilities. External determinants comprise supplier availability and governments legislation. In addition, the findings of the exploratory case study suggested that the airline's managers believe that outsourcing will positively influence the operational objectives and the overall operational performance. Chapter 6 contains the analysis of secondary data. The quantitative analysis aims to further evaluate the implications of outsourcing in the operational performance of airlines and explore the impact of outsourcing different types of activities on different performance measures.

CHAPTER 6

THE SECONDARY DATA ANALYSIS

6.1 CHAPTER OVERVIEW

Chapter 6 contains the analysis of secondary data through a regression analysis. Section 6.2 outlines the statistical characteristics of the sample. Section 6.3 presents the results of the linear regression analysis of the data. Section 6.4 summarises the findings associated with the secondary data analysis. The regression analysis presented within the chapter involves the data of the airlines' performance during 2006 and 2007, published by the International Air Transport Association (IATA) and the Association of European Airlines (AEA, 2007 and 2008), respectively.

6.2 CHARACTERISTICS OF THE SAMPLE

Of the IATA statistical report on the airlines' operational performance in 2006, 181 airlines were found to have published useful data for the purpose of this analysis. 'Passenger load factor' data was available for all 181 airlines. Data for 'all the other categories' were not available for all 181 airlines. The 'number of aircraft' was only available for 158 airlines. 'Average aircraft utilisation' data were available for 144 airlines. 'Operating profit' was provided for 85 airlines. The data on 'number of employees' in the categories utilised in the analysis for 'Maintenance & Overhaul', 'Ticketing, Sales & Promotion', 'Airport Handling', and 'Other Functions', were available for 153 airlines. Moreover, data derived from the AEA, on the percentage of 'on-time departures' and 'number of bags delayed', was available for 28 and 24 airlines, respectively. Table 6.1 presents the source for each category. Table 6.2 summarises these figures and presents the key characteristics of the 2006 sample.

Table 6.1: Data Sources

Category	*Source*
Total number of aircraft	IATA
Passenger load factor	IATA
Average aircraft utilisation	IATA
Operating profit	IATA
Number of maintenance and overhaul employees	IATA
Number of ticketing, sales and promotion employees	IATA
Number of airport handling employees	IATA
Number of all other categories employees	IATA
Percentage of on-time departures	AEA
Number of bags delayed	AEA

Table 6.2: The Characteristics of the Sample (2006)

Firm characteristics	*N*	*Min*	*Max*	*Mean*	*SD*
Number of airlines	181	NA	NA	NA	NA
Passenger load factor	181	34.90%	88.30%	68.95%	9.25%
Number of aircraft	158	2	697	65.69	101.33
Average aircraft utilisation	144	9.60%	79.88%	38.48%	12.24%
Operating profit – US$ Thousands	85	-194110	1348000	114211.74	254729.73
% of on-time departures	28	60.10%	90.70%	78.81%	6.63%
No. of bags delayed per 1000 Pax	24	4.4	23.0	12.84	4.68
Airline outsourcing involvement[3]	153	33.52%	99.15%	85.25%	10.96%
Maintenance & overhaul outsourcing	153	0.00	100%	81.15%	17.38%
Ticketing, sales & promotion outsourcing	153	0.00	100%	82.91%	14.52%
Airport handling outsourcing	153	0.00	100%	85.98%	15.46%
Other functions outsourcing[4]	153	0.00	99.51%	90.97%	11.67%

[3] Airline outsourcing involvement corresponds to the airlines' level of outsourcing intensity. It was based on the breadth and depth of outsourcing of the four staff categories: 'maintenance and overhaul', 'ticketing, sales and promotion', 'airport handling', and 'all others' as explained in Chapter 4.

[4] Other functions' involvement corresponds to 'all others' staff category, which encompasses employees not included in the six other categories such as finance, legal, personnel and corporate planning staff, as explained in Chapter 4.

Of the operational performance statistics during 2007, the data for 160 airlines were derived from the report published by the IATA. 'Load factor' figures have been published for all those 160 airlines. The 'number of aircraft' was found for 142 airlines. 'Average aircraft utilisation' data were available for 127 airlines. 'Operating profit' was provided for 78 airlines. 'Number of employees' in the categories utilised in this analysis – 'Maintenance & Overhaul', 'Ticketing, Sales & Promotion', 'Airport Handling', and 'Other Functions' – were available for 132 airlines. Data derived from the AEA, on the percentage of 'on-time departures' and 'number of bags delayed', were available for only 28 and 26 airlines, respectively. Table 6.3 summarises these figures and presents the key characteristics of the 2007 sample.

Table 6.3: The Characteristics of the Sample (2007)

Firm characteristics	*N*	*Min*	*Max*	*Mean*	*SD*
Number of airlines	160	NA	NA	NA	NA
Passenger load factor	160	27.00%	87.40%	70.72%	8.86%
Number of aircraft	142	2	655	72.16	107.07
Average aircraft utilisation	127	12.23%	64.02%	38.98%	10.37%
Operating profit – US$ Thousands	78	-665068	2170000	164637.15	368814.55
% of on-time departures	28	59.90%	88.80%	77.56%	6.84%
No. of bags delayed per 1000 Pax	26	4.5	27.8	13.85	5.59
Airline outsourcing involvement	132	26.78%	99.39%	83.24%	12.26%
Maintenance & overhaul outsourcing	132	0.00%	100%	79.51%	18.34%
Ticketing, sales & promotion outsourcing	132	0.00%	100%	75.94%	20.94%
Airport handling outsourcing	132	0.00%	100%	87.51%	15.47%
Other functions outsourcing	132	0.00%	100%	89.98%	13.66%

6.3 RESULTS AND ANALYSIS

The results of the regression analysis of the impact of the airlines' outsourcing intensity on the airlines' performance indicators can be summarised as follows. The intensity of the outsourcing does not exert a statistically significant influence on any of the performance indicators of 'passenger load factor' (Beta = -.119, $p > 0.1$, in 2006; Beta = .016, $p > 0.1$, in 2007), 'operating profit' (Beta = .009, $p > 0.1$, in 2006; Beta = .002, $p > 0.1$, in 2007), and percentage of 'on-time departures' (Beta = -.182, $p > 0.1$, in 2006; Beta = -.032, $p > 0.1$, in 2007). In reference to the correlation between 'outsourcing intensity' and 'number of bags delayed', the analysis revealed a moderate negative influence for 2006, but such a relationship was not confirmed in 2007 (Beta = -.470, $p < 0.05$, in 2006; Beta = -.128, $p > 0.1$, in 2007). Nevertheless, the regression analysis shows a *small negative* correlation between the airlines' 'outsourcing intensity' and the 'average daily aircraft utilisation'. Such a relationship was detected in 2006 and confirmed in 2007 (Beta = -.253, $p < 0.01$, in 2006; Beta = -.202, $p < 0.05$, in 2007). Therefore, the results suggest that there is no significant direct effect of the airlines' outsourcing intensity on the airlines' operational performance with the exception of a small negative impact on the 'average daily aircraft utilisation'. Table 6.4 shows the correlations between the airlines' outsourcing intensity and the performance indicators.

Table 6.4: Impact of Airlines' Outsourcing Intensity

Dependent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Passenger Load Factor	-.119	.016	.142	.859	1.000	1.000	1.000	1.000
Avg. Aircraft Utilisation	-.253***	-.202**	.003	.029	1.000	1.000	1.000	1.000
Operating Profit	.009	.002	.940	.984	1.000	1.000	1.000	1.000
% of On-Time Departures	-.182	-.032	.365	.883	1.000	1.000	1.000	1.000
No. of Bags Delayed	-.470**	-.128	.021	.561	1.000	1.000	1.000	1.000

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

The regression analysis represents the findings of the analysis involving the functional level outsourcing and the performance indicators (Tables 6.5, 6.6, 6.7, 6.8, and 6.9). The outsourcing impact of each of the functions categories was examined against the most related performance indicators. As seen in Table 6.5, the regression analysis results indicate no significant influence on 'passenger load factor' was detected for either 'ticketing, sales and promotion' category outsourcing (Beta = -.053, $p > 0.1$, in 2006; Beta = .108, $p > 0.1$, in 2007) or the 'airport handling' category outsourcing (Beta = -.094, $p > 0.1$, in 2006; Beta = -.091 $p > 0.1$, in 2007).

Table 6.5: Impact of Outsourcing on Passenger Load Factor

Independent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Ticketing, Sales & Promotion	-.053	.108	.543	.238	.855	.913	1.170	1.095
Airport Handling	-.094	-.091	.284	.321	.855	.913	1.170	1.095

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

Table 6.6 illustrates the regression results of the influence of 'Maintenance & Overhaul', 'Ticketing, Sales & Promotion', and 'Airport Handling' outsourcing on the 'average aircraft utilisation' indicator. The results obtained from the regression analysis demonstrate the absence of significant impact on the 'average aircraft utilisation' of 'Maintenance & Overhaul' outsourcing (Beta = -.003, $p > 0.1$, in 2006; Beta = -.050, $p > 0.1$, in 2007) and 'Airport Handling' outsourcing (Beta = -.137, $p > 0.1$, in 2006; Beta = .064, $p > 0.1$, in 2007). Nevertheless, the test shows that 'Ticketing, Sales & Promotion' outsourcing is negatively correlated with the 'average aircraft utilisation' (Beta = -.184, $p < 0.1$, in 2006; Beta = -.264, $p < 0.05$, in 2007). Referring to the impact of outsourcing on the 'operating profit' indicator, the results obtained from the regression analysis are illustrated in Table 6.7. It shows that the indicator has no significant correlation with any of the predictors: 'Maintenance & Overhaul' (Beta = -.089, $p > 0.1$, in 2006; Beta = -

.091, $p > 0.1$, in 2007), 'Ticketing, Sales & Promotion' outsourcing (Beta = .072, $p > 0.1$, in 2006; Beta = .203, $p > 0.1$, in 2007), 'Airport Handling' (Beta = .112, $p > 0.1$, in 2006; Beta = .068, $p > 0.1$, in 2007), and 'All Other Functions' (Beta = -.078, $p > 0.1$, in 2006; Beta = -.189, $p > 0.1$, in 2007).

Table 6.6: Impact of Outsourcing on Average Aircraft Utilisation

Independent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Maintenance & Overhaul	-.003	-.050	.977	.615	.806	.835	1.241	1.198
Ticketing, Sales & Promotion	-.184*	-.264**	.056	.010	.745	.809	1.342	1.235
Airport Handling	-.137	.064	.131	.506	.806	.894	1.191	1.118

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

Table 6.7: Impact of Outsourcing on Operating Profit

Independent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Maintenance & Overhaul	-.089	-.091	.546	.527	.612	.659	1.633	1.518
Ticketing, Sales & Promotion	.072	.203	.592	.127	.744	.777	1.343	1.286
Airport Handling	.112	.068	.411	.582	.713	.890	1.403	1.123
All Other Functions	-.078	-.189	.607	.186	.577	.666	1.734	1.502

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

The results from the linear regression of the impact of the functional level outsourcing on the percentage of 'on-time departures' indicator suggests that the indicator is not

influenced by outsourcing of any of the functions examined. The results obtained are as follows: 'Maintenance & Overhaul' outsourcing (Beta = .109, $p > 0.1$, in 2006; Beta = .074, $p > 0.1$, in 2007), 'Ticketing, Sales and Promotion' outsourcing (Beta = -.123, $p > 0.1$, in 2006; Beta = .078, $p > 0.1$, in 2007), and 'Airport Handling' outsourcing (Beta = -.186, $p > 0.1$, in 2006; Beta = -.156, $p > 0.1$, in 2007), as illustrated in Table 6.8. In addition, Table 6.9 presents the results of the regression analysis related to the influence of 'Ticketing, Sales and Promotion' outsourcing and 'Airport Handling' outsourcing on the 'Number of bags delayed'. The results suggest no influence of both predictors on the performance indicator. The results read as (Beta = .124, $p > 0.1$, in 2006; Beta = .313, $p > 0.1$, in 2007) and (Beta = -.295, $p > 0.1$, in 2006; Beta = -.157, $p > 0.1$, in 2007).

Table 6.8: Impact of Outsourcing on Percentage of On-Time Departures

Independent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Maintenance & Overhaul	.109	.074	.633	.762	.806	.835	1.241	1.198
Ticketing, Sales & Promotion	-.123	.078	.605	.755	.745	.809	1.342	1.235
Airport Handling	-.186	-.156	.408	.510	.839	.894	1.191	1.118

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

Table 6.9: Impact of Outsourcing on Number of Bags Delayed

Independent Variable	*Standardised Coefficient*		*Significance*		*Collinearity Statistics*			
	Beta				*Tolerance*		*VIF*	
	2006	*2007*	*2006*	*2007*	*2006*	*2007*	*2006*	*2007*
Ticketing, Sales & Promotion	.124	.313	.591	.176	.855	.913	1.170	1.095
Airport Handling	-.295	-.157	.208	.490	.855	.913	1.170	1.095

*** P < 0.01, ** P < 0.05, * P < 0.1 VIF = Variance Inflation Factor

6.4 SECONDARY DATA ANALYSIS FINDINGS

The linear regression analysis of the secondary data examined the performance implications of outsourcing at the organisational-level (airline-level) and at the level of individual functional areas. As for the airline level of outsourcing, the influence of the airline outsourcing intensity was examined against the formerly identified performance indicators. The functional level outsourcing involved examining each of the chosen four staff function categories against the more relative performance indicators. The results from the regression data analysis revealed that there is no significant direct influence of the airline level of outsourcing on the performance of the airline with the exception of a small negative impact on the airlines' 'average daily aircraft utilisation'. Furthermore, the findings of the functional level outsourcing impact on the airlines' operational performance also suggest there are no significant correlations between outsourcing of any of the four functions categories investigated and operational performance. Nevertheless, the results identified a small negative influence of the outsourcing of the function 'Ticketing, Sales & Promotion' on 'average daily aircraft utilisation'.

6.5 CHAPTER SUMMARY

This chapter described the findings of the quantitative analysis of secondary data. In the exploratory case study presented in Chapter 5, it was suggested that the airline management believes that outsourcing will positively influence their operational objectives and overall operational performance. However, these beliefs have not been supported by the data regression analysis. The regression analysis described in Chapter 6 indicates that there is no significant influence of outsourcing on the airlines' performance, neither at the airline level nor for the functional level outsourcing. The secondary data analysis suggested only a small negative impact of the airline level, and the 'Ticketing, Sales & Promotion' function outsourcing on the indicator 'average aircraft utilisation'. Considering the contrast between the findings of the exploratory case study and the regression analysis, further investigation was deemed necessary. Chapter 7 will examine the feedback from in-depth semi-structured interviews with managers of several airlines on the determinants and current practices of airlines related to outsourcing.

CHAPTER 7

OUTSOURCING DETERMINANTS AND CURRENT PRACTICES

7.1 CHAPTER OVERVIEW

Chapter 7 examines the empirical data from the airline industry covering the determinants of outsourcing presented by motives, external factors and internal factors, and current outsourcing practices. The data presented in Chapter 7 was collected through 14 in-depth semi-structured interviews with managers and general managers representing 12 airlines, as explained in detail in Chapter 4 (Research Methods). The remainder of the chapter is divided into four main sections. Section 7.2 shows the interviewees' feedback on the motives behind outsourcing in the airline industry. Section 7.3 examines the external factors affecting the airlines' outsourcing decisions. Section 7.4 examines what the empirical data reveals in terms of the internal factors influencing the airlines' outsourcing decisions. Finally, current outsourcing practices within the airline industry are investigated in Section 7.5. This chapter examines the empirical data related to the highlighted boxes of the research framework introduced in Chapter 3.

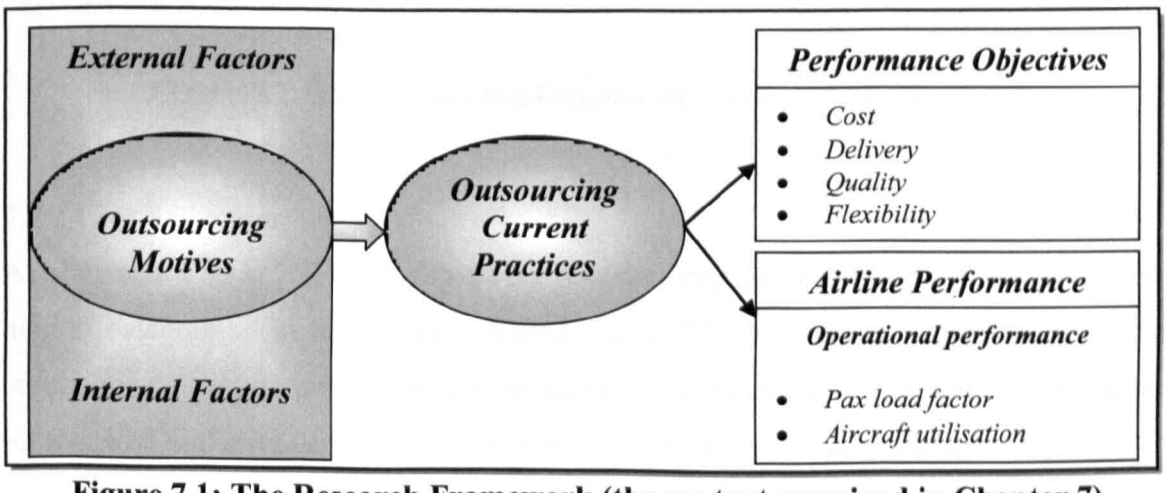


Figure 7.1: The Research Framework (the content examined in Chapter 7)

7.2 MOTIVES

This part of the in-depth semi-structured interviews aimed to identify the main motives behind outsourcing in the airline industry. The main motives identified by the study were (1) cost reduction and (2) focus on core activities. Figure 7.1 suggests that cost reduction is the main motive behind outsourcing in the airline industry. All the respondents (100.00%) stressed that cost reduction is their main motive for outsourcing. In addition, eight respondents representing 57.14% (eight respondents) of the sample stated that focusing on core activities has also motivated their airlines to engage in outsourcing. These findings are detailed in the following two subsections.

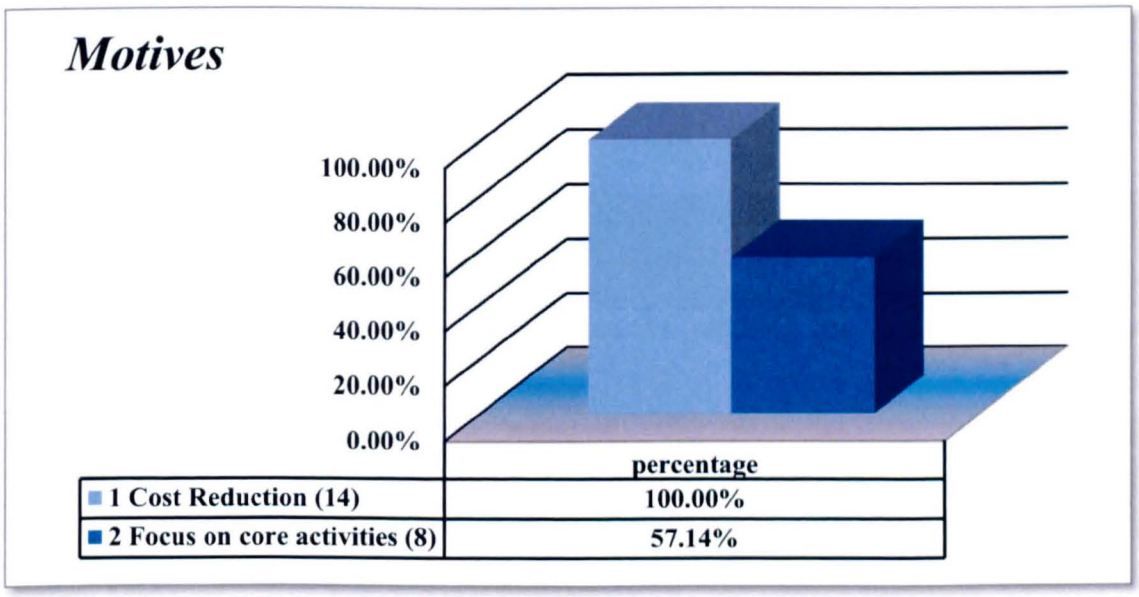


Figure 7.2: Motives Behind Outsourcing in the Airline Industry

7.2.1 Cost Reduction

As shown in Figure 7.1, the interviewees revealed that cost reduction is the main motive behind outsourcing in the airline industry. Table 7.1 illustrates the importance of cost reduction as the main motive behind outsourcing, as mentioned by the airlines' managers interviewed in the study. It contains quotes extracted from the transcripts.

Table 7.1: Motives Behind Outsourcing – Cost Reduction

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"Certainly anything we look into in terms of outsourcing is to reduce our overall operating costs. That would be the key measure of what they are proposing or planning to do".
Mrs. B Airline 02, Airport Manager	"It is much easier now to get more handlers to do your flights … because there are costs involved".
Mr. C Airline 03, Station Manager	"Shedding any sort of … not only manpower, facilities that maybe are unnecessary or costly".
Mr. D Airline 04, Airport Services Manager	"It is all down to synergies of cost, lots of flights, then employ your own staff. Hardly any flights, buy some time off someone else".
Mr. E Airline 05, Station Manager	"I would personally say it is purely economics … The biggest objective is cost saving".
Mr. F Airline 06, Station Manager	"It is cost, it is reducing … outsourcing, you pay a small amount of money a month but yet you get everything".
Mr. G Airline 07, Station Manager	"The only reason for outsourcing is to reduce cost… In all the experience that I have, discussing with airlines and negotiating with airlines, the only motive is cost".
Mr. H Airline 08, GM Customer Services UK & Ireland	"Cost reduction always remains the main motive behind outsourcing".
Mr. I Airline 09, General Manager	"Cost is the first thing. It has to come down to cost. We would not consider outsourcing unless there was a business reason to do it".
Mr. J Airline 10, Station Manager	"It definitely reduces cost".
Mr. K Airline 03, HR Manager – Europe	"I would outsource as much as practically possible, purely because of cost… Airlines are desperate to try and save money".
Mr. L Airline 11, Station Manager	"The main motive behind outsourcing is only and mainly to reduce costs. It is not only the motive for us but it is the motive for all airlines".
Mr. M Airline 12, Station Manager	"You cannot handle your flights if you operate two flights per day, it is not financially feasible".
Mr. N Airline 01, General Manager London Heathrow	"It is all about cost. It is just simply keeping the cost to an absolute minimum".

The embedded importance of cost reduction in the airlines' decisions and choices is elaborated by three of the respondents:

> "The biggest objective is cost saving, usually when an airline's been handling itself and it goes to a ground handler, it is usually to save costs ... Obviously especially at the moment with the economic climate, it is just to bring the operating costs down. So wherever we can make it slimmer and more efficient we will" (Mr. E, Airline 05).
>
> "Costs go up and fares go down, so you have to find the cheapest way to do everything.... in recent years airlines have found it more efficient to outsource services, because it is cheaper and more cost effective" (Mr. N, Airline 01).
>
> "Obviously the legacy carriers have learnt from the new entrants ... they have learnt from the low-cost carriers ... Because the start-up carriers and the low-cost carriers have such a low cost base, they were in a position to offer cheap fares or cheaper fares, lower fares and they did not have such high overheads as the legacy carriers. Of course, the legacy carriers cannot compete, so they had to review their whole method of operation, as you know. So this is one of the reasons why a lot of the legacy carriers sort of took really ... studied or looked at their operation with a view to outsourcing and reducing their cost base" (Mr. C, Airline 03).

Moreover, one of the respondents illustrated the influence of cost reduction on the airline's decisions:

> "At this airport, there are probably four or five providers or cabin cleaning. Actually, there are now four in the market capable of offering clean and search function on an aircraft. Three of them are bad and one of them is extremely good. The problem is the price differential is huge. So if I said to my bosses: 'Look, the only one of these companies I am

> interested in is Company A, because I know I am going to get a service I can rely on, I know I am not going to take delays, I know I am going to have a high quality product on the aircraft for the passengers, I know they are not going to be in breach of any environmental laws, I know they are going to comply with all the security requirements, and I know they are going to supply *ad hoc* services when I want them. That is why I want them. I know they are expensive. I stack that up against three other companies who are really bad, but they are about half the price, any airline, because airlines run on very thin margins, is going... any airline, unless it is their number one priority, is going to turn around and say: 'You cannot have them because they are twice as much as them', so 'unfortunately cost is the driver in all of this'. The airline business runs, and this is a piece of research that you need to do, on extremely thin margins. If we make a profit we are lucky, but most of the time most airlines do not make profits" (Mr. I, Airline 09).

From Table 7.1 and the above quotes, it can be stated that cost reduction has become one of the top priorities for most airlines. This is mainly due to the continuous economical pressure on fares created by the low-cost carriers and entrant airlines.

7.2.2 Focus on Core Activities

Although cost reduction can be considered the predominant motive behind outsourcing arrangements, some are motivated by the focus on core activities. For instance, most of the managers interviewed in this study stated that focusing on the core activities is the main motive behind outsourcing catering. Catering is not being considered as one of the core activities for airlines. It is important to point out that catering outsourcing will be addressed in more detail in the current practices section. One of the respondents commented:

> "I think the main reasons relate to the fact that those areas, those disciplines are not core to the running of the airline. They are all services

> which the airline requires. They are critical to the operation of the airline but they're not actually you know, core to the running of the aircraft. You know, we're trying to concentrate on operating the aircraft and running at a profit based on seats being sold at a certain fare level that generates a profit. Now anything outside of that, okay they are all supporting units but they are not the absolute core. Anything that can be outsourced that does not ... is not required as part of the core business, is being outsourced" (Mr. C, Airline 03).
>
> "It all depends on what you are going to outsource. For instance, most airlines outsource catering nowadays, even in their home base, because they realised that they need to concentrate on core activities and catering is not a core activity, despite its importance" (Mr. H, Airline 08).

In short, the feedback from managers suggests that the outsourcing decision is highly, and mainly, motivated by the desire of the airlines to reduce their operating costs, taking into consideration the continuous pressure on their profit margins. Another important motive is enhancing the focus of an airline management on core functions, as was the case with the catering outsourcing.

7.3 EXTERNAL FACTORS

Managers in this study suggested that local authority legislation is the main factor influencing the airlines' outsourcing decisions. All fourteen interviewees indicated this factor. In many airports, the provision of several activities such as ground handling is only accessible to a designated supplier, usually the national carrier. Thus, all airlines operating to those airports are obliged to outsource these activities to the designated supplier. Table 7.2 summarises the respondents' comments on external factors influencing outsourcing decisions, highlighting the influence of the local authority legislation. Figure 7.3 represents this influence graphically.

Table 7.2: External Factors Influencing Outsourcing – Local Authority Legislation

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"There are certainly a number of airports where you have no choice… In Kiev (in Ukraine), there were two handling agents and we were told no, you are using number three, the most expensive, the governmental organisation".
Mrs. B Airline 02, Airport Manager	"It is just a policy of the place that you are in, you are governed by government because that is a practice it is a monopoly basically…you do not have a choice. I know in Russia, you are forced to go with this and if you do not like it you do not like it".
Mr. C Airline 03, Station Manager	"The airline has to adapt to the local requirements".
Mr. E Airline 05, Station Manager	"There were various airports in Europe where there was a monopoly".
Mr. F Airline 06, Station Manager	"It is a condition for every airline that lands into our home base that they have to be handled by the national carrier".
Mr. G Airline 07, Station Manager	"There are very few airports in the world where they have a very liberal handling policy… At Heathrow, you have a situation where the airport allows competition on the handling business. We made a strategic decision back in 1997 to become self-handling and third party handling".
Mr. H Airline 08, GM Customer Services UK & Ireland	"Government legislation, like the PRMs for instance, with the wheelchairs, we were told this was going to come in and we just had to accept it, regardless that it was a retrograde step for our customers".
Mr. I Airline 09, General Manager	"There are a few countries where you have to deal with the local handlers. Russia is one. We have to use only one".
Mr. L Airline 11, Station Manager	"Local authority legislation influences outsourcing decisions in some countries".
Mr. M Airline 12, Station Manager	"Some of the countries' governments' legislation forced the outsourcing decision".
Mr. N Airline 01, General Manager London Heathrow	"Government legislation in some countries plays a role in outsourcing decisions".

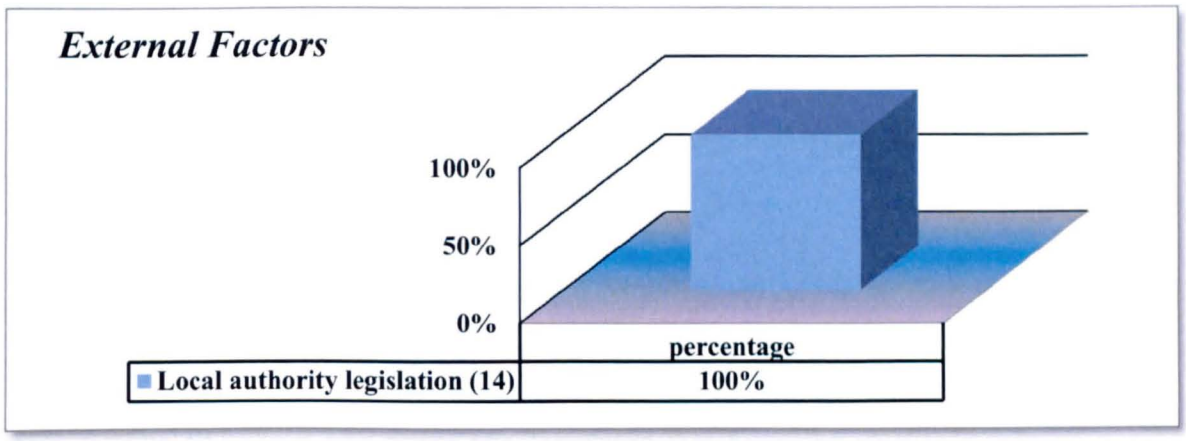


Figure 7.3: External Factors Affecting Outsourcing

The influence of the local authority legislation was further explained by one of the respondents:

> "The airline has to adapt to the local requirements. In our country of origin, we have some control over what our destiny is. But outside, as long as they have a competitive environment in that location, we then have the choice on who we go to. But if there is no competitive environment such as Dubai, I suppose it is government run ... but anyway; we obviously have to go along with the local requirements. In Frankfurt there is only one ground handler but that ground handler has been appointed based on a competitive... the local authority had gone out to a number of handlers and chosen the most competitive of the ground handlers to handle and that is reviewed every maybe two years or three years. So when we go to Frankfurt we can only deal with one handler but they have reached that decision through a competitive bid. Here at Heathrow what they do is they allow unlimited handlers to compete for the airline business but of course there is only so much business. So you will not find so many handlers because if there were too many handlers, none of them would make money. So it is self-regulating, so you know, here at Terminal 3, we have about five or six handlers; at Terminal 4 probably about the same. And they all compete for the carriers that want to operate and then you have a

> choice you know, if you do not like a particular handler, then go to another handler and say you want to change. So all in all, yeah, we have to adapt as an airline to the conditions in every country and every station that we serve" (Mr. C, Airline 03).

The Handling of Passengers with Reduced Mobility (PRM) is another example of the local authority legislation's influence on the airlines' outsourcing decisions:

> "The EU about two years ago legislated that handling of PRMs was no longer going to be the responsibility of the airline. It was going to be the responsibility of the airport. So they told all airports in Europe that the airport operator is now responsible for the handling of PRMs from the time they arrive on an airplane until the time they leave the airport. From the time they arrive at the airport, until the time they get on the airplane, okay, totally the responsibility of the airport operator. But the airlines have to pay for it. And the EU even sort of legislated how we would pay for it, which obviously really upset the airlines because immediately we could see we were going to be paying a lot more money than we were paying when we had our own contract" (Mr. E, Airline 05).

> "Government legislation, like the PRMs for instance, with the wheelchairs, we have no ... we were told that this was going to come in and we just had to accept it, regardless that it was a retrograde step for our customers. Our customers really suffered for at least six months while it settled down, and that shouldn't have been allowed to happen" (Mr. H, Airline 08).

The influence of the local authority legislation on the outsourcing decision was established by all respondents. Hence, it can be concluded that the local authority legislation is the main influential external factor affecting the airlines' outsourcing. The next section explores the internal factors affecting outsourcing decisions.

7.4 INTERNAL FACTORS

In terms of internal factors, the study findings suggested that the factors influencing outsourcing decisions include three main items: demand level, the criticality of the activity under consideration, and the airlines' current capability. Figure 7.4 represents this indication. As illustrated by Figure 7.4, all of the interviewees of the study (100.00%/fourteen managers) suggested that demand level of a given function is the main influencing factor on airlines' outsourcing decision. The two other factors identified include: (2) criticality of the activity, reported by 57.14% of the interviewees (eight interviewees), and (3) the airline current capability status, reported by 50.00% of the interviewees (7). These factors are explored in more detail in the subsequent subsections.

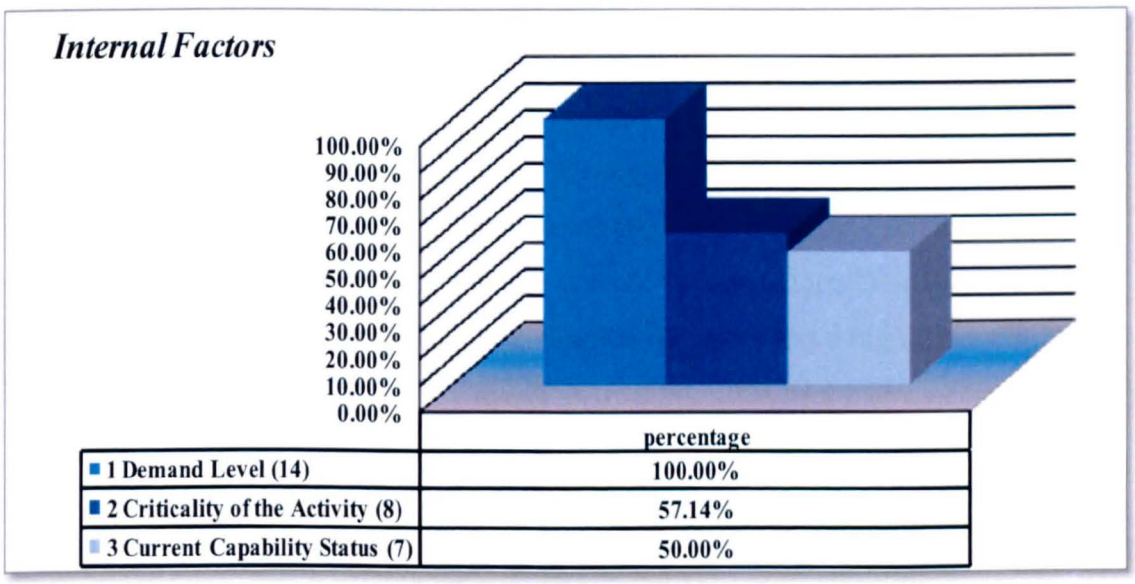


Figure 7.4: Internal Factors Affecting Outsourcing

7.4.1 Demand Level

All of the managers interviewed suggested that the demand level could be regarded as the main factor influencing outsourcing decisions in the airline sector. Demand level refers to the volume of work that is required for the airline's operations. For some airlines, it includes the ability of the airline to sell its surplus capacity to others as well. The following quotations explain the role of the demand level in outsourcing decisions. Two of the respondents elaborated:

"We looked at the demand and what we also thought of it, the fact that we had surplus capacity that we could not sell to other airlines. It was not cost effective ... we ended up having engineers standing around doing nothing for periods of time. As our engineering director described when he was explaining the outsourcing, the introduction of outsourcing policy, 'I have the best painted hangar in the world'. Because when his engineers were not busy fixing aircraft they were painting the hangar with the equipment, so there was a lot of surplus there. So all of that was looked into".
(Mr. A, Airline 01).

"At Heathrow we are largely self-handling here, which means that we do a lot of the work for ourselves, with our own staff, and one of the reasons for that is that we have a long schedule, which is a long working day and it is a relatively large schedule. It is cheaper for us to do a lot of the work ourselves. Everywhere outside of Heathrow in the Europe and Pacific division is outsourced. In a place where there is a very small schedule or it does not pay to have much in the way of infrastructure then it is much more sensible to outsource. So the number of flights has a big influence ... Ground equipment is an expensive item. Let us say if I had one flight a day, in order to service a 767, I need the following pieces of equipment: I need two high loaders, I need one push out tractor, I need one bent loader, I need two baggage carts, eight dollies, and I need space to keep all of that stuff, and I need all of that stuff maintained. If you think about that basket of equipment, just that basket of equipment, high loaders cost a hundred and fifty thousand pounds each, a push out tractor costs three hundred thousand, so you have got six hundred thousand pounds worth of equipment right there, plus a bent loader and the other stuff is probably two hundred thousand, so I need about eight hundred thousand pounds worth of equipment, plus maintenance, plus people trained and so on to use all of this stuff. It does not pay for itself doing one flight a day. It

probably pays for itself doing seven, eight, nine, ten, maybe twelve flights a day" (Mr. I, Airline 09).

Table 7.3: Internal Factors Influencing Outsourcing – Demand Level

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"We looked at the demand. And what we also thought the fact that we had surplus capacity that we could not sell to other airlines … it was not cost effective".
Mrs. B Airline 02, Airport Manager	"It depends on your frequencies. So if you are going to have like two frequencies a week, you do not need a whole load of staff …at one stage we had five, now because of the cuts and reduced flights, we have outsourced the service".
Mr. C Airline 03, Station Manager	"It is the demand… There is a whole range of different facilities and so on that you have to consider… Now if you only have two flights, it is not really very economically interesting to have to invest in all of those things".
Mr. D Airline 04, Airport Services Manager	"It depends on the size of the station. Because a lot of it is determined by the size of your operation".
Mr. E Airline 05, Station Manager	"Whether you outsource or not comes to the point of things like frequencies".
Mr. F Airline 06, Station Manager	"Once we reached maybe four or five flights a day that is the only time I would recommend that we go self-handling".
Mr. G Airline 07, Station Manager	"If you had one flight a day, it would be cheaper to outsource because you could not employ for one flight a day or two flights a day".
Mr. I Airline 09, General Manager	"In a place where there is a very small schedule or it does not pay to have much in the way of infrastructure then it is much more sensible to outsource. So the number of flights has a big influence".
Mr. J Airline 10, Station Manager	"With one flight a day or less, it is cost effective to have your own staffing to manage the flights. It'd have to be a minimum of four flights a day before thinking of having your own staff".
Mr. K Airline 03, HR Manager - Europe	"People like American, as a big carrier in Terminal 3, I don't know how many flights they've got a day, it may not be viable to outsource because you keep your people occupied all the time".
Mr. L Airline 11, Station Manager	"Having many flights per day would give the power in negotiating better prices with our suppliers and also do cost analysis and consider hiring our own staff".
Mr. M Airline 12, Station Manager	"You cannot handle your flights if you operate two flights per day, it is not financially feasible Because of the cost of the manpower and the equipment required".

Table 7.3 summarises through excerpts from the interviews the importance of the demand level for outsourcing decisions in the airlines. The interviewees also indicated the importance of criticality of the function under consideration and the status of the current capacity to perform the function. The criticality of the function being considered for outsourcing was indicated by 57.14% of the interviews; while the current capability status was appointed by 50% of the operational managers interviewed in the study.

7.4.2 Criticality of the Activity

The second factor identified by the respondents is the criticality of the function under consideration. Interviewees suggested that functions that involve direct contact with customers are at the top of the activities list that airlines would perform in-house, whenever it is reasonably feasible to do so. Respondents spelled out the importance of this factor as illustrated in Table 7.4.

Table 7.4: Internal Factors Influencing Outsourcing – Criticality of the Activity

Respondent	***Quote***
Mr. C Airline 03, Station Manager	"When it comes to dealing with people, that is a slightly different issue… the face-to-face link between our staff and the customers…The staff from a handling company are not always as loyal to our customers as our own staff would be".
Mr. D Airline 04, Airport Services Manager	"The disadvantage of the ground handler when interacting with the customers is that you always run the risk of decreased commitment to the service levels of the brand. You are bringing the third party into the middle. You are always at risk of that intermediary not being as committed as the airline".
Mr. H Airline 08, GM Customer Services UK & Ireland	"Be really careful on what tasks you want to outsource and keep the ones that are going to affect you the most".
Mr. I Airline 09, General Manager	"We tend to, if anything, in-source our passenger services, keep our passenger services people… That is the face of your product. But everything that goes on under the wing can more easily be outsourced".
Mr. N Airline 01, General Manager London Heathrow	"When the customer touches someone at the airport, it is our airline person. But on the ground, when their bag is being handled, it is by an outsource company. So the customer never knows that it is a different company doing that, but for us it is a cheaper way to do business".

The influence of the criticality of the function being outsourced on the outsourcing decision was further explained by two managers:

> "If you outsource your lounge, a third party is probably cheaper; it would be a lot cheaper for us to put our passengers in somebody else's lounge and just pay them. But then they are not getting your product, they are getting somebody else's product and you will always be very wary about putting your passengers in a competitor's lounge. Because if you put your passengers in a competitor's lounge and they think 'Oh! this carrier is doing a lounge and it is lovely here, why am I flying with this company? I could be flying with the company that owns the lounge'" (Mr. E, Airline 05).

> "We specifically have some of our security outsourced into what are known as the non-contact positions, so where we require a security guard he does not necessarily have any passenger contact. That position is outsourced. That runs, for our operation, around two hundred people a day, approximately, two hundred people a day in non-contact security positions. We have eighteen flights a day, eighteen wide body aircraft, so we need people to stand on the ground while the aircraft is there; they need people there at the door to guard it, and then people handling a secondary search at the gates. So in other words, they go through the ordinary central search but when they get to the gates, if somebody has a security profile we want to investigate, we will put them through some type of security search at the gate. So for every gate I need four people, for every aircraft I need two people downstairs and two people upstairs, and it is an eighteen hour day operation, so, you know... I need people at catering, to search things, and so on. So it is around two hundred people a day for security, which is outsourced. They work alongside an insourced American security group, so we have fifty of our own staff but effectively

> they do slightly different tasks. They do passenger contact tasks, as well as supervising the non-contact staff ... even if you need to outsource, you just outsource the functions where the customers are not involved...You do not want to get your customer with the third party" (Mr. I, Airline 09).

7.4.3 Current Capability Status

The third factor identified in the study was the airlines' current capability in performing the function under consideration. In general, the outsourcing decision for the airlines that have invested in acquiring the capability of performing a given function is influenced by the current capability. Those airlines are in a position that they do not want to lose their capability, because it is not easy to acquire it again due to the costs involved. Moreover, they would lose most of the experience and know-how they have accumulated over the years. On the contrary, some of them are further utilising their capability by acting as service providers for other airlines. The influence of the airlines' current capability on outsourcing decisions has been demonstrated by respondents. Table 7.5 summarises some of the quotes on the influence of the current capability status on outsourcing.

The interviews identified three main internal factors influencing the airlines' outsourcing decisions. The most important of these factors is the demand level. The demand involves the volume of work that is required for the airline's operation. For some airlines, it includes the ability of the airline to sell its surplus capacity. The second factor is the criticality of the activity under consideration. The criticality of the functions encompasses the importance of the activity for the airline's smooth operation and those activities related to the direct interaction with the airline's customers. The third factor is the airline's current capability status of performing the activity candidate for outsourcing. The influence of the current capability status is related mainly to the experience and know-how developed by the airline on performing that function. Furthermore, some of the airlines act as service providers for other companies, using those capabilities.

Table 7.5: Internal Factors Influencing Outsourcing – Current Capability Status

Respondent	*Quote*
Mr. E Airline 05, Station Manager	"One of the exercises we did to try and get some income… we had this big lounge and of course we do not have an awful lot of passengers in it ourselves, so we said well we could outsource the lounge to another party".
Mr. G Airline 07, Station Manager	"Several airlines have already had the capabilities in-house dating from the 70s and they have the volume … For the ten flights that we have a day, because last year there were not ten, there were 13 flights; we sold three slots. So, we had a structure in place which was already large, okay. So on that, we were able to build our business. If you have one flight, you cannot build a business with one flight, you only need a handful of people. With all these people that we needed for the ten flights, you are able to build a business and you find synergies and then from those synergies you actually start to grow the business and find further synergies".
Mr. H Airline 08, GM Customer Services UK & Ireland	"There are some things that might make sense, in outsourcing, but there is a big risk attached and you have got to make sure that you accept the risk before you go down there because once you do it, there is very little chance of getting it back again … it is very difficult to go back, so that is one worry … When you outsource you cannot come back, because you would sell your ground equipment. So if I outsource to you on a Monday and then a month later it is an absolute disaster, there is going to be a really difficult conversation to say well, actually, I would like my ground equipment back".
Mr. I Airline 09, General Manager	"Once you have taken the outsourcing step, it is extremely hard to go back because you give up facilities, and this is an extremely facility constrained airport. So if I give up a room on the ramp, the very next day someone has taken that and I will never get it back again. If you take the outsourcing step you take it forever, not necessarily forever but you take it and it has to work. It is very hard to revert to your own internal operation. This for me is one of the big hurdles … which is why I am so reluctant to lose my ramp people. I will never get it back – the goodwill, the experience, the ownership, the know-how".
Mr. K Airline 03, HR Manager – Europe	"If we were starting again in London, there is no way they would start there with our own maintenance people, I doubt it. It is a historical scenario".

7.5 CURRENT PRACTICES

This section provides a holistic view of the outsourcing current practices in the airline industry. Section 7.5 is divided into four subsections. The first differentiates the outsourcing practice in the airlines' home bases and outstations. The second subsection highlights the airlines' outsourcing practices regarding three main function areas: maintenance, ground handling, and catering. The third subsection addresses issues related to the supervision of the outsourced functions. Finally, the fourth subsection discusses the outsourcing trend within the airline industry.

7.5.1 Home Base vs. Outstations

At their home base, most airlines are self-handled, either through an internal division or through a strategic business unit owned by the airline. Moreover, they are acting as service providers for other airlines. Generally, most of the outsourcing arrangements, within the airline industry take place in the airlines' outstations with less intensity in the airlines' home base stations. This difference is mostly driven by the demand level and the ability of an airline to efficiently utilise the capacity of its resources and act as a service provider for other airlines.

One of the interviewees elaborated on this difference:

> "If you are an airline with a base station, like British Airways or Malaysia Airways in Kuala Lumpur, then obviously you are handling lots of aircraft; that is really your main base where all your airplanes are coming in and out. So it makes sense for you to do your own handling, you have all your own equipment. But even British Airways, if they are flying somewhere where they only have one or two flights a day, and there is a lot of places they fly where they probably do not even have one flight a day, it might just be three a week or something, then obviously there is no way you can afford to buy all that equipment and have it sitting around doing nothing, just for the odd occasion that you come in" (Mr. E, Airline 05).

Table 7.6 presents excerpts that indicate the airline's current practices in terms of arrangements in their home base and their outstations. In addition, further differentiation can be made amongst an airline's outstations, based on their outsourcing practices. This differentiation is mainly attributed to the number of flights that a given airline provides to the destination and the associated legislation of the local authority in regards to the service provision. Table 7.7 summarises the comments of the interviewees regarding the arrangements at the airlines' outstations.

Table 7.6: Home Base vs. Outstations

Respondent	***Quote***
Mrs. B Airline 02, Airport Manager	"The majority of the places we are handled, we just used to have like three; Heathrow, Egypt and India… The home base is a separate case altogether, it is handled by us".
Mr. D Airline 04, Airport Services Manager	"Generally home base tends to self-handle".
Mr. F Airline 06, Station Manager	"Most of the outstations are outsourced. Self-handling is only in the home base, it is all just pure in-source".
Mr. G Airline 07, Station Manager	"Generally speaking, on our network everything is outsourced … The home base is all self-handling… The volume of business is sufficient for the base airline to run it itself. We also handle other airlines in our home base".
Mr. H Airline 08, GM Customer Services UK & Ireland	"At the home base everything would be done by the airline normally".
Mr. J Airline 10, Station Manager	"With the amount of flights we have in the home base, we will continue handling ourselves. But outstations, no. We will continue to outsource… it is not cost effective for the airline to have our own handling staff here for one flight a day, so we have a handling agent here for everything".
Mr. L Airline 11, Station Manager	"Outstations contracted independent suppliers, which is the most prevailing strategy among airlines. At the main station everything is performed by an SBU fully owned by the airline".
Mr. M Airline 12, Station Manager	"At the home base the airline is handled through strategic business units owned by the airline. But I do not think there is any outstation where we are self handled".

Table 7.7: Home Base vs. Outstations – Arrangements at the Outstations

Respondent	***Quote***
Mr. A Airline 01, Head of Operations and Crewing	"It depends on the airport. At our home base, we do most of the handling ourselves but we do not provide our catering. At other airports we have some staff employed by us and other airports we are entirely in the hands of handling agents".
Mrs. B Airline 02, Airport Manager	"The majority of the places we are handled, we just used to have Heathrow, Egypt and India... We are looking ourselves at Heathrow... It depends on your frequencies".
Mr. D Airline 04, Airport Services Manager	"It depends on the size of the station. Heathrow is our biggest outstation. And then if you go to Lahore, where we have about three or four flights a week, the check-in desk may well be outsourced because it is not cost-effective to have our staff there. But you come to Heathrow I have my own staff, because a lot of it is determined by the size of your operation".
Mr. E Airline 05, Station Manager	"The thing that governs how we do it here is obviously how big you are. American Airlines do their own, because they are big here".

A few airlines have gone further than being self-handled, at their outstations, to become service providers for other airlines operating at that airport. For instance, Table 7.8 contains excerpts from the interviews with managers of three airlines operating to Heathrow as one of their main outstations, but based in three different countries. Each of these three airlines operates between ten and eighteen flights a day to Heathrow Airport.

7.5.2 Functional Level Outsourcing

The previous subsection highlighted the airlines' current outsourcing practices. This subsection will further differentiate between the airlines' outsourcing practices in regards to three of their main function areas: Maintenance, Ground Handling, and Catering. Not unlike the general theme of the outsourcing practice in the airline industry, most of the maintenance outsourcing arrangements take place at the airlines' outstations. At the airlines' home bases, maintenance usually constitutes one of a given airline's main divisions or one of the strategic business units owned wholly or partly by the airline. Moreover, the airlines seek to utilise further their maintenance capability and capacity by acting as service providers for other operators, commercial and private.

Table 7.8: Home Base vs. Outstations – Providing Services for Others

Respondent	*Quote*
Mr. G Airline 07, Station Manager	"The tendency in our airline is to outsource in most stations but not in London. In London, the intention is to build the business that we have here, providing services to other airlines … Because here you have a situation where one, the airport allows competition on the handling business, we made a strategic decision back in 1997 to become self-handling and third-party handling. We are successful at it and it helps us to reduce our costs for the mother carrier. So we earn money from the handling business, which lowers our costs".
Mr. H Airline 08, GM Customer Services UK & Ireland	"At Heathrow, we have been a handling agent for as long as I can remember, about 25 years, maybe more. And the idea behind it is that you have got your own business and you have got peaks in the morning and peaks at midday. And, throughout the day there is like valleys in your operation, in between the peaks where the staff is there but they are not engaged in doing any work for Air Canada. So the idea was we act as a handling agent and fill in some of these gaps and that is how we sort of base our looking round for business or new business, that fits in those gaps".
Mr. I Airline 09, General Manager	"At Heathrow, maintenance and engineering we do it ourselves, automotive maintenance we do it ourselves, flight operations we do ourselves, dispatch we do ourselves, passenger service we do ourselves, ramp we do it ourselves, and actually we provide services to other airlines, so we handle Egypt Air, Korean, Kuwait, and A & A. We do all of their work for them, so we are an outsource provider of services to other people as well. We generate revenue from these services".

Two of the respondents also elaborated on their practices related to maintenance while Table 7.9 summarises quotes from interviewees on the function sourcing decisions.

> "We have established a strategic business unit which is owned by the airline ... In outstations, we outsource to a local maintenance aircraft turnaround supplier… In London, we do not outsource, we have our own small unit of staff, but in most other places, we outsource to the local supplier. It is usually outsourced to the home-based carrier or a company that has staff who are licensed on our aircraft, for our type of aircraft" (Mr. C, Airline 03).

"In our home base, we offer those maintenance services to anybody, any airline. So, we do a contract with an airline to maintain their planes or private jets or things like that. So that is obviously a source of income. As soon as you get outside of the home base, all the maintenance is outsourced. We have a representative. So obviously airlines, especially big national airlines, will want to have their representatives in there as well. And, obviously there is quality control and that sort of stuff as well. So he used to be the maintenance manager for Europe, so if we had a problem in Paris or a problem in ... He would jump on a plane and off he would go and spend two or three days there sorting it out and then come back again. It is all very nice, he could have been based anywhere in Europe but they based him in London because obviously we have the most flights" (Mr. E, Airline 05).

Table 7.9: Functional Level Outsourcing – Maintenance

Respondent	*Quote*
Mr. D Airline 04, Airport Services Manager	"The main hub has its own engineering team. Everywhere else it is outsourced".
Mr. F Airline 06, Station Manager	"The people that I know that have their own engineering department here are the likes of Air Canada, KLM, British Airways, the big, big companies, where they have God knows how many flights a day that come in and out; and Virgin because they are a huge company".
Mr. G Airline 07, Station Manager	"In the home base, engineering is done by us".
Mr. I Airline 09, General Manager	"All of our heavy maintenance is still done in our country of origin and still done by internal mechanics. We have an engine shop in conjunction with Rolls Royce. We do all of the Rolls Royce work. We actually offer our own service to third parties for heavy maintenance for engine repairs, and for so on and so forth".
Mr. K Airline 03, HR Manager – Europe	"For the home base, it depends on how many aircraft you have got. There must be a breakeven figure. If you have got twenty to thirty aircraft, certainly you would do most of the maintenance yourself, but you may not do it yourself, you might set up a separate company like Singapore Airlines Engineering Ltd, like Lufthansa Technik, so that is another approach. So you are outsourcing but you are not outsourcing".

Ground handling services can be classified into two main categories: 'above the wing' and 'below the wing'. The 'above the wing' services involve the passenger services, which include activities such as the arrival service, the check-in service and the gate service. The 'below the wing' or ramp services involve activities such as baggage handling, interior cleaning, water and waste, and aircraft parking. It could be generally stated that the ground handling outsourcing also follows the general outsourcing pattern taking place within the airline industry. Table 7.10 summarises this statement through excerpts from the interview transcripts.

Table 7.10: Functional Level Outsourcing – Ground Handling

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"Depending on the airport we will run ourselves, but certainly where we contract our handling in most places we will contract out both front and back of house".
Mr. C Airline 03, Station Manager	"Our Director General's vision is to outsource all our airport services functions. Ground handling has always been in-house in the past... In our country of origin that has now gone to a strategic business unit owned by our airline and we have a partner, a private company. That happened about three months/four months ago. And then outside our country of origin it would be outsourced to whomever ... to whichever ground handler is available locally".
Mr. E Airline 05, Station Manager	"At Heathrow, our ground handler does the heavy stuff under the wing and they do the passenger services above the wing. So, on each shift we only have three staff. We used to have 15 I think, but now we only have three staff. We have a senior officer, an intermediate and a lower grade officer and they basically oversee the ground handling operations. We have our own ticket desk downstairs and we have our own customer service desk. So if there are issues that the ground handler cannot address or if there are ticketing issues, then yes, they come to us".
Mr. F Airline 06, Station Manager	"At Heathrow, we pretty much outsource everything. We only deal with the reports and statistics and the monitoring of the service by two members of my staff, which are two supervisors, one is at check-in and one is meeting the flight or the other way around, and myself. But the check-in is outsourced, loading is outsourced and engineering is outsourced".

In the study, managers emphasised that catering provision is almost always outsourced by all airlines in all outstations. Furthermore, many airlines do not consider the catering provision as part of their airline's core business. Hence, catering is outsourced even in their home base, irrespectively of the demand level. Table 7.11 shows this tendency.

Table 7.11: Functional Level Outsourcing – Catering

Respondent	*Quote*
Mr. A Airline 01, Head of Operations & Crewing	"At the home base we do most of the handling ourselves but we do not provide our catering".
Mr. C Airline 03, Station Manager	"In the home base, catering was outsourced to a subsidiary company about probably 5 or 6 years ago ... In an outstation, it would not be feasible to have your own catering unit anyway. So you're sharing with a number of other airlines on catering".
Mr. D Airline 04, Airport Services Manager	"Nobody does their own catering, nobody; everybody outsources their catering".
Mr. E Airline 05, Station Manager	"British Airways in the past probably did just about everything themselves; they used to do their catering, their own cleaning, the maintenance. I mean the only thing they did not do was their own fuelling; that is a specialised job, so the oil companies fuelled them. But as you go through the years, I mean British Airways have actually started giving up areas; they gave up their catering, they outsourced that".
Mr. F Airline 06, Station Manager	"In outstations, catering is outsourced, especially at Heathrow Airport, every airline is outsourced, no airline has their own catering. It is just a common thing to do... You have no choice; you have to choose a catering company. Not like in our home base, catering is insourced".
Mr. G Airline 07, Station Manager	"In the home base catering is outsourced. Why is catering outsourced? Because it is not our business, it is not a core business; it has never been a core business for our airline".
Mr. H Airline 08, GM Customer Services UK & Ireland	"I cannot think of one airline that does its own catering now. Ten years ago they realised that they wanted to sort of focus on the core function and catering is not really a core function".
Mr. I Airline 09, General Manager	"Catering is handled by Alpha Caterers, so that's outsourced. We don't do our own catering. I cannot imagine running a catering business. There're lots of good catering businesses. There's good competition in that market. Here there are four caterers, they are all good, they are cheap, and they know what they're doing. It's just not part of the core business. It's completely outsourced now, everywhere including home base".

Maintenance, ground handling and catering are the main functions required for the airlines' operations in their networks. As illustrated in Table 7.9 and Table 7.10, maintenance and ground handling are following the general theme of the airlines' outsourcing practices identified in all previous sections. However, catering provision is not being considered by airlines as one of their core activities, in which they would need to invest in or focus on (Table 7.11). Thus, most airlines are outsourcing their catering within their entire network, at their home bases and at their outstations.

7.5.3 Supervision

The managers interviewed in the study reported that the supervision of the delivery of the outsourced function is usually kept in the airline's hands. Representatives of the airlines are always working closely with the handlers' staff. With reference to Table 7.12, it can be stated that the supervision of the airline on their service providers fulfils two objectives. The first is to ensure smooth operations and solve any non-routine problems. The second is monitoring their service provider regarding the Service Level Agreement.

Table 7.12: Supervision

Respondent	***Quote***
Mr. A Airline 01, Head of Operations and Crewing	"You have to push your supplier to deliver. We have managed our suppliers much more closely than perhaps what we had previously planned … I think we spent more time managing outsourced contracts than when they were insourced".
Mr. C Airline 03, Station Manager	"There has to be some representation from the airline at each location to supervise and make sure that the SLAs are maintained and are kept".
Mr. E Airline 05, Station Manager	"When we started, I think our service level agreement was about three pages. And after we finished with Servisair, our service level agreement was about 15 pages, because every time they make these mistakes … Not just once, but they keep making recurrent mistakes. We say okay, this is going to have to go into the SLA".
Mr. G Airline 07, Station Manager	"We have what is called supervision. So there will be a station manager and there may be a couple of supervisors that will supervise a handling agent".
Mr. I Airline 09, General Manager	"We still have to manage the contractor, and that is something that I think is not very well understood, particularly in this industry. People forget the contractors need to be managed".
Mr. M Airline 12, Station Manager	"At our outstations we have our own staff just to monitor the handler's performance".

7.5.4 The Outsourcing Trend

With regards to outsourcing as a recent phenomenon in the airline industry, the interviewees suggested that it is now widespread. Table 7.13 summarises their views on the outsourcing trend.

Table 7.13: The Outsourcing Trend

Respondent	*Quote*
Mr. F Airline 06, Station Manager	"Airlines are going more towards outsourcing, except Etihad".
Mr. G Airline 07, Station Manager	"There is a trend and the trend is to outsource more and more and cheaper and cheaper".
Mr. H Airline 08, GM Customer Services UK & Ireland	"I think there is always pressure to reduce the costs and that the cost, will be the key".
Mr. L Airline 11, Station Manager	"Outsourcing is spreading dramatically among airlines. But that depends on the number of the flights the airline operates".
Mr. M Airline 12, Station Manager	"There is a strong trend toward outsourcing in the airline industry to fix the costs".
Mr. N Airline 01, General Manager London Heathrow	"There is definitely a trend. Over the last 10 years, airlines have outsourced more and more … it is driving the cost down".

Two of the managers emphasised the growth of outsourcing in the airline industry over the past ten years:

> "There is definitely a trend. Over the last 10 years, airlines have outsourced more and more … it is driving the cost down" (Mr. M, Airline 01).

> "If you had asked me this question ten years ago, I would have said there is a definite trend towards outsourcing, everybody was doing it. And now, it is prevalent and it is the accepted practice but you do get to a point in your handling where it is … you are better off to bring them in-house. Now when you work all day from the beginning of the day to the end of the day and you can justify all hours in that day, then a lot of the time it is better to bring it all in-house because it is cost-effective because you are paying for staff who are doing something all day. But you have to hit that critical mass, where all of a sudden your whole day is paid for. But when

> you are only paying … when you can only justify paying for two-thirds of a day or half a shift, then it is always more cost effective to give it to someone else because you are only paying for the four or five hours" (Mr. D, Airline 04).

Nevertheless, it has been stated that there are several occasions where airlines have insourced, or considered insourcing, outsourced functions. For instance, Virgin and Etihad have insourced their check-in services in several airports, which had been previously outsourced. Other airlines have also reconsidered the role of outsourcing. Table 7.14 illustrates some of these changes.

Table 7.14: The Outsourcing Trend – Insourcing Outsourced Functions

Respondent	*Quote*
Mr. C Airline 03, Station Manager	"There have been situations where airlines brought back in-house ground handling and customer services … those areas that involve public contact".
Mr. D Airline 04, Airport Services Manager	"I worked at Virgin, they sold off all their out-stations, all … you know, JFK and Los Angeles, they sold the staff over to handling companies. And then, they got so much service dilution they brought them all back again, or most of them. They were one -flight-a-day carriers and they sold them to handlers who did 50 flights a day. So there was no commitment to the Virgin brand and the Virgin brand is very strong, the customer service staff have high service provision trained into them and they were not getting it on the outstations. And Virgin recognised that, so they brought them all back in-house again. Which is more expensive to do you know, because you are paying for people to be on shift when you only need them for four or five hours in the day. So you are paying for the overhang but what they paid in extra costs, they made up for in service provision".
Mr. G Airline 07, Station Manager	"In terms of Etihad and Virgin, it is certainly quality because they are probably one of the two airlines that have more focus on quality … There are 92 airlines operating in Heathrow, two of them are maybe looking at quality and 90 are looking at price".

Moreover, the trend of outsourcing practice within the airline industry has been explained by one of the respondents:

> "A lot of airlines have outsourced in the past and then maybe brought some of those back into the core business because they find it has not been

> quite as successful or has not achieved the goals that they wanted to achieve ... they are now finding a level which is acceptable, which is both ... provides them with efficiencies and commercial or cost efficiencies but that work well with their organisations. So if you look at British Airways for example, they outsource catering; yes they have had problems but overall they are happy with the outsource situation with catering. In terms of engineering, they have kept the engineering in-house but you know, other airlines ... Every airline has a different objective and a different reason for outsourcing and it is for each airline to find its own level ... A company like easyJet outsources just about everything, they basically fly the aeroplanes and run their internet booking system and very little else" (Mr. C, Airline 03).

The empirical data of this study indicates that at their home base, most airlines are self-handled. Moreover, they are acting as service providers for other airlines at their home bases. About outsourcing current practices, the data reveals that most of the outsourcing arrangements are being made outside the airlines' home bases. Further differentiation can be made among outstations. This differentiation is mainly based on the number of flights an airline operates to a specific airport and the local authority legislation at that airport. At their outstations, some airlines moved one step further, from being self-handled to become service providers for other airlines. The three main functions addressed in this study were maintenance, ground handling and catering. The study findings suggest that maintenance and ground handling outsourcing arrangements generally take place at the airlines' outstations and are being insourced in the home bases. Many airlines have realised that catering is not a core business. Thus, catering is being outsourced at the airlines' outstations and at most home bases. Finally, respondents stated that the outsourcing phenomenon has spread within the airline industry. Yet there were several occasions where airlines insourced outsourced functions. Table 7.15 and Table 7.16 present the study main findings regarding outsourcing determinants and current practices.

Table 7.15: Summary of Findings – Outsourcing Determinants

	TOPIC	*FINDINGS*
7.2	***MOTIVES***	
7.2.1	*Cost Reduction*	• The interviewees emphasised the importance of the expectation of cost reduction in determining outsourcing decisions. The cost reduction is related to converting fixed costs into variable costs paid to service providers when they execute the tasks.
7.2.2	*Focus on Core Activities*	• The focus on core activities was also mentioned by a number of the interviewees in addition to cost reduction. The outsourcing, in this case, assists airlines in discarding excessive workloads in non-core activities/functions.
7.3	***EXTERNAL FACTORS***	
		• The local authorities' legislation was found to be the main external factor influencing outsourcing decisions, mainly because local government policies may impose the use of their national carrier. The airline is then forced to outsource to the designated service provider.
7.4	***INTERNAL FACTORS***	
7.4.1	*Demand Level*	• For the airlines, the demand level is represented by the volume of work that is required for their operations. The efficiency in using available resources to perform the function in-house is considered while deciding on the outsourcing of the function.
7.4.2	*Criticality of the Function*	• Airlines tend to pay particular attention to functions that involve direct interaction with customers. The criticality of the function relates to its importance for the smooth running of their operations.
7.4.3	*Current Capability Status*	• Available resources such as facilities, machinery, and manpower are considered in the outsourcing decision to evaluate the current status of capability to perform an activity in-house or the need to outsource it.

Table 7.16: Summary of Findings – Outsourcing Current Practices

	TOPIC	*FINDINGS*
7.5	***CURRENT PRACTICES***	
7.5.1	*Home Base vs. Outstations*	• At their home base, most airlines are self-handled and are acting as service providers for other airlines. • Most of the outsourcing arrangements are taking place in the airlines' outstations with less intensity in the airlines' home base stations. • This difference is mostly driven by the demand level and the ability of an airline to efficiently utilise the capacity of its resources and act as service providers for other airlines.
7.5.2	*Functional Level Outsourcing:* *a) Maintenance* *b) Ground handling* *c) Catering*	• At the airlines' home bases, maintenance usually constitutes one of a given airline's main divisions or one of the strategic business units owned wholly or partly by the airline. Most of the maintenance outsourcing arrangements take place at the airline's outstations. • It could be generally stated that the ground handling outsourcing arrangements also take place at the airlines' outstations. Usually, it constitutes one of a given airline's main divisions or one of the strategic business units owned wholly or partly by the airline at the airline's home bases. • Catering provision is usually outsourced by all airlines in all outstations. Moreover, many airlines do not consider the catering provision as part of their airline's core business. Hence, catering is outsourced even in their home base.
7.5.3	*Supervision*	• Supervision of the delivery of the outsourced function is usually kept in the airline's hands. • The purposes of the supervision are to ensure smooth operations/solve non-routine problems and monitor the provider's performance as per the SLA.
7.5.4	*The Outsourcing Trend*	• Outsourcing has spread within the airline industry. • Nevertheless, it has been stated that there are several occasions where airlines have insourced or considered insourcing outsourced functions.

7.6 CHAPTER SUMMARY

Chapter 7 illustrated the findings of the analysis of the empirical data, regarding outsourcing determinants and current practices within the airline industry. The managers interviewed in this study suggested that the decision to outsource is highly (and mainly) motivated by the desire of the airlines to reduce their operating costs. Another important motive is enhancing the focus of the airlines' management on core functions. In terms of external and internal factors influencing outsourcing decisions, it has been concluded that the local authority legislation is the main influential external factor affecting the airlines' outsourcing decisions. Moreover, the interviews identified three main internal factors influencing the outsourcing decisions of the airlines. On top of those factors is the demand level. The second factor is the criticality of the activity under consideration. The third factor is the airlines' current capability status to perform the activity candidate for outsourcing. The qualitative analysis of the empirical data also revealed that most airlines are acting as service providers at their home bases, whilst outsourcing arrangements are being made outside the airlines' home bases. At their outstations, some airlines moved one step further, from being self-handled to become service providers for other airlines. Furthermore, the three main functions addressed in this study were maintenance, ground handling and catering. The study findings suggest that maintenance and ground handling outsourcing arrangements generally take place at the airlines' outstations and are being insourced in the home bases. Catering is being outsourced at the airlines' outstations and at most airlines' home bases as many airlines have realised that catering is not a core business. The supervision of the delivery of the outsourced function is usually kept in the airlines' hands. Its purpose is twofold: (1) ensure smooth operations and solve any non-routine problems; and (2) monitor the performance of the service provider as per the Service Level Agreement. Finally, respondents stated that the outsourcing phenomenon has been spreading within the airline industry. Yet, there were several occasions where airlines insourced outsourced functions. Chapter 8 is concerned with the evaluation of the impact of outsourcing on the performance objectives and the overall airline performance.

CHAPTER 8

THE IMPACT OF OUTSOURCING

8.1 CHAPTER OVERVIEW

Chapter 8 mainly examines the empirical data related to the impact of outsourcing on the performance objectives and on airlines' overall operational performance. The chapter is divided into six main sections. Each of the first four sections investigates the implications of outsourcing in one of the performance objectives analysed in the study: the cost objective, delivery objective, quality objective, and flexibility objective, respectively. The fifth section examines what the empirical data reveals regarding the impact of outsourcing on the airlines' operational performance. Finally, causes of the negative implications of outsourcing in the performance objectives and the airlines' operational performance are explored. Chapter 8 examines the empirical data related to the highlighted boxes of the research framework (Figure 8.1).

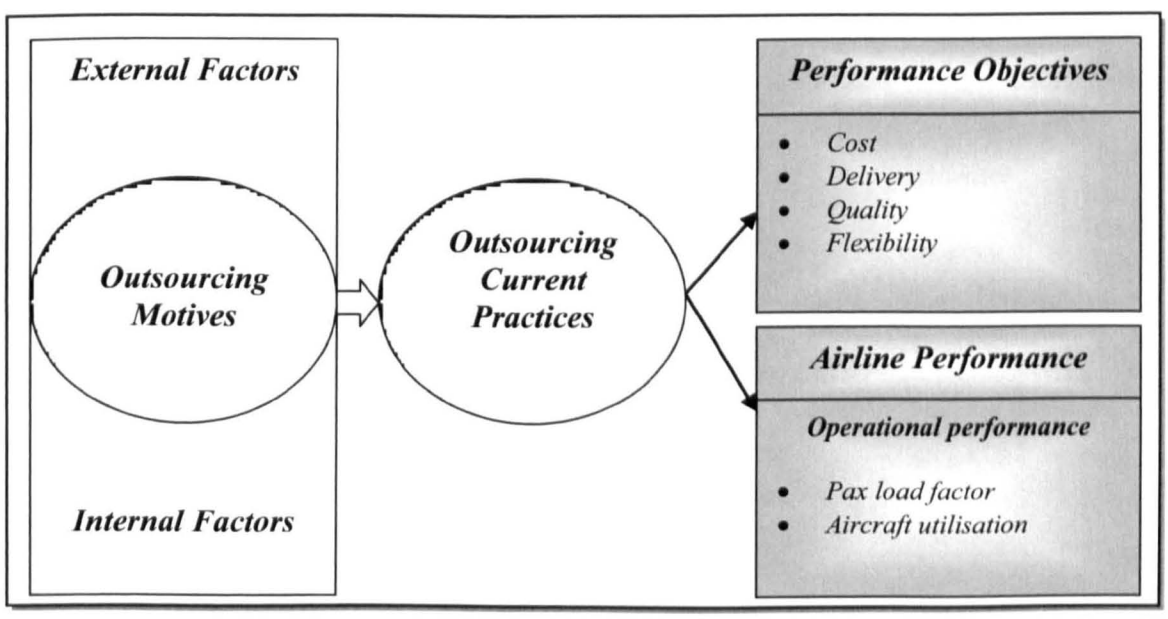


Figure 8.1: The Research Framework (the content examined in Chapter 8)

8.2 PERFORMANCE OBJECTIVES – COST

The managers interviewed in this study stated that outsourcing has a positive impact on the cost objective. For instance, some managers commented that the main benefit associated with outsourcing was the reduction of costs. Some excerpts from the interviews emphasise the nature of this positive impact (Table 8.1).

Table 8.1: Outsourcing Impact on the Cost Objective

Respondent	*Quote*
Mr. A Airline 01, Head Operations & Crewing	"We have gained in cost that is definitely the benefit of what we have pursued".
Mrs. B Airline 02, Airport Manager	"It is much easier now to get more handlers to do your flights because there are costs involved".
Mr. C Airline 03, Station Manager	"In the end the overall benefit is a cost saving … It is not just the direct costs; there are other costs, hidden costs".
Mr. D Airline 04, Airport Services Manager	"Strengths, fixed costs and ability to flex up and down when required. And you do not pay for what you do not use; what I mean there is if we cancel a flight, we do not pay them for it … They absorb the cost of the cancelled flight, i.e. they are bringing their staff in but they have got nothing to do".
Mr. E Airline 05, Station Manager	"The source of cost saving is mainly labour costs. And obviously we do not pay for equipment either".
Mr. F Airline 06, Station Manager	"Outsourcing is cost-effective, it is less cost and that is the main thing nowadays is cost, this is where everybody is heading to, it is cost, reducing cost and so on because of the crunch that we are going through. So I would say the best thing to do is to outsource".
Mr. G Airline 07, Station Manager	"Generally speaking when you give your operation to a third party, you are handing them everything on a plate, the costs then become all theirs. Because all you are looking at is the cost of that turnaround, so your focus is on one basic turnaround cost; you do not have to control the other costs, it becomes the problem of the supplier".
Mr. I Airline 09, General Manager	"In general yes. I think outsourcing is the way to help moderate your costs, but not always… I am just paying for a product. I am paying for the delivery of a product to a certain aircraft. If my schedule goes up and my schedule goes down, fantastic, I am only going to pay for what I am using".
Mr. J Airline 10, Station Manager	"It definitely reduces cost".
Mr. N Airline 01, General Manager London Heathrow	"In recent years airlines have found it more efficient to outsource services, because it is cheaper and more cost-effective".

Moreover, respondents provided details on the source of cost savings. Table 8.2 summarises these findings. Figure 8.2 represents the belief of interviewees on the positive impact of outsourcing on the cost objective.

Table 8.2: Outsourcing Impact on the Cost Objective – Sources of Cost Saving

Respondent	*Quote*
Mr. A Airline 01, Head Operations Crewing	"It is things like reduction in the facilities you are using. So we have been able to rent out one of our buildings at East Midlands … I think the strength is that we have saved costs".
Mrs. B Airline 02, Airport Manager	"I have got 53 staff here; okay, salary, uniform, uniform cleaning, ID passes, car park passes, office space, maintenance of the place, radios …Training, car park passes, do you know how expensive they are for each staff? Basically, you are talking about nearly £700 for the normal car park and the centre pass about £1,200".
Mr. C Airline 03, Station Manager	"There is a big supporting structure around having your own staff which you can cut right back if you outsource. And there are many, many areas such as training facilities, training staff and a lot of government taxes you have to pay as well for your staff, each staff member's national insurance, there is company tax that we have to pay ... The organisation is shedding any sort of not only manpower, facilities that maybe are unnecessary or costly … So if you outsource that problem is with somebody else".
Mr. D Airline 04, Airport Services Manager	"Well it is reduced training, definitely; definitely reduced training costs … Also, security passes cost about £200 a go, so if you outsource, they have to pay £200 for each of these, which means I do not have to pay for them. So there are savings there on passes and car park passes and such like".
Mr. E Airline 05, Station Manager	"The source of cost saving is mainly labour costs. And obviously we do not pay for equipment either".
Mr. G Airline 07, Station Manager	"Generally speaking, when you give your operation to a third party, you are handing them everything on a plate, the costs then become all theirs. Because all you are looking at is the cost of that turnaround, so your focus is on one basic turnaround cost; you do not have to control the other costs, it becomes the problem of the supplier, like it is in our case when we are supplying to other airlines. I am picking up all the costs of the training, IT, telephone costs, everything".
Mr. M Airline 12, Station Manager	"Direct and indirect costs should be taken into consideration, include salaries, permissions and work permits, benefits and compensations, and the facilities".
Mr. N Airline 01, GM London Heathrow	"The salaries are usually lower with the handling companies than the airlines".

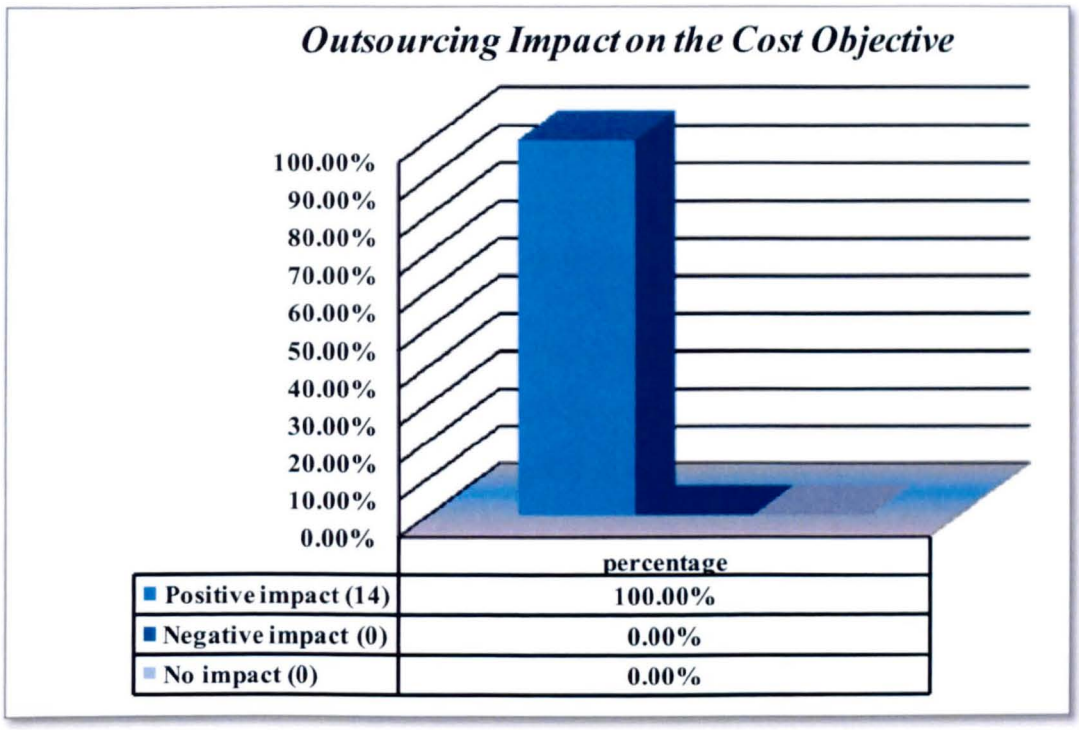


Figure 8.2: The Impact of Outsourcing on the Cost Objective

In addition, cost reduction is generally correlated with demand levels and attributed to an efficient utilisation of resources. For instance, four of the study interviewees explained:

> "When you can only justify paying for two thirds of a day or half a shift, then it is always more cost effective to give it to someone else because you are only paying for the four or five hours ... Using the Gatwick example again, it is a huge saving on labour costs if you only have one flight a day because you only pay for what you use" (Mr. D, Airline 04).

> "People like us, from five, we have gone to three flights daily... it is much easier now to get handlers to do your flights ... because there are costs involved. Outsourcing only would help us to reduce our costs ... I will give you an example: we are starting at 2 o'clock now, okay, the girls come in and they go down to check in at a certain time and they check in and they are wasting time a bit here you know, like easy. Whereas if you are a handler, they do not have time like check in staff, they go and fetch

one flight then they do another flight and so forth. So you get the max" (Mrs. B, Airline 02).

"We have a lot of resources idle for long periods of time whereas if you are going to buy capacity from a different supplier, then you do not have people sitting around" (Mr. A, Airline 01).

"People like American, as a big carrier in Terminal 3 - I do not know how many flights they have got a day - it may not be viable to outsource because you keep your people occupied all the time, but with us the flight gets in at six twenty in the morning, so the ground staff meet the flight, clear it hopefully by seven twenty/a quarter to eight. Well, the check-in does not open until nine, so most of the check-in staff are part-time anyway. That is quite an expensive function. And you have got to keep their training up to date, and you have got to do this, and you have got to do that, so the administration actually... apart from the straight cost impact, the administration would be greatly reduced" (Mr. K, Airline 03).

Yet, it has been suggested that outsourcing could generate other costs, which are not always taken into consideration when outsourcing costs are evaluated:

"You think you have saved money, but you have not because you have got other costs which start to accumulate, unless you have built in really rigorous penalties, which nobody builds in because nobody accepts rigorous penalties. So you can have aircraft delays, you get more parking fees, you have delays with connections out of hubs, there are all sorts of series of other knock-on costs which often airlines do not consider when they are making those decisions" (Mr. G, Airline 07).

"It is very easy to be sort of skewed by the figures that you can save by moving from being an airline to a handling agent. When you look at the hidden costs you know, like you would not get that situation for a ground handler, you would not get the mechanics helping out, you would not get

the sales people, etc, etc. So how do you put a cost on that? You know, you might save an overnight delay, so there is £30,000, but you would not pick that up by doing a comparison between the two. On-time performance as well, you know, you might put it down as strength/weakness opportunities you know, that sort of thing. Like on a SWOT analysis you might say well the on-time performance might be affected but no-one's going to sort of be able to give you a figure of how much the performance would deteriorate. So ... and each minute probably costs about £500. So you start adding up the delay costs and then weighing it against that, but it is all unknown, so it is very sort of fuzzy to deal with ... I think the sense of ownership, if you factor that in, and the quality that that gives then there is a huge offset against any cost savings that you can make" (Mr. H, Airline 08).

"In general yes. I think outsourcing is the way to help moderate your costs, but not always. I would say if we look at the case of United and American, United decided to outsource its heavy maintenance, American decided to keep its heavy maintenance in the US. I think you will find out if you go and ask a United executive whether that was a good decision to outsource the heavy maintenance. I am pretty sure they would say 'no' because they are being hit with some very high base maintenance costs and they are losing a lot of aircraft time shipping their aircraft out of the US for heavy maintenance and then back again. It is costing them a lot of money. When they first did it, it was fantastic, because they got rid of a very expensive workforce, some very expensive facilities, and so on and so forth. It is a short term gain, it is not a long term gain, and now three years later I think they are regretting it. But how do you start a maintenance base now? You cannot. You have sold all the heavy machinery, you have got rid of the premises. You cannot do it. You cannot go backwards. That is the problem with outsourcing" (Mr. I, Airline 09).

In short, it could be stated that the impact of outsourcing on the cost objective has to be viewed through the lens of the demand level. Outsourcing can prove to positively influence the cost objective when the demand level does not justify the investment in the provision of a given function in-house, as through outsourcing airlines can solve the problem of the unutilised capacity. Nevertheless, as the demand increases the positive influence decreases until it reaches the level where that positive impact disappears and it becomes less cost effective to outsource. Furthermore, hidden costs and quality issues may be associated with outsourcing and should be considered in the evaluation of the outsourcing impact on the cost objective. Sources of cost saving include labour costs, facilities, training, uniforms, machinery and technology.

8.3 PERFORMANCE OBJECTIVES – DELIVERY

In general, managers believe that outsourcing has a negative impact on the delivery objective. It is particularly believed that outsourcing can negatively impact on aspects such as 'on-time performance' and the passengers' 'check-in waiting time', 'baggage delivery', and 'PRM handling'. This view was expressed by the study respondents. Figure 8.3 shows the rate of the responses. Table 8.3 illustrates this belief drawn through some excerpts from the interviews.

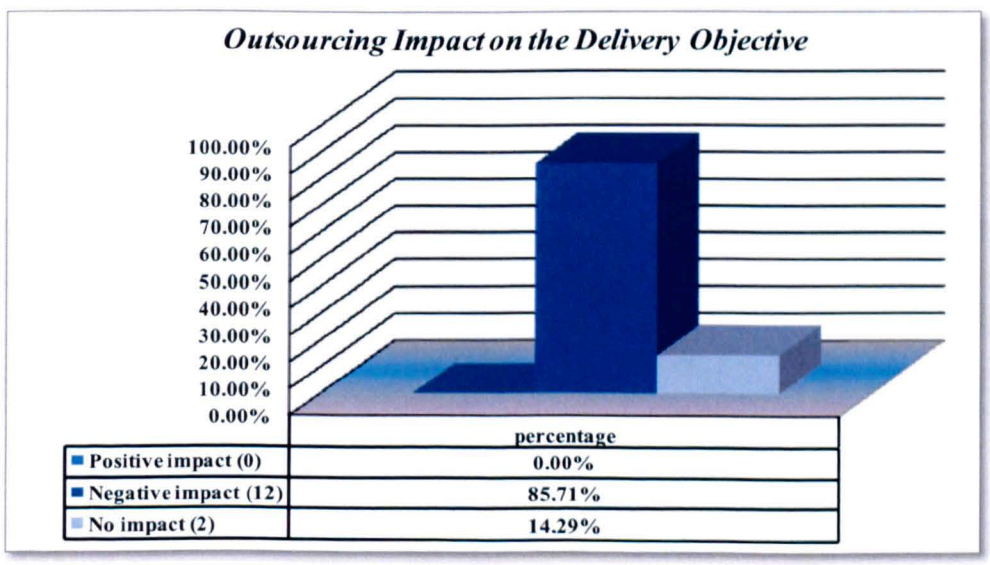


Figure 8.3: The Outsourcing Impact on the Delivery Objective

Table 8.3: Outsourcing Impact on the Delivery Objective

Respondent	*Quote*
Mr. C Airline 03, Station Manager	"I have flights being delayed or something, put a little bit of extra effort in making sure that the standards ... The on-time performance and so on, very often is not as good with a handling agent as it is with your own in-house ... because you staff will make that little bit of extra effort ... When the people internally demand something which is out of the ordinary or which maybe in the case sure that the flight goes out on time or that extra service is provided".
Mr. G Airline 07, Station Manager	"More often than not it is negative ... I can tell you. Up until 1996, when we were partially handled by another handler ... our cargo was delivered by a cargo handler because we were not allowed to do it, so we had a cargo handler. I can guarantee you that in 90% of cases, the cargo was never on the aircraft it was booked on, it always arrived late. Since we took on the cargo handling, no piece has ever been left behind. That is the difference".
Mr. H Airline 08, GM Customer Services UK & Ireland	"The difficulty or one of the risks if you like, that you are prepared to accept is if you do not have your own staff there and so you go to a third party aircraft mechanic. If there are two aircraft that are on the ground at the same time, at the moment by having our own mechanics, our mechanics go to our flight. If there is more than one, how do you know that you are not going to be delayed as a result of that? So you could be there for an hour until you get another mechanic to deal with your problem. So, that is the risk".
Mr. I Airline 09, General Manager	"In our own experience here we have had during the first half of this year I have probably taken forty or fifty delays as a direct result of our outsourced contracts, which I do not think I would have done if they were insourced ... due to outsourced companies not providing the service on time, generally the clean and search people... In any month I probably take one or two ramp delays out of five hundred departures. I know if it was outsourced I would take twenty or thirty. I know that".
Mr. L Airline 11, Station Manager	"When you have your own staff they are going to be trained on what you want them to do. What takes the handler staff five minutes to do, your staff would be able to do in one minute. It is much better if you have your own staff but that will impact on the cost".

As one of the managers further explained:

> "Outsourcing is an issue because everything they have to come and ask us, everything they have to ask, ask, ask, 'Can we do this?', 'Can we do that?'

> And it is time-consuming, time-consuming and customers are waiting, that is one big issue. In outsourcing, it would be lengthy to deal with a customer because they have to come and get authorisation from us. Being self-handling, it is done quickly because you are the airline, you make that decision, you know the rules and regulations of the airline ... so there is a delay you know, it is ... they are not checking them in as quickly as possible because the passenger has a question and they call over the supervisor, 'Oh the passenger wants to know this, this and this' and they walk away and the customer has another question or another issue, they will not deal with it there and then, they will not make a decision, they call the supervisor again. Some passengers get upset, you know, it is like why is it taking so long, just a simple question, but they have to ... that is the negative side of it"(Mr. F, Airline 06).

In addition, it has been suggested that outsourcing has a negative impact on 'baggage delivery'. Table 8.4 exemplifies this negative impact.

Table 8.4: Outsourcing Impact on the Delivery Objective – Baggage Delivery

Respondent	*Quote*
Mr. D Airline 04, Airport Services Manager	"I think there is a disadvantage to outsourcing for baggage delivery times and check-in times because if you are relying on a third party, who does not necessarily share your brand values or your product".
Mr. H Airline 08, GM Customer Services UK & Ireland	"If someone else was to do our ramp and baggage, I think the performance would deteriorate overall ... I think personally we get better results by doing it ourselves".
Mr. I Airline 09, General Manager	"Our airline's bag numbers here, of the bags we lose as a station, our numbers are thirty or forty percent better than the rest of the airport. I know that for a fact. I have got a piece of paper that tells me that. I think that is because we are insourced. I could guarantee you there is more ownership. There is a feeling of let us get this bag on this aircraft".
Mr. J Airline 10, Station Manager	"You can say that you want them to weigh the bag and if it is over a certain amount they should be charged, but there are other little things that you cannot really specifically ask for" .

Furthermore, the handling of Passengers with Reduced Mobility (PRM) is another example of the functions that are negatively influenced by outsourcing. Yet, it must be noted that the airlines are obliged to outsource this function at Heathrow Airport as part of the BAA (British Airport Authority) legislation. Table 8.5 summarises the comments of the responses on the PRM handling outsourcing.

Table 8.5: Outsourcing Impact on the Delivery Objective – PRM Handling

Respondent	*Quote*
Mr. E Airline 05, Station Manager	"If you ask any airline, it is horrendous. I mean the standard of handling PRM at Heathrow has gone through the floor, it is absolutely atrocious; they just cannot handle it. It took a Club Class passenger two and a half hours the other day to go from the airplane to the baggage hall; two and a half hours".
Mr. F Airline 06, Station Manager	"When BAA decided to give the entire PRM passengers with the restricted movements, wheelchairs and everything, giving it to one company, and that one company could not handle it. They do not have the staff to handle all the wheelchairs that come in and out of Terminal 3 ... They were suffering; passengers were kept waiting on the aircraft for more than 45 minutes to an hour before they received a wheelchair. Which means the crew is not allowed to leave the aircraft while there is a passenger still on board, so that affected the crew rest hours. And if the rest hours of the crew suffer, then the departure ... you know, the next departure will suffer because they have not had a good rest".
Mr. H Airline 08, GM Customer Services UK & Ireland	"The 'PRM', for instance; when we did it ourselves, we had a much better handle on how the customers were treated and the wait times that our customers experienced. When we moved over to the one company in the terminal, our customers experienced you know, shocking delays and were poorly treated by the company".

Overall, respondents suggested that outsourcing has negative implications in the delivery objective. On-time performance, passengers' waiting time at the check-in counter, baggage delivery and PRM handling are negatively affected by outsourcing.

8.4 PERFORMANCE OBJECTIVES – QUALITY

The empirical data of the study suggests that the impact of outsourcing on the quality objective can vary, depending on the nature of the function being outsourced. In general, respondents differentiated between activities related to customer services, which involve interaction with customers, and other functions not involving direct contact with customers. Nonetheless, a negative impact is generally verified. All the interviewees (14/100%) indicated the negative impact of outsourcing on the quality objective. Figure 8.4 represents this indication. Table 8.6 summarises the opinion of the managers on the implication of outsourcing on the quality objective as expressed in the interviews.

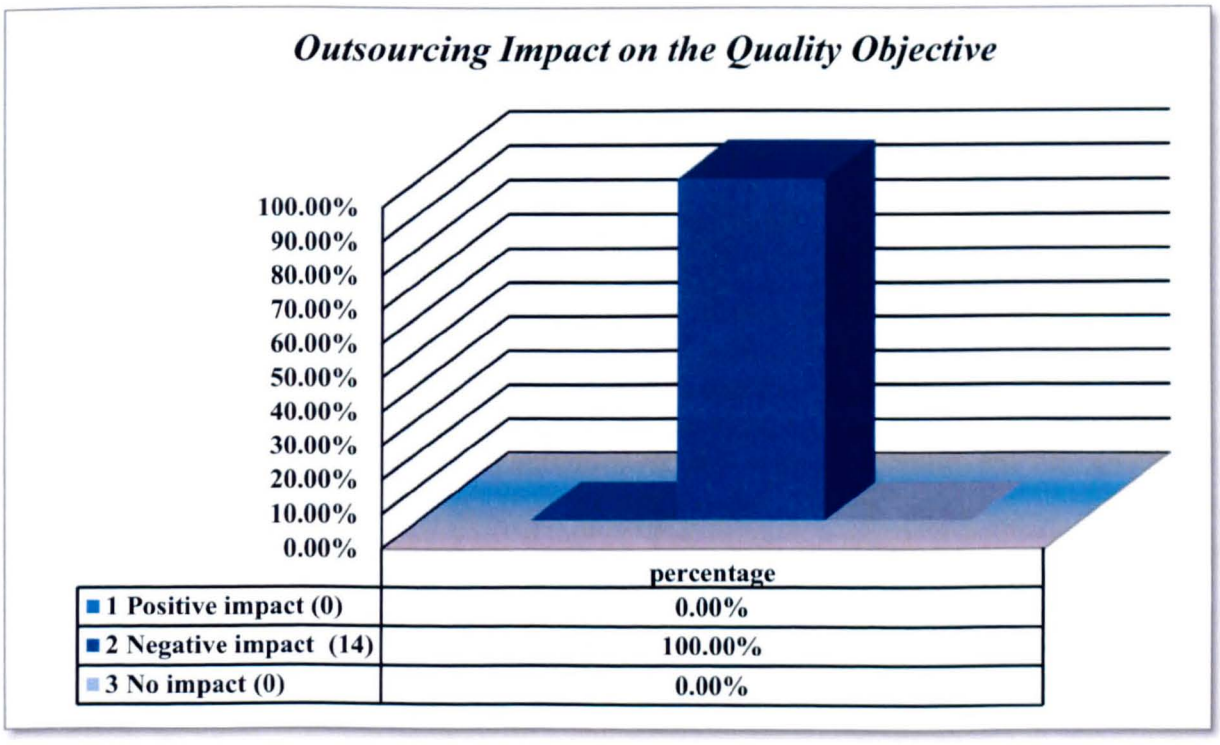


Figure 8.4: The Impact of Outsourcing on the Quality Objective

Table 8.6: Outsourcing Impact on the Quality Objective

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"One of our handling agents we served three notices of improvements, so effectively we put them in a 100 days' notice to terminate the contract, we had to do that for the same supplier over the last 18 months".
Mrs. B Airline 02, Airport Manager	"To be honest, to me, I am a great believer in staff and I just feel there is no service like a self-service, nothing better than that".
Mr. C Airline 03, Station Manager	"When it comes to dealing with people that is a slightly different issue. I think the face-to-face link between our staff and the customers/passengers … Personally, I feel that staff from a handling company are not always as loyal to our customers as our own staff would be".
Mr. F Airline 06, Station Manager	"The negative side of outsourcing is the customer service given to our customers that has not as good quality … I still think that if it was self-handling we would give better customer service".
Mr. G Airline 07, Station Manager	"Quality is always talked about but it is always at the end of the queue in the end … Because they say well if we outsource, and we can save a million pounds a year, then we will outsource; it does not matter whether we lose some percentage points in quality".
Mr. H Airline 08, GM Customer Services UK & Ireland	"It depends where you are thinking of outsourcing. In the customer-facing roles, I think it would be a retrograde step".
Mr. K Airline 03, HR Manager – Europe	"I think it would reduce the service a bit".
Mr. L Airline 11, Station Manager	"It is no way to improve quality. If you want to improve your quality you should have your own … If you have your own staff quality is always better. The handling agent will definitely impact the standard of the service … When we sign the contract with the supplier we ask for the IATA standards, and we can ask for extra things if needed, before signing the contract. The stated standards would provide the customer with acceptable service standards. However, you could provide your customers with better service standard if you were serving them with your staff".

Similar views on outsourcing impact on the quality objective were expressed by other interviewees:

> "The passengers will look at the person in front of them who is got the airline uniform on and they will be able to differentiate between the

service levels they are getting; one from an airline employee and one from a handler. So you are sending out different messages to your customers. So that can be a potential disadvantage ... you have got one service in the home base and you have got a different service level at an outstation. So you get inconsistency from the passenger's experience ... The trade-off is in-house, higher quality against outsourced, potential lower quality but lower costs" (Mr. D, Airline 04).

"If an airline thinks it is going to get a better service from its ground handler than it would give itself, then obviously it does not train its staff very well ... I have been in this company ten years and probably in the last seven years; we have changed our ground handler five times ... Just a simple thing that we are always trying to get over to the agents is when somebody walks up to you, smile at them. I mean you would be surprised, if you go down to check in now on your way back and you look, and you just stand and watch people go to the check-in desk and you actually see how many people actually smile or even stand up and greet them; very few ... As a general rule, if you do it in-house, it is the best you get" (Mr. E, Airline 05).

"The danger you have is that your service quality suffers and your customer service product suffers ... The actual customer-facing product would suffer from outsourcing ... Most airlines believe that you only get good customer service if you do your own handling. You will not get such a high standard of customer service if you use a handling company ... What you cannot control is the smiling, or the interaction with the customer. Airlines traditionally would argue that your own staff will give you a better quality product ... Courtesy and smiling, happy interaction, friendliness. All of that stuff would suffer if you did not have your own people; there is no doubt about that" (Mr. N, Airline 01).

On the other hand, it has been suggested that the outsourcing of functions not involving interaction with customers, such as maintenance and some of the ramp functions, would not lead to a negative impact on quality, when they are outsourced to a capable supplier. Table 8.7 summarises those remarks made by the managers.

Table 8.7: Outsourcing Impact on the Quality Objective – Neutral Impact

Respondent	***Quote***
Mr. A Airline 01, Head of Operations and Crewing	"We had an interim supplier because our techs could not do all the work that was going to outsourcing, so we sent some aircraft to Israel for maintenance. Some aircrafts went to Israel the standard of the aircraft when it came out of Israel was disappointing. It was not as good as we hoped for. This year all aircraft are going to Lufthansa Technik installations, the output of quality has been much better. Certainly better than last year when we're having problems and possibly better than we had when we're in-house".
Mrs. B Airline 02, Airport Manager	"Maintenance, with us we have KLM, very good, never had a problem with them".
Mr. C Airline 03, Station Manager	"Outside our home base, catering is outsourced to third parties. There is no doubt that catering is a good example where the quality is excellent and you have a number of different suppliers who you can compare and decide who you are going to use based on the quality. And their ultimate aim is to provide you with the best possible catering food and staffing and service. Catering is a very good example of where you can actually improve your offering".
Mr. H Airline 08, GM Customer Services UK & Ireland	"Our engineers are told what they have got to do, when they have got to do it and if there is a problem, they have to fix it to a certain standard. So the quality should be the same regardless of who provides that.... 'Below wing', some areas may improve, like specialist, like water and toilets; transportation might improve because they might have improved technology over what you had. You know, i.e. tracking ability of the vehicles, whereas we did not have that, but now we have got it and we can say 'Well at what time did you turn up at the aircraft?' and they can say 'Well 13:01' you know, they have got a record. So ... because that is their specialist function and they have invested in technology; we did not have that because we did not see it as a real important thing with only like 10-15 flights a day. So you know, they will be willing to invest in technology whereas perhaps we would not. So the quality there would improve because you have got a better method of tracking".
Mr. N Airline 01, GM London Heathrow	"Underneath the wing is not such an issue because you are handling baggage and cargo. An airline will always be able to keep focus on that".

It could be concluded that the outsourcing impact on the quality objective varies. The effects on quality depend on the activity being outsourced. In general, outsourcing functions that involve interaction with customers are more likely to have a negative impact on the quality objective. Other activities such as maintenance, some of the ramp services, and the catering provision could be 'safely' outsourced to a capable supplier.

8.5 PERFORMANCE OBJECTIVES – FLEXIBILITY

Respondents emphasised that outsourcing has a positive impact on the flexibility objective. As the airlines' demand is not stable during the year, outsourcing provides airlines with the volume flexibility required to overcome the challenge of fluctuating demand, which in turn affects the number of flights as well. Only one of the interviewees indicated a neutral impact from outsourcing. Figure 8.5 expresses the opinion of managers on the implications of outsourcing on the flexibility objective. Table 8.7 shows a few excerpts from the interviews also reporting the outsourcing overall positive impact on flexibility.

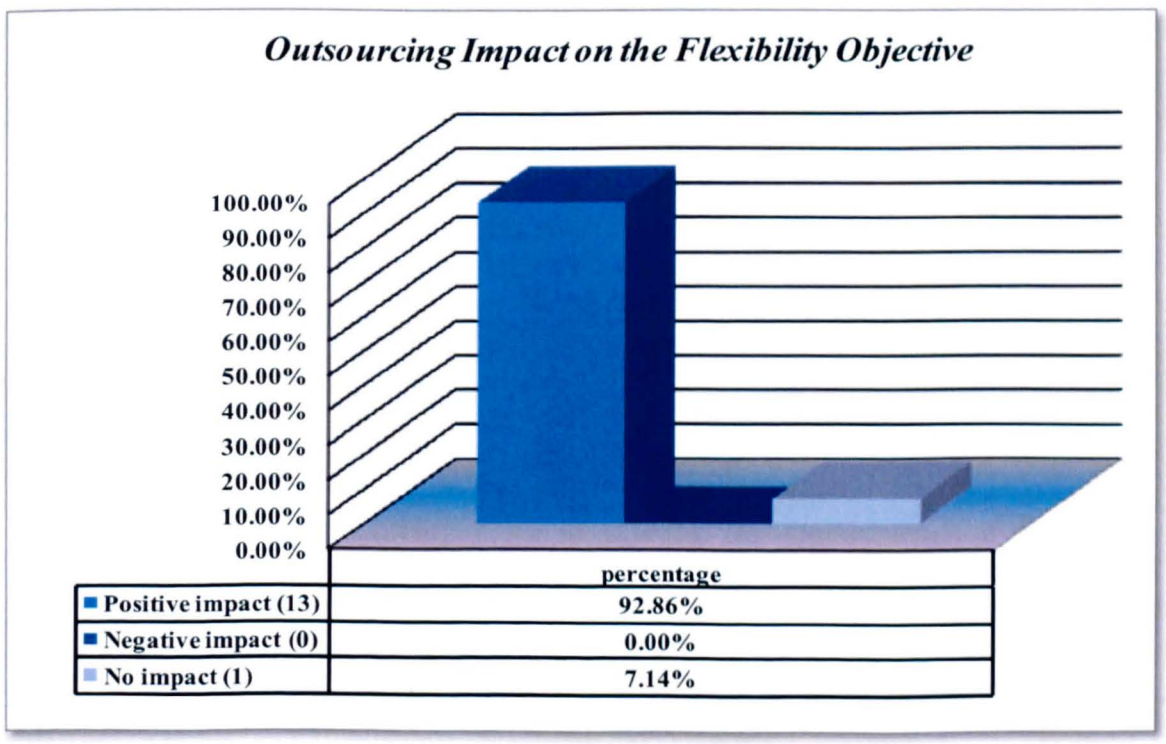


Figure 8.5: The Impact of Outsourcing on the Flexibility Objective

Table 8.8: Outsourcing Impact on the Flexibility Objective

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"The planning window for sales has decreased whereas when we had it in-house we probably would have struggled to put on a sale in a weeks' time … I mean flexibility is probably a positive, slightly positive".
Mr. C Airline 03, Station Manager	"If you have extra flights and so on, yes an outside company will be asked to provide more staff and in-house though we cannot do that because you cannot just find extra staff at a moment's notice. From that point of view, flexibility is probably a benefit in having an outsourced company".
Mr. E Airline 05, Station Manager	"Obviously the ground handler has a lot more sources … You go to a company that has a bigger pool, so yeah, there is obviously a lot more flexibility there. It is like if you are a small airline and you are handling yourself and your staff are handling that aeroplane and you have another aeroplane diverted to your station for some reason, you have actually got nobody to do it now".
Mr. F Airline 06, Station Manager	"Even if the aircraft lands … diverts into another airport, the good thing about the handling companies in the UK is that they are also in other airports and you just call them and they deal with it. They deal with the baggage, the passengers, everything and then send the aircraft back here when it is ready".
Mr. G Airline 07, Station Manager	"It is positive in some aspects … Your only interest if you are a supervising station, you only say to the supplier 'Look, I have one additional flight, please cover it'. And that is it; you do not have to worry about it".
Mr. J Airline 10, Station Manager	"One day you can be very full. I mean obviously the busy times it is busy. The summer and so, you need the maximum. But there are down times when, maybe the flight's fifty percent and you can tell the handling company I would only need three desks, or I need four, or whatever. So you can manage it".
Mr. L Airline 11, Station Manager	"Whenever we have additional flights we just inform our handling agent and it is his duty to provide me with the required staff. So, it is easier because otherwise you have to prepare everything by yourself. But with the handling agent all what you need to do is just send an e-mail to your handling agent and job done".
Mr. M Airline 12, Station Manager	"Outsourcing helps in meeting the requirements of fluctuating demand. We have increased our frequencies here at Heathrow and all what we had to do is to notify our handler and he was ready to arrange the staff to comply with our new schedule. So outsourcing improves flexibility, in particular, in outstations".

This view was further explained by two of the interviewees:

"It certainly, improves flexibility.... In principle, I need less staff in the winter than I do in the summer, and also there are times within the winter and summer periods where I need more and less staff. For example, the second half of July and first half of August I need every person I can get my hands on, whereas I get to October and I do not need a lot of those people anymore, so there is a certain amount of fluctuation that is required, and with an outsourced contract it is generally easier, because an outsourced company can take advantage of the opposite fluctuations of different companies. For example, the heavy winter travel period to India neatly dovetails with my low-winter period. There are more flights to India in the winter, and to Pakistan, and to basically the subcontinent in general. There are more flights that way in the winter than there are transatlantic. So if a company has a transatlantic contract and a Far East contract, they can run an relatively efficient company by using the fact that some of these things do tend to dovetail" (Mr. I, Airline 09).

"Strengths, fixed costs and ability to flex up and down when required. And you do not pay for what you do not use; what I mean there is if we cancel a flight, we do not pay them for it ... They absorb the cost of the cancelled flight, i.e.,they are bringing their staff in but they have got nothing to do ... And the third party is contractually bound to provide you with the additional staff should you ask for it. So it is an advantage to the carrier to be able to switch them on and off. You know, whereas if I had kept it in-house, I am virtually looking at myself to meet this peak of demand and I would not be able to reach it. Whereas if you have got a ground handler that serves many people, like Servisair work on my airline but they also do other carriers. And if we put extra flights on, because they have bought in bulk their staff to service other carriers, they can pull from the other carriers and fill in the gaps. So the huge advantage is that they have a

greater option to pull in from other areas, so that is a big, big advantage for flexibility, a bigger pool of manpower" (Mr. D, Airline 04).

Furthermore, it has been stated that the interruption of the operations caused by staff absence can be mitigated through outsourcing. Table 8.9 gathers a few excerpts from the interviews that describe this situation. In short, it could be stated that outsourcing positively influences the airlines' flexibility objective, in particular, the 'volume flexibility'. The source of this positive impact can be mainly attributed to the ability of suppliers to react to the demand fluctuation faster due to a bigger pool of staff. Table 8.10 summarises the main findings on the outsourcing impact on the performance objectives.

Table 8.9: Outsourcing Impact on the Flexibility Objective – Staff Absence

Respondent	***Quote***
Mr. D Airline 04, Airport Services	"If there is any sickness absenteeism, it is for the handler who you've paid for, they've got to manage that problem".
Mr. E Airline 05, Station Manager	"If you have got three or four people off of a shift that do not turn in, then if it is your own staff you just get on with it and try and make do. Now if your ground handlers got the same problem, then of course you turn round to him and say 'But we only had three staff' and he would turn round and say 'Yeah, I am really sorry but I had eight staff sick this morning'. And you turn round and say 'That is not my problem. But, if you had employed them yourself, then it is your problem and you have to get through it. But because it is a ground handler, then you expect them ... it does not matter, you expect them to have the staff".
Mr. F Airline 06, Station Manager	"Sickness of staff, leave of staff, and absence of staff has a big effect on the operation. If you have your own staff, you are limited on keeping a healthy coverage and presentation of check-in and at the gates and everywhere. So outsourcing you pay a small amount of money a month but yet you get everything; you get staff, you get continuous coverage, they have so many staff. So if one goes sick, they are immediately replaced by another".

8.6 OPERATIONAL PERFORMANCE

This study investigated the outsourcing impact on the airlines' operational performance, measured by the 'passenger load factor' and 'aircraft daily utilisation'. The empirical data of the study revealed that there is no significant direct influence of outsourcing on the airlines' operational performance. Yet, it has been suggested that outsourcing could negatively influence on-time performance. Table 8.11 illustrates this indication.

Table 8.10: Summary of Findings – Outsourcing Impact on Performance Objectives

	TOPIC	*FINDINGS*
8.2	*Impact of outsourcing on cost objective*	• Outsourcing has a positive impact on the cost objective. • Sources of cost saving include labour costs, facilities, training, uniforms, machinery, and technology. • The positive impact of outsourcing is negatively correlated with the airline demand for the outsourced function.
8.3	*Impact of outsourcing on delivery objective*	• Outsourcing has a negative impact on the delivery objective. • Aspects such as on-time performance, passengers' waiting time at the check-in counter, baggage delivery and PRM handling are negatively affected by outsourcing.
8.4	*Impact of outsourcing on quality objective*	• Impact of outsourcing on the quality objective can vary, depending on the nature of the function being outsourced. • Outsourcing functions that involve interaction with customers are more likely to have a negative impact on the quality objective. • Activities such as maintenance, some of the ramp services, and the catering provision could be 'safely' outsourced to a capable supplier.
8.5	*Impact of outsourcing on flexibility objective*	• Outsourcing positively influences the airlines' flexibility objective, in particular, the 'volume flexibility'. • The source of this positive impact can be mainly attributed to the ability of suppliers to react to the demand fluctuation faster due to a bigger pool of staff.

Table 8.11: Outsourcing Impact on Overall Operational Performance

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"I do not think it had any impact at all in any of those operational performance factors ... No impact, positive or negative ... However, handling agents certainly have some effect on on-time performance".
Mr. C Airline 03, Station Manager	"Load factors and aircraft utilisation are controlled by the core airline ... I think we will see a result from going to an improved management system, computer system. But we keep all of those things in-house; they are part of the core airline ... I have experiences that the standards, the on-time performance and so on, very often are not as good with a handling agent as they are with your own in-house".
Mr. D Airline 04, Airport Services Manager	"The load factor is driven by your sales team, there's a potential disadvantage on turnaround times, because you're reliant on your handler to be as committed to your brand and your own airline as you are as the carrier, and generic handlers have traditionally had a far more relaxed approach to their customers".
Mr. E Airline 05, Station Manager	"Obviously the airline sets its schedules. I do not think the outsourcing has a direct factor on aircraft utilisation ... The load factor will not have that effect, but on-time performance obviously, that is a lot to do with your ground handler".
Mr. F Airline 06, Station Manager	"When it comes to filling up the aircraft and the turnaround and everything, it is monitored by us ... So no, it would not have any effect on that because we deal with that".
Mr. G Airline 07, Station Manager	"Load factor is not influenced by outsourcing... on-time performance, more often than not it's a negative impact".
Mr. I Airline 09, General Manager	"Load factor is to do with whether you can sell your planes or not ... If we're running a short haul operation it'd affect aircraft utilisation".
Mr. J Airline 10, Station Manager	"Load factor mainly depends on sales, promotions, and things like that. And I do not see any connection between outsourcing and aircraft utilisation".
Mr. K Airline 03, HR Manager/Europe	"There is no connection between outsourcing and load factor".
Mr. L Airline 11, Station Manager	"There is no relation between outsourcing and load factor.... Bad handling agent could affect average aircraft utilisation but there is no strong relation".
Mr. M Airline 12, Station Manager	"I do not think there is a direct relation between outsourcing and the airline load factor or average daily aircraft utilisation".
Mr. N Airline 01, General Manager London Heathrow	"There is no link between load factor and outsourcing. The load factor is down to the airline themselves selling and marketing the product. Aviance would not impact our load factor because the customer does not know it is Aviance".

Nonetheless, one of the respondents suggested that the negative impact of outsourcing on the turnaround time could lead to a modest negative impact on 'daily aircraft utilisation'. In that regard, the respondent explained:

> "There is a link between aircraft utilisation and outsourcing. So if, for example, you can get your ground handler to turn round, every airline has its minimum turn round time on all flights, so that is the time that we know, say for example, it takes 35 minutes to turn a full loaded airbus 320 in and out then we can plan our schedule round, every time it comes to Heathrow it takes 35 minutes to turn round. And you know it will take 35 minutes to turn round in Amsterdam and Glasgow, so that is the target and that way you work out how much your aircraft can fly and what it can do ... In Egypt they are not so fast so we give them one and a half hours to turn round ... You factor in the turn round times. If you know you are going to a bad airport then you give them an extra half hour and you just plan the network that way. There is a slight negative impact, not huge but generally there could be, that is the only area it could impact" (Mr. N, Airline 01).

In general, no correlation was detected between outsourcing and the airlines' operational performance, measured by the 'load factor' and 'daily aircraft utilisation'. However, it has been suggested that the negative impact of outsourcing on 'on-time performance' would lead to a slight negative impact on 'aircraft utilisation'.

8.7 CAUSES OF THE NEGATIVE IMPACT

The respondents suggested that the negative impact aspects of outsourcing on the delivery and quality objectives could be attributed to three main factors: lack of staff loyalty, lack of staff training and knowledge, and lack of control over the activities being performed by the service providers. These factors are briefly discussed next.

8.7.1 Staff Loyalty

Managers interviewed for the purposes of the study emphasised the importance of their staff's loyalty in delivering better services to their customers. Quotes drawn from the interviews' transcripts expressing this information are presented in Table 8.12.

Table 8.12: Causes of Negative Impact – Lack of Staff Loyalty

Respondent	*Quote*
Mr. A Airline 01, Head of Operations and Crewing	"If you work for your airline you have a desire to do well whereas if you work with a handling agent that works for other airlines, then this airline is just another airline. You are just another client as opposed to being a sole client".
Mr. C Airline 03, Station Manager	"It is loyalty you know, that you are actually paying them, so you know, they know who their paymaster is. If you are working for a handling agent, the handling agent is paying you and you are dealing with a number of different airlines usually, handling a number of different airlines and it is how you feel within yourself towards that airline as to how well you might serve them … And if you are an airline that has a profit-share philosophy, many Far East carriers do and some European carriers do and American carriers I am sure, but of course it is only the core airline employees that will receive any benefit from that, none of the Airlink companies would".
Mr. C Airline 03, Station Manager	"If it is in-house, there is a definitely a slight edge when it comes to the service level because people are working for their own company and you definitely generally get a better level of service from staff who are working for their own company, as opposed to working for another handling agent that is dealing with a third party … They are not going to serve them badly but at the same time, your heart may not be in it. Whereas your own staff are more likely to have their heart in their jobs, so they give a personalised service".
Mr. F Airline 06, Station Manager	"Because I used to work for a self-handling company and we used to give 100% to our customers, we used to go that one step further to assist, to deliver good customer service. But, when you outsource, the handling company agents, they'll not give you 100% because they don't care you know, it's not their airline; they're just there to do their job and go home after. They won't say 'Okay, I'll stay behind and do overtime' or 'I'll take the passenger', 'I'll deal with it' and 'I'll do', they don't give everything from their heart".
Mr. G Airline 07, Station Manager	"There's no motivation in the handling agents generally. There's no staff motivation, there's no fidelity towards the product or towards the airline product and often even towards their own company that is employing them. They're just seen as service providers".
Mr. L Airline 11, Station Mgr.	"When you have your own staff they will be loyal to the company".

Three of the managers elaborated on the importance of the staff loyalty:

> "There is the potential for dilution of commitment to brand. Potential for lack of ownership of customer needs ... Because you are reliant on your handler to be as committed to your brand and your own airline as you are; as the carrier and generic handlers have traditionally had a far more relaxed approach to their customers. You know, they do not buy into ... they are not working for their company, they are providing a service to somebody else, therefore it invariably sometimes becomes diluted. So you run the risk of an inferior service or that lack of company commitment, because they are not employed by the business, they always provide a service to the business ... They will go up to a certain level of service provision and then defer ... They will just look at another flight, another flight, whereas to us you know, it is the flight you know, there is a big difference" (Mr. D, Airline 04).

> "The difference between our staff and the handler's staff is if one of our flights arrives late, not only would you get the cleaners on that flight to try and turn it round as quickly as possible, because if you did not, it might go overnight. We have had mechanics on there, we have had aircraft mechanics, we have had the passenger people, ramp people, baggage people, all on board trying to clean that aircraft to turn it round. And that is the thing that you do not get when you have not got your own staff ... If someone works for the airline, they feel as if they belong to that airline. If they are a ground handler who is handling ten different airlines, there is no sense of ownership, they work for the handler, I can go home at the end of my shift, what is it to me? Nothing is going to happen to Aviance; they might get some bad press over it but nothing is going to happen to me" (Mr. H, Airline 08).

> "I would say in the case of an outsourced company they do not necessarily care whose contract they are working on. They could be cleaning an

American plane one minute, or cleaning a Virgin plane the next, or ramp-handling a Virgin plane one minute and 'other airline' plane the next. I do not think they necessarily have any emotional attachment to it. Their attachment is to getting paid at the end of the month and so on, whereas I would say that, especially on the ramp, we get an enormous amount of goodwill because of the ownership and the pride that people take in working for this company. I think that is a great factor or having insourced versus outsourced employees ... The guys who work on ours travel on ours. They use our aircraft. They have seen people who have lost their bags. They are not happy with that. If they can get last minute bags on they will. If that is in the hands of an outsourced guy who says 'I closed the door at minus five, that is it. If there are any more bags, 'I do not care'. That is the kind of attitude you often get from outsourced employees. Even though you can say 'Look, there is fifteen bags here. We could put them on. We are going to take an air traffic delay anyway, just put them on,' they are going to say 'no'. That is the issue with outsourcing is there tends to be a lack of emotional attachment to the company they are actually doing the work for. For me, it has a bit of a downside ... An insourced employee over time may develop a relationship with a company and think 'I like these passengers. I have seen these guys before'. There might be lots of reasons why they deliver better quality than an outsourced employee" (Mr. I, Airline 09).

8.7.2 Staff Training and Knowledge

Respondents also suggested that the airlines' staff generally possess greater knowledge of their own product and system, while acquiring that knowledge would be difficult, even impossible, for the handler staff, considering the number of airlines they serve. Table 8.13 gathers some of the concerns expressed by the interviewees regarding the lack of training and knowledge of the handler staff.

Table 8.13: Causes of Negative Impact – Lack of Staff Training and Knowledge

Respondent	*Quote*
Mr. D Airline 04, Airport Services Manager	"The disadvantage is that I have to manage a third party rather than manage my own staff, which potentially it is easy to manage your own staff, because you know they have been immersed in the same training programme as you … And there is a risk that the handler has not got the right trained people to provide a service to yours … I mean to give you an example, BA, they handle us. There is always a risk that they might not have somebody on shift who is trained for our 777. So if we send a Boeing 777 into Heathrow, you run the risk that staff that are on duty might not be licensed for it. So it is not necessarily going to be a dilution of service, it is going to be a total stoppage of the service, because they have not got somebody licensed you know, to provide service to that aircraft".
Mr. E Airline 05, Station Manager	"One of the downfalls you have also got to realise as well is that a lot of the staff that are working on your passenger handling, your check-in desks are probably working on other airlines as well. And they could be working on three, four, five, six other airlines and they are expected to know the products and all the different little bits, all the different little bits in the system and then you wonder why sometimes somebody gets it wrong, somebody made a mistake … Your own staff only know your product, so you train them internally. They know about check-in, they know about the procedures, they know about if you like, Malaysian titles, and all these sort of things. So if you train your own staff and you have control over them, then really that should be the best service that you can give your passengers".
Mr. F Airline 06, Station Manager	"I believe that if we have our own people, there will be that extra touch towards the customer service, there is always that extra … because you train them, you build your staff and I would sit back and know that 100%, that my staff will be where they are supposed to be, they will talk to the right people, they will handle the customers as they should be handled. They would have all the information with regards to our Frequent Flyer Programme, the uses of the lounge, passengers connecting and reissuing their tickets, for example, you know the rules and regulations".

Excerpts from the interviews also represent this influence:

> "We have a big programme, it is called Soft Skills, how we address people because we have a lot of titled people in Malaysia, and the way that you deal with the passengers. So, we have Soft Skills and we have trained ground handlers and we have our people down there to try and make sure

that they do it. It is like ... 'do not get me wrong', it is not always easy because sometimes you get a ticket and you can just about read the name you know, it is so long or whatever and you have got to be careful. It is always nice to call a passenger by his name. So the passenger walks up to you and you look at his ticket, 'Mr Smith, how are you? Nice to see you'. But it is when it is Mr Zanzoflaglocuclusi ... you could insult the passenger by trying to say his name, so you have got to be ... you know; then it becomes Sir or Madam. So you just have to be a bit more sensible" (Mr. E, Airline 05).

"You would definitely have a better product offer if you had your own staff ... Because you could concentrate, really, on the importance of customer service, and the cultural thing, which plays a big part in customer service. If you are aware of how your customer likes to be handled in certain ways, you know, the way you speak to them, this has a big impact ... If you have your own staff, yes, then you can emphasise these certain things, but if they are not, you cannot. There is a certain level of customer service that is probably across the board for most airlines, but it does not go that extra mile just to make sure that your people are looked after" (Mrs. J, Airline 10).

8.7.3 Control

In this study, managers stated that control over the staff helps them in achieving their airlines' targets and enforcing standards. Such control would be lost through outsourcing. Table 8.14 exemplifies these concerns. The respondents suggested the negative impact of outsourcing on the delivery and quality objectives could be attributed to three main factors. Firstly, staff loyalty and attachment to the airline brand as opposed to the handler staff, which provides services to several airlines. The second factor is the in-depth knowledge of the staff of their airline products and system versus the handler staff required to deal with several airlines' systems. The third factor is the lack of managerial control over the handler staff. Table 8.15 summarises the main findings on the

outsourcing implications in the airlines' overall performance and suggestions on the factors for the negative impact of outsourcing on the delivery and quality objectives.

Table 8.14: Causes of Negative Impact – Lack of Control

Respondent	*Quote*
Mr. A Airline 01, Head OPS Crewing	"Outsourcing gives you cost benefit, but it does not give you other things, because you do not have control".
Mr. C Airline 03, Station Manager	"You cannot tell staff directly, because you have to direct all your concerns through the management of the handling agent who then direct their staff. There can be shortcomings and sometimes objectives are not achieved and you do not achieve SLAs".
Mr. E Airline 05, Station Manager	"It is all about the control over the staff; you have your own standards. You have more control over your own staff. If they don't do something or whatever, you've got direct control over them you retrain them, if necessary discipline them or whatever, so that you can maintain it under your own umbrella, your own roof. You cannot control a ground handler, because they are not your staff. You can only complain to the management and it is how they discipline or train their staff to meet the standards. So you do not have any direct control over that".
Mr. F Airline 06, Station Manager	"I believe if you are more in control of your business, then you would have better customer service delivery, better performance in regards to full handling, as in the turnaround of the aircraft, you are in full control ... I would say the advantage of being self-handling is control over the whole situation, running the station as per the manual, as per the rules and regulations of the airline ... Instead of if something goes wrong, then you have to go through the management of the outsourced company ... I have no control over the staff, I have to go through their management to deal with the staff, I cannot go directly to the staff. So as a station manager, even though I am in control, I do not have control of their mistakes or if anything happens, I have to go through the route of speaking to their management and then they take care of it. And that makes a big difference because if it was my own staff, I would deal with it immediately and done, but it takes time, it is lengthy".
Mr. G Airline 07, Station Manager	"If there is no clear economic advantage, then it is not worth it, you lose control of the product that you are selling".
Mr. J Airline 10, Station Manager	"If you have control of it wherever you are, you can dictate the quality of service".
Mr. L Airline 11, Station Manager	"The main factor is the control over the staff. Delivery would be much better with your own staff mainly because you have control".

Table 8.15: Summary of Findings – Outsourcing Impact on Operational Performance

	TOPIC	*FINDINGS*
8.6	*Impact of outsourcing on operational performance*	• No significant direct influence of outsourcing on the airlines' operational performance, measured by 'passenger load factor' and 'aircraft average daily utilisation'. • However, it has been suggested that the negative impact of outsourcing on on-time performance would lead to a slight negative impact on aircraft utilisation.
8.7	***CAUSES FOR THE NEGATIVE IMPACT ON THE DELIVERY AND QUALITY OBJECTIVES***	
8.7.1	*Staff loyalty*	• Staff loyalty and attachment to the airline brand as opposed to the handler staff, which provides services to several airlines.
8.7.2	*Training and knowledge*	• In-depth knowledge of the staff of their airline products and system versus the handler staff required to deal with several airlines' seems to be one of the critical areas in terms of outsourcing.
8.7.3	*Control*	• The third factor is the lack of managerial control over the handler staff. This factor is particularly sensitive in terms of achieving the quality standards airlines demand from their staff members.

8.8 CHAPTER SUMMARY

Chapter 8 illustrated the findings of the qualitative analysis of empirical data analysis regarding outsourcing implications in the performance objectives and the overall operational performance in the airline industry. The respondents stated that outsourcing could prove to positively impact the cost objective when the demand level does not justify the investment in the provision of a given function in-house. Nevertheless, as the demand increases, this positive influence decreases until it reaches the level where that positive impact disappears and it becomes less cost effective to outsource. On the other hand, the respondents suggested that outsourcing has negative implications for the delivery objective. It is particularly believed that outsourcing can negatively impact on aspects such as 'on-time performance' and the passengers' 'check-in waiting time', 'baggage delivery', and 'PRM handling'. Moreover, it has been concluded that the impact of outsourcing on the quality objective varies. The outsourcing consequences on quality depend on the activity being outsourced. In general, outsourcing functions that involve direct interaction with customers are more likely to have a negative impact on the quality objective. Other activities, such as maintenance, some of the ramp services, and the catering provision could be 'safely' outsourced to a capable supplier. In terms of the implications in the flexibility objective, it has been stated that outsourcing has a positive impact on the airlines' flexibility objective, 'volume flexibility' in particular. There was no correlation detected between outsourcing and the airlines' operational performance, measured by the 'load factor' and the 'daily aircraft utilisation'. However, it has been suggested that the negative impact of outsourcing on on-time performance would lead to a slight negative impact on 'aircraft utilisation'. The empirical data suggests that the negative impact of outsourcing on the delivery and quality objectives can be attributed to three main factors: firstly, staff loyalty to their airline; secondly, in-depth knowledge of the airline staff of their products and system; finally, is the lack of managers' control over the handler's staff. Chapter 9 contains the discussion of the study findings and the main contributions provided by the research: theoretical and practical.

CHAPTER 9

DISCUSSION AND CONCLUSION

9.1 CHAPTER OVERVIEW

The aim of this chapter is to discuss the main findings from the analysis of empirical data in terms of the determinants, current practices, and impact of outsourcing on the airline industry, as presented in Chapter 5 (the exploratory case study), Chapter 6 (the regression analysis of secondary data), Chapter 7 (semi-structured interviews on the outsourcing determinants and current practices), and Chapter 8 (semi-structured interviews on the performance objectives and overall airline performance). Chapter 9 starts with an overview of the context of the study and its purpose in Section 9.2. Section 9.3 contains the discussion of the research findings; whereas, Section 9.4 analyses the main contributions provided by the study: theoretical and practical. The chapter is concluded by the presentation of research limitations and proposed areas for further research, which are explored in Section 9.5 and Section 9.6, respectively.

9.2 CONTEXT AND PURPOSE OF THE STUDY

Outsourcing has evolved from traditional to strategic outsourcing. Outsourced activities are no longer limited to peripheral functions such as gardening and security but include a growing number of organisational activities and functions, especially those that substantially contribute to its added value (some of which are ever closer to the core activities that constitute the heart of the business). Thus, outsourcing is a key decision area within operations strategy, which has an impact on various aspects of business performance. Many potential advantages of outsourcing have been identified in the management literature. Yet, outsourcing is not a risk free management practice. A vast majority of management research has focused on understanding outsourcing determinants and the outsourcing decision-making process with very few empirical studies on its implications. In addition, conventional airlines are historically vertically integrated whereas new entrants tend to outsource as many activities as possible. Consequently, the pace and scope of outsourcing has been on the rise in the airline

industry. Nevertheless, outsourcing practices and their implications within the airline industry have not been studied in detail. The present study aimed to bridge the described gap by empirically exploring the role of outsourcing within the airline industry. In particular, the research sought to identify the main determinants, that is, internal and external factors and motives influencing outsourcing and to examine current outsourcing practices within the airline industry. It further sought to evaluate the implications of outsourcing in performance objectives such as *cost, delivery, quality, and flexibility*, as well as on the airlines' overall operational performance using *passenger load factor* and *daily aircraft utilisation* as performance measures. Six main objectives were envisaged with this purpose:

- Identify the airlines' management motives behind outsourcing;
- Identify the airlines' external environmental factors influencing outsourcing decisions;
- Identify the airlines' internal factors shaping outsourcing decisions;
- Examine the airlines' current practices in regards to the main activities being outsourced;
- Evaluate the implications of outsourcing in the airlines' performance objectives: cost, delivery, quality, and flexibility;
- Evaluate the implications of outsourcing in the airlines' operational performance.

In order to achieve the research objectives, a mixed methods approach was adopted in the study and a three-stage process was devised. Figure 9.1 reproduces the research process presented in Chapter 4 (Research Methods). Stage 1 corresponded to the review of relevant literature and to carrying out an exploratory case study with Saudi Arabian Airlines. This strategy was used to identify initial trends and obtain insights related to the airline's outsourcing. It was also utilised as a means to explore the motives for the airlines' outsourcing and the environmental factors influencing outsourcing decisions.

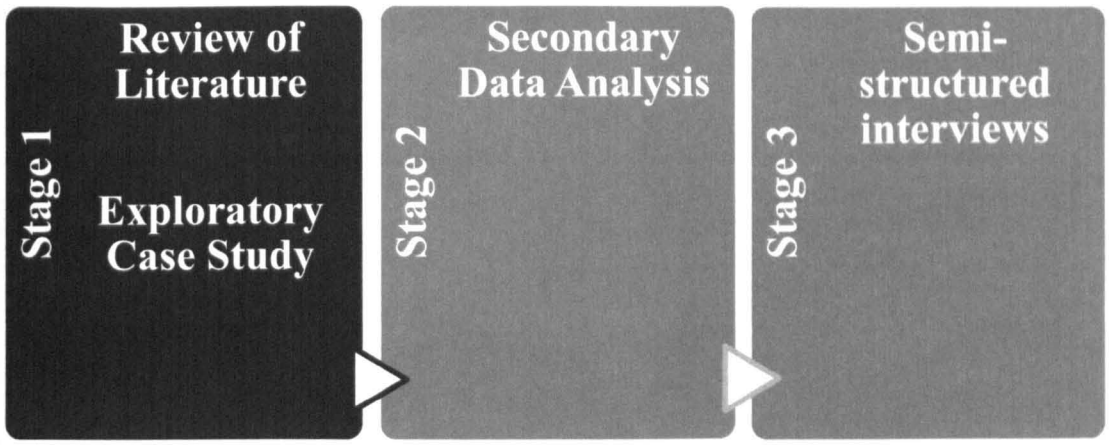


Figure 9.1: The Research Process (reproduced)

The review of literature and the exploratory case study also allowed the exploration of perceptions on outsourcing implications in the airlines' operational performance. The study suggested that an analysis of secondary data related to airlines' performance could allow a more in-depth understanding of the implications of outsourcing in airlines' operational performance. Stage 2 corresponded to the regression analysis of secondary data on airlines' performance referring to 2006 and 2007. The data used in the analysis was published by the International Air Transport Association (IATA) and the Association of European Airlines (AEA, 2007 and 2008), respectively. The regression allowed the analysis of the impact of outsourcing different activities on different performance measures. The linear regression of data did not come in line with the expectations of the executives interviewed in the exploratory case study. This motivated the empirical exploration of motives for airlines' outsourcing, and the identification of external and internal factors that influence the outsourcing decisions in Stage 3. Fourteen in-depth interviews with operational managers were conducted, representing twelve different airlines. Moreover, it allowed further examination of the current outsourcing practices in the airline industry and evaluation of the impact of outsourcing different activities on the airlines' performance objectives – *cost, delivery, quality and flexibility* – and the overall operational performance of the airlines using measures such as *passenger load factor* and *daily aircraft utilisation*. In addition to this theoretical contribution, it is envisaged that the results of the study and associated recommendations will be useful to managers and decision makers in the

airline industry. Figure 9.2 reproduces the research framework presented at the end of Chapter 3.

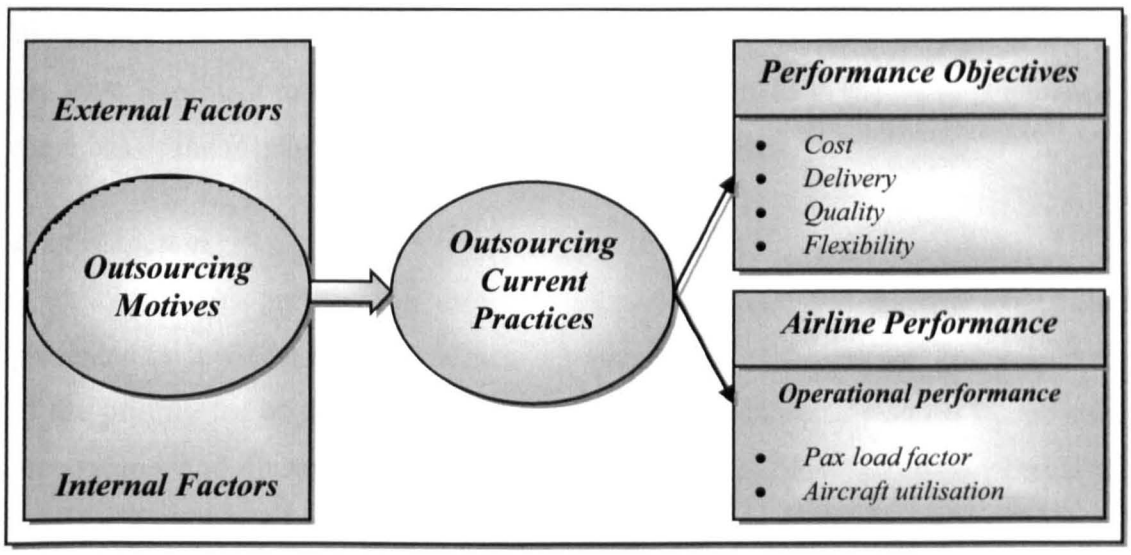


Figure 9.2: The Research Framework (reproduced)

9.3 STUDY FINDINGS

9.3.1 Motives

The management literature of the possible motives behind outsourcing includes focusing on core activities (Dess *et al.*, 1995), quality improvement (Barrar and Gervais, 2006), operating cost reduction (Hill, 2000), and flexibility enhancement (Jennings, 2002). For instance, in the study of the purposes for outsourcing in the hotel industry, Lam and Han (2005) revealed that respondents expect that external suppliers are experts in the outsourced functions and able to operate them successfully. It has been suggested that outsourcing hotels could better utilise the resources previously devoted to outsourced functions in other operations. Other purposes include reducing operating costs. Besanko *et al.* (2003) suggested that less vertically integrated organisations tend to perform activities more efficiently because of their focus on core activities. Similarly, Kakabadse and Kakabadse (2002) credited the improvement of performance associated with outsourcing to the specialisation of service providers and their efficiency in exploiting existing resources at lower costs due to the lack of bureaucratic constraints. In their study of Information Systems outsourcing in the banking business, Baldwin *et al.* (2001) identified significant

improvements in quality, because of their access to new technologies through service providers. The flexibility attributed by new technological solutions represents another motive behind outsourcing, according to Mahnke *et al.* (2003). In terms of the motives behind outsourcing, the present study revealed that the reduction of costs is the most important motive. Another main motive identified in the study is enhancing the focus of the management of an airline on core functions.

Cost reduction

With continuous pressure on airlines' tickets fares and the intense competition presented by low-cost carriers and new entrant airlines, cost reduction has become top of the priority list of the management teams of most airlines. As stated by the study respondents and illustrated in Chapter 7, operating costs have increased whereas the prices of fares have decreased. The low-cost carriers and new entrant airlines have put forward part of this hurdle. These airlines do not present high overhead costs, as they start with rather low operating costs. They are in a better position to offer lower fares to their customers than existing airlines. Low-cost carriers such as RyanAir and easyJet are exploiting derived demand for air transport and selling mobility at very low cost (Goetz and Graham, 2004). As a result, legacy carriers have engaged more and more in outsourcing to reduce their operational costs. As shown in Chapter 5 and Chapter 7, cost reduction is the main motive for outsourcing. According to the operational managers that participated in the study, envisaging cost savings is always behind outsourcing; one of the interviewees summarised: "Certainly anything we look into in terms of outsourcing is to reduce our overall operating costs". Cost reduction can be attributed to several factors, the first of which is to abandon some of the balance sheet fixed costs and convert them into variable costs, as the airline will pay the suppliers based on the actual utilisation of services. Alamdari and Morrell (1997) indicate that labour costs correspond to one-quarter and one-third of airlines' operating costs. Reducing the workforce due to outsourcing can be translated into reduction of the high salaries usually paid by airlines added to other associated costs such as employee training, pensions, and health insurance. This finding is similar to what Quelin and Duhamel (2003) and Lonsdale and Cox (1998) claimed to be one of

the aspects of cost reduction related to outsourcing, that is, the change of some of the large fixed costs into variable costs.

Focus on core activities

Based on the outcomes of Chapter 5 and Chapter 7, where the motives behind outsourcing were explored, focus on core activities was found to be another important motive behind outsourcing. The outcomes of the study suggest that the second motive for outsourcing arrangements just after cost reduction is the ability to focus on core activities and discard the excessive workload generated by non-core activities. In that sense, it has been commented, by one of the airline executives, that "it is very clear in the aviation business that the core business of airlines is selling seats and flying them. The rest can be produced by others in a more efficient way". For instance, most airlines are outsourcing their in-flight catering, both at their home bases and at all outstations. One of the managers elaborated on that saying that "the main reasons relate to the fact that those areas, those disciplines are not core to the running of the airline. They are all services, which the airline requires. They are critical to the operation of the airline but they are not actually core to the running of the aircraft". It could be concluded that the outsourcing decision in the airline industry is highly and mainly motivated by the desire of the airlines to reduce their operating costs, taking into consideration the continuous pressure on their profit margins. Such findings complement the findings of Apte *et al.* (1997) on their study of the advantages of outsourcing IS (Information Systems) functions.

The focus on core activities is mentioned as a motive by Rieple and Helm (2008) on their study of seven legacy carriers and their outsourcing arrangements. It is said to be a major trend encountered in the airline industry (Johan and Jones, 2008), a statement that was confirmed by the study findings. The exploratory case study conducted at SAUDIA echoed that tendency. The executives indicated that focus on core activities together with the search for cost savings represent the main motives behind the outsourcing decision. Catering, fuelling, cleaning and maintenance are regarded as incidental activities, non-core functions (Knez and Simester, 2001). Non-strategic competences should be kept in-house only if they do not distract management focus (Clemons and Hitt, 1997). Outsourcing non-core activities seems to "strengthen a

company's focus on innovating within its own specialties or core competencies" (Theys, 2003, p. 13). Furthermore, this produces a more focused organisation capable of responding more quickly to the changes in the market place and using complementary resources that can provide leverage of the companies' own core competences (Jennings, 2002). The study findings also confirm the investigation of Källström (2004) on the outsourcing process implemented at Finnair (the flag carrier and largest airline of Finland) over a period of ten years. The researcher observed the main motives for outsourcing and the results of the process in the airline. Initially, cost reduction and focus on core activities were the main reasons behind the outsourcing decision. Ten years later, outsourcing to Amadeus, a global distribution system company, managed to develop the business knowledge of the airline employees. According to the author, "Finnair's own personnel had the possibility to focus on core competencies in the field of activities, investing in knowledge and development of functions for providing higher flight revenues" (Källström, 2004, p. 13).

9.3.2 External and Internal Factors

Although outsourcing decisions might be motivated by its advertised advantages, when considering such strategic decisions, several factors should be taken into serious consideration. Bolumole *et al.* (2007) suggest that there are at least two separate underlying factors behind organisations' outsourcing decisions: external factors and internal factors. These external and internal conditions correspond to the contextual factors involved in the outsourcing decision (Fill and Visser, 2000). The study suggested that local authorities' legislation is the main external factor influencing the airlines' outsourcing decisions, as in many airports the provision of several activities is only accessible to designated suppliers. The study findings indicated that there are three influential internal factors affecting airlines' decisions when outsourcing is considered. The first factor is the demand level for a given function. The second factor is the criticality of the activity being considered for outsourcing. The third internal factor is the current capability status of performing the activity. Current capability status includes the required facilities, machinery and manpower experience.

The external and internal factors identified in the study of the outsourcing in the airline industry are discussed next.

External Factors

Ward *et al.* (1995) suggested that environmental factors should be taken into consideration in almost all operations strategy research. The authors suggest that external factors appear to have a substantial impact on strategic choices in operations. Thus, exploring external factors that influence outsourcing decisions in the airline industry was one of the research aims. The study findings suggest that the main external factor identified is the local authorities' legislation as indicated in the exploratory case study (Chapter 5) and the semi-structured interviews (Chapter 7). This comes in line with the study of challenges and issues on outsourcing to emerging markets conducted by Javalgi *et al.* (2009). The authors cite the local legislation on software in China that discriminates against US companies and greatly influences the decision to outsource to that market. Companies should be aware of this type of issue and devise their strategy accordingly, they conclude. Similarly, Rao (2004) emphasised the importance of considering local legislation arrangements already in place as a factor related to the outsourcing decision-making. In several countries, provision of activities such as ground handling is only accessible to the national carrier as per governmental policy. Thus, all airlines operating in those countries' airports are obliged to outsource such activities to that designated supplier. Usually, it is the national operator irrespective of the service levels provided. For instance, Dnata, part of the Emirates Group and Tunis Air, is the sole player in the ground handling market in its countries, through the local authority legislation. Another example of the influence of the local authority legislation on airlines outsourcing decisions is PRM (Passengers with Reduced Mobility) handling in the European airports. The European Union recently legislated that handling of PRMs at all airports in Europe was no longer going to be the responsibility of the airline; it was going to be the responsibility of the airport. As a result, airlines had to outsource this function to the operator designated and authorised by the airport management. As one of the study respondents concluded: "We have to adapt as an airline to the conditions in every country and every station that we serve".

In addition, it has been suggested that it is not always possible for an airline to allocate capable suppliers to perform an activity at the airline's required standards at all destinations serviced by the airline. Fisher *et al.* (2008) indicated the same issue regarding the outsourcing trend within the US airline industry. Maintenance outsourcing, for instance, has been viewed as a cost saving strategy; however, it has been linked with a number of flight delays due to a poor performance by service suppliers. The authors indicate that, although a positive causal relationship cannot be established, this impact should be examined in more detail by decision makers. Nevertheless, it is worth noting that with the spreading of outsourcing in the airline industry, more and more capable suppliers are getting into the market, which in turn moderates the impact of the supplier availability factor. Therefore, it can be concluded that local authority legislation is the main influential external factor affecting airlines' outsourcing decisions. The internal factors influencing outsourcing decisions are discussed next.

Internal Factors

Duncan (1972) suggests that the organisational internal environment comprises those relevant physical and social factors within the boundaries of the organisation that are taken into consideration in the decision-making process. The study findings discussed in detail in Chapter 7 and illustrated by excerpts from the interviews indicated that there are three main influential internal factors affecting the airlines' decisions when outsourcing is considered: demand level, criticality of the activity, and current capability status.

Demand level

The demand level for a given function comes at the top of those factors that influence the decision of whether that function should be outsourced to an external supplier or performed in-house. The demand involves the volume of work that is required for the airline's operation, taking into account the utilisation efficiency of the resources required to perform the function in-house. As one of the managers summarised, "in a place where there is a very small schedule or it does not pay to have much in the way of infrastructure then it is much more sensible to outsource. So the number of flights has a big influence". This finding is similar to what Al-Kaabi *et al.* (2007) concluded

from their study of eight airlines and sourcing arrangements for Maintenance, Repair and Overhaul (MRO) activities. The researchers found that activities with low demand for such engine maintenance are usually outsourced. In addition, for some airlines, it also includes the ability of the airline to sell its surplus capacity in order to utilise its resources efficiently generating extra revenue. In that regard one of the interviewees elaborated, "We looked at the demand. And what we also thought the fact that we had surplus capacity that we could not sell to other airlines ... As our engineering director described when he was explaining the outsourcing, the introduction of outsourcing policy, 'I have the best painted hangar in the world'. Because when his engineers were not busy fixing aircraft they were painting the hangar with the equipment, so there was a lot of surplus there. So all of that was looked into".

Criticality of the activity

The criticality of the activity being considered as an outsourcing factor comes next in priority. The criticality of the functions involves the importance of the activity for the airline's smooth operation. Particular attention is paid to activities that relate to the direct interaction with the airline's customers. In general, respondents suggested that it is preferred that functions that involve direct interaction with customers are performed in-house to control service standards. For instance, one of the respondents stated that "we tend to, if anything, in-source our passenger services, keep our passenger services people... That is the face of your product. But everything that goes on under the wing can more easily be outsourced". Al-Kaabi *et al.* (2007) reached a similar conclusion on their investigation of the outsourcing of MRO activities in the airline industry. According to the authors, activities that bear direct influence on the airline performance and whose management relates to incurring cost or lowering quality standards are carefully examined for outsourcing, whereas for others of a less critical nature, airlines tend to outsource them, considering a controllable amount of risk. Comparable findings were reported by Pandey and Bansal (2003) on the development of their framework for the IT outsourcing decision applied in a leading locomotive company of India. In that case, however, the criticality of the activity was found to be the most important criterion for the outsourcing of IT services. Kremic *et*

al. (2006) emphasised the importance of considering the critical knowledge embedded in the functions to be outsourced. These types of functions are less likely to be outsourced, since the organisations seek to control critical knowledge, the researchers pondered.

Current capability status

The third internal factor is the current capability status of performing the activity. Current capability includes the required facilities, machinery and manpower experience. There may be financial constraints, lack of skills of the workforce or issues related to the availability of facilities, which can affect the ability of airlines to undertake some activities (Al-Kaabi *et al.*, 2007). In the exploratory case study (Chapter 5), the influence of the capability of performing some activities was indicated by respondents. According to the Senior Manager of Administration & Coordination, "the existing capability of Saudi Airlines in the non-core activities influenced the decision of creating the new SBUs. And, before being restructured, Saudi Airlines used to sell its services to other airlines through its different divisions, yet in a low profile". Similarly, it has been suggested by the respondents in the interviews reported in Chapter 7 that, if the airline has invested in acquiring the facilities and machinery and built up the required experience to effectively perform a given function, then the airline may consider continuing to perform the function in-house, taking into consideration the ability of the airline to become a service provider for other airlines and the input from other influential factors. For instance, one of the respondents stated: "We had this big lounge and of course we do not have an awful lot of passengers in it ourselves, so we said well we could outsource the lounge to another party". Moreover, several airlines who have invested in performing a given activity are not willing to lose their capability as it is hard to regain it easily. As remarked by one of the respondents: "Once you have taken the outsourcing step, it is extremely hard to go back because you give up facilities, and this is an extremely facility-constrained airport. So if I give up a room on the ramp, the very next day someone has taken that and I will never get it back again. If you take the outsourcing step you take it forever, not necessarily forever but you take it and it has to work. It is very hard to revert to your own internal operation. This for me is one of the big

hurdles … which is why I am so reluctant to lose my ramp people. I will never get it back – the goodwill, the experience, the ownership, the know-how". Thus, it can be concluded that the most influential internal factors identified by interviewees were demand level, criticality of the activity, and current capability status. The main external factor influencing the outsourcing decisions in the airline industry is the local authority legislation. Whereas the main motives for outsourcing are constituted by cost reduction and focus on core activities. Table 9.1 summarises the study findings related to the main determinants for outsourcing.

Table 9.1: The Outsourcing Determinants

Determinants	*Exploratory case study*	*Regression analysis of the secondary data*	*In-depth semi-structured interviews*
Motives	• Cost reduction • Focus on core activities	Not Applicable	• Cost reduction • Focus on core activities
External Factors	• Local authority legislation	Not Applicable	• Local authority legislation
Internal Factors	• Current capability status	Not Applicable	• Demand level • Criticality of the activity • Current capability status

9.3.3 Current Practices

As mentioned previously, one of the research aims was to provide a more holistic view on current outsourcing practices in the airline industry. The thesis managed to uncover some issues, especially in terms of the main activities being outsourced. In order to have a better understanding of the subject, differentiation should be made between the outsourcing practice at an airline's home base and practices at its outstations (destinations serviced by an airline away from its home base). The discussion on the airlines' current practices involves organisational restructuring, functional level outsourcing, and a brief discussion on supervision and the outsourcing trend within the airline industry.

Home Base vs. Outstations

The study showed that airlines are usually self-handled at their home bases and mostly dependant on outsourcing at their outstations. Such differentiation is mostly based on the demand level. With the amount of flights airlines operate at their home bases, they usually have the ability to utilise the capacity of their resources efficiently by satisfying the operational requirements of the airline, and acting as service providers for other airlines. Therefore, at their home bases, most airlines are still vertically integrated. Their organisational structure comprises several divisions, each of which represents one of the main functions required for the airline's operations, such as the maintenance division and the ground handling division. Additional differentiation should be made in terms of their outstations; some of the airlines are self-handled and moved a step further and have become providers of services for other airlines. This is usually related to the number of flights operated to specific airports and the local authority legislation at those airports.

Organisational Restructuring

"In a world of organisation refocusing, downsizing, and outsourcing, a critical strategic decision that many senior managers make is determining their firm's boundaries. 'Which business activities should be brought within the boundary of the firm?' and 'Which business activities should be outsourced?' are essential strategic decisions in determining a firm's boundary" (Barney, 1999, p. 137). Likewise, several airlines have been through a fundamental restructuring programme, whereby, those airlines have moved from the vertically integrated business model, which is referred to as the traditional business model, to the aviation business model (both models were presented and discussed in Chapter 3). In the aviation business model, the airlines' non-core activities such as maintenance and ground handling are represented by a business unit owned wholly or partially by the airline. The airline then outsources its work to its subsidiary SBU. Airlines adapting the aviation business model include Lufthansa and Emirates Airlines. For a better understanding of the restructuring programmes undertaken by those airlines, the company chosen to represent the exploratory case study is currently implementing a major restructuring programme as part of its privatisation plan. When the airline decided on privatisation, two different approaches were considered. The first was to offer the airline for privatisation with its

existing structure, the traditional business model, and the second approach was to restructure the organisation and adopt the aviation business model. The decision made was to pursue the second alternative. It is believed that this will improve organisational performance and, in consequence, increase the value of the organisation. Before being restructured, under the traditional business model, non-core divisions had been dealt with as cost centres. Through the aviation business model, several strategic business units (SBUs) are being created. In addition to the SBU, which represents the airline's core activities, each of the other newly created SBUs will represent one of the non-core activities. As a result, those non-core activities considered to be cost centres are becoming a source of revenue. The airline will outsource all of its work to those specialised SBUs. This outsourcing concept is known as quasi-outsourcing.

Barthelemy and Geyer (2005) distinguish between two types of outsourcing: conventional outsourcing (a contract with a vendor) and quasi-outsourcing (the organisation developing a subsidiary). Thus, the concept of quasi-outsourcing is mostly related to the spin-off concept. Schipper and Smith (1983) argue that the spin-off can have a positive effect on the parent firm's shareholder return. Increased managerial efficiency (focus) due to reduction in size and complexity of the managed units constitutes one of the main reasons behind such a positive effect. Moreover, Ito (1995) argued that the growth of the spin-off is encouraged by the simplified structure and operation. The spin-off's (subsidiary SBUs) core competency, which is different from the core competency of the parent, may create its own competitiveness. As mentioned, a noticeable phenomenon in the airline industry is the restructuring of legacy airlines and the move from the traditional airline model, vertically integrated structure, toward the aviation business model through spin-offs. For instance, five of the twelve airlines whose managers were interviewed in the study have followed the same path.

Functional Level Outsourcing

Maintenance, Ground Handling and Catering are the main functions required for the airlines' operations in their networks. In the interviews conducted with managers and

reported in Chapter 7, the current practices in regards to these functional areas can be summarised as follows:

- Maintenance: Not unlike the general theme of outsourcing practices in the airline industry, most of the maintenance outsourcing arrangements takes place at the airlines' outstations. However, in the airlines' home bases, maintenance usually constitutes one of a given airline's main divisions or one of the strategic business units, which are subsidiaries of the airline. Moreover, at their home bases, airlines also seek to further utilise their maintenance capability and capacity by acting as service providers for other operators.
- Ground handling: These activities can be classified into two main categories as discussed: 'above the wing' and 'below the wing'. 'Above the wing' services involve the passenger services which include activities such as the arrival services, check-in service and gate service; activities that involve direct contact with the customer. 'Below the wing' services, i.e. ramp services, involve activities such as baggage handling, interior cleaning, water and waste, and aircraft parking. At an airline's home base, both 'above the wing' and 'below the wing' activities are usually performed in-house or outsourced to the airline's subsidiary SBU. However, at outstations airlines usually outsource 'below the wing' activities to a local supplier. 'Above the wing' activities have been historically kept in the hands of the airline employees at outstations. Nevertheless, more and more airlines are engaging in outsourcing 'above the wing' activities at their outstations to overcome the problem of low utilisation of the resources dedicated to perform these functions, especially during low demand seasons.
- Catering: With regards to in-flight catering, managers in this study emphasised that catering provision is almost always outsourced by all airlines in all outstations. Additionally, many airlines do not consider catering provision as part of their airline's core activities. Consequently, catering is outsourced even at their home bases, irrespectively of the demand level.

As noted, maintenance and ground handling follow the general theme of the airlines' outsourcing practices identified in all previous sections. However, catering provision is not considered by airlines as one of their core activities, in which they would need to invest in or focus on. Thus, most airlines outsource their catering within their entire network, at their home bases and at their outstations.

Supervision and the Outsourcing Trend

The interviewees indicated that the supervision of activities is usually kept in the hands of the airlines. The supervision of the airlines on their service providers fulfils two objectives. The first is to ensure smooth operations and solve any non-routine problems. "At our outstations we have our own staff just to monitor the handler performance", as summarised by one of the managers. The second is monitoring their service provider performance and to ensure that the service is delivered as per the contracted Service Level Agreement (SLA). As remarked by one of the operational managers, "there has to be some representation from the airline at each location to supervise and make sure that the SLAs are maintained and are kept".

Finally, referring to the outsourcing trend in the airline industry, the study confirmed that outsourcing has been spreading within the industry and has become common practice, considering the continuous pressure for cost reduction. One of the interviewees indicated that "there is a strong trend toward outsourcing in the airline industry to fix the costs". His point of view was supported by another respondent, who stated that "there is a trend and the trend is to outsource more and more and at cheaper and cheaper". Nevertheless, it must be noted that there have been a few occasions where airlines have insourced or considered insourcing outsourced functions, mainly at areas related to customer services. One of the managers interviewed in the study emphasised this point: "There have been situations where airlines brought back in-house ground handling and customer services ... those areas that involve public contact". Table 9.2 summarises the current outsourcing practices in the airline industry.

Table 9.2: The Outsourcing Current Practices

Current practices	*In-depth semi-structured interviews*
Home base vs. outstations	• At their home base, most airlines are self-handled, acting as service providers for other airlines. • Most airlines' outsourcing arrangements take place at their outstations with less intensity in their home base stations. • This difference is mostly driven by the demand level and the ability of an airline to efficiently utilise the capacity of its resources and act as service providers for other airlines.
Functional level outsourcing: ***a) Maintenance*** ***b) Ground handling*** ***c) Catering***	• At the airlines' home bases, maintenance usually constitutes one of a given airline's main divisions or one of the strategic business units owned wholly or partly by the airline. Most of the maintenance outsourcing arrangements take place at the airlines' outstations. • Ground handling outsourcing arrangements also take place at the airlines' outstations. It constitutes one of a given airline's main divisions or one of the SBUs owned wholly or partly by the airline at their home bases. • Catering provision is usually outsourced by all airlines in all outstations. Many airlines do not consider catering provision as part of their core business. Hence, catering is outsourced even at their home base.
Supervision	• Supervision of the delivery of the outsourced function is usually kept in the airline's hands. • It aims to: (1) ensure smooth operations/solve non-routine problems; (2) monitor the service delivery as per the SLA.
The outsourcing trend	• Outsourcing has spread within the airline industry. • Nevertheless, it has been stated that there are several occasions where airlines have insourced or considered insourcing outsourced functions.

9.3.4 The Outsourcing Impact on Performance

Investigating the impact of outsourcing on airlines' performance was another of the main objectives of the present study. This study examined the impact of outsourcing on the airlines' performance objectives: cost objective, delivery objective, quality objective, and flexibility objective. Further investigation was undertaken to examine the implications of outsourcing in the overall operational performance of airlines, measured by 'passenger load factor' and 'aircraft utilisation'. The study attempted to

differentiate and investigate the performance implications of outsourcing at the organisational-level (airline-level) and at the individual functional areas level. As for the airline's level of outsourcing, the influence of the airline outsourcing intensity was examined against the mentioned performance indicators. Functional level outsourcing involved examining each of the chosen four staff function categories against the most relative performance indicators.

Case Study Findings

The first stage of the assessment of outsourcing implications involved an exploratory case study. As mentioned, the airline chosen to be the case study is currently undertaking a major restructuring programme as part of its privatisation plan. As part of the restructuring process, outsourcing is going to play a major role in the new organisational structure. In many ways, the organisational boundaries are being redefined through outsourcing. The findings of the case study suggested that the management of the airline believes that outsourcing arrangements will have a positive impact on the operational performance objectives of cost, delivery, quality, flexibility, and on the airline's overall operational performance. These findings come in line with those reported by Espino-Rodriguez and Padron-Robaina (2004) in their study of the perceptions of managers on the influence of outsourcing in the hotel sector.

Regression Analysis Findings

However, the results from the regression data analysis of the secondary data revealed that there is no significant correlation between the intensity of outsourcing at the airline level and the airlines' overall operational performance with the exception of a small negative impact on the airlines' 'average daily aircraft utilisation'. Furthermore, the findings of the functional level outsourcing impact on the airlines' operational performance also suggest no significant correlations between outsourcing of any of the four functional categories investigated ('Maintenance & Overhaul', 'Ticketing, Sales & Promotion', 'Airport Handling', and 'All Others') and the operational performance. Nevertheless, the results identified a small negative influence of the 'Ticketing, Sales & Promotion' function outsourcing on the 'average daily aircraft utilisation'. The findings from the regression analysis complement those of Gilley and Rasheed (2000) and Jiang *et al.* (2006) achieved in their study on the influence of

outsourcing on organisational performance. Nevertheless, it is important to indicate that a limited data set was available for the quantitative analysis. In studies such as those of Elmuti (2003) and Khong (2005), for instance, a comprehensive data set was analysed by the researchers. The relationship between outsourcing strategies and organisational performance was explored by Elmuti (2003) by surveying 402 organisations in the US, whereas Khong (2005) examined the relationship between outsourcing and customer service management in 124 Malaysian companies. Both studies have a predictive nature given the existence of 'sufficient evidence' represented by the data set as explored by Khong (2005).

In the present study, however, there was not sufficient data available for a more in-depth causal analysis of the relationships between each airline or group of airlines (if categorised through specific attributes) and outsourcing decisions and/or outcomes. Even if a more refined data set is available, Cullen *et al.* (2005, p. 382) still pondered that the conflicting viewpoints on the outsourcing results may be related to the different configurations of outsourcing. The authors explained that outsourcing arrangements are based on a prevailing context and resources: "Just as it is not enough to know that a medical patient is sick, because different forms of sickness require different treatments". Not all outsourcing is the same, according to the researchers. Given the exploratory nature of the study and this limitation, primary data collected through interviews was used to obtain further insights into outsourcing in the airline industry. Table 9.3 shows the contrast between the exploratory case study and the regression analysis findings. After the input obtained from the secondary data analysis, the exploration of the primary data was conducted 'in the field' through in-depth semi-structured interviews with experienced operational managers.

Table 9.3: The Case Study and Regression Analysis Findings (a comparison)

	Case study findings	*Regression analysis findings*
Positive	- A positive impact on cost, delivery, quality, and flexibility is envisaged by the executives.	
Negative		- A small negative impact on the airlines' 'average daily aircraft utilisation' was found. - A small negative influence of the 'Ticketing, Sales & Promotion' function outsourcing on the 'average daily aircraft utilisation' was identified.
Neutral		- There is no significant correlation between the intensity of outsourcing at the airline level and the airlines' overall operational performance. - No significant correlations between outsourcing of any of the four function categories investigated and the operational performance were identified.
Similar Findings	The findings are similar to those of Rodriguez and Padron-Robaina (2004)	The findings complement those of Gilley and Rashed (2000) and Jiang *et al.* (2006)

Findings from the Interviews with Managers

As noted in the literature review chapters, the subject of outsourcing in the airline industry has received little attention in management research. The choice of in-depth semi-structured interviews allowed the respondents to elaborate on their perceptions and experiences about outsourcing. Even though a guide was used for the interviews to cover all topics, the respondents were free to contribute on relevant issues that they deemed were of interest for the study. Stage 3 involved 14 interviews with operational managers of 12 different airlines. The findings of the interviews on the outsourcing implications in the airlines' performance are discussed next. Findings related to the impact of outsourcing on the performance objectives represented by cost, delivery, quality, and flexibility, and the overall performance of airlines are described. Potential causes of negative impact were also explored with the interviewees and are briefly discussed.

Cost Objective

The analysis of the interviews with the operational managers of the airlines, presented in Chapter 8, suggests that outsourcing can have a positive impact on the cost objective. Apte *et al.* (1997) suggested, based on their study of IS (Information

Systems) outsourcing in three different countries – USA, Japan, and Finland – that cost reduction was the most important advantage witnessed by managers in all three countries. Jiang *et al.* (2006) made a similar discovery in their study of 51 firms that outsourced part of their operations between 1990 and 2002. Analysing publicly available accounting data, the researchers found that the argument of cost savings related to performance is supported by evidence. Yet, this study revealed that this positive impact is strongly moderated by the demand level for a given function. Hence, when the demand increases for a given function, it becomes less cost effective to outsource it. This correlation is mainly attributed to the ability of the airline to utilise efficiently its resources, which comes in line with the economy of scale concept. The situation was described by one of the respondents: "Outsourcing definitely helps in reducing the costs. And it is one of the main objectives of outsourcing to reduce the cost. However, if I have many flights per day then I would reconsider the situation and see which is better for me". Similarly, another manager stated: "With the ten daily flights we operate outsourcing comes up more expensive". The study findings support the statement of Coe (2000) that low or irregular demand may cause the internalisation of service supply to be unfeasible or inefficient. In addition, this finding supports what was suggested by Barrar and Gervais (2006), that the advantage of economies of scale cannot be achieved in all activities performed by any given organisation. Hence, contract companies can witness the benefits of an economy of scale by doing the repetitive functions for several organisations at any given time. Besanko *et al.* (2003) suggested that it is conventional wisdom that outsourcing organisations can perform most activities more efficiently than highly integrated ones as suppliers might be able to aggregate the needs for several organisations, thus achieving economies of scale. The influence of the demand found in the study meets the findings of Ellram *et al.* (2007) on offshore outsourcing professional services using a transaction cost perspective. Low transaction volumes are unattractive for outsourcing, the authors concluded. Meanwhile, cost allocation goes down as the number of transactions increases.

In addition, the study findings indicated that the main source of cost savings is labour costs. This finding comes in line with what was stated by Lonsdale and Cox (1998). The authors indicated that one of the main sources of cost savings through

outsourcing is labour, as outsourcing fundamentally affects the employment patterns. This study revealed that cost saving through labour is based on two fundamental issues: the first is the efficient utilisation of labour work hours and the second is the higher salaries of airline staff in comparison with the salaries of the suppliers' staff. Other sources of cost savings include the expenses of staff training, facilities, expenses with hiring new employees, and the costs of the machinery and acquisition of technology. It can be concluded that the demand level moderates the influence of outsourcing implications in the cost objective. In particular, when the demand level increases for a given function, it becomes less cost effective for an airline to outsource. In contrast, outsourcing can have a positive impact on the cost objective where the demand level does not allow for the efficient utilisation of allocated resources.

Delivery Objective

As suggested by Hill (2000), one of the main disadvantages of outsourcing is the possibility of losing control of key capabilities. For instance, dimensions such as quality conformance and delivery speed become partially within the suppliers' processes and systems. The analysis of the interviews with the airlines' operational managers presented in Chapter 8 showed that there is a common belief among the study respondents that outsourcing has negative implications in the delivery objective. These statements do not satisfy the hopes of the case study respondents and contradicts the findings achieved by Espino-Rodriguez and Padron-Robaina (2004) in their study of hotel sector managers' perceptions on the influence of outsourcing. Similarly, the study findings challenge the research of Elmuti (2003) on the perceived impact of outsourcing on performance in companies in the US. In that case, the outsourcing was associated with a positive impact on the delivery objective. The present study revealed that 'On-time Performance', 'Passenger Waiting Time at Check-in Counter', 'Baggage Delivery' and 'PRM (Passengers with Reduced Mobility) Handling' are the main aspects of operations negatively affected by outsourcing. "Outsourcing is an issue because everything they have to come and ask us, everything they have to ask, ask, ask, 'Can we do this?', 'Can we do that?'. And it is time-consuming, time-consuming and customers are waiting, that is one big issue",

indicated one of the managers interviewed in the study. This conclusion is in line with the study by Belcourt (2006) on the impact of outsourcing on service delivery. In the study of Calgary Health Region's outsourcing process, even with the existence of high standards for the service delivery, the expectations associated with the outsourcing were not met by suppliers and there were financial penalties as a consequence. Furthermore, some loss of control on the service supervision and possibility of labour board challenges were reported. The negative impact provided by outsourcing found in the present study also supports the findings of Kakabadse and Kakabadse (2001) on the effect of outsourcing of public services. According to the authors, the managers indicated that outsourcing has a negative impact on the functioning of public services, especially in terms of their accountability to the public associated with the service delivery.

Quality Objective

The outcomes of the interviews with the airlines' operational managers suggest that the impact of outsourcing on the quality objective can vary, depending on the nature of the function being outsourced. In general, respondents differentiated between activities related to customer services, which involve direct interaction with customers, and other functions not involving direct contact with customers. The interviewees indicated that the outsourcing of functions related to customer services such as check-in has a negative influence on the quality objective. This finding contradicts those reported by Khong (2005) on the study of the impact of successful outsourcing on customer service management in Malaysian companies. In that case, successful outsourcing was deemed to positively affect customer services. Nonetheless, the findings of the present study on the negative impact of outsourcing on functions involving direct customer services are in line with the conclusions drawn by Walsh and Deery (2006) from their research on the outsourcing of airlines' call centres. "By assigning the service provision of its customers to a subcontractor whose staff were less organisationally committed and more overworked and who indicated a greater desire to quit their jobs the airline introduced the risk that it would supply its customers with a poorer quality service" (Walsh and Deery, 2006, p. 576). Moreover, the study findings broaden the observations of Rhoades *et al.* (1998) on the service

quality in the US airline industry. The researchers recognised the underestimated impact of outsourcing on quality in that case. For instance, a total of 482,004 mishandled baggage claims were filed with Delta Airlines in 1996; but only 127 complaints were recorded with the Department of Transportation's Air Travel Consumer Report (DOT) used in their study. Considering quality issues represent a trend across other categories, the impact on direct consumer dissatisfaction with the airline industry might be grossly underestimated, the authors conclude. The present study also revealed that outsourcing functions not involving customer interaction such as maintenance and some of the ramp functions would not lead to a negative impact on quality, if outsourced to a capable supplier. Managers also stated that catering is an example of a function whose quality is not affected, and in some cases might be improved when outsourced to a capable supplier. The present research showed that outsourcing negatively influences the quality objective related to customer services aspects. This also contradicts the findings of Espino-Rodriguez and Padron-Robaina (2004). Even so, the study findings are in line with the authors' conclusion on activities not involving direct customer interaction.

Flexibility Objective

With regard to the impact of outsourcing on the flexibility objective, the analysis of the interviews suggests that outsourcing exerts a positive impact on the flexibility. Such an influence is translated into volume flexibility that outsourcing can provide to airlines, taking into consideration the demand fluctuation nature of the airline business. The demand for the airline business is correlated with different seasons of the year. In this sense, it has been suggested that a bigger pool of staff that suppliers usually operate with is the main mechanism for suppliers to overcome such a challenge. As concluded by one of the interviewees, "obviously the ground handler has a lot more sources ... You go to a company that has a bigger pool, so yeah, there is obviously a lot more flexibility there".

The findings of this study on the impact of outsourcing on the flexibility objective support the statement of Jennings (2002, p. 27) that "outsourcing presents organisations with the opportunity to avoid the constraints of their own productive capacity in meeting changes in the volume of scales". The study findings are in line

with the conclusions achieved by Espino-Rodriguez and Padron-Robaina (2004) and Jack and Raturi (2002). In the latter study, the authors observed in three in-depth case studies that outsourcing is used as a long-term strategy to achieve volume flexibility and deal with demand fluctuation. "A volume flexibility strategy provides options that allow a firm to respond efficiently to demand fluctuations while maintaining high service levels" (Jack and Raturi, 2002, p. 545). Table 9.4 summarises the study's main findings regarding the impact of outsourcing on the cost, delivery, quality and flexibility performance objectives. The overall operational performance of the airlines and associated study findings are discussed next.

Table 9.4: Outsourcing Impact on Cost, Delivery, Quality and Flexibility

Topic	*Exploratory case study*	*Regression analysis of the secondary data*	*In-depth semi-structured interviews*
Impact on Cost Objective	Expecting a positive impact	No significant correlation detected	Positive impact, moderated by demand level
Impact on Delivery Objective	Expecting a positive impact	No significant correlation detected	Negative impact
Impact on Quality Objective	Expecting a positive impact	Not applicable	Negative impact on activities involving customer interaction, neutral or positive impact otherwise
Impact on Flexibility Objective	Expecting a positive impact	Not applicable	Positive impact

Overall Operational Performance

The findings of the interviews suggest that there is no direct impact of outsourcing on the airlines' operational performance. The respondents indicated that selling seats and aircraft scheduling are usually kept in the airlines' hands, which has a direct impact on the 'passenger load factor' and 'average aircraft utilisation' indicators, respectively. Nevertheless, it was concluded that there is a negative impact of outsourcing on the on-time performance factor. Two managers suggested that the negative impact on on-time performance has the potential to negatively impact the

turnaround time. One of them further explained that the negative impact of outsourcing on the delivery objective, on-time performance in particular, might lead to a negative impact on the 'average daily utilisation of aircraft'. The respondent further demonstrated that, at stations known for the constant poor delivery of the handler staff, the airline increased its scheduled aircraft turnaround time, ground time, mainly to compensate for the poor delivery of the handler and that, in turn, will have a modest negative effect on the 'average daily aircraft utilisation'. This discussion of potential causes for the negative impact of outsourcing on the 'average daily aircraft utilisation' can also account for the small negative impact found in the regression analysis of secondary data. Therefore, it could be concluded that outsourcing has no significant direct impact on the airlines' operational performance with the exception of a modest negative impact on the average daily aircraft utilisation, driven by the negative implication of outsourcing on the delivery objective, on-time performance in particular. These findings are in line with the conclusion achieved by Gilley and Rasheed (2000). A brief discussion on the potential causes for the negative impact of outsourcing on the quality and delivery performance objectives was carried out with the interviewees. These points are summarised next.

Causes of Negative Impact

The negative implications of outsourcing in the delivery and quality objectives revealed by this study are in line with the research of Hill (2000). The author emphasised that one of the main disadvantages of outsourcing is the possibility of losing control of key capabilities. For instance, dimensions such as quality conformance, delivery speed, and delivery reliability become partially within the suppliers' processes and systems. The present study showed that this negative impact could be attributed to three main causes, as follows.

Lack of outsourced staff loyalty

The lack of staff loyalty was the main cause emphasised by respondents. In that regard, managers pondered that unlike the suppliers' staff, airlines' staff are more committed to their airline brand and are willing to put in extra effort and time when needed, because of the pride that employees take in working for their airlines. On the other hand, suppliers' employees are not emotionally attached to the airline they

serve, lack the sense of ownership, since they are serving several airlines and are seen just as service providers. The influence of employee loyalty identified by the study supports the comments of Bryce and Useem (1998) and the study of Lam and Han (2005). The authors state that some managers regret that the supplier's employees do not display the same level of commitment and dedication shown by the internal staff.

Lack of outsourced staff training and knowledge

The second reason for this negative impact is the depth of staff training and knowledge. Respondents emphasised that an airline's employees usually possess greater knowledge of their own product and system. On the other hand, acquiring the same level of knowledge would be difficult, even impossible, for the handler staff, taking into consideration the number of airlines they serve. In addition, airline employees are usually trained internally on every aspect of their airline's products and on passenger handling, 'soft skills', such as smiling and addressing passengers with their names and titles.

Lack of control over outsourced staff

The third cause is the lack of control over staff. It has been stated that control over the staff allows managers to achieve their airline's delivery targets, enforcing service quality standards. Outsourcing would generally lead to a loss of control, according to the respondents. Managers voiced their dissatisfaction when they needed to rectify the mistakes of the outsourced staff as that required going through the supplier's management chain, considering that they do not have control over the handler staff. Table 9.5 summarises the findings of the study on the main motives for outsourcing, internal and external factors that influence the outsourcing decision, the outsourcing implications on the performance objectives cost, delivery, flexibility, and quality and the overall performance of the airlines, represented by 'passenger load factor' and 'daily aircraft utilisation'. The following section describes the main contributions of the study.

Table 9.5: The Study's Main Findings

Topic	*Exploratory case study*	*Regression analysis of the secondary data*	*In-depth semi-structured interviews*
Motives	Cost reduction Focus on core activities	Not applicable	Cost reduction Focus on core activities
External Factors	Local authority legislation	Not applicable	Local authority legislation
Internal Factors	Current capability	Not applicable	Demand level criticality of the activity Current capability
Impact on Cost objective	Expecting a positive impact	No significant correlation detected	Positive impact moderated by demand level
Impact on Delivery Objective	Expecting a positive impact	No significant correlation detected	Negative impact
Impact on Flexibility Objective	Expecting a positive impact	Not applicable	Positive impact
Impact on Quality Objective	Expecting a positive impact	Not applicable	Negative impact on activities involving customer interaction, neutral or positive impact otherwise
Impact on Load Factor	Expecting a positive impact	No significant correlation detected	No impact
Impact on Daily Aircraft Utilisation	Expecting a positive impact	Small negative impact on average aircraft utilisation	No impact, with a potential of negative impact caused by the negative impact on delivery objective

9.4 MAIN CONTRIBUTIONS

The study contributed to the academic understanding of outsourcing in the airline industry and the improvement of industrial practices, corresponding to two

dimensions: theoretical and practical. While most existing research related to outsourcing has focused on the determinants and the decision-making process, little is known about the outsourcing outcomes (Gilley *et al.*, 2004). Additionally, there is also a shortage of literature pertaining to the airline industry's supply chain (Taneja, 2004). The thesis empirically examined outsourcing results with a specific interest in the airline industry. It also provided another theoretical contribution by empirically exploring the determinants of outsourcing decisions (external factors, internal factors, motives), current practices, and the impact of outsourcing, considering specific performance objectives (cost, quality, delivery and flexibility) and the overall airline performance measured by 'passenger load factor' and 'aircraft utilisation'. In a practical dimension, it is envisaged that study outcomes and recommendations will be of great help in the management of traditional airlines in terms of restructuring their supply chains. Outsourcing has become critical to senior managers for the definition of organisational boundaries, considering current needs to refocus and downsize (Barney, 1999). The study unveiled the potential impact of outsourcing various activities on the airlines' performance objectives of cost, delivery, quality and flexibility and the overall airline performance. The research will also benefit new entrant airlines by providing practical guidance on how to build their supply chains.

9.4.1 Theoretical Contribution

Through the study, it was possible to identify the main motives behind outsourcing decisions. The study revealed that cost reduction is the most important motive behind outsourcing. Another main motive identified in the study is enhancing the focus of the management of an airline on core functions. The study suggested that local authorities' legislation is the main external factor influencing the airlines' outsourcing decisions, as in many airports the provision of several activities is only accessible to designated suppliers. The study findings indicated that there are three main influential internal factors affecting airlines' decisions when outsourcing is considered. The first factor is the demand level for a given function. The second factor is the criticality of the activity being considered for outsourcing. The third factor is the current capability status of performing the activity. Current capability includes the required facilities, machinery and manpower experience.

A more holistic view of current outsourcing practices in the airline industry was also provided. The thesis managed to uncover some issues related to current outsourcing practices in the airline industry, especially in terms of the main activities being outsourced. The study showed that most outsourcing arrangements are being made outside the airlines' home bases. At their home bases, most airlines perform required activities in-house acting as service providers for other airlines. Further differentiation can be made among the outstations airlines serve. This differentiation is mainly based on the number of flights an airline operates to a specific airport and the local authority legislation at that airport. Three main functions were addressed in this study: maintenance, ground handling and catering. The study findings suggested that maintenance and ground handling outsourcing arrangements generally take place at the airlines' outstations and are being insourced in the home bases. On the other hand, catering is being outsourced at the airlines' outstations and at most airlines' home bases, as many airlines have realised that catering is not a core business.

Moreover, investigating the impact of outsourcing on airlines' performance was one of the main objectives of the study. During the exploratory case study of Saudi Airlines, the airline management team expressed their belief that outsourcing will have a positive impact on all four performance objectives – cost, delivery, flexibility, and quality – and consequently on the airline's overall operational performance. In the secondary data analysis, the study examined the implications of outsourcing arrangements in the performance objectives, cost, delivery, quality, and flexibility, and the implications in the airlines' overall operational performance, measured by 'passenger load factor' and 'average aircraft utilisation'. However, the regression analysis of the secondary data failed to detect a significant impact of outsourcing on any of the performance objectives and the airline's overall operational performance, with the exception of a small negative impact on 'aircraft utilisation'. Nonetheless, the empirical data collected through the in-depth semi-structured interviews revealed that outsourcing might have a positive impact on the cost objective. Nevertheless, this positive impact is strongly correlated with the demand level for the outsourced function, as when the demand increases, it becomes less cost effective to outsource. The study concluded that the delivery objective is negatively influenced by

outsourcing. The study showed that the influence of outsourcing on the quality objective varies, depending on the nature of the outsourced function. The research revealed that outsourcing functions involving interaction with customers could negatively influence the quality objective. On the other hand, outsourcing functions not involving interaction with customers, such as maintenance, some of the ramp functions, and catering, would maintain quality standards and maybe enhance them if outsourced to a capable supplier. In terms of flexibility, the findings of the study indicated that the objective, volume flexibility in particular, is positively influenced by outsourcing. Finally, the study revealed that there is no direct impact of outsourcing on the airlines' operational performance. Yet, the negative impact of outsourcing on the delivery objective, on-time performance in particular, can lead to a modest negative impact on 'average aircraft utilisation'. Respondents suggested three main causes for the negative impact on the delivery and quality objectives: lack of outsourced staff loyalty, lack of outsourced staff training and knowledge, and lack of control over outsourced staff.

The positive impact of outsourcing on cost indicated in the present study is emphasised in other studies in both manufacturing and service firms. Jiang *et al.* (2006) report the significant cost efficiency obtained from outsourcing operations, which allows organisations to concentrate on their core activities. This also comes in line with the main motives reported by respondents of this study. Cost reduction and focus on core activities were highlighted as the main motives behind the outsourcing decision in the airline industry. The findings of the present study on the overall performance of airlines are similar to those of Gilley and Rasheed (2000), where no significant direct impact on performance was identified in manufacturing firms. Environmental dynamism was deemed to moderate the relationship between outsourcing and performance in that case. Switching suppliers when new technologies emerge represents an example of this dynamic feature. Comparing the results of the study of manufacturing and service firms (450 and 45 companies, respectively), Heshimati (2003, p. 97) found that "outsourcing is increasing and playing a major role in the rise of communications, finance and insurance, real estate and rental, personal services and repair services, business services, auto repair services, medical

educational services and government enterprises". Growth in real output for the service firms has been higher than in manufacturing companies, according to the researcher. This conclusion meets the evaluation of the operational managers interviewed in this study on the outsourcing trend and its significant impact on the airline industry over the past ten years. Several advantages and positive implications of outsourcing are suggested in the management literature, e.g., the study of Espino-Rodriguez and Padron-Robaina (2004) in the hotel industry. Moreover, managers of Saudi Airlines, interviewed during the exploratory case study, are expecting positive implications of outsourcing on their airline's performance objectives: cost, quality, delivery, and flexibility, and in the overall operational performance. The findings of the present study suggest that outsourcing could exert a positive effect on some of the performance objectives such as the cost objective and the flexibility objective.

Nevertheless, a negative impact of outsourcing on the delivery and quality objectives were found in the present study. This finding comes in line with the work of Görzig and Stephan (2002) on West German manufacturing firms. According to the researchers, companies tend to overestimate the benefits arising from outsourcing. Furthermore, analysing the differences in performance of firms that outsourced material inputs (better performance) and those who outsourced services, the difficulty in monitoring the quality of the service delivery was designated as a potential explanation. The causes for the negative impact of outsourcing suggested by the study interviewees match this analysis. As one of the respondents elaborated, "I believe if you are more in control of your business, then you would have better customer service delivery, better performance in regards to full handling, as in the turnaround of the aircraft, you are in full control". Hence, the lack of control over the suppliers' processes represents an important factor in the outsourcing decision. Table 9.6 contains a comparison of the study findings on outsourcing in the airline industry and previous research on outsourcing related to the cost and delivery objectives. New insights and implications are highlighted.

Table 9.6: Implications of the Study Findings on the Cost and Delivery Objectives

Topic	*Findings*	*Previous research*
Cost objective	❖ Positive impact on cost ❖ The positive impact depends on demand level ❖ Main source of cost savings is labour: ➢ Efficient utilisation of labour work hours; ➢ Lower salaries for the outsourced staff.	❖ In line with the study of Jiang *et al.* (2006) in manufacturing and service firms ❖ In support of the findings of Coe (2000), Barrar and Gervais (2006), and Ellram *et al.* (2007) on the influence of the demand ❖ In line with the study of Lonsdale and Cox (1998)
	Insights/Implications	
	❖ It is directly related to the demand level ❖ As demand increases, it becomes less cost effective to outsource	
Delivery objective	❖ Negative implications in the delivery objective ❖ Main aspects negatively affected: ➢ 'On-time Performance'; ➢ 'Passenger Waiting Time at Check-in Counter'; ➢ 'Baggage Delivery'; ➢ 'PRM Handling'.	❖ In line with the work of Belcourt (2006) and Kakabadse and Kakabadse (2001) on the negative impact on service delivery ❖ It contradicts the findings of Espino-Rodriguez and Padron-Robaina (2004) ❖ Contrary to the research of Elmuti (2003)
	Insights/Implications	
	❖ Potential causes for the negative impact related to lack of control and lack of accountability associated with the services provided by others (outsourced staff)	

Table 9.7 shows the comparison between the study findings and previous research on outsourcing related to the quality and flexibility objectives and the impact of outsourcing on the overall performance of the airlines. Figure 9.3 expresses the study's main findings, using the research framework reproduced in the beginning of Chapter 9. The practical contribution provided by the study is examined in detail next. Certain guidelines were devised as per the research findings on the potential impact on the performance objectives (cost, delivery, quality, and flexibility) and the outsourcing of maintenance, ground handling, and catering. These guidelines lead to recommendations on the outsourcing of these functions, since they indicate potential outcomes reported by respondents in the study.

Table 9.7: Implications of the Findings on Quality, Flexibility, Overall Performance

Topic	*Findings*	*Previous Research*
Quality Objective	❖ Negative impact on activities involving direct customer contact	❖ It contradicts the findings reported by Khong (2005) and Espino-Rodriguez and Padron-Robaina (2004) ❖ In line with the research of Walsh and Deery (2006) ❖ It adds to the observations of Rhoades *et al.* (1998) ❖ It is in line with the findings of Espino-Rodriguez and Padron-Robaina (2004) on the negative impact on direct customer contact activities
	Insights/Implications	
	❖ Activities not involving customer interaction can be safely outsourced (neutral impact) (e.g. ramp services) ❖ The quality of catering may be improved if outsourced to a capable provider	
Flexibility objective	❖ Positive impact on flexibility ❖ Volume flexibility due to a bigger pool of staff	❖ In line with the studies of Jennings (2002), Espino-Rodriguez and Padron-Robaina (2004), and Jack and Raturi (2002) ❖ In line with the research of Görzig and Stephan (2002) about manufacturing firms
	Insights/Implications	
	❖ The volume flexibility is especially relevant to deal with the fluctuation of the demand	
Overall Performance	❖ No direct impact on overall performance	❖ In line with the findings of Gilley and Rasheed (2000) ❖ Environmental dynamism is suggested to explain the negative impact on delivery and quality objectives
	Insights/Implications	
	❖ Potential causes for negative impact: ➢ Lack of staff loyalty; ➢ Lack of outsourced staff training and knowledge; ➢ Lack of control over outsourced staff.	

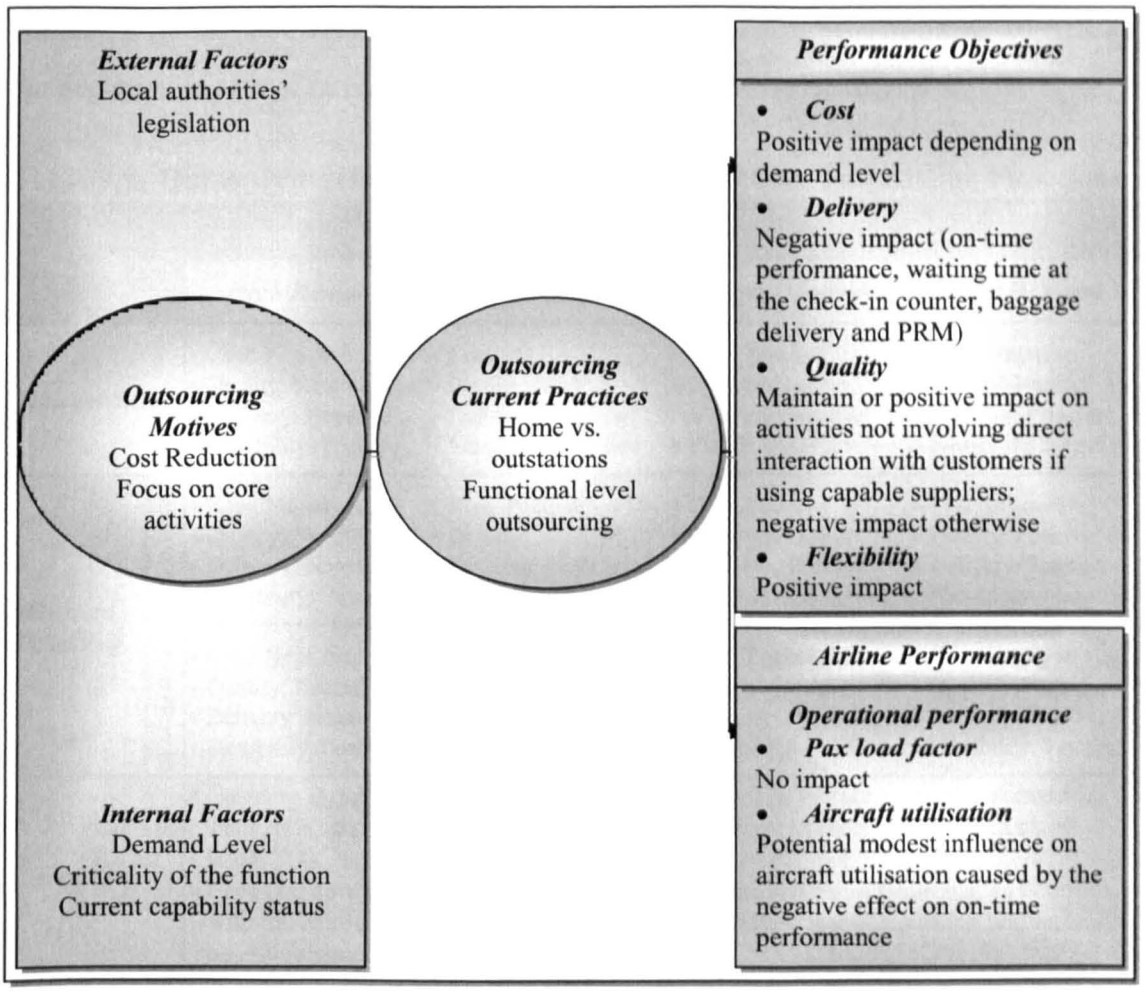


Figure 9.3: The Study's Main Findings Expressed in the Research Framework

9.4.2 Practical Contribution

In a practical dimension, it is envisaged that the study's outcomes will be of great help in the management of traditional airlines in terms of restructuring their supply chains. The study unveiled the potential impact of outsourcing various activities on the airlines' performance objectives of cost, delivery, quality and flexibility and overall airline performance. The research will also benefit new entrant airlines by providing practical guidance for the decision on how to build their supply chains. Based on the study's findings, Table 9.6 summarises the impact of different sourcing strategies on the performance objectives and the main functions investigated in the study. The information described in Table 9.6 can be used as guidelines for airlines on expected outcome implications. It must be restated that the study concluded that there is no correlation between outsourcing and the airlines' overall operational performance,

with the potential of a small negative impact on 'average aircraft utilisation' caused by the negative impact of outsourcing on the delivery performance objective.

Table 9.8: Outsourcing Impact on Performance Objectives and Airline Functions

Function		*Outsourcing*		*Insource*	
		High Demand	***Low Demand***	***High Demand***	***Low Demand***
Maintenance		• Cost: Negative • Quality: Neutral • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Neutral • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Neutral • Delivery: Positive • Flexibility: Negative	• Cost: Negative • Quality: Neutral • Delivery: Positive • Flexibility: Negative
Ground Handling	*Above the Wing**	• Cost: Negative • Quality: Negative • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Negative • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Positive • Delivery: Positive • Flexibility: Negative	• Cost: Positive • Quality: Positive • Delivery: Positive • Flexibility: Negative
	*Below the Wing***	• Cost: Negative • Quality: Neutral • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Neutral • Delivery: Negative • Flexibility: Positive	• Cost: Positive • Quality: Neutral • Delivery: Positive • Flexibility: Negative	• Cost: Negative • Quality: Neutral • Delivery: Positive • Flexibility: Positive
Catering		• Catering is not considered as one of the core activities that airlines would invest in. Thus, it is advised that catering should be outsourced irrespective of the demand level. • Focus on core activities is the main motive behind catering outsourcing. In addition, with the availability of capable suppliers, it is believed that outsourcing will have a positive impact on quality.			

* Above the wing includes those functions related to customer service such as check-in and gate services.

** Below the wing refers to activities not involving interactions with customers such as baggage handling, water and waste.

Based on the guidelines summarised in Table 9.6, some recommendations can be stated:

Maintenance

This is regarded as one of the critical activities that most airlines perform in-house. Maintenance can represent one of the main divisions of an airline structure, in the case of a conventional airline structure. On the other hand, maintenance is one of the important strategic business units, as it is the case for the airlines adopting the aviation business model. The study of Al-Kaabi *et al.* (2007) on maintenance, repair and overhaul activities reasons on the great influence of the demand on the outsourcing decision. The authors found three scenarios. The under-capacity means that the airline cannot satisfy its own demands; the airlines then seek outsourcing to deal with their demand needs. The second scenario is represented by the optimum

capacity where its demand is completely satisfied. The final scenario involves the over-capacity, which is directly linked with the demand. In this case, a reduced number of flights generates reduced hours of maintenance requirements and some airlines sell their surplus to other airlines. Hence, airlines can be advised to outsource the maintenance function only when the demand level generated by the airlines and its potential buyers of services does not justify the investment in the internal production of the activity. In short, the decision to internalise the production of maintenance should be based on the demand level. As per the conclusions drawn from the study, maintenance outsourcing can negatively influence the delivery objective.

On-time performance, passengers' waiting time at the check-in counter, baggage delivery and PRM handling were negatively affected by outsourcing. The operational managers interviewed in the study mentioned the poor performance of service providers and existing issues of control over their activities as the main sources of this negative impact. For instance, aircraft maintenance is vital to an airline's on-time performance (Mirghani, 1996). If the service provided does not meet the airlines' standards, the delivery objective is negatively affected in consequence. Campbell (1995) supports this finding by mentioning the main concerns of managers regarding maintenance outsourcing. The lack of control over the supplier was indicated as an important hurdle to be considered in the outsourcing decision. In addition, the cost objective can be positively influenced only if an efficient utilisation of the resources dedicated to maintenance cannot be achieved through the demand. Arnett and Jones (1994) and Rosenberg (2004) found that maintenance is one of the most common activities to be outsourced. Reportedly, airlines can reduce substantially their hangar, personnel, supply and storage costs by contracting professional providers that will supply high-cost, high-technology, and highly difficult aircraft maintenance tasks (Cheng, 2008). The recommendation related to maintenance outsourcing can be illustrated as in Figure 9.4. The outsourcing of the function 'Ground Handling' is discussed next.

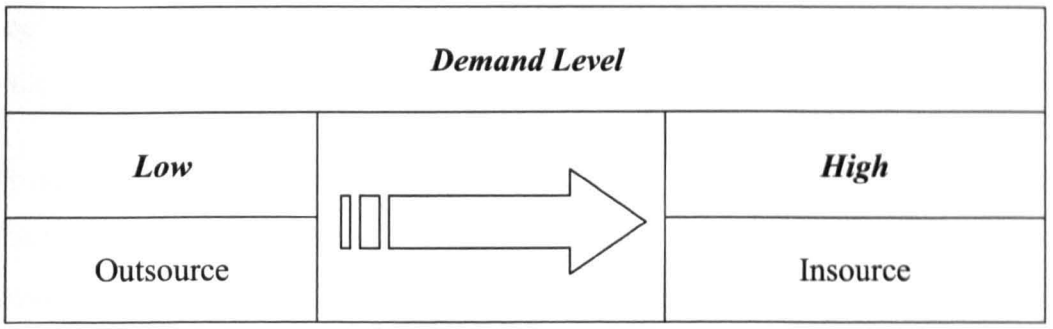


Figure 9.4: Maintenance Outsourcing (recommendation)

Ground Handling

Ground handling services can be classified into two main categories: 'above the wing' and 'below the wing'. The 'above the wing' services involve passenger services, which include activities such as the arrival, check-in and gate services. The 'below the wing' or ramp services involve activities such as baggage handling, interior cleaning, water and waste, and aircraft parking. In general, ground handling can represent one of the main divisions of the structure of an airline (for a conventional airline structure). On the other hand, ground handling is one of the important strategic business units, as is the case for the airlines adopting the aviation business model. The research on outsourcing in the airline industry indicates that outsourcing decisions on 'below the wing' services should be based on the demand level. Knez and Simester (2001) conducted a study on the incentives put in place by Continental Airlines, which included the outsourcing policy adopted by the airline to improve performance. Of the sample of 32 airports explored by the researchers, the outsourcing of gate and/or ramp activities to other airlines or ground handling firms was found in ten cases. The low demand represented by infrequent flights and idle equipment and personnel favoured the outsourcing of ground handling services. If the efficient utilisation of resources dedicated to the internal production of the activity is not achieved through demand, then it is better for the airline to outsource the function. However, when demand justifies investment in the internal production of the activity, then airlines ought to internalise production of the activity. As the present study concludes, outsourcing 'below the wing' activities can negatively influence the delivery objective. Moreover, the cost objective is also negatively influenced by outsourcing if the airline demand can justify the internal production of the activity.

Nonetheless, the decision of whether to outsource 'above the wing' activities or not should not be based solely on the demand level.

A strong consideration must be also given to the competitive priority for an individual airline. This is in line with the proposition of Slack (1994) regarding the distinction between order-winning and qualifying factors. Order-winning factors are regarded as key reasons for a customer to acquire a product/service. A qualifying factor is important, but it is not considered a major determinant of success. In the case of an individual airline, if the quality objective is regarded as an order-winning factor, the airline should keep provision of the 'above the wing' services in-house, irrespective of the demand level. On the other hand, where the cost objective is more important than the quality objective, the decision should be based on the demand level and the ability of the airline to efficiently utilise its deployed resources. EasyJet constitutes one example of this priority, where cost is the 'major purchase driver' followed by convenience and care (Peters, 2009). The same occurs with Ryanair being regarded as the 'Southwest of Europe'. According to Lawton (2000), the cost reduction policy adopted by the airline with a minimum number of activities being performed in-house, no baggage interlining and other services that 'slow down' competitors will be very hard to emulate by large carriers with a high quality reputation. Furthermore, a given airline may choose different strategies in different stations of its network. The airline may decide that the cost objective is more important than the quality objective in serving station ABC. On the other hand, the quality objective might be more important than the cost objective in serving station XYZ. Hence, it is for each airline to decide on its performance priorities in operating each station of the network it serves. This recommendation is based on the fact that the study concluded that the quality and delivery of the 'above the wing' services are negatively influenced by outsourcing. Ghobrial (2005) makes a similar statement on the outsourcing trend and the potential impact on levels of service and customer satisfaction. The author emphasises the lack of loyalty and pride, and low salaries of outsourced personnel as the main sources of negative impact. The cost objective is positively influenced by outsourcing only when an efficient utilisation of the deployed resources is attained through demand. The recommendation related to the ground handling activities

outsourcing can be illustrated by the matrix shown in Figure 9.5, based on the study findings.

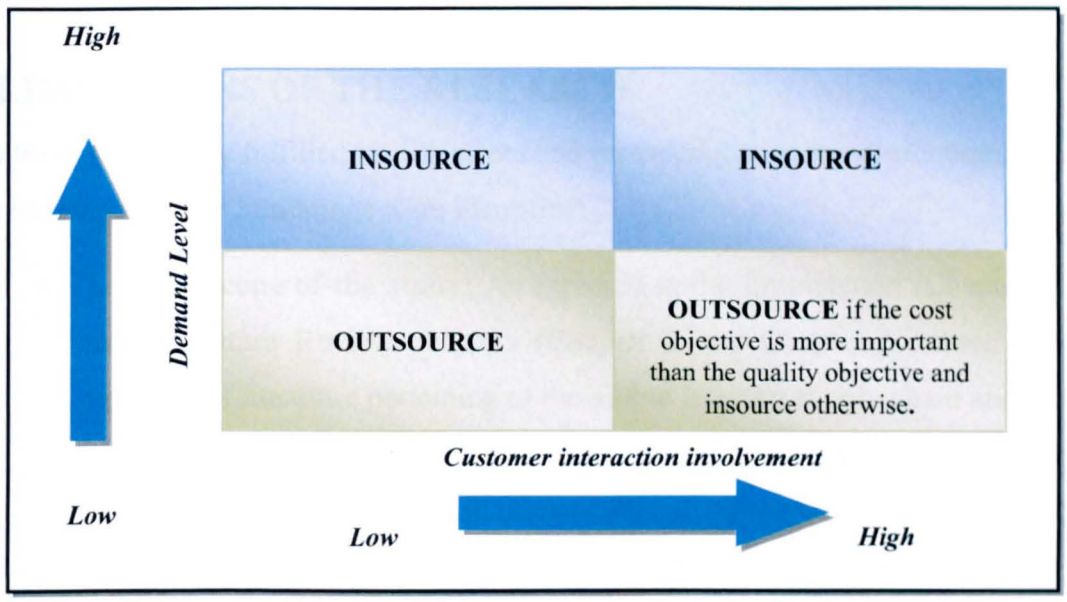


Figure 9.5: Ground Handling Outsourcing (recommendation)

Catering

New entrant airlines and legacy airlines that do not possess the capability of internal production of in-flight catering should outsource/continue the outsourcing of catering. This recommendation is based on the belief that catering is not considered a core activity for airlines and outsourcing this function positively influences the quality objective and improves the airlines' management focus. Low-cost carriers often reduce labour costs through the outsourcing of catering and other activities regarded as non-core (Spiess and Waring, 2005). Moreover, Pedrick *et al.* (1993) emphasised the influence the airlines have on the quality of catering. In their study of a catering service provider and its quality improvement efforts related to four American airlines, significant success was obtained in reducing waste and customer complaints, improving product and service quality, mainly due to the efforts of the catering company in understanding the airline management requirements. Rieple and Helm (2008) consider that "there are few reasons why outsourcing should not be outsourced". The authors support this recommendation using a transaction cost perspective. According to their study on seven legacy airlines and the outsourcing as competitive advantage, the skills involved in the function are neither high-tech nor

complex and the risk of opportunism and hold-up is regarded as minimal. The study revealed that airlines tend to outsource catering even in their home bases. It is believed outsourcing will have a positive impact on quality, using capable suppliers.

9.5 LIMITATIONS OF THE RESEARCH

Even though the study fulfilled its objectives and provided the main contributions that were envisaged, some limitations were identified:

- **Limited scope of the study:** As explored in the Introduction (Chapter 1) and Literature Review chapters (Chapter 2 and Chapter 3), there is a shortage of literature pertaining to the airline industry supply chain and the impact of outsourcing in the sector. Even though the present study provided new insights into the implications of outsourcing on the airlines' performance, it constitutes only an initial step towards a more in-depth understanding of the phenomenon in the airline industry. The scope of the study was rather narrow, in that sense, given the scarcity of studies specific to the sector and the limited time available for the research. Moreover, the research did not focus on the decision-making process behind outsourcing in terms of existing models, current approaches and decision aids in general. Although some of the determinants (motives, internal and external factors) for the outsourcing decision in the airline industry were identified and current practices discussed, no specific frameworks were analysed or explored in the research process.

- **Industry specificity:** The research focused on the practices and the determinants of outsourcing decisions for the airline industry specifically. It is not proposed that other service industries will have the same issues involved in their outsourcing decision-making. All airlines included in the study are passenger, scheduled, international and full service airlines. Low-cost and regional carriers were not included in the study. Hence, the findings of the study cannot be considered representative of the specific determinants of outsourcing decisions and current practices for all types of airlines. This limitation of scope is also recognised by the researcher.

- **The influence of the size of the airport:** In the research, the interviewed managers expressed their views and perceptions related to the airports they operate to from Heathrow (London, United Kingdom) in terms of outsourced activities. Considering the study findings, it is assumed that their opinions reflect current practices and perceptions on performance. Although some respondents referred to other airports and mentioned different contexts, it is also possible that their perceptions were influenced by the specific context of Heathrow Airport. A large airport such as Heathrow may have particular characteristics that will differ from smaller airports, for instance. It was not possible to infer whether the size of the airport is a factor that influences their perception on performance.

- **Methodological approach:** As reported by Gorla and Lau (2009), the use of multiple respondents may lead to the most accurate data regarding the characteristics of an organisation. In the study, only one respondent from each airline was used, with the exception of two airlines. Two managers were interviewed in those cases. Although the interviewees represented the general management of that airline and usually coordinated the outsourcing practices, the existence of just one respondent may have led to a potential bias, which should be indicated as a potential limitation.

- **Data sources:** For the regression analysis described in Chapter 6, another limitation has to be mentioned: a rather limited data set was available for the secondary data analysis. Potentially, a more refined data set could have produced richer results and a broader interpretation of the outsourcing impact on the functions explored in the regression analysis. Moreover, the data on bags delayed and on-time performance was not available for all the airlines, just the European airlines through the AEA (Association of European Airlines). Thus, that data set was used as representing all airlines. As those factors represented dependent variables, the results were not affected by the use of this sole data source. The generalisation of the findings related to those factors, however, may have been affected in consequence.

9.6 FURTHER RESEARCH

Considering the limitations found in the study, it is possible to declare that further research is warranted regarding:

- **Scope of the study (1):** Considering the present study as an initial step toward understanding outsourcing in the airline industry, further research on the decision-making process is deemed necessary. By exploring the impact of the phenomenon in the sector, it is possible to devise a more complete set of meaningful guidelines and/or frameworks that can assist managers in their decision-making. Although some recommendations were proposed by the researcher, a more structured approach could be of further practical relevance for academics and practitioners.
- **Scope of the study (2):** As indicated in the study limitations, the research focused on the airline industry. Passenger, scheduled, international and full service airlines operating from Heathrow Airport were approached in the research and the managers in charge of their airlines' operations interviewed. Low-cost and regional carriers were outside the scope of the study. Thus, further research could be addressed at those companies, seeking to compose a more comprehensive picture of the overall airline industry. Similarly, further research can be directed at other service sectors and the analysis of the performance inside their contexts related to the impact of outsourcing.
- **Influence of the size of the airport:** Although it cannot be stated that airport size influences the perception of managers related to outsourcing and performance, further research can be conducted in different locations. This would allow observation of the impact of size and context regarding the feedback obtained from managers on the outsourcing determinants, current practices and performance impact.
- **Methodological approach:** In order to address the issue of bias, future studies could count on multiple interviewees from the same company. In this study, the operational managers were approached given their

responsibility over the airlines' activities being outsourced or insourced. Further research could include other professionals involved in the airlines' activities to provide a more in-depth understanding of the impact of outsourcing on the airlines.

- **Data sources:** It is envisaged that future research on outsourcing will count on a more comprehensive data set related to the performance of the airlines. Similarly, grouping airlines according to their attributes could indicate a pattern of decisions and associated outsourcing outcomes. A more in-depth understanding of the relationship between outsourcing decisions and outcomes could suggest 'best practices' that lead to successful outsourcing experiences.

9.7 CONCLUSION

Through the research, it was possible to identify the determinants of outsourcing decisions in the airline industry. The study revealed that cost reduction is the most important motive behind outsourcing. Another important motive is enhancing the focus of the airline management on core functions. Local authorities' legislation was found to be the main external factor influencing the airlines' outsourcing decisions. Three influential internal factors were identified: demand level for a given function, the criticality of the activity being considered for outsourcing, and the current capability status of performing the activity. The study examined current outsourcing practices in terms of the main activities being outsourced. It showed that most outsourcing arrangements are being made outside the airlines' home bases. At their home bases, most airlines perform the required activities in-house and are acting as service providers for other airlines. The findings of the study indicate that maintenance and ground handling outsourcing arrangements generally take place at the airlines' outstations and are being insourced in the home bases. Catering is being outsourced at the airlines' outstations and at most airlines' home bases. The research also allowed the evaluation of the implications of outsourcing in the airlines' performance objectives: cost, delivery, quality and flexibility. It was found that outsourcing exerts a positive impact on the cost objective. Nevertheless, this positive impact is strongly correlated with the demand level for the outsourced function. The

study concluded that the delivery objective is negatively influenced by outsourcing. As for quality, the influence of outsourcing might vary, depending on the nature of the outsourced function. The research revealed that outsourcing functions involving interaction with customers could negatively influence the quality objective. On the other hand, outsourcing functions not involving interaction with customers, such as maintenance, some of the ramp functions, and catering, would maintain quality standards and maybe enhance them, if outsourced to a capable supplier. Regarding the flexibility objective, volume flexibility in particular is positively influenced by outsourcing, considering the seasonal variability of the demand level throughout the year. In terms of the evaluation of the outsourcing impact on the airlines' overall operational performance, the study revealed that there is no direct impact of outsourcing on the airlines' overall operational performance. Yet, the negative impact of outsourcing on the delivery objective, on-time performance in particular, could lead to a modest negative impact on average aircraft utilisation. Some recommendations on outsourcing strategies for the maintenance, ground handling, and catering functions were generated from the study findings. The outsourcing of maintenance depends mostly on the demand level. This is regarded as one of the main functions of an airline. In the case of low demand, it should be outsourced to a suitable supplier. On the other hand, airlines should insource the function when demand is high. Ground handling involves the 'above the wing' and 'below the wing' activities. The outsourcing of 'below the wing' activities such as baggage handling and aircraft parking should be based on demand level, while the 'above the wing' activities such as arrival, check-in and gate services depend on the competitive priority for the airline. For instance, if the cost objective is more important for the airline than the quality objective, the decision should be based on the demand level and its ability to use more efficiently deployed resources. Furthermore, different strategies can be adopted at different stations. It is for each airline to decide on its performance priorities for each station of the network it serves. Catering should be outsourced in most cases. Not being considered a core function, the activity could be safely outsourced to capable suppliers. It is envisaged that the findings associated with the research and the recommendations listed by the researcher will assist managers in terms of supply chain restructuring, since further insight into the

implications of outsourcing within the airline industry was provided. Finally, the study represents practical guidance for new entrant airlines in terms of devising their supply chains and predicting the impact of outsourcing decisions on the performance objectives of cost, delivery, quality, flexibility, and the airlines' overall operational performance.

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APPENDICES

APPENDIX A

Regression Analysis Data Set

Airlines IATA Memebers 2006	Number of Aircrafts	Pax Load Factor	Avg. Aircrafts Utilization	Operating Profit 2006 *	% of on-time departures	No of Bags Delayed per 1 000 Pax	Pilots and Co-Pilots	Cabin Attendants	Maintenance and Overhaul	Ticketing, Sales and Promotion	Airport Handling	All Other Personnel	Total # of Personnel
Adria Airways	14	63.50%	34.40%	1,062	79.4%	9.6	118	77	182	90	44	81	592
Aegean Airlines S.A.	21	71.50%	34.21%	49,145			198	321	165	195	748	106	1,733
Aer Lingus		77.60%											
Aeroflot	93	70.20%	35.23%	247,547			1,132	2,654	3,139	2,119	3,471	1,737	14,717
Aerolineas Argentinas	37	79.90%	37.31%				493	1,334	1,591	988	882	812	6,155
AEROMEXICO	84	66.30%	47.14%	-67,396			865	1,514	194	1,046	506	2,277	6,402
Aeropostal Alas De Venezuela		53.60%											
Aerosvit Airlines	13	67.90%	36.76%	-6,436			150	365	393	159	197	735	1,999
Afriqiyah Airways	5	47.80%	11.81%				37	113	17	89	172	280	708
Air Astana	23	67.90%	38.21%	39,617			186	539	329	33	360	314	1,761
Air Austral	6	77.20%	32.47%				70	232	42	88	76	150	658
Air Baltic	16	60.10%	36.22%	30,031			158	243	108	158	61	122	850
Air Berlin	58	80.20%	38.53%				639	1,014	244	332	185	625	3,039
Air Botswana		54.70%											
Air Caledonie International	4	69.70%	36.37%	-7,156			30	134	42	35	51	75	367
Air Canada	200	81.00%	47.86%				2,625	6,062	1,731	1,100	728	2,857	15,103
Air China Limited	205	76.00%	42.75%	253,223			2,515	4,461	3,496	2,486	3,825	5,419	22,544
Air Europa	37	77.70%	46.17%	11,185			454	1,085	204	149	2,178	280	4,350
Air France	382	79.40%	44.44%		78.3%	16.6	4,007	12,933	9,534	12,785	15,570	5,012	59,928
Air India	36	63.30%		-85270			449	2,287	3,421	2,868	2,100	3,927	15,060
Air Jamaica	24	64.30%	27.08%				170	368	224	106	871	1,014	2,753
Air Macau		75.50%		-14,426									
Air Madagascar	12	57.40%	48.61%				89	176	267	306	244	372	1,454
Air Malta	13	68.20%	45.05%	-17,550	70.4%	4.4	131	203	147	129	542	339	1,491
Air Marshall Islands	2	38.50%	20.76%				8	3	18	35	10	12	90
Air Mauritius	14	74.30%	49.62%	34,648			201	600	410	128	532	689	2,560
Air Namibia	7	72.10%	21.75%				60	131	1	0	119	175	486
Air New Zealand	96	74.00%	38.84%	416,845			1,227	2,246	2,441	1,234	2,178	1,787	11,113
Air Niugini	13	60.50%	27.17%	19,304			111	120	192	195	353	364	1,335
Air Nostrum	68	62.70%	39.21%				515	552	251	0	233	489	2,040
Air One S.p.A.	42	57.80%			74.8%	8.1	275	567	0	243	0	562	1,647
Air Pacific		68.40%		12,660			83	350	109	90	30	190	852
Air Senegal International	5	61.40%	51.67%										
Air Seychelles	7	75.20%	20.30%	6,049			51	130	92	39	194	189	695
Air Tahiti	10	67.90%	28.03%	4,149			70	64	93	77	967	115	1,386
Air Tahiti Nui	5	62.70%					94	386	59	60	84	56	739
Air Tanzania	6	60.60%	33.91%				20	70	58	42	26	79	295
Air Zimbabwe	9	58.50%	26.82%				55	98	321	110	260	212	1,056
Albanian Airlines	3	50.40%	25.00%				16	25	27	18	35	10	133
Alitalia	172	73.60%	35.40%		78.7%	16.5	2,257	4,835	2,895	1,668	4,228	4,040	19,723
All Nippon Airways	182	68.10%	44.73%	619,164			1,509	4,325	2,719	736	952	2,458	12,778
Aloha Airlines		75.60%											
America West Airlines	139	79.70%	48.08%				1,813	2,696	851	3,543	2,806	2,833	14,542
American Airlines	697	80.10%	40.00%	696,798			8,460	15,946	10,900	11,907	11,257	12,511	70,981

Arkia Israeli Airlines	12	79.50%	15.25%				61	87	94	139	73	96	550
Asiana Airlines	60	73.90%	49.90%	136,601			954	2,772	971	1,101	1,363	551	7,799
Atlasjet Airlines		82.40%											
Austral	24	84.10%	17.86%	-118,166			236	496	459	63	167	132	1,553
Austrian	102	74.20%	37.65%		83.9%	13.8	1,141	2,213	1,322	1,435	1,071	955	8,137
AVIANCA	51	70.40%	34.49%	75,294			602	909	1,209	497	1,616	1,113	5,955
Bangkok Airways	17	65.80%	35.01%	24,118			183	260	192	255	743	263	1,896
Belavia	18	60.10%	14.03%				88	105	452	80	61	328	1,173
Biman Bangladesh	15	70.00%	38.77%	-91,605			172	492	878	573	985	2,054	5,174
Binter Canarias	18	67.70%	69.44%	10,528			99	115	97	31	16	61	419
Blue1	17	64.00%	32.68%	-541			121	140	99	46	0	108	514
BMI		69.60%			81.3%		648	1270	453	0	0	1478	3849
British Airways	282	76.20%	40.46%	1,164,000	71.2%	23	3,626	14,998	5,868	4,659	10,315	6,745	46,227
Carpatair		60.80%											
Cathay Pacific	99	79.90%	53.35%	540,944			2,125	6,931	919	1,514	2,592	2,371	16,455
China Airlines	70	76.90%	49.54%	86,825			1,084	2,434	2,262	1,491	1,003	1,683	9,957
China Eastern Airlines		71.30%					2670	5608	5800	4148	0	0	18226
China Southern Airlines	298	71.70%	39.83%										
Cimber Air	16	56.20%	19.80%				154	111	110	43	64	67	549
Cirrus Airlines	19	53.20%	19.78%	-5,211			131	113	14	66	50	39	413
CityJet		67.80%		28,093									
Comair	24	77.80%		24,500			176	322	5	195	560	104	1,392
Continental Airlines	352	81.50%	46.54%				4,168	8,562	3,769	4,388	13,769	7,837	42,493
Continental Micronesia	14	70.80%	50.44%				108	316	120	137	565	194	1,440
COPA		77.80%											
Corse Air International - Corsair	10	79.10%					172	784	220	89	181	214	1,676
Croatia Airlines	11	60.60%	33.79%	-2,672	82.4%	11.8	124	168	197	240	92	182	1,022
Cyprus Airways	11	73.00%	42.15%	-41,359	74.4%		122	318	200	286	480	147	1,553
Czech Airlines	50	69.70%	34.94%	-13,252	86.7%	10.8	524	1,017	1,096	537	860	1,213	5,247
Dba Luftfahrtgesellschaft mbH	33	62.90%					153	245	116	36	0	89	639
Delta Air Lines	440	79.00%	46.19%	33,809			5,810	10,284	6,261	4,971	15,846	2,536	45,715
Dragonair		66.50%					341	1056	92	91	0	830	2410
Egyptair	40	60.60%	49.99%				516	2,172	3,820	0	2,382	13,737	22,635
El Al	42	81.40%	45.36%	-16,827			498	297	1,070	486	558	622	3,562
Emirates	101	75.70%	57.87%	225,169			1,597	7,962	2,412	366	2,164	6,454	21,228
Estonian Air	7	61.40%	45.09%	-6,018			63	101	0	58	131	72	425
Ethiopian Airlines	40	63.70%	41.24%	15,309			256	618	1,490	684	1,042	660	4,750
Etihad Airways	24	59.60%	54.32%				337	1,504	33	356	178	446	2,854
European Air Express	7	36.50%	18.13%				25	13	19	13	0	15	85
EVA Air	49	80.00%	49.54%				747	1,512	110	626	1,054	1,078	5,127
Far Eastern Air Transport	16	63.80%	24.22%	62,501			127	226	395	52	267	176	1,243
Finnair	49	72.40%	41.19%		83.6%	14.2	705	1,731	1,944	1,275	1,175	965	7,795
Flybe		81.80%					350	428	362	131	135	454	1879
Garuda	49	72.10%	37.92%	-61,982			564	1,862	85	853	470	1,339	5,233
GB Airways		81.40%											
Gulf Air	34	72.10%	58.77%				505	1,975	518	850	807	1,256	5,911

Royal Jordanian	25	67.20%	41.84%	18,241			272	498	527	400	843	1,201	3,741
Sahara Airlines	28	66.00%	36.02%				247	479	470	743	630	1,109	3,824
Samara Airlines	18	59.60%	9.60%				83	115	402	0	101	232	1,015
SAS Scandinavian Airlines	164	74.40%	27.96%	248,652	78.9%	13.3	1,795	2,956	216	1,618	319	684	7,588
SATA Air Açores	5	63.60%	68.94%	4,868			33	24	77	40	395	83	652
Saudi Arabian Airlines	151	71.00%	20.32%				1,215	1,811	6,013	1,896	5,583	5,366	22,025
Shandong Airlines	26	75.00%	40.63%	34,109			360	370	444	581	286	900	2,941
Shanghai Airlines	51	69.20%	39.94%				609	868	1,020	807	615	457	4,393
Shenzhen Airlines	43	77.90%	42.40%				537	627	674	1,369	0	3,511	6,718
Silberia Airlines	62	75.50%	22.97%				550	1,203	138	0	235	560	2,946
Sichuan Airlines	30	74.90%	40.01%	111,049			360	405	475	269	450	441	2,400
Silkair	13	69.90%	41.67%	7,856			119	280	0	20	0	342	761
Singapore Airlines	111	78.20%	62.39%	545,021			2,571	6,910	498	2,003	718	2,433	15,133
Skyways	22	53.10%	16.39%				120	88	63	22	1	44	338
SN Brussels Airlines	38	64.60%	32.54%		86.2%	12.7	353	689	178	464	213	242	2,212
Solomon Airlines	6	50.20%					13	16	12	15	37	90	183
South African Airways (SAA)	67	74.80%	46.74%	284,537			788	2,165	2,753	749	1,458	1,627	9,579
Spanair	70	68.50%	36.93%	39,376	78.4%	9.5	528	935	389	0	903	548	3,303
Srilankan Airlines	16	76.10%	47.42%	-67,671			208	808	546	147	1,186	1,862	4,766
Surinam Airways	2	74.30%		-6,409			25	66	36	22	38	287	474
SWISS	75	79.80%	35.76%	204,814	78.7%	10	970	2,747	709	677	289	984	6,376
Syrianair		62.50%											
TACA		73.00%					373	468	353	678	1788	786	4716
TAM Linhas Aéreas	96	73.30%	53.97%	370,671			1,339	2,941	1,588	953	1,309	3,801	11,931
TAP - Air Portugal	48	72.80%	50.82%		60.1%	21	651	1,755	1,833	463	0	806	5,508
TAROM S.A. Romanian Air Transport	20	62.30%	29.97%		88.4%	8.3	168	291	770	382	208	499	2,318
Thai Airways	86	77.00%	46.19%	208,524			1,088	5,377	4,602	2,287	8,642	4,312	26,435
TNT Airways S.A.		76.20%											
Transaero Airlines	21	67.90%	47.04%	46,277									
Transportes Aéreos Del Mercosur	5	69.00%	40.97%				37	74	28	122	259	139	659
Tunis Air	29	61.30%											
Turkish Airlines	106	69.10%	43.85%		83.6%	4.7	1,167	2,604	0	2,794	2,402	1,357	10,324
Ukraine International Airlines	13	54.20%	32.29%	1,859			108	216	285	78	94	288	1,066
United Airlines	460	82.10%	36.61%				6,349	15,101	5,778	1,705	14,884	8,069	51,886
US Airways	224	78.20%	41.81%	591,835			2,568	4,578	2,754	4,668	4,396	1,880	20,844
Varig	28	69.20%	41.13%				396	1,051	52	487	846	857	3,689
Vietnam Airlines	38	71.70%	32.10%				446	1,426	770	1,140	1,592	4,080	9,645
Virgin Atlantic	36	73.10%	60.69%				735	3,776	877	921	879	1,670	8,858
Virgin Nigeria		59.10%		-9,496									
Vladivostok Air JSC	23	68.10%	14.35%	-7,691			193	282	521	204	894	634	2,881
Volga-Dnepr Airlines	26	60.60%	23.04%	50			185	10	520	75	85	624	1,705
Wideroe	30	56.30%		29,207			364	255	358	34	400	149	1,560
Xiamen Airlines	41	71.80%	43.25%	62,501			356	732	804	1,233	1,004	1,253	5,496
Yemenia	9	57.20%	39.97%				132	338	0	393	1,367	1,584	3,814
Zambian Airways Limited	3	34.90%					9	10	13	22	15	48	117

* Financial results - US $ Thousands

Airlines IATA Members 2007	Number of Aircrafts	Pax Load Factor	Avg. Aircrafts Utilization	Operating Profit 2007 *	% of on-time departures	No of Bags Delayed per 1 000 Pax	Pilots and Co-Pilots	Cabin Attendants	Maintenance and Overhaul	Ticketing, Sales and Promotion	Airport Handling	All Other Personnel	Total # of Personnel
Adria Airways	14	64.30%	57.63%	6,503	73.8%	9.8	132	93	228	87	51	88	679
Aegean Airlines S.A.	23	69.40%	35.48%	59,682			230	373	177	229	804	102	1,915
Aer Lingus	41	75.40%	45.97%										
Aeroflot	87	70.30%	39.19%	295,377			1,174	2,699	3,184	2,212	3,848	1,781	15,303
Aerolineas Argentinas	39	78.80%	42.22%				667	1,294	1,553	1,099	817	1,122	6,618
Aeromexico	79	66.90%	45.07%				866	1,461	192	1,078	497	2,229	6,323
Aeropostal Alas De Venezuela	3	54.70%					37	99	0	170	0	0	312
Aerosvit Airlines	16	73.20%	28.37%	-70,869			185	410	510	167	151	924	2,347
Afriqiyah Airways	6	48.30%	44.44%				12	140	54	46	164	583	1,027
Air Astana	21	68.80%	35.76%	43,955			211	666	474	71	619	270	2,311
Air Austral	6	83.70%	34.22%	26,824			67	252	44	98	79	142	682
Air Baltic	21	62.60%	40.01%	6,243			183	330	122	206	70	105	1,016
Air Caledonie International	4	72.00%	33.94%	-5,305			35	155	47	35	53	80	405
Air Canada	210	81.30%	44.62%				2,829	6,236	1,663	1,052	702	2,826	15,308
Air China Limited	216	78.80%	42.36%	477,056			2,520	5,035	2,114	2,036	3,514	8,883	24,376
Air Europa	39	79.20%	40.91%	45,288			507	1,114	202	149	484	466	2,922
Air France	387	80.10%	47.41%		80.1%	17.6	4,118	13,341	0	0	0	42,514	60,059
Air India	151	66.20%	36.90%	-665,068			1,385	3,870	8,783	7,081	4,164	7,898	33,203
Air Jamaica	19	67.60%	32.20%				165	358	274	90	986	785	2,658
Air Macau	14	76.60%	28.48%	-16,161			145	254	60	19	34	487	999
Air Madagascar	12	52.70%	30.75%				89	172	280	317	267	412	1,537
Air Malawi	3	27.00%	17.48%				15	32	16	26	0	204	293
Air Malta	13	67.60%	40.04%	-10,313	67.5%	4.5	139	202	145	133	490	385	1,494
Air Mauritius	13	76.30%	50.56%	31,618			182	557	392	100	539	639	2,409
Air New Zealand	95	76.00%	39.85%	662,200			1,290	2,250	2,348	1,120	1,927	2,040	10,975
Air Nugini		63.80%					119	139	199	242	326	419	1,444
Air Nostrum	72	61.80%	37.84%				527	567	280	0	226	517	2,117
Air One S.p.A.	51	57.00%			73.7%	9.9	319	610	0	258	0	641	1,828
Air Pacific	6	70.30%		-1,464			85	323	105	92	25	176	806
Air Seychelles	7	72.60%		5,670			64	132	105	38	291	123	753
Air Tahiti Nui	5	65.80%	60.42%	-14,625			93	389	57	80	83	116	818
Alitalia	150	74.40%	36.40%		77.7%	19.7							
All Nippon Airways	209	67.10%	48.16%	652,564			1,512	4,728	2,712	718	1,034	2,828	13,602
Alma de Mexico	18	53.30%	35.14%										
American Airlines	655	81.50%	39.65%	702,098			8,452	15,945	11,258	12,299	11,651	12,404	72,009
Arkia Israeli Airlines	12	78.80%	18.99%				64	85	90	140	73	102	554
Armavia		68.50%											
Asiana Airlines	66	73.60%	56.65%	182,916			1,041	2,959	999	1,452	1,104	553	8,200
Atlasjet Airlines	15	83.30%	37.17%				62	258	129	18	52	100	700
Austral	24	80.50%	42.79%				234	485	444	90	138	165	1,556
Austrian	98	75.10%	37.15%	28,585	83.5%	12.9	1,049	1,945	1,229	1,450	1,064	966	7,703
AVIANCA	53	75.00%	38.47%	202,673			640	1,005	1,338	599	1,774	1,046	6,412
Azerbaijan Airlines	20	69.80%					224	251	398	172	725	4,800	6,673

Bangkok Airways		62.50%											
Belavia	20	61.80%	19.24%				83	112	443	79	58	319	1,142
Bellview Airlines	6	43.00%	32.18%										
Biman	12	69.80%	33.34%	-39,359			162	459	847	503	909	1,994	4,892
Binter Canarias	19	64.10%	47.83%	18,437			82	92	0	0	0	156	431
Blue Panorama Airlines S.p.A.	11	78.80%					92	215	40	0	0	97	444
Blue1	13	65.40%	27.39%	10,099			108	124	79	41	0	138	490
bmi		67.60%			81.4%	17							
British Airways	246	75.60%	44.92%	-32,000	66.3%	26.5	3,161	14,062	5,140	4,031	11,092	5,809	43,309
Carpatair	19	65.60%	12.23%				42	59	99	54	91	164	509
Cathay Pacific	112	81.10%	52.53%	807,891			2,291	7,233	930	1,549	2,579	2,498	17,083
China Airlines	69	77.50%	48.97%				1,073	2,501	2,201	1,509	1,091	1,685	10,060
China Eastern Airlines		73.60%											
China Southern Airlines	339	74.50%	39.23%										
Cimber Air	19	63.00%	17.55%				177	133	116	70	70	62	628
Cirrus Airlines	19	58.90%	13.70%	-18,070			118	125	19	70	51	40	423
CityJet		64.90%		1,884									
Comair Limited	29	78.80%		25,272			178	362	6	181	753	154	1,668
Continental Airlines	395	82.20%	48.22%				4,554	8,973	3,831	4,157	13,302	7,367	42,184
Continental Micronesia	14	71.90%	48.78%				106	306	121	174	440	190	1,337
COPA		78.40%											
Corsair	8	81.60%					150	905	190	94	183	172	1,695
Croatia Airlines	11	64.70%	35.27%	8,837	77.5%	9.3	120	171	224	243	113	181	1,052
Cyprus Airways	11	72.20%	42.07%	7,432	70.6%	8.8	130	335	211	293	471	150	1,590
Czech Airlines (CSA)	49	66.10%	35.37%	12,935	88.6%	12.4	534	1,015	1,132	440	936	717	4,774
Delta Air Lines	446	81.10%	45.97%	1,004,847			6,297	11,029	6,874	5,475	17,906	2,495	50,080
Dragonair		68.40%					493	1,278	98	171	0	715	2,755
Egyptair	46	65.60%	48.67%				646	2,028	3,875	2,421	0	15,473	24,448
El Al	41	84.90%	42.81%				505	320	1,086	471	496	616	3,522
Emirates	112	79.30%	42.81%	517,657			1,882	8,731	2,889	440	2,820	7,581	24,668
Estonian Air	8	63.80%	37.27%	-53,943			64	102	0	62	151	76	455
Ethiopian Airlines	31	67.40%	47.90%	67,511			267	560	849	496	791	1,886	4,849
Etihad Airways	36	68.80%					532	2,670	64	681	163	600	4,710
EVA Air	51	81.40%	51.28%				738	1,407	105	700	954	1,083	4,987
Far Eastern Air Transport		61.80%											
Finnair	64	73.40%	36.71%	144,816	79.8%	15.8	752	1,793	1,781	663	0	777	5,766
Flybe.British European		62.90%					677	757	802	91	106	440	2,873
FlyLAL - Lithuanian Airlines	12	58.60%					85	104	3	30	0	79	314
Garuda	48	77.40%	39.50%	18,348			558	1,909	95	671	431	1,458	5,322
Gulf Air	36	72.20%	46.12%				430	1,494	460	799	679	1,070	4,932
Hahn Air		62.30%											
Hainan Airlines	70	80.30%	43.88%				1,049	1,538	1,613	1,403	698	2,585	8,886
Hapag Lloyd		85.10%											
IBERIA	136	81.60%	42.73%	385,710	80.8%	13.8	1,736	4,298	3,693	1,457	10,464	1,934	23,582
Icelandair	24	76.40%	43.17%		76.8%	11.1	288	390	0	250	25	78	1,031
Iran Air	56	78.70%	29.43%				317	522	1,541	535	1,049	1,861	5,898

Iran Aseman Airlines	28	67.40%	64.02%				170	243	498	97	320	323	1,677
Japan Airlines	210	68.90%	37.06%				2,702	6,519	2,061	1,852	1,966	609	16,236
Jat Airways	16	58.50%	28.73%		79.6%		234	322	19	321	302	644	1,842
Jet Airways	79	69.30%	46.70%	-11,967			1,024	3,140	1,991	658	2,291	2,761	12,078
Jet Lite (India) Ltd	24	71.80%	35.46%	-123,604			233	461	598	113	735	81	2,324
KLM		83.40%			76.6%	19.7							
Korean Air	123	72.70%	49.83%	685,060			1,759	3,133	4,419	936	1,418	4,804	16,611
Kuwait Airways		72.20%											
LAB	7	65.90%	41.15%				50	150	230	170	180	200	1,000
Lan Airlines	83	69.80%	48.69%	413,371			1,180	2,494	1,922	2,014	4,940	3,247	15,797
LOT Polish Airlines	46	75.70%	30.08%	30,015	75.7%	13.9	475	732	1,009	623	332	240	3,411
Lufthansa	417	79.90%	40.00%	2,170,000	79.7%	15.8	5,801	16,354	18,892	0	0	56,727	97,803
Luxair	15	61.30%	27.88%		88.1%	17.2	142	122	118	49	1,432	439	2,316
Macedonian Airlines (MAT)	5	69.10%	27.88%	1,015			19	36	14	25	0	66	160
Mahan Air	22	62.30%	18.82%				131	527	350	62	163	629	1,882
Malaysia Airlines	87	71.50%	48.24%	160,546			1,171	4,206	2,602	1,513	2,437	7,131	19,060
MALEV	30	69.10%	33.27%	-55,397	82.9%	9.5	272	319	12	261	62	637	1,563
Malmö Aviation	9	76.70%		14,573			87	91	94	120	49	37	478
Meridiana	24	67.50%	34.32%				230	488	328	269	44	212	1,571
Mexicana	62	69.20%	50.59%				787	1,357	865	1,110	320	1,731	6,170
MIAT Mongolian Airlines	3	74.70%	30.21%	13,004			37	88	119	31	197	210	699
Middle East Airlines	9	52.30%	44.07%				128	327	305	381	485	846	2,480
Montenegro Airlines	5	65.60%	36.46%	20			31	48	56	64	24	142	389
Northwest Airlines	398	84.70%	39.10%				4,486	8,317	2,248	3,351	11,855	1,812	32,069
Olympic Airlines	64	67.30%	44.13%		68.7%								
Oman Air	12	74.30%	22.61%	2,113			128	429	197	236	2,135	235	3,360
Pakistan International Airlines (PIA)	55	67.40%	34.02%				547	2,113	4,281	1,705	1,345	8,164	18,231
Pegasus Airlines	16	74.00%	46.10%	29,028			133	275	130	20	118	275	951
Philippine Airlines	33	76.90%	41.50%	70,286			424	1,397	4	1,444	2,186	2,136	7,591
PLUNA		68.80%											
Qantas	133	81.10%	46.41%	666,345			2,215	6,792	4,843	2,655	6,106	3,009	25,750
Qatar Airways	60	77.40%	53.41%				921	3,421	793	1,404	865	1,184	8,760
Rossiya - Russian Airlines	51	71.90%					431	901	1,967	460	1,524	674	6,433
Royal Jordanian	29	70.90%	40.30%	46,518			310	584	587	434	954	1,292	4,161
SA Airlink		47.00%											
SAS Scandinavian Airlines	146	74.10%	26.48%	265,651	80.0%	14.8	1,720	3,025	226	1,582	351	656	7,560
SATA Air Açores	6	65.40%		5,479			36	30	83	34	383	101	667
Saudi Arabian Airlines	158	68.30%	32.94%										
Shandong Airlines	31	76.80%	38.58%	37,000			383	575	515	748	287	796	3,304
Shanghai Airlines	56	72.30%	38.85%				750	973	1,163	904	794	543	5,172
Shenzhen Airlines	55	77.30%	42.22%				589	1,103	877	1,426	0	5,436	9,411
Siberia Airlines	60	79.40%	26.96%				610	1,290	146	0	0	626	2,908
Sichuan Airlines	36	78.80%	35.41%	51,542			402	482	547	324	505	515	2,775
Silkair	14	70.90%	41.67%	12,674			125	275	0	19	0	374	793
Singapore Airlines	110	80.70%	61.84%	1,120,131			2,586	7,035	495	1,887	716	2,395	15,114
Skyways	25	58.50%	14.56%				124	76	83	11	11	45	350

SN Brussels Airlines	48	67.20%	35.64%		81.9%	11.7	468	828	216	389	454	224	2,665
South African Airways (SAA)	53	75.00%	41.41%	192,511			762	1,658	2,536	312	1,215	1,820	8,305
Spanair	72	68.20%	37.03%	-22,872	71.1%	15.4	558	1,098	413	0	853	613	3,535
Srilankan Airlines	15	79.00%	55.06%	-51,155			230	861	567	145	1,321	2,159	5,283
Surinam Airways	2	59.90%		-8,077			25	65	39	34	37	288	488
SWISS	81	80.20%	44.73%		77.7%	11.4	1,022	3,015	791	672	321	1,011	6,832
Syrianair		62.80%											
TACA		77.00%					389	752	657	595	1,278	752	4,641
TAM Linhas Aéreas	115	69.90%	52.00%	97,921			1,650	3,778	2,035	6,514	1,339	3,554	18,870
TAP - Air Portugal	68	70.90%	48.01%		59.9%	27.8	728	2,082	1,886	916	0	890	6,502
TAROM Romanian Air Transport	22	67.10%	39.79%		88.8%	9.5	202	336	720	387	242	525	2,412
Thai Airways	85	79.10%	49.33%	368,244			1,189	5,876	4,574	2,310	8,978	4,304	27,356
THY (Turkish Airlines)	102	73.20%	46.78%		82.9%	4.5	1,204	2,628	0	2,906	2,277	1,438	10,453
TNT Airways S.A.	49	72.30%	19.23%										
Transaero Airlines	29	74.80%	46.90%	12,503									
TransAsia	16	64.80%	20.12%	-14,306			86	128	242	106	284	139	985
Ukraine International Airlines	16	63.50%	31.61%	17,790									
United Airlines	460	82.80%	39.24%				6,471	15,098	5,527	1,830	15,118	11,150	55,194
US Airways	360	80.00%	41.99%	936,652			2,844	4,509	2,796	5,001	4,950	1,863	21,963
Virgin Atlantic	38	76.40%	60.74%				771	4,171	894	1,050	992	1,749	9,627
Vladivostok Air	18	71.60%	20.16%	-8,156			202	322	511	211	936	561	2,877
Volga-Dnepr Airlines (JSC)	31	62.70%	19.82%	95			174	9	588	17	0	593	1,613
Widerøe	29	58.90%		30,910			351	228	320	39	429	130	1,497
Xiamen Airlines	45	73.60%	41.45%	112,466			413	735	884	1,347	988	1,342	5,957
Yemenia	10	61.70%	36.03%				167	279	0	483	1,541	1,304	3,774

* Financial results - US $ Thousands

APPENDIX B

Interview Guidelines

Interviews to obtain managers' views about the determinants and impact of different sourcing strategies in the airlines sector

Airline:	Date:

Part A: General information about the interviewee & his/her airline

The respondent:

Position: .....

Years of experience with the airline: (years).

Years of experience in the industry: (years).

The airline:

What is your airline's home base city and country?

City..... and Country.....

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Part B: Airline's current sourcing strategies

Outsourcing structure, breadth, and depth:

T: Internally managed and produced (vertically integrated structure).

V: Outsourced from independent supplier.

A: Outsourced from an independent strategic business unit owned by the airline.

What is your current sourcing practices regarding the three following activities?

Aircraft maintenance:

Home base:

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This station in particular (Heathrow Airport):

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Outstations in general:

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Ground handling:

Home base:

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This station in particular (Heathrow Airport):

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Outstations in general:

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In-flight catering:

Home Base:

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This station in particular (Heathrow Airport):

.....

.....

.....

Outstations in general:

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Sourcing strategies adopted over the past few years:

- Did your airline increase, decrease, or maintain its levels of outsourcing involvement, in regards to the following activities?

Aircraft maintenance

Ground handling

In-flight catering

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Sourcing strategy changes proposed for the future:

- Does your airline plan to increase, decrease, or maintain current levels of outsourcing involvement in regards to the following activities?

Aircraft maintenance

Ground handling

In-flight catering

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Part C: Motives and other factors shaping outsourcing decisions

The following subsections intend to capture managers' views on relevant motives behind outsourcing and other internal and external factors shaping sourcing strategies in their airline.

- What are the motives behind current/intended sourcing strategies in your airline?

1. Reduce costs
2. Improve quality
3. Increase flexibility
4. Enhance focus, etc.

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- What are the most influential internal factors shaping current/intended sourcing strategies for your airline?

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- What are the most influential external factors shaping current/intended the sourcing strategies of your airline?

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Part D: The impact of outsourcing strategies on the performance

What is the impact of outsourcing, if any, on your airline performance objectives of cost, delivery, quality, and flexibility, and on your airline's overall operational performance? How?

Cost objective:

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Delivery objective:

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Quality objective:

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Flexibility objective:

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Airline's overall operational performance:

Increase load factor per flight

Improve daily aircraft utilisation

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Part E: Final thoughts

In your opinion, what are the weaknesses and strengths of your airline's current sourcing strategies in comparison with other alternative strategies?

- What sourcing strategies would you suggest for your airline, in regards to each of the functions being discussed? Why?

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- What are the current trends in outsourcing within the airline industry?

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- Could you indicate any other respondents that could be interviewed, considering the purposes of this study?

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APPENDIX C

Content Analysis (sample)

Respondent	Cost Objective
A01	It gives you cost benefit, but it does not give you other things, because you do not have control.
A01	We have gained in cost that is definitely the benefit of what we have pursued.
A01	Somebody who is already capable of dealing with your aircraft type on their own; then you do not have people sitting around but you are only paying for a check when it has been done.
A01	Certainly in the past it has been to reduce labour costs. That has been the case for engineering outsourcing, revenue management and reservations. It is things like reduction in the facilities you are using. So we have been able to rent out one of our buildings at East Midlands, because it is no longer a call centre; that kind of thing.
A01	I think the strength is that we have saved costs, the strength is that it has improved our balance sheet.
B02	People like us, from five we've gone to three flights, okay and then this constant … and it's quite costly to keep the airlines you know, going and so forth. And again, we are driven by … because it's not just the sickness, it's the salaries, staff holidays, additional costs of uniform, the cleaning, the rent of the place, it's all additional costs.
B02	It is much easier now to get more handlers to do your flights than you having … because there are costs involved. Whereas the handler, he would have … like I'll give an example; we're starting at 2 o'clock now, okay, the girls come in and they go down to check-in at certain time and they check-in and they're wasting time a bit here you know, like easy. Whereas if you're a handler, they don't have time like check-in staff, they go and fetch one flight then they do another flight and so forth. So you get the max …
B02	I can give you a number; here, you can write on this piece of paper what savings … Alright, now I'm talking like … I've got 53 staff here; okay, salary, uniform, uniform cleaning, ID passes, car park passes, office space, maintenance of the place, radios …Training; Car park passes, do you know how expensive they are for each staff? Basically you're talking about nearly £700 for the normal car park and the centre pass about £1,200.
B02	Outsourcing only would help us with ground services to reduce our costs because in ground services, basically ground services is in charge of the check-in, of the ramp, of the parking charges, aircraft … everything. So that's a huge cost to them.
C03	You eliminate a lot of the other expenses, such as training, uniform, sort of less obvious things like pensions, employment law and health and safety requirements. There are many, many hidden things which relate to employing staff that are costly to incorporate into your organisation. So if you outsource that problem is with somebody else.
C03	Cost reduction, a means of trimming or right-sizing, as the Americans would say, the organisation, shedding any sort of not only manpower, facilities that maybe are unnecessary or you know, costly, reducing the facilities.
C03	The savings are in peripheral costs. So you know, the pensions, the overtime maybe, compensating time for when people work extra hours, the HR functions, appraisals, paperwork. There's a big supporting structure around having your own staff which you can cut right back if you outsource. And there's many, many areas … such as training facilities, training staff and a lot of government taxes you have to pay as well for your staff, each staff member's national insurance, there's company tax that we have to pay. So it's not just the direct costs, there are other costs, hidden costs. So in the end, the overall saving, the overall benefit is a cost saving.
D04	Well it's reduced training, definitely; definitely reduced training costs. It's difficult for me to pinpoint if it's reduced labour costs because our operation is all day. Using the Gatwick example again, it's a huge saving on labour costs if you only have one flight a day because you only pay for what you use. Whereas I pay … I'm operational all day, so there's not much cost savings between if I did it myself or I gave it to someone else to do.
D04	We save in secondary costings, i.e. car park passes, we don't have to pay for those staff to have access to BAA car parks, so that a considerable saving.
D04	These passes … these cost about £200 a go, so if you recruit … if you outsource, they have to pay £200 for each of these, which means I don't have to pay for them. So there are savings there on passes and … car park passes and such like.
D04	Strengths; fixed costs and ability to flex up and down when required. And you don't pay for what you don't use; what I mean there is if we cancel a flight, we don't pay them for it.
D04	They absorb the cost of the cancelled flight, i.e., they're bringing their staff in but they've got nothing to do.
D04	There is not a black and white answer in that the trade-off is in-house, higher quality against outsourced, potential lower quality but lower costs. What you need is an intermediate.
D04	Strengths; fixed costs and ability to flex up and down when required. And you don't pay for what you don't use; what I mean there is if we cancel a flight, we don't pay them for it.
D04	Now when you work all day from the beginning of the day to the end of the day and you can justify all hours in that day, then a lot of the time it's better to bring it all in-house because it is cost-effective, because you're paying for staff who are doing something all day. But you have to hit that critical mass, where all of a sudden your whole day is paid for. But when you're only paying … when you can only justify paying for two thirds of a day or half a shift, then it's always more cost effective to give it to someone else because you're only paying for the four or five hours.

E05	So the source of cost saving is mainly labour, labour costs? M: I would probably say so for us here, yeah. M: I mean obviously we don't pay for equipment either.
E05	Whether you outsource or not comes to the point of things like frequencies. Now with 747s, if you have two wide-bodied aeroplanes a day and they're carrying about 350 people, you're almost at the breakeven point where you might consider going self-handling. Okay? Once you go over two wide-bodies a day, and you're into threes and fours, you would probably actually be saving money by having your own passenger handling staff.
E05	Above wing, so we got to the stage where we went up to three flights a day and I went to the company and said 'Look guys you know, wouldn't it be worth going self-handling for the passenger handling because we would actually be saving money because the amount we pay per aircraft turnaround obviously is not changing now, it's just multiplying the more flights we get'. So then what we do is you work out okay, well we're handled by this ground handler and they're charging us this much for each turnaround times our number of aeroplanes, comes up to this amount of money in the year. Now you turn round and say okay, well I've got three flights a day, I need two shifts, I need this many staff to do the passenger handling, you multiply the salaries at the end of the year and you look at the difference. And the chances are it's cheaper to do it with your own staff. Now the problem you have is that on top of not just having your own staff, you've got other issues to do with staff.
E05	Under wing, as far as we're concerned here, we couldn't do it anyway because we couldn't afford to buy … it wouldn't make sense to buy the equipment and all the amount of staff you need to do it. Because obviously ground handlers win by the fact that they've got a pool of equipment, they've got a pool of manpower and they take their contracts on that fit into … so that they get the maximum usage of those. So that's where their economies come in, so that's how they do that. You have the cost of IDs; these alone, you have to pay money to get airside IDs you know, security IDs. Uniforms are extra cost, leave is extra cost; all that, "WE" will not be involved in. They just pay a set amount of money a month and the handling company just takes care of everything. And it's more feasible, it's time-consuming, it's less paperwork, it's cost-effective as well.
F06	It's cheaper, much cheaper to outsource. For many reasons, like I said, we don't deal with the overtime that they do, they pay … the overtime is eliminated, leave and all that is eliminated, sicknesses. What else? Uniform costs and training, everything is eliminated, so it's cheaper. So everything is just ready for us, we just say to them come and handle us, we pay monthly and that's it...we don't pay for any vehicles, we don't pay for … we don't have to buy anything...And if you have vehicles airside, you have to insure them and it's millions and millions of pounds, so we don't get involved with that either. So we don't do the insurance, nothing at all.
F06	Engineering, it's also cost-effective to outsource it because you outsource it, already the engineering department has all the tools, you don't have to go and buy and … again, we're talking about employees and cost of training and everything. We take that company, they have all the tools, they have all the parts, they have all the contacts of the airport, so if an aircraft has to stay and go to a hangar, they take care of it. So it's kind of like a must for every airline to outsource engineering, especially here at the airport. And the ones that have their own engineering, they've been here for many, many, many years, we're talking tens of years.
F06	They outsource, just purely for the cost of it. And the space because airside, to get an office first of all you can hardly find space to get a proper office that is suitable to hold staff offices plus storage, it's difficult. And if you do, the cost of it is absolutely massive. So … and plus, the tools, the spare parts, everything, the spares, they cost a lot of money.
F06	I: So with the number of flights, if the number of flights increased, then the cost reductions decrease? M: Yeah, they would.
F06	The advantage of outsourcing, like I said, is cost, less cost and less paperwork, I would say, less human resources.
F06	The outsourcing is cost-effective, it's less cost and that's the main thing nowadays is cost, this is where everybody's heading to, it's cost, reducing cost and so on because of the crunch that we're going through. So I'd say the best thing to do is to outsource.
G07	I: Which aspects of costs, do they reduce? M: Everything, just generally speaking when you give your operation to a third party, you're handing them everything on a plate, the costs then become all theirs. Because all you're looking at is the cost of that turnaround, so your focus is on one basic turnaround cost; you don't have to control the other costs, it becomes the problem of the supplier, like it is in our case when we're supplying to other airlines. I am picking up all the costs of the training, the IT costs, the telephone costs, everything.
G07	I: Would it be cheaper for "Your airline" maybe if they just outsourced, even with that number, the ten flights per day, if they just outsourced that function to another handler here? M: We've tried. I You've tried to outsource that number and then …? M: It still comes up more expensive and you don't get the same quality...And less control. I: Oh right. So when you said we tried … so you just did the calculation, you didn't …? M: No, no, no, we went to market, we went to tender.
H08	The other areas you know, like specialist areas where people just do that you know, they just do the water or they just do the toilet, yeah there's some benefits to that because it's not really cost-effective for you to do a ten-minute job on ten flights a day, and then you know, what are you going to do for the rest of the day?
I09	As well as being able to provide an efficient internal service to ourselves, and to be able to defray some of the downtime cost by offering services to third parties, we have a fairly efficient set up at the moment. In that

	respect, we're quite alike with Air Canada. Air Canada does a similar type of thing. In general yes. I think outsourcing is the way to help moderate your costs, but not always. I would say if we look at the case of United and American, United decided to outsource its heavy maintenance, American decided to keep its heavy maintenance in the US. I think you will found out if you go and ask a united executive whether that was a good decision to outsource the heavy maintenance, I'm pretty sure they would say no because they are being hit with some very high base maintenance costs and they're losing a lot of aircraft time shipping their aircraft out of the US for heavy maintenance and then back again. It's costing them a lot of money. When they first did it, it was fantastic, because they got rid of a very expensive workforce, some very expensive facilities, and so on and so forth. It's a short term gain, it's not a long term gain, and now three years later I think they are regretting it. But how do you start a maintenance base now? You can't. You've sold all the heavy machinery, you've got rid of the premises. You can't do it. You can't go backwards. That's the problem with outsourcing.
I09	Let's start with Heathrow, which is the bit that's closest to me. We are largely self-handling here, which means that we do a lot of the work for ourselves, with our own staff, and one of the reasons for that is we have a long schedule, which is a long working day and it's a relatively large schedule. It's cheaper for us to do a lot of the work ourselves.
I09	We've looked at outsourcing various parts of the operation. We looked at outsourcing ramp, and we looked at outsourcing automotive and stuff. Because of the size of the operation here, you know, we invariable run up against two or three hurdles. So if I was to outsource ramp handling, which is a very common thing to outsource, a few things happen. Firstly, TUPE gets in the way. If I was to go to a company and say 'Fine, let me… Would you please outsource this for me?' first off they would need to take over my staff at the same terms and conditions that my staff are already on and then make a profit on that, so there's almost a natural… It's almost mathematics get in the way here. How can they use my staff to do the same job, paying them the same terms and conditions and benefits for two years, and then make some profit on top of it and provide that service back to me cheaper than I'm doing it myself? If we are extremely inefficient then the answer is yes they can do that because they can use some of the downtime to go and work on other airlines, which would defray the cost of the people. That's simple business. But the fact is we have, because of the length of the day, and the schedule we have, and the peaks and troughs we have, we run a very efficient group anyway, so whenever I go and make a cost comparison of an outsourced company versus ourselves we don't get very far. We find that we …
J10	Yes, in terms of cost. We know it has a positive impact on cost. That's only if you have maybe one or two or three flights. But as we were saying, if you reach five or six flights per day then maybe it's more cost effective to in-source the function? So, what I'm saying is, outsourcing would have a positive impact up to a certain level and then … And then obviously it would probably be better to keep it in house.
J10	So definitely an airline with six or seven or eight flights a day … Yes, it's obviously cost effective and it's worthwhile them having their own staff.
N01	To save money. It's cheaper for us to … we don't … Therefore, we could probably, for argument's sake, we probably halved our work force. So 50% of our staff at that point went to work for their new company and we lost all the overhead costs of having those employees.
N01	Yes they're, [Suppliers], more efficient. They can do … turn round an aircraft with less men and less equipment. They do everything at a minimum cost, whereas your traditional airline, as you say, like Air Canada or American Airlines will have … they have to own all of the ground equipment, in theory. So they need a huge outlay for high loaders, staff salaries, equipment, offices … We don't have any of that cost. We just pay a price per passenger to Aviance.
N01	Generally, to be honest, the salaries are usually lower with the handling companies than the airlines, and that way they keep their costs down, but some airlines will be completely handled by the handling company. You won't have any airline staff at all. You might have one airport manager and then you use a company like Aviance to handle your passengers, your baggage, everything you do.
L11	Outsourcing definitely helps in reducing the costs. And it is one of the main objectives of outsourcing to reduce the cost. However, if I have many flights per day then I would reconsider the situation and see which is better for me
M12	Outsourcing positively impacts cost objectives. However, when you reach a specific number of flights per day then it's cheaper to be self-handling. That number varies depending on which station and country you're operating in. In addition, all direct and indirect costs should be taken into consideration. Such costs include salaries, permissions and work permits, benefits and compensations, and the facilities.

APPENDIX D

Document Overview: In general, the extracted pages of the employees' manual to privatisation provide an overview of the privatisation plan and restructuring of Saudi Arabian Airlines presented in Chapter 5. A scanned copy of the document can be found after the translation. The following is a summary of what is written in the Arabic language:

Saudi Airlines is proceeding with the privatisation programme in light of the executive approval obtained from the Supreme Economic Council of the Kingdom of Saudi Arabia. The privatisation programme includes the following main dimensions:

- Turning all non-core divisions of Saudi Airlines into commercial strategic business units owned by a newly created holding company;
- A comprehensive restructure of the airline, in terms of its financial, organisational, operational, and human resources structure;
- Restructure the flying division to become a commercial strategic business unit, operating on a commercial basis that corresponds to the foundations of the air transportation industry, locally, regionally, and internationally.

The steps that have been accomplished through the privatisation process include:

- A Royal Decree has been obtained to allow the airline to register each newly established SBU as a company fully owned by the airline in preparation to attract strategic partners to share in the investment.

- The Council of Ministers agreed on the policy and procedures that will be implemented in regards to the conversion of the current workers and employees when transferred to the new SBUs at the privatisation stage.

- The privatisation consultancy studies showed that the airline is overstaffed. Thus, the airline introduces optional early retirement packages to reduce the number of employees.

- Working continuously to improve services provided to passengers.

- Restructure the operations scheduling of the current fleet to correspond to the commercial operation requirements.

- Renew the fleet within the next ten years.

Consequently, the airline has finalised the transference of some of its non-core divisions to SBUs and initiated its privatisation process, as followed:

THE CATERING STRATEGIC UNIT
Catering produces more than 20 million meals per year. It is a service provider for about 49 airlines, through its five units located in Jeddah, Riyadh, Dammam, Medina and Cairo. This strategic unit was the first SBU to be shared with the private sector; 49% of its shares were sold to strategic investors.

CARGO STRATEGIC UNIT

Consultant studies confirmed the bright future for the cargo sectors. The annual growth in the cargo market is up 6% and could be increased by 13% in the fast cargo market. The income generated from that sector was more than 1 Billion Saudi Riyals. Cargo flights were scheduled to New York, Houston, Brussels, Hong Kong, Tibet, Shanghai, Dhaka, Khartoum and Nairobi. In addition, there are some seasonal flights to Cairo and Dubai. The campaign to attract a strategic partner has already started. Offers from bidders were received and are now in the evaluation process by the financial consultant of the privatisation project.

GROUND SERVICES STRATEGIC UNIT

The consultant studies showed that the trend of the ground services market indicates that airlines depend on mass orders for common services to get competitive prices. Ground service companies at the airport intend to make an alliance with each other to face the mass orders. Investing in SAUDIA's ground services unit is very attractive, because of the air traffic and the number of airlines that land at the Kingdom's airports. In addition, the investment of the local private sector is an important process for privatising this sector. The expansion of the operation of the ground services should include the check-in, boarding and ramp services. The completion of the privatisation requirements are expected for the middle of 2008.

TECHNICAL SERVICES STRATEGIC UNIT:

Many airlines are now outsourcing the maintenance services of the airplane fuselage and engines, which makes it an appealing market. The average growth in the market of the airplanes body and engines maintenance can reach 3%. The technical service department's ability to execute major maintenance services for all Saudi Arabian Airlines' airplanes and engines gives it a competitive advantage as well as the availability of qualified technicians and full-equipped workshops. Currently, Saudia provides technical services to many others airlines. A full restructuring has been made after merging the technical services and procurement management. The completion of the privatisation requirements are expected at the end of 2008.

PRINCE SULTAN AVIATION ACADEMY

The process of privatising this sector is planned to start by the middle of 2008 and to be finalised during 2009. To complete the privatisation processes, a full restructuring will be implemented in the academy and other training departments before converting them to a global aviation training academy. The academy will provide its services to all Saudi Arabian airlines' trainees and other airlines as well.

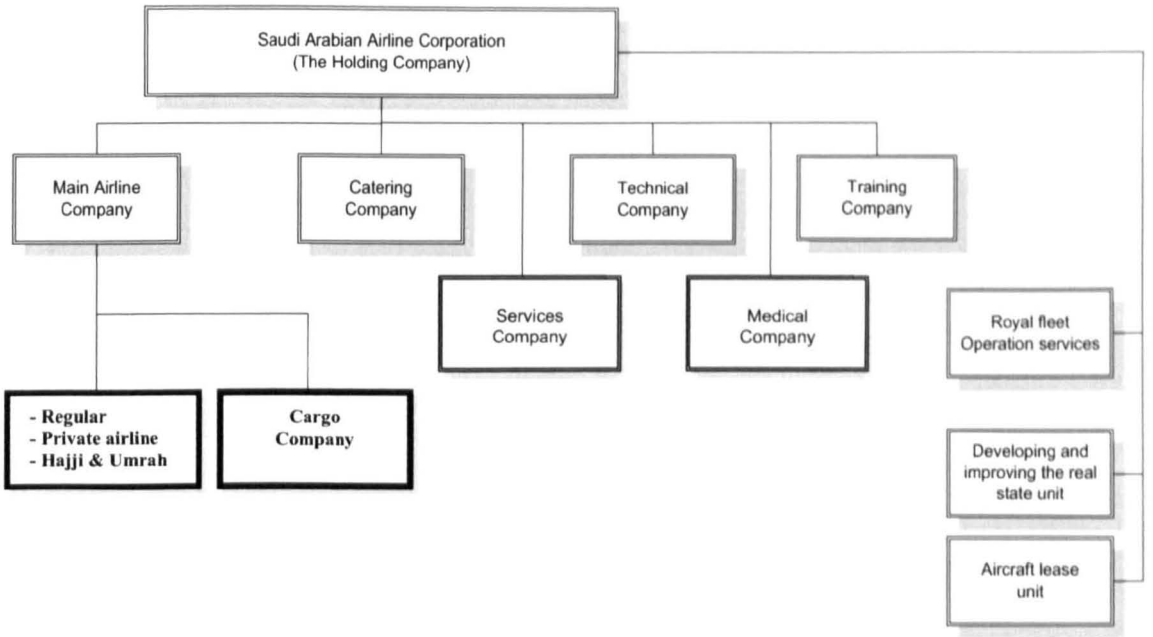
THE MAIN AIRLINE SECTOR

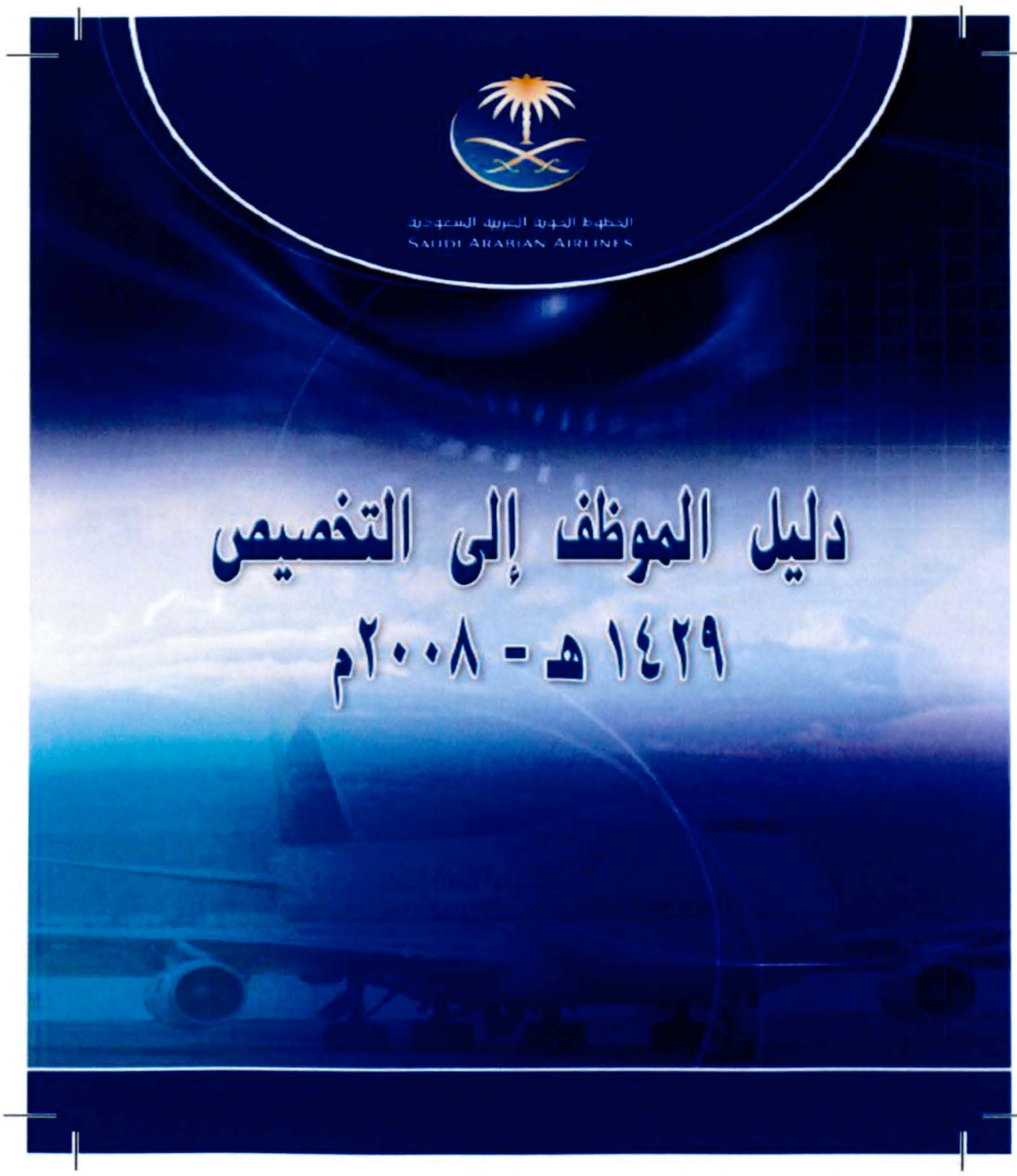
In order to prepare the main airline for the privatisation, a ten-year strategic plan and goals have been set. Such plans include the implementation of a complete plan to develop the automation systems, working on developing and improving the services, improving sales and increasing revenue, renewing the fleet within the coming years, restructuring the international flight schedules and concentrating on the most profitable sectors, developing and improving the domestic flights network, completing the establishment of three SBUs under the main airline sectors as follows:

- Routine (Regular) Airline (SBU)
- Hajj & Umrah Flights Unit (SBU)
- Private Airline Services Unit (SBU)

THE HOLDING COMPANY

In order to privatise the holding company several measures have to be taken. It is expected that 18 months will be needed to accomplish the privatisation of the holding company. In addition, the establishment of other SBUs such as the Information Technology SBU and Medical Services SBU has been approved by the board of directors of Saudi Arabian Airlines.


Saudi Arabian Airline Corporation
(The Holding Company)
Main Airline Company
Catering Company
Technical Company
Training Company
Services Company
Medical Company
Royal fleet Operation services
- Regular
- Private airline
- Hajji & Umrah
Cargo Company
Developing and improving the real state unit
Aircraft lease unit


الخطوط الجوية العربية السعودية
SAUDI ARABIAN AIRLINES
دليل الموظف إلى التخصيص
١٤٢٩هـ - ٢٠٠٨م

برنامج تخصيص المؤسسة

تستكمل الخطوط السعودية خطوات التخصيص وفق البرنامج التنفيذي المعتمد بموجب قرار المجلس الاقتصادي الأعلى رقم ١/٢٧ وتاريخ ١٤/ ٢/١٤٢٧هـ على ضوء المحاور الرئيسية التالية:

تحويل قطاعات المؤسسة غير الأساسية إلى وحدات تجارية إستراتيجية (مراكز ربحية)، ومن ثم إلى شركات تمتلكها المؤسسة (الشركة القابضة)، والانتهاء من إجراءات تخصيصها.

إعادة الهيكلة الشاملة للمؤسسة، والتي تشمل الهيكلة المالية، والتنظيمية، والتشغيلية، والقانونية، وشؤون الموارد البشرية.

إعادة هيكلة قطاع الطيران الأساسي وتحويله إلى وحدة إستراتيجية، وتشغيله على أسس تجارية تتناسب وواقع صناعة النقل الجوي المحلي والإقليمي والعالمي.

وخلال مرحلة التخصيص تم استكمال الخطوات والإجراءات المطلوبة، والتي نشير إلى بعض منها على النحو التالي:

- صدر المرسوم الملكي الكريم رقم م/٧٠ وتاريخ ١٤٢٨/٨/١٥هـ والمتضمن السماح للخطوط السعودية بتحويل الوحدات الاستراتيجية في القطاعات المراد تخصيصها إلى شركات يرخص للمؤسسة بتأسيسها بمفردها وتملكها بالكامل، وذلك تمهيداً لتخصيصها بمشاركة مستثمرين من القطاع الخاص.
- صدر قرار مجلس الوزراء الموقر رقم ٣٤٨/وتاريخ ١٤٢٨/١١/٢٣هـ

والمتضمن الموافقة على القواعد والترتيبات الخاضعة بمعاملة موظفي وعمال المو ٔسسة العاملين في الوحدات التجارية الاستراتيجية وقطاعات المو ٔسسة عند تحويلها ا ٕلى شركات بمشاركة مستثمرين من القطاع الخاص.

- بناٴعلى توصيات الشركات الاستشارية للتخصيص ، والتي تشير ا ٕلى وجود فائض في أعداد القوى العاملة ، قامت المو ٔسسة بتشجيع من يرغب من الموظفين على ترك الخدمة اختيارياً عن طريق التقاعد المبكر.
- استمرارية العمل على تحسين وتطوير الخدمات المقدمة لجمهور المسافرين فيما يتعلق بخدمات الحجز ومكاتب المبيعات ، وا ٕجراءات الصعود للطائرة ، والخدمة الجوية ، وخدمات الوصول ، والمناولة الأرضية.
- ا ٕعادة هيكلة الجدولة التشغيلية لأسطول الطائرات الحالي بما يتوافق ومتطلبات التشغيل التجاري.
- العمل على استكمال تحديث أسطول المو ٔسسة خلال العشر سنوات القادمة ، وذلك عن طريق الشراء أو الاستئجار طويل الأجل.

الانتهاء من ا ٕعداد خطة ا ٕستراتيجية متكاملة للعشر سنوات القادمة ، ويتم الاتفاق حالياً مع شركة استشارية للاستفادة من خبراتها في تطبيق هذه الخطة لوحدة الطيران الاعتيادي ووحدة الحج والعمرة ووحدة الطيران الخاص والنقل الجوي الداخلي ووضع التصورات التشغيلية ، وتوفير المساندة الفنية والا ٕدارية اللازمة لذلك لتحقيق الأهداف المنشودة لتطوير الخدمات وتحسينها ، وتنمية المبيعات وزيادة الا ٕيرادات ، وا ٕعادة هيكلة جدولة الرحلات الدولية ، وتطوير وتحسين شبكة الرحلات

الداخلية ، ونقل الخبرات الفنية والا دارية للقوى العاملة الوطنية.

• الانتهاء من تحويل بعض القطاعات غير الأساسية ا لى وحدات ا ستراتيجية والبدء في ا جراءات تخصيصها وذلك على النحو التالي :

الوحدة الإستراتيجية للتموين:

أعلنت المو سسة بتاريخ ٢٠٠٦/٨/٢١م عن رغبتها في تخصيص قطاع التموين كأولى القطاعات غير الأساسية ، وذلك لما يحتله هذا قطاع من أهمية كبرى تميزه عن غيره من القطاعات في الفرص الاستثمارية المتاحة من منطلق التالي:

يعتبر وحدة ا ستراتيجية منذ ا نشائه عام ١٩٨١م.

يمثل ا نتاج قطاع التموين ا لى أكثر من ٢٠ مليون وجبة سنوياً.

• يقوم بتزويد ما يقارب ٤٩ شركة طيران أخرى باحتياجاتها من الوجبات.

• يعمل من خلال خمس وحدات تموين متكاملة في كل من جدة ، والرياض ، والدمام، والمدينة المنورة ، والقاهرة.

وقد تم الانتهاء من تخصيص هذا القطاع ليمثل باكورة تخصيص القطاعات غير الأساسية بالمو سسة ، حيث تقدمت العديد من الشركات الوطنية والدولية بطلب الرغبة في الاستثمار فيه ، وبعد تقديم العطاءات ، صدر قرار مجلس الا دارة الموقر رقم ٤٥/٣ وتاريخ ١٤٢٨/٤/١٨هـ الموافق ٢٠٠٧/٥/٥م بالموافقة على ترسية العطاء لأفضل المتقدمين ، والذي يمثل ائتلاف مجموعة الحكير ومجموعة الفوزان وشركة نيورست ولقد تشرفت المو سسة بالرعاية الكريمة لصاحب السمو الملكي ولي العهد نائب رئيس مجلس الوزراء، وزير

الدفاع والطيران والمفتش العام ، ورئيس مجلس الا ٍدارة لمراسم توقيع عقد بيع ٤٩٪ من أسهم قطاع التموين مساء يوم الأحد ١٤٢٨/٩/١١هـ الموافق

الوحدة الإستراتيجية للشحن:

أكدت الدراسات الاستشارية وجود فرص استثمارية واعدة لقطاع الشحن الجوي بالخطوط السعودية في ظل الحقائق التالية:

- معدلات النمو في سوق الشحن الجوي تبلغ (٦٪) سنوياً وتزيد هذه النسبة ا ٍلى (١٣٪) في مجال الشحن الجوي السريع.

ارتفاع معدل التشغيل لهذا القطاع في المو ٍسسة حيث تقدر الا ٍيرادات بأكثر من مليار ريال سنوياً.

- تُسير "السعودية" رحلات منتظمة بطائرات الشحن ا ٍلى كل من نيويورك ، وهيوستن ، وبروكسل، وهونج كونج ، وتايبيه، وشنغهاي ، ودكا ، والخرطوم، ودبي. ا ٍضافة ا ٍلى رحلات موسمية لكل من القاهرة وتورونتو.

وتم البدء بالحملة الا ٍعلانية لاستقطاب شريك استراتيجي أو مستثمر محلي من خلال التركيز على الشركات العالمية المتخصصة في مجال الشحن ، حيث

تقدمت العديد من الشركات المتخصصة بطلبات الرغبة في الاستثمار في هذا القطاع ، ويقوم المستشار المالي لمشروع التخصيص حالياً بإعداد واستكمال الإجراءات المطلوبة لهذا الأمر ، ولقد تم الانتهاء من ترسية العطاء على أفضل الشركات المتقدمة للاستثمار في منتصف شهر يناير من عام ٢٠٠٨م وسيتم الإعلان عن موعد توقيع عقود الاستثمار في وقت لاحق خلال شهر فبراير من هذا العام ٢٠٠٨م.

الوحدة الإستراتيجية للخدمات الأرضية:

- أظهرت الدراسات الاستشارية المتخصصة أن الاتجاه العام لسوق الخدمات الأرضية يشير إلى توجه الشركات المستفيدة من الخدمة إلى التكتل للحصول على خدمات مشتركة بأفضل الأسعار.
- توجه الشركات المشغلة للخدمات الأرضية في المطارات إلى عقد تحالفات فيما بينها لمواجهة تكتل الشركات.
- زيادة الجاذبية الاستثمارية لقطاع خدمات المناولة الأرضية بالخطوط السعودية على ضوء الحركة الجوية في المملكة وإعداد شركات الطيران التي تهبط في مطاراتها وأهمية مشاركة القطاع الوطني الخاص في الاستثمار لتخصيص هذه الوحدة.
- اتساع نطاق الخدمات الأرضية من التشغيل في ساحة المطار فقط لتشمل تقديم الخدمات في صالات المطارات (الكاونترات وإجراءات صعود الطائرة).

ومن المتوقع الانتهاء من متطلبات تخصيص هذه الوحدة في منتصف عام ٢٠٠٨م.

الوحدة الاستراتيجية للخدمات الفنية:

تم الانتهاء من دمج الخدمات الفنية وإدارة المواد وإعادة الهيكلة الشاملة لهذا القطاع ووضع خطة متكاملة (Business Plan) من منطلق التوجهات الاقتصادية التالية:

- يشهد سوق صيانة هياكل ومحركات الطائرات انفتاحاً واسعاً في الفترة الأخيرة في ظل توجه العديد من شركات الطيران إلى شراء خدمات الصيانة من الخارج (Outsourcing).
- يصل معدل النمو العالمي لسوق صيانة هياكل ومحركات الطائرات إلى (٣٪).
- يمتلك قطاع الخدمات الفنية ميزات تنافسية تتمثل في القدرة على إجراء عمليات الصيانة الأساسية لكافة محركات وهياكل طائرات الخطوط السعودية، إضافة إلى وجود كوادر فنية مؤهلة وورش صيانة مجهزة.
- تقوم الخطوط السعودية حالياً بتقديم خدمات الصيانة للعديد من شركات الطيران الأخرى.

ويتم العمل حالياً على استكمال متطلبات تحويل هذا القطاع إلى وحدة إستراتيجية مستقلة، إضافة إلى استكمال جميع متطلبات التخصيص، حيث من المتوقع الانتهاء من ذلك بنهاية عام ٢٠٠٨م ليبدأ بعد ذلك مرحلة التخصيص خلال عام ٢٠٠٩م.

أكاديمية الأمير سلطان لعلوم الطيران:

سيتم بمشيئة الله البدء في إجراءات تخصيص هذا القطاع اعتباراً من منتصف

عام ٢٠٠٨م ليتم استكمال ذلك خلال عام ٢٠٠٩م وذلك با ,عادة الهيكلة الشاملة للأكاديمية وقطاعات التدريب الأخرى وتحويلها ا ,لى مركز عالمي للتدريب يعمل وفق أسس تجارية للتدريب الأولي على الطيران وتدريب الطيارين على رأس العمل على جميع أنواع الطائرات والتدريب على صيانة الطائرات ، وكذلك التدريب الا ,داري والتجاري والتدريب في مجال تقنية المعلومات وتقديم هذه الخدمة لجميع شركات الطيران وكذلك تدريب أبناء الوطن من منطلق تجاري على علوم الطيران لتخريج أعداد كبيرة من الطيارين ومهندسي الصيانة والمتخصصين في مجالات الا ,دارة والتسويق لسوق العمل في المملكة ومنطقة الخليج والشرق الأوسط.

القطاع الأساسي للطيران:

قامت ا ,دارة المو ٔسسة بالعمل على ا ,عداد القطاع الأساسي لمرحلة التخصيص من خلال تنفيذ التالي:

- الانتهاء من وضع الأهداف والخطط الا ,ستراتيجية خلال العشر سنوات القادمة للقطاع الأساسي للطيران.
- البدء في تنفيذ خطة متكاملة لتطوير الأنظمة الآلية المستخدمة من خلال وضع نظام تقني شامل مع الاستفادة المثلى من القوى العاملة .
- العمل على تطوير وتحسين الخدمات.
- تنمية المبيعات وزيادة الا ,يرادات.
- تحديث الأسطول خلال السنوات القادمة.
- ا ,عادة هيكلة جدولة الرحلات الدولية ، والتخطيط الأمثل لشبكة الرحلات بالتركيز على المحطات الأكثر ربحية.

- تطوير وتحسين شبكة الرحلات الداخلية.

•استكمال إعادة الهيكلة الشاملة (المالية والتشغيلية والتنظيمية ، وشؤون الموارد البشرية).

•العمل على استكمال إنشاء وحدات إستراتيجية تابعة للقطاع الأساسي للطيران على النحو التالي:

- وحدة للطيران الاعتيادي
- وحدة الطيران لرحلات الحج والعمرة
- وحدة لتقديم خدمات الطيران الخاص

ويجري العمل حالياً للانتهاء من وضع خطة متكاملة لمراحل تخصيص هذا القطاع ورفعها للمجلس الاقتصادي الأعلى للحصول على الموافقات اللازمة خلال عام ٢٠٠٨م.

الشركة القابضة:

يتطلب تخصيص الشركة القابضة مدة زمنية قدرها (١٨) شهراً من صدور قرار مجلس الوزراء الموقر بشأن الموافقة على تخصيص الشركة القابضة ، بحيث يتم القيام بالإجراءات التالية:

- الرفع للحصول على الموافقات الكريمة لتحديد نسبة الاكتتاب واستكمال المتطلبات النظامية.
- تحديد هيكل للاكتتاب العام المبدئي.
- إعداد المستندات الخاصة بالاكتتاب العام.
- مناقشة الأسعار مع المستشار المالي.
- إعداد المستندات الخاصة بضمانات الأسهم وتقديمها للجهات النظامية

الخاصة بالضمان.

- إعداد تقارير البحث اللازمة للمحللين.
- إعداد تقارير المرحلة السابقة للتسويق والتسجيل.
- إعداد العروض الإعلانية وتقويمها
- تحديد الطريقة المثلى لطرح الأسهم للاكتتاب العام

موافقة مجلس الإدارة على تحويل قطاع الطيران الأساسي إلى وحدة تجارية إستراتيجية وإنشاء وحدات تجارية إستراتيجية أخرى

وافق صاحب السمو الملكي ولي العهد نائب رئيس مجلس الوزراء وزير الدفاع والطيران والمفتش العام ورئيس مجلس إدارة المؤسسة العامة للخطوط الجوية العربية السعودية وأعضاء المجلس الموقر خلال الاجتماع الأول للسنة السادسة والأربعين المنعقد بعد ظهر يوم الثلاثاء ١٤٢٨/١٢/١هـ الموافق ٢٠٠٧/١٢/١١م، على الأهداف الإستراتجية للمؤسسة وخطوات مشروع التخصيص والدراسة المتكاملة التي قدمتها إدارة المؤسسة كما وافق على التالي:

أولا. الموافقة على تحويل قطاع الطيران الأساسي إلى وحدة إستراتيجية تجارية تشتمل على:

- وحدة الطيران الاعتيادي.
- وحدة الطيران لرحلات الحج والعمرة.
- وحدة الطيران الخاص.

ثانيا. الموافقة على إنشاء الوحدات الإستراتيجية الأخرى والتي تتبع للشركة القابضة على النحو التالي:-

- الوحدة الإستراتيجية لتأجير الطائرات.
- الوحدة الإستراتيجية لتنمية وتطوير العقارات.
- الوحدة الإستراتيجية للخدمات الطبية.
- نقل الوحدة الخاصة بخدمات وتشغيل الأسطول الملكي لتتبع مباشرة للمؤسسة (الشركة القابضة).


الخطوط الجوية العربية السعودية
SAUDI ARABIAN AIRLINES
الهيكل التنظيمي للشركة التابعة
المؤسسة العامة للخطوط الجوية العربية السعودية
(الشركة القابضة)
٢٠

APPENDIX E

CASE STUDY PROTOCOL: SAUDI ARABIAN AIRLINES (SAUDIA)

Overview

Objectives, issues and topics being investigated

- Identify the airlines' management motives behind outsourcing;
- Identify the airlines' external environmental factors influencing outsourcing decisions;
- Identify the airlines' internal factors shaping outsourcing decisions;
- Examine the airlines' current practices in regards to the main activities being outsourced;
- Evaluate the implications of outsourcing in the airlines' performance objectives: cost, flexibility, quality, and delivery;
- Evaluate the implications of outsourcing in the airlines' overall operational performance.

Field Procedures

Credentials and access to sites, sources of information

- ***List of interviewees:***

The Senior (SR) Manager (Mgr) for Administration and Coordination, the Vice-President (VP) for Corporate and Development, the Executive Vice-President (EVP), the Senior (SR) Specialist in Human Resources, the General Manager (GM) of Industrial Engineering and Systems, the General Manager (GM) of the Reservations Call Centre, the General Manager (GM) of Operations, and the Manager (Mgr) of Human Resources.

- Locations: Saudi Arabia/United Kingdom (Heathrow Airport)
- Access: Full access (as airline employee)

Questions

Specific questions the investigator should keep in mind during data collection

- ***Topics under investigation***:
  - *a.* Airline background;
  - *b.* Current organisational structure;
  - *c.* Challenges faced by the airline;
  - *d.* Restructuring process: motives, determinants (influencing factors)/ expectations (impact);
  - *e.* Ground services (first SBU after the restructuring): current status vs. expectations.

Final Report

Outline, format, narrative for the final case report

- ***Outline:***
  1. Build on the researcher's knowledge of the motives and other determinants influencing outsourcing decisions, and
  2. Understand the airline's top management team expectations on outsourcing that influence the airline's performance, including the performance objectives: cost, delivery, quality, and flexibility and overall operational performance.
- ***Narrative:***

Develop information collected through the personal interviews, using direct quotes under each heading (topic). Thesis: *Introduction →Literature Review →Research Methods →**Case Study***