Factors Influencing a Firm's Decision-making on the Introduction of New Services: A Case Study of Airbus Industrie

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Abstract

The main objective of this paper is to explore the various factors that have had a major influence upon Airbus Industrie's decision making concerning the introduction of a direct dispatch support service. A project was conducted by the company to assess its feasibility. This dispatch support service is essential for the daily flight operations, which was until recently left to big airlines and specialised computer companies. The data were acquired through extensive interviews with and company documents from the project team members and the director of customer support services of Airbus Industrie in France. Case studies analysis regarding the company and the project are presented. Among the strategic, environmental and operational factors identified in this research, a firm's commitment to a long-term relationship with customers has been found to be the most important influential factor upon the firm's decision-making.

1. Literature review

A number of theories has been developed to explain the behaviour of firms choosing between the internal provision or the external supply of commodities and services [1]. A range of variables which are most likely to affect 'make or buy' decisions has been identified. These include strategic, environmental and operational factors. Strategic factors include core business issues and entry barriers; environmental factors refer to degree of competition and pace of technological development, and within the operational factors are production costs and economies of scale. In the literature, two potentially conflicting trends are suggested. The first trend refers to the move toward strategic alliences. Thus, as firms become more focused and specialised in their core activities, they are likely to be in favour of the 'buy' decision. On the other hand, accelerating change in technology, competition and customer preferences has made it an essential requirement that a firm be able to maintain a long-term relationship with customers, by thriving on superior service quality and exceptional customer responsiveness. This implies that a firm may decide to provide services which used to be outsourced, if the quality of these services were not satisfactory. Service quality and customer satisfaction are important to managers because a customer's evaluation of a purchase is thought to determine the likelihood of repurchase [2]. In particular, service marketers have embraced the "gap" model, which suggests that consumers will judge a service encounter as high quality if the experience exceeds his or her expectations. Understanding customer expectations is a prerequisite for delivering superior service; customers compare perceptions with expectations when judging a firm's service. Parasuraman, et al [3] categorised customer service expectations into five dimensions, and include reliability, tangibles, responsiveness, assurance and empathy. Quality in services has become more important, as managers realise that the efficient design and delivery of their core tangibles are insufficient to provide a sustainable competitive advantage [4]. It is recognised that services in a technology-based industry have such particular characteristics as interactive and knowledge-creating. Demanding customers or lead users can act as a trigger for accumulating knowledge and exploring new product-market opportunities, which is crucial in sustaining a long-term relationship with customers and to the creation of a sustainable competitive advantage.

2. Company background

Airbus Industrie is a partnership of Europe's largest aircraft manufacturers, which combines the highly advanced technological capabilities of the European industries. The full partners in Airbus Industrie include Aerospatiale of France with a share of 37.9%, Deutsche Aerospace Airbus of Germany also with 37.9% share, British Aerospace

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with 20% share and Construcciones Aeronauticas (CASA) of Spain with 4.2% share. Fokker of the Netherlands and Belairbus of Belgian are associated partners.

The different power-plants are supplied either by General Electric, Pratt & Whitney, Rolls-Royce and CFM International or International Aero Engines. Over 1,400 companies in 23 countries supply the Airbus production system. The partners are liable for debts of Airbus Industrie out of their own assets. Customers and suppliers are therefore better protected than when dealing with normal limited liable companies. At the end of 1990, the combined sales of the four partners were over $22 billion and they employed 139,600 employees.

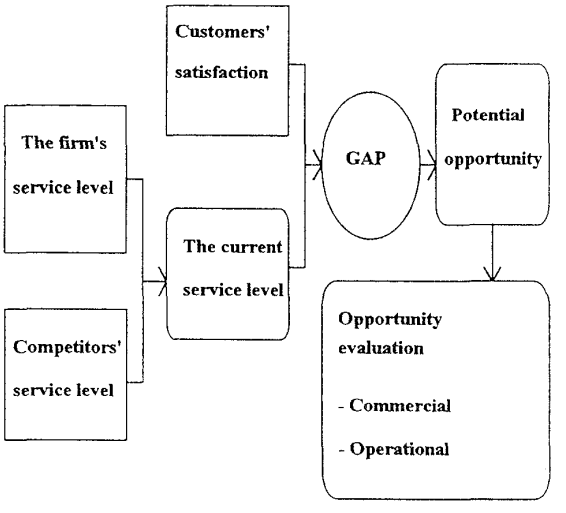
Airbus Industrie was formed in the late 1960s after the recognition that the European civil aircraft industries were too fragmented to compete effectively on an international scale. The long-term success of a European programme could only be achieved by harnessing the existing national resources into a single commercial enterprise capable of offering airlines a full range of products. Airbus Industrie operates on an international scale with its headquarters in France, main spare part centre in Hamburg and distribution centre in Singapore and Washington.

The aeronautical market today is characterised by the rapid technological change that has happened over the last decade, as a result of an increase in fierce global competition. The product life cycle time has decreased drastically in the last few years. Recession, intensified competition and increased product variety and complexity makes survival hard for many aircraft manufacturers as well as airlines. Confront with high environmental uncertainty Airbus Industrie has recognised the need to switch from standardised mass production to more flexibility by reducing fixed costs and increasing variable costs. In order to meet this need, the company has put a major focus on customer support service by thriving on superior service quality and customer responsiveness.

3. The introduction of direct dispatch support services by Airbus Industrie

The introduction of a direct dispatch support service (see Appendix for the details of this service) is an important move by the company towards building up long-term partnerships with the customers. The flight dispatch support is essential for daily flight operation, which involves the development of complex software programs and the provision of large-scale technical training. Until recently Airbus Industrie only provided core products for their airline customers, leaving the flight dispatch support to other specialised companies. However, customer complaints on the quality of the existing services were reported, especially from small airlines. This is because in-house operation requires manpower, expertise and equipment etc., which is not viable for the small airlines. Small airlines or carriers are therefore forced to obtain their flight dispatch support either from big airlines (which are often their direct competitors) or from specialised computer companies whose products are often too expensive and of a poor quality. Having committed to the establishment of a long-term partnership with the customers, Airbus Industrie considered it not only an opportunity but also a responsibility to respond to customers' demands. The company therefore set up a project to assess the feasibility of introducing a direct dispatch support service. A framework for assessing the feasibility of introducing DDs services was developed by the project team, which is shown in figure 1 below.

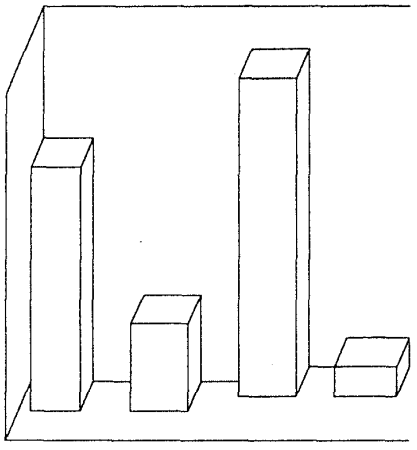
Figure 1 A framework for assessing the feasibility of introducing DDS services



As illustrated in Figure 1, the problems were approached by first measuring the gap between the customer expectations and the perceived service quality provided by current suppliers. This was achieved by a carefully designed large-scale questionnaire survey and in-depth interviews with potential customers. Secondly, the state of competition in the target market was studied by identifying four strategic groups. A questionnaire survey was conducted with the main suppliers of flight dispatch products, giving important and detailed information about the current services provided by the different suppliers. An in-depth

competitive analysis showed that dispatch support is currently available from four alternative sources, as shown in Figure 2. In-house operators are airlines who produce their own flight dispatch products, such as Air France, Swiss Air and Royal Jordanian. Some of these in-house operators also at the same time sell their services to other airlines, which form the second source. The third source is specialised companies like Sita, Jeppesen and AMR. Licence agreement is the fourth source, which is an in-house dispatch support carried out by the means of leased software to reduce the in-house effort and expenses. Direct dispatch support is faced with a number of entry barriers, including the relatively high capital, licence and labour requirements.

Figure 2 Current suppliers of flight dispatch support service



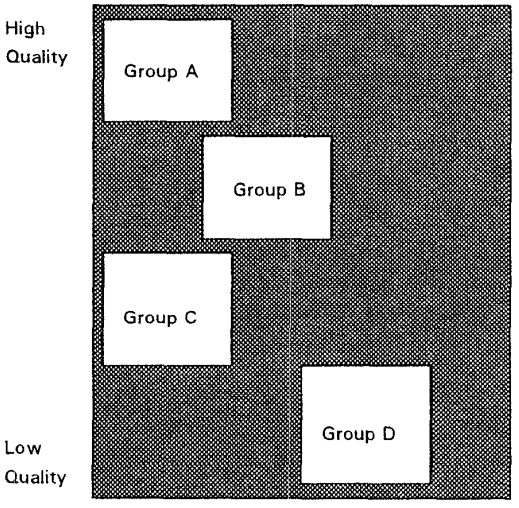
In-house Airline Specialised Companies Licence Agreement

Two important strategic dimensions in the aircraft manufacturing industry were identified by the company. These were vertical integration and quality image. As a result, four strategic groups were classified (see Figure 3). Group A consists of three companies, i.e. EDS, Sita and America West Airlines. Group B consists two major companies - Lufthansa and Swissair. Group C consists of Jeppesen and KLM and group D consists of Compuflight and Air Data.

The entry barrier differs for each group. For example, group D presents the lowest barrier because of the minimal investment required, the potential to offer a very broad line and the lack of experienced competitors in the market.

In addition, the company also evaluated customers' satisfaction of the current service through a large-scale questionnaire survey. Five ratings of customer satisfaction/service importance in nine current service areas were given in the questionnaires. They range from very satisfied/most important to very dissatisfied/least important. The results indicate an average of 25% of dissatisfied customers with regard to the flight operations support. Customers were particularly dissatisfied with the flight dispatch support services currently provided either by large airlines or specialised companies, since these suppliers were providing services at very high prices and often with poor quality. 50% of customers recommended the enlargement of the services currently available from the aircraft manufacturers themselves, by providing an independent source of flight documentation.

Figure 3 The four strategic groups in the flight dispatch support market



A gap was identified in the market, customers were demanding closer assistance, shorter response time and better quality service products. The identification of such a gap represents an opportunity for the aircraft manufacturers, since in today's fast moving aeronautical market, creating exceptional customer responsiveness is a key success factor, which requires both fast adaptation and tight linkage with the customers.

Meanwhile the study revealed that in today's competitive situation, where airlines have a vast array of products and suppliers, the behaviour of evaluating candidate aircraft has also changed. Conventionally, the prime target of an aircraft manufacturer is to maximise value by focusing on cost reduction. Customers then create an expectation of value which they compare with the offered value. The deviation will in turn characterise their satisfaction and thus influence

their purchase/repurchase probability. However, it was revealed in the current research that customers in the aeronautical market did not define and evaluate quality and value in the same way. Some gave more weight to the product value (i.e. performance, reliability, special features, etc.), others emphasised monetary aspects. Moreover, it was found that customers were evaluating and selecting candidate products based on criteria which not only related to product value and associated costs, but also related to service value, such as service quality, range, etc.

4. Concluding remarks

The case study on Airbus Industrie and its feasibility studies project reveals several important factors influencing the firm's decision-making regarding the introduction of a new service. The most important environmental factors were found to be competitors' reactions and purchase/repurchase probability. Operational efficiency and safety were found to be the most crucial operational factors. Strategic factors included entry/exit barrier and degree of firm's commitment to long-term relationship with customers. Among these factors, the commitment to long-term relationship with customers is an unique finding of this study. The case study reveals that the company has recognised the importance of managing buyer-seller relationships as strategic assets. Airbus Industrie characterises its customers as relationship customers and scales the commitment of resources accordingly. This represents a fundamental change in the concept and practice of marketing. However, many of these changes have been initiated by industry, their academic justification and theoretical explanation have not been attended. The findings of this case study have provided further evidence of such changes and stressed the need for the development of multi-disciplinary theories and approaches.

References

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Appendix The five sub-services of flight dispatch support

flight dispatch service	function
take-off chart	to decide the maximum permissible take-off temperature, weight and surface wind condition.
computerised flight plan	to improve operational safety and optimise operational efficiency.
route studies	to determine the capability of a particular aircraft type within an airline's network.
load and trim sheet	to determine the centre of gravity location of an aircraft.
airport and noise studies	to identify the operational feasibility of an aircraft and to assess noise level at a certain airport, given its runway length, surface dimension, etc.

