

The Influence of Internet Technology on the Aviation Industry: Existing Tactics and Future Advancements

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Abstract:

This paper focuses on the customer interface effects that Internet technologies are having on airline firms; the examination centres on many airline businesses that have been utilizing Internet technology for their own profit. It is demonstrated how airline operators are utilizing the Internet to provide their consumers cutting-edge transaction structures and exchange methods. Customers' expectations of what and how these businesses supply products and services are growing as the Internet becomes more widely used. In reality, the Internet has become critical to the strategic development of the airline corporations under consideration. The use of Internet technology at the user interface has made the limits and extent of the aviation sector less obvious. The availability of a diverse variety of products and services is driving industry convergence, which has significant consequences for business strategy formation. The use of the Internet at the consumer interface has become a critical driver in the development of the airline business. Further exploitation of the Internet will result in increased levels of complexity, which will raise customer expectations about what and how these firms supply products and services.

Keywords: Internet Technology, Aviation Industry, Consumers, Services, Convergence

Introduction:

The growing relevance of innovative Information Communication Technology (ICT) for economies and society has piqued the interest of academics and practitioners alike. Over the past two decades, ICTs have significantly impacted corporate operations and competition (Porter, 2001; Porter and Millar, 1985). Since the middle of the 1990s, the advancement of the Internet, with its vast range of potential services and applications, has resulted in a transformation of corporate strategy, as evidenced by the increasing use of terms such as industry convergence, virtual corporations, and electronic commerce. (Picot et al., 1997).

Evans and Wurster (1997) use the private banking business as an example, arguing that technological advancements will result in industry convergence and unbundling of conventional value chains. Conventional industry boundaries are dissolving as more businesses merge or overlap, particularly in the information technology sector (Bettis and Hitt, 1995). These changes have significantly impacted traditional strategic thinking, which saw industry structure as the key predictor of corporate performance (Porter, 1980). A critical issue for management in using the Internet is recognizing that these fundamental

shifts result in firms working in a more global, digitally integrated, and information-driven world (Sampler, 1998).

The examination focuses on many airline businesses that have used Internet technology at the user interface. Changes in the value chain and the integration of new value-added stages as a form of corporate strategy are discussed in detail, as well as the ramifications for corporate management. Analysis of several established and low-cost airline companies yielded the following findings. It demonstrates how airline operators use the Internet to create novel trade methods and transaction structures.

Customers' expectations of what and how these businesses supply products and services are growing as the Internet becomes more widely used. The use of the Internet at the consumer interface is a critical driver in the modernization of the airline business. The findings emphasize the significance of information as a vital resource for airlines. The introduction of Internet technology at the consumer interface has made it more difficult to define the scope and limitations of the aviation sector. The availability of a diverse variety of products and services is driving industry convergence, which has major ramifications for business strategy formation. Using Internet technology to integrate and exploit resources more effectively than rivals may provide substantial value.

Theoretical Background:

The Internet is a public, worldwide communication network that allows anybody to join directly via a local area network (LAN) or Internet Service Provider (ISP). The US Army's Advanced Research Projects Agency created a software standard for computer networking, resulting in a public network with gateways for connection and routing. This open standard, known as the Transmission Control/Internet Protocol (TCP/IP), was embraced by a wide range of research, education, and public-sector institutions as a way to integrate previously incompatible computer programs.

As corporations and people gained easy access to the Internet, there was an increase in interest in using it. This surge of connection has already caused and will continue to cause, changes in how individuals and businesses engage with one another. The interaction patterns will differ dramatically from those associated with past paradigms, such as mass manufacturing when corporations preyed on a mostly naive customer base. In truth, the method by which many firms address the demands of their clients is still highly affected by mass-production concepts. Initially, mass manufacturing focused on large-volume markets for 'vanilla' items, with little effort to cater to the demands of an uninformed consumer base. The firm could afford to pursue such a strategy since the customer needed more mobility in terms of access to alternative sources of supply. Although 'mass production' refers to the fabrication of physical items, its ideas have also been used in other fields such as travel, education, and finance.

The Internet provides a potent vehicle for customers to do this, giving them more power and control over corporations. In several corporate areas, commercial entities no longer deal with naive consumers. As customers become more intelligent, they will no longer accept whatever corporations are selling. Consumers will have more influence over their relationships with corporations. They now inform product and service suppliers about what they want, when they want it, how they want it, and how much they are ready to spend.

Dealing with this type of client necessitates a fundamental shift in the mentality of employees and management. Every operation within the organization and its suppliers should satisfy the end client. The Internet's benefits, such as increased access to information, lower procurement, marketing, and distribution costs, and easier commercial transactions, might make it challenging for organizations to reap these benefits. According to Porter (2001), the Internet may disrupt industrial structures and level the playing field, making it difficult for companies to maintain a competitive edge.

Amit and Zott (2001) advance e-business theory by exploring the fundamentals of value generation. The authors employ a unique data collection and cross-case analysis to find similar patterns of value generation in e-business, drawing from entrepreneurship and strategic management literature. Amit and Zott's approach follows Brandenburger and Stuart's (1996) definition of total value generated as the sum of values appropriated by all parties participating in a transaction. The term 'value' refers to the overall value generated in e-business transactions, regardless of who appropriates it (company, customer, or other participant). Figure 1 illustrates the value-drivers model, which identifies four variables that improve e-business value creation: Efficiency, Complementarities, Lock-In, and Novelty. The following value drivers will be examined in turn (Amit and Zott, 2001):

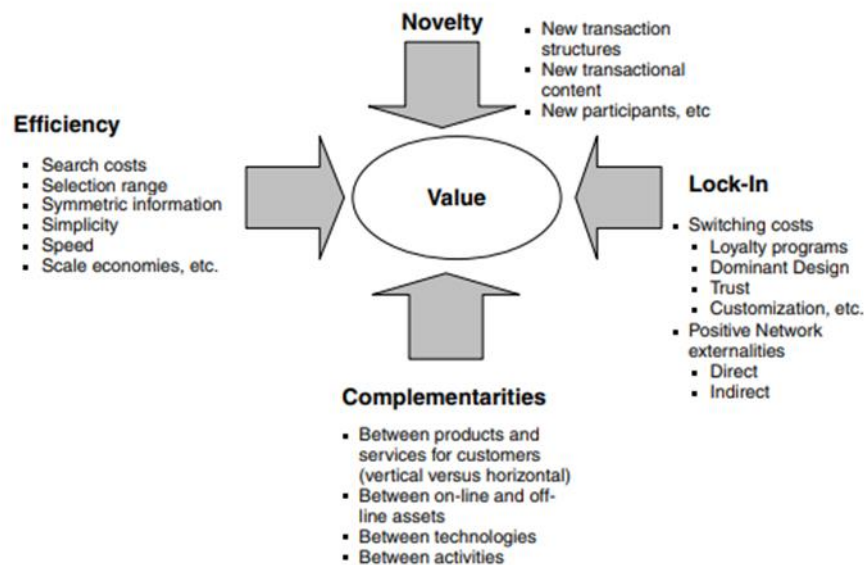


Figure 1. Sources of value creation (source: Amit and Zott, 2001: 504).

Efficiency: E-business technology can provide transactional efficiencies through reduced expenses. Rapid access to information on the Internet can lower search costs and boost negotiating power. Internet access can improve transaction efficiency by allowing faster and more informed decision-making. Connectivity may reduce distribution and inventory costs, streamline transactions, and enable clients to gain economies of scale through demand aggregation, supply chain optimization, and faster order fulfillment.

Complementarities are a set of products and services an organization offers that provide more value than the overall value of having each product or service alone. Partner organizations offer additional items, such as after-sales services or one-stop shopping. This research may be extended to consider how an offline presence might improve an online service. Organizations can also provide supplemental items or services later connected to the central business. Each value driver is interdependent on the others. Internet

technology can enable complementary products and services, leading to increased efficiency. For example, providing complementary products and services to clients can boost efficiency by reducing search costs and decision-making.

Lock-in refers to consumer motivation for repeat transactions and strategic partners' motivations for maintaining and improving relationships. Lock-in may be achieved in various ways, including loyalty schemes and incorporating trust mechanisms into the connection. Customizing products, services, or information to meet individual needs can increase client loyalty. Virtual communities may also increase lock-in to a certain organization by allowing regular conversations on various themes, fostering loyalty and repeat purchases. For Example, Amazon has included community elements, including a 'community of interests' where users may post book evaluations (Kotha, 1998). E-businesses may attract and keep clients by their efficiency and complementing features, leading to lock-in. Furthermore, the formation of lock-in can improve both efficiency and complementarities. According to Amit and Zott (2001), an e-business's potential value is determined by the efforts of all drivers.

Novelty refers to the novel ways e-business technology might influence transaction structure. Online auctions like eBay and Priceline have revolutionized business transactions. Value is produced by linking previously disconnected parties and removing inefficiencies in the buying and selling processes via novel transaction mechanisms. There are interdependencies between novelty and other value drivers. For example, innovation is associated with complementarities. The major innovation of certain e-businesses is found in their complementing aspects, such as the types of products and services they offer. Furthermore, there are links between innovation and efficiency. E-business efficiency can be attributed to new resources (e.g., transaction analysis) in a virtual environment.

Methodology:

Management research is often soft, applied, and diverse in complex and dynamic organizations (Tranfield and Starkey, 1997). Using the standard positivist technique, which relies on replication to assess validity, becomes challenging. The inductive case study technique is widely used in organizational management research (Yin, 1994; Bourgois and Eisenhardt, 1988). The case study technique gives richness and diverse views on the data obtained from the numerous managers involved, making it primarily qualitative.

To better understand how Internet technologies have impacted airline operators and their passengers, in-depth research of four airlines was done, including two no-frills carriers, Ryanair and easyJet, and two established ones, British Airways and Aer Lingus. Companies from the no-frills and established industries were chosen to investigate the amount of value produced by Internet technology. A research team carried out the primary analysis utilizing data collected from numerous sources. Data was collected from publicly available sources such as annual reports, investment analyst reports, and corporate websites. Yin (1994) and Eisenhardt (1989) employed within-case and cross-case analysis techniques. Rather than creating narratives, notes were used to collect within-case evidence.

A systematic questionnaire was constructed based on the four drivers of value creation to examine the following issues:

- The advantages of online purchasing the product/service (e.g., price savings, additional bonuses for frequent flyer accounts, etc.)

- The variety of complementing products and services offered.
- The extent to which complementary product and service suppliers are motivated to preserve and strengthen their relationships with airline operators.
- The variety of noncomplementary items and services supplied.
- How the Internet presence adds value to the core product (e.g., booking a seat) by offering additional products and services.
- The procedures utilized by airline operators to lower the switching costs of clients who make online purchases.
- Online firms that help passengers reserve airline seats.
- The Internet can decrease information gaps between passengers and airlines by providing comprehensive information.
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Real-Time Decision-Making Mechanisms:

Real-time flight reservations can be made immediately without relying on brick-and-mortar agents' hours of operation or the capacity to access Computer Reservations Systems (CRS) at the moment of purchase. Buyers and sellers receive quick payment information and confirmation, resulting in a balanced appropriation of mutual value. Airlines may reinforce their brand values and reliability through direct engagement with customers.

Access to various information on supplemental travel services, such as hotel accommodations and vehicle rentals, on both the airline's and online agencies' websites, facilitates decision-making even more. As a result of reduced information asymmetries, merchants may make quick judgments and respond quickly to client requests, mainly through direct contact methods. For example, Aer Lingus claims that its new web presence has enabled the airline to deliver 'greater value and adapt more swiftly to market conditions.'

Complementarities:

Value-added complementarities might be connected to or unrelated to the primary service. Analysis of low-cost and established airlines reveals vertical, horizontal, and other non-core offerings. There was also evidence that the airlines sold noncomplementary items and services via their Internet sites. Ryanair and Virgin provide various financial services, including travel and home insurance, through business-to-business relationships and integrated value chains. There were indications that the alliance partners were pushing each other's products and services to establish a global seamless service.

The growth of these middlemen is anticipated to cause significant problems for airlines. It has previously been demonstrated that information management at the business-to-customer interface is a substantial source of competitive advantage in the aviation sector. As a result, airlines must maintain direct contact with their consumers. However, in the future, these middlemen may constitute a significant challenge to airline carriers in this region.

Conclusion:

The facts offered in this article demonstrate how the Internet is a strong medium for facilitating business and communication between customers and airlines. The Internet allows customers to transition from passive participants to proactive and intelligent in their interactions with airlines. As the Internet advances,

customers will have increased expectations for enterprises' products and services. It should also be noted that the Internet is still in its early stages, with the underlying infrastructure a long way from being fully developed.

The use of information technology to handle information is already an essential aspect of the connection between airline operators and their consumers. Airlines must invest in analyzing templates to create robust analyses with travelers. Customers prefer complementary offers over individual products and services, leading to a trend towards partnerships and alliances. Identifying the airline's products and services that stand out from the competition is challenging. Its value creation occurs in networks of product and service suppliers.

Internet technologies at the consumer interface to expedite transactions necessitates a network of capabilities drawn from various sources, including customers, suppliers, complementary product and service providers, and, in some circumstances, rivals. They are using Internet technology to combine and exploit these resources more inventively and powerfully than rivals, which will be a vast source of value. As a result, airline operators must make corporate decisions beyond industry and firm borders. However, the problems connected with this must be understood in light of the significant complexity and dynamism of the sector developments.

The introduction of Internet technology at the consumer interface has made it more difficult to define the scope and limitations of the aviation sector. Airlines no longer analyze their competitive landscape just via the airline industry. The findings revealed that enterprises from various industries are active in meeting the demands of travellers by offering a variety of complementary and, in some cases, noncomplementary products and services. Offering a diverse range of products and services leads to industry convergence, affecting business strategy.

References:

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