AN ASSESSMENT OF E-BUSINESS STRATEGIES USING THE STRATEGIC ALIGNMENT MODEL

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Abstract

Most research concerning e-business offers a methodology, measures the predisposition of the firm or evaluates the consequences in terms of management. Few authors attempted to develop specific constructs and models for analyzing and evaluating e-business. This is why this paper aims at designing a model for assessing e-business strategies based on the strategic alignment perspective. Using the Information Systems (IS) literature about alignment and data collected from 11 interviews of general and e-business managers from the main companies of the French tourism sector, 12 variables were identified. These, in turn, can be used to build an e-business alignment model for the enterprise. Using this model, firms which have been developing an internet-related strategy over the past few years can assess their own decisions and actions concerning the Internet and are able to compare them to their competitors’. We decided to apply this investigation to a sector where firms did a lot in e-business: tourism.

Keywords: E-business, strategy, Information Technologies (IT), Information Systems (IS), alignment, model, Internet, tourism

INTRODUCTION

Criticized and even put into question, after the 2000 “e-crack”, e-business is present today, more than ever, in the activity of the firms.

If we only take a look at the B to C revenue of 2003, Europe raised 29.81 billion euros and the U.S. raised around 55.2 billion dollars with annual increase rates reaching up to 50%, depending on sectors.

Authors often give diverging definitions of the term “e-business”. What we propose here is a simple definition: the integration of Internet technologies within the firm, especially in order to present and sell products and services through a website.

This paper first describes the main trends in e-business research and then presents the Henderson and Venkatraman strategic alignment model (1993).

Finally, from the strategic alignment perspective, this research proposes an assessment model for Internet strategies: an e-business alignment model.

1. DIFFERENT RESEARCH APPROACHES ABOUT E-BUSINESS

1.1 Three main trends

E-business succeeded to become a strategic reality in the heart of the firms business and was the subject of different research. We can distinguish three main trends in e-business research (Table 1).
The first trend presents a methodology for integrating Internet within the organization: **how to do e-business?**

This trend consists in suggesting the right solution to successfully build an e-business strategy (Venkatraman, 2000; Kulatilaka et al., 2001).

Secondly, authors propose models measuring the predisposition of the firm for electronic commerce (Pillet et al., 2002), identify key factors for developing e-commerce (Ang et al., 2001; Raymond et al., 2002) or Internet (Limayem et al., 1999), in the organization. Others, finally, investigate the **IT core capabilities** (Van Der Heijden, 2001) or **IT infrastructure capabilities** (Vitale et al., 2002) needed to develop e-business.

The second trend studies Internet technologies and the developmental impact on the management of the firm: **how to manage e-business?**

It is necessary to take into account this impact on the organization of the firm (Kalika, 2000), the IS direction (Earl et al., 2001; Ross et al., 2002) and the firm’s performance (Monod, 2002).

Finally, the third trend builds a specific framework to analyze e-business: **how to analyze e-business?**

Some research aims at updating strategic management tools like the Value Chain (Porter, 2001; Rayport et al., 1995), The Industry Structure analysis (Porter, 2001) or even classical portfolio strategy maps (Tjan, 2001).

This research trend also attempts to evaluate the quality of a web site (Palmer, 2002) or the Internet consumer satisfaction (Devaraj et al., 2002; Mc Kinney et al., 2002). Finally, this trend presents assessment models and theories for the e-commerce activity of the firm (Nickerson, 2002; Wheeler, 2002).

<table>
<thead>
<tr>
<th>Trend</th>
<th>Question</th>
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<tbody>
<tr>
<td>Methodology</td>
<td>How to do e-business?</td>
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<tr>
<td>Managerial impact</td>
<td>How to manage e-business?</td>
</tr>
<tr>
<td>Analysis</td>
<td>How to analyze e-business?</td>
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</table>

*Table 1- Main trends in e-business research*

1.2 Methodology

In an exploratory approach, 11 interviews were made between June 2002 and October 2003 with general and e-business managers from the main companies of the French tourism sector. The semi-structured interviews focused on different subjects: Internet impact in the tourism sector, description of the e-business project of the firm, relations between e-business managers and general managers, current results of the e-business activity and objectives for the next years.

All the interviews were recorded (10 hours), transcribed (88 pages) and analyzed using a thematic categorization.

1.3 A real need

Concerning e-business, managers have learned more on their own through experimentation than through research (Malone, 2001). Moreover, the 11 interviews indicate a real need. Indeed, firms which have been developing an internet-related strategy over the past few years now need to assess...
their achievements. Today, it is necessary for them to stand back in order to assess their own decisions and actions concerning the Internet and to be able to compare them to their competitors'. This is why we propose an assessment model of e-business strategies in agreement with the trend of research aiming at designing a framework for the analysis of e-business.

2. THE STRATEGIC ALIGNMENT MODEL AS A FRAMEWORK FOR ANALYSIS

2.1 Presentation

The e-business strategies model proposed in this research is based on 1993’s Henderson and Venkatraman work. It suggests that strategy and IT developments must be coherent. The strategic alignment between business strategy and IT strategy is derived from two main relations:

- The *strategic fit between* the external and internal scopes of the firm
- The *functional integration* of IT within the enterprise

These links are drawn between four elements: *Business Strategy, Business Infrastructure and Processes, IT Strategy* and *IT Infrastructure and Processes* (Figure 1).
This innovative model goes further than the traditional linkage between business activity and IT by dividing IT functions into two elements, operating a distinction between IT strategy and IT infrastructure and process.

The most important objective for managers is not to reach alignment but to find the alignment perspective that best corresponds to the firm.

What strategic alignment aims at goes beyond partial fit. It is an attempt at simultaneously taking into account the complex relationships between strategies, structure and technology.

2.2 Use

Strategic alignment model for IS/IT can be applied to Internet technologies. If we consider e-business strategy as emerging from Internet technologies, the Henderson and Venkatraman model would enable us to assess the congruence of the e-business strategy with the rest of the firm. Today, however, there are very few, if any, studies that apply the strategic alignment model to the e-business activity of the firm.

Finally, today, as the potential or competitive advantages deriving from IT in the new economy have become crucial, the development of e-business puts forth the use of IT and brings into the foreground the strategic alignment concept.
3. AN E-BUSINESS ALIGNMENT MODEL

3.1 Construction

The model is divided into 4 levels connected to 3 main relations (Figure 2).

We define e-business alignment as the fit between the *E-business Strategy* of the firm (elaboration and application processes of the e-business strategy) on the one hand, and the *Business Strategy* (elaboration and application processes of the business strategy), the *organization* of the firm (structures and organizational processes), and the *E-business structure* (technological infrastructure and processes) on the other hand.

*Put together, strategic e-business alignment, organizational e-business alignment and technological e-business alignment constitute what we call the e-business alignment of the firm.*

![Figure 2 – Proposition for the representation of E-business Alignment.](image-url)
3.2 Variables

From the IS literature describing factors that inhibit or facilitate alignment, and the data collected in the 11 interviews conducted between June 2002 and October 2003 with general and e-business managers of the main companies of the French tourism sector, 12 variables were identified and adapted to the e-business activity (Table2). We can then with these variables characterize the different relations within the e-business alignment representation and obtain an e-business alignment model proposition (Figure 3).

<table>
<thead>
<tr>
<th>Relations</th>
<th>Variables</th>
<th>Meaning</th>
<th>References</th>
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<tbody>
<tr>
<td>Strategic E-business</td>
<td>Communication between managers</td>
<td>Regular exchange of information between managers during the elaboration and application of strategies</td>
<td>Lind and Zmud, 1991; Reich and Benbasat, 2000; Van Der Zee and De Jong, 1999</td>
</tr>
<tr>
<td>Alignment</td>
<td>Collaborative planning methods</td>
<td>Planning process including the activity</td>
<td>Broadbent and Weill, 1993; Reich and Benbasat, 2000; Lederer and Burky, 1989; Zmud, 1988</td>
</tr>
<tr>
<td>Valorization</td>
<td></td>
<td>Consideration of the activity by other functions of the firms</td>
<td>Amabile and Gadille, 2002; Ciborra, 1997; Reich and Benbasat, 1996; Interviews</td>
</tr>
<tr>
<td>Implication in the strategy</td>
<td></td>
<td>Implication of the activity in the strategy</td>
<td>Broadbent and Weill 1993; Interviews</td>
</tr>
<tr>
<td>Organizational E-business</td>
<td>Organizational change choice</td>
<td>Choice of adapting the organizational structure of the firm to the activity</td>
<td>Amami and Rowe, 2000; Interviews</td>
</tr>
<tr>
<td>Alignment</td>
<td>Resources shared</td>
<td>Sharing of resources in the establishment of working methods</td>
<td>Ives, Jarvenpaa and Mason, 1993</td>
</tr>
<tr>
<td>New processes</td>
<td></td>
<td>Creation of new processes for the activity in the firm</td>
<td>Broadbent and Weill, 1993</td>
</tr>
<tr>
<td>Functional integration</td>
<td>Level of integration of Internet-based technologies within the different departments of the firm</td>
<td>Amabile and Gadille, 2002; Interviews</td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>Inter-functional relationships: existence of inter-functional teams and exchanges between functional managers.</td>
<td>Broadbent and Weill, 1993; Boynton, Zmud, and Jacobs, 1994; Clark and Fujimoto, 1987; Luftman, 1997; Rockart, Earl and Roos, 1996; Interviews</td>
<td></td>
</tr>
<tr>
<td>Technological E-business</td>
<td>Complementarity</td>
<td>Complementarity in technological investments</td>
<td>Amabile and Gadille, 2002; Henderson and Venkatraman, 1993</td>
</tr>
<tr>
<td>Alignment</td>
<td>Development</td>
<td>Development of a new technological architecture</td>
<td>Henderson and Venkatraman, 1993; Interviews</td>
</tr>
<tr>
<td>Technological integration</td>
<td>Integration of existing technological resources</td>
<td>Rockart, Earl and Roos, 1996; Interviews</td>
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Table 2 – Selected variables for assessing e-business from literature about IS/IT alignment

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3.3 Research prospects

The Alignment trend has been much criticized because of the weakness of its empirical results. It is true that measuring alignment in practice is a rather difficult exercise.

Instead of statistical approaches based on co-variation, which have showed their limits, we decided to build an instrument to measure alignment with factual indicators of the fit. To do so we are adapting scales measure of alignment described in the IS literature, to the e-business activity, to establish a questionnaire that will be sent to the e-business or general managers of companies from the French tourism sector. Then the validity and reliability of the model could be tested.

We decided to apply this investigation to a sector where firms did a lot in e-business: tourism. Tourist products and services essentially contain information and are perfectly adapted to the Internet. This is why tourism represents one of the first sectors on the web. For instance, in the US tourism market, around 20\(^3\)\% of transactions were made on the Internet in 2003. The same year, in Europe, 27\(^4\)\% of travelers used the Internet to find information or make a reservation.

\(^3\) Jupiter Research, June 2003
\(^4\) IPK International 2003 Annual inquiry about Internet use in the travel industry
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