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Assessing the of potential of e-business models: towards a framework for assisting decision-makers

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Abstract

Decision makers are faced with an enormous range of electronic business models from which to choose. The process of fully researching each of these models can prove daunting. Such research is a feature of what has been termed the "intelligence phase" of decision making. This phase is important as options excluded at this stage do not get considered at a later stage. This paper develops a prerequisites framework for use at the intelligence phase to exclude models that are incompatible with prevailing organisational and supply chain characteristics. The framework assesses the following characteristics: economic control, supply chain integration, functional integration, innovation and input sourcing. The paper utilises a series of five point Likert scales to operationalise these characteristics so that they can be used by decision makers to efficiently manage "intelligence phase" activities.

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Keywords: Electronic business models; Decision support framework; Intelligence tool; Organisational characteristics; Supply-chain characteristics

1. Introduction

The electronic business landscape is confusing for many new entrants, and many of them face the paradox that hesitation would run the risk of being left behind, but rushing in and making an incorrect choice regarding electronic business initiatives could have dire consequences for organisations (Wise and Morrison, 2000). Internet-only or "dot.com" models have proven particularly vulnerable. For example, the "dot.com" implosion of Spring 2000 led to a large number of highprofile dot.com collapses including boo, ClickMango and eToys (Howcroft, 2001). "Clicks and Mortar" strategies have also met with mixed success e.g. Wall Street Journal Interactive (Chen, 2001) and Fyffes' World-of-Fruit. Electronic business poses significant challenges for organisations as it affects both how organisations relate to external parties (customers, suppliers, partners, competitors, and markets) – and how they operate internally in managing activities, processes, and systems (Rayport and Jaworski, 2001). Porter (2001) argues that the companies that succeed with e-business will be those that use the Internet in

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conjunction with their traditional business models and activities. Ben Lagha et al. (2001) argue that "after an initial phase of euphoria and the following disillusionment" in relation to electronic business, it is important to understand how business models function. Linder and Cantrell (2000) argue that existing frameworks are not sufficient to describe the rich array of business model choices facing managers in electronic business environments. In particular, decision makers have a difficult task in assessing the range of proposed models in order to determine those that are most suitable.

The objective of this paper is to develop a "prerequisites framework" for assisting decision makers assess the suitability of electronic business models during the intelligence phase of the decision making process. Following this introduction, the business model concept is discussed and the range of models proposed by researchers explored. The issue of deciding on appropriate business models is then outlined. This is followed by an explanation of the theoretical grounding for the proposed framework, and a discussion of its operationalisation as a series of Likert scales. The paper concludes with thoughts on refining and testing the framework.

2. Models of electronic business

Business models are possibly the most discussed, yet least understood area of electronic business (Alt and Zimmerman, 2001; Rappa, 2003). Osterwalder et al. (2002) make the point that consultants, executives, researchers and journalists have "abusively" used the phrase "business model" but have "rarely given a precise definition of what they exactly meant by using it", and that this has led to the a loss of credibility of the concept.

Mahadevan (2000) argues that a business model is a blend of three streams; value, revenue, and logistics. The value stream is concerned with the value proposition for buyers, sellers and market makers. The revenue stream identifies how the organisations will earn revenue, and the logistics stream involves detailing how supply chain issues will affect the organisations involved.

Timmers (1999) defines a business model as "an architecture for product, service and information flows", incorporating a description of the sources of revenue, the actors involved, their roles, and the benefits to them. According to Timmers (1999), an electronic business model is comprised of components, linkages and dynamics. Components are factors such as customer scope, product/service scope, customer value, pricing, revenue sources, connected activities, implementation, capabilities of the firm, and sustainability. Linkages exist when one activity affects another in terms of cost-effectiveness, and trade-offs and optimisation are sought to find the right blend to achieve competitive advantage. The dynamics represent how a firm reacts to or initiates change to attain a new competitive advantage, or to sustain an existing one, to have sustainable competitive advantage and to perform better than its rivals in the long term (Afuah and Tucci, 2001).

Osterwalder and Pigneur (2002) take a more meticulous approach to the discussion of e-business models. They propose an e-business model ontology, which they define as a "rigorous definition of the e-business issues and their interdependencies in a company's business model". The e-business model ontology focuses on four aspects of the organisation, product innovation, infrastructure management, customer relationship and financials as shown in Table 1.

Timmers (1999) has argued that architectures for business models can be identified through the

Table 1

Aspects of an e-business model (Osterwalder and Pigneur, 2002	
Product innovation	Target customer segmentValue propositionCapabilities
Customer relationship	Information strategyFeel and serveTrust and loyalty
Infrastructure management	 Resources Activity configuration Partner network
Financials	 Revenue model Cost structure Profit/loss

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