African Journal of Business Management Vol. 4(18), pp. 4096-4105, 18 December, 2010
Available online at http://www.academicjournals.org/AJBM
ISSN 1993-8233 ©2010 Academic Journals

Full Length Research Paper

An empirical research of the effect of internet-based innovation on business value

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Accepted 11 October, 2010

In recent years, much debate about the value of information technology (IT) in general and e-business in particular and has been raised. Aiming to contribute to the investigation of whether and how Internet/WWW technologies create business value, this paper develops a conceptual model, grounded on a well established theoretical foundation from the strategic management domain, the resource-based view (RBV) of the firm, which analyzes web infrastructure and internet-based innovation as sources of business value. The methodology involved a large data source collected by the European e-Business Market Watch, an established e-business observatory organization sponsored by the European Commission. Results show that web infrastructure is not significantly related to business value, while on the contrary Internet-based innovation has a positive significant impact on business value. In addition, results show no significant complementarities between web infrastructure and internet-based innovation. These findings indicate that firms should be very careful when they decide to make this kind of investments, since they have to combine 'hard' investments in web infrastructure with 'soft' investments for the development of new products, services and processes exploiting the capabilities of this infrastructure.

Key words: e-Business, information technology, resource-based theory, Internet, innovation, business value.

INTRODUCTION

Firms all over the world have to make important investment decisions concerning the development or enhancement of costly World Wide Web (WWW) related technological infrastructures aiming to benefit from the connectivity, transaction and collaboration capabilities provided by the internet, and to conduct various types of e-business activities (Al-Mabrouk and Soar, 2010; OECD, 2009; Turban et al., 2008). This kind of investment results in the creation of a very special kind of assets, which are much more flexible, adaptable and innovation enabling than the other 'usual' fixed assets (e.g. production equipment), belonging to the so-called 'general purpose technologies' (Bresnahan and Trajtenberg 1995; Melville et al., 2007). Therefore, it is quite important to understand whether and how such web-related infrastructures create business value, so that appropriate guidance can be provided to firms for making rationally these important investment decisions and defining appropriately their scope and composition.

Recently, much debate about the business value of Information Technology (IT) in general and e-business in particular has been raised. It has been argued that the technology itself is available to all firms (including competitors), so it will rarely create superiority, while at the same time empirical studies have found that IT spending rarely correlates to superior performance (Brynjolfsson and Hitt, 2000; Carr, 2003; Gonzálvez-Gallego et al, 2010; Mata et al., 1995; Powell and Dent-Micallef, 1997; Soto-Acosta and Merono-Cerdan, 2008).

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