IS/IT INVESTMENTS, STAKEHOLDERS AND FIRM PERFORMANCE

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Abstract

IS/IT investments are seen has having an enormous potential impact on the competitive position of the firm, on its performance, and demand an active and motivated participation of several stakeholder groups.

Actual research conducted in the Information Systems field, relating IS/IT investments with firm performance use transactions costs economics and resource-based view of the firm to try to explain and understand that relationship. However, it lacks to stress the importance of stakeholder management, as a moderator variable in that relationship.

Stakeholder theory sees the firm as the hub centric to the spokes representing various stakeholders who were in essence equidistant to the firm, and survival and continuing profitability of the corporation depend upon its ability to fulfil its economic and social purpose, which is to create and distribute wealth or value sufficient to ensure that each primary stakeholder group continues as part of the corporation's stakeholder system.

(Instrumental) Stakeholder theory argues that if a firm pays attention to the stakes of all stakeholder groups (and not just shareholders), it will obtain higher levels of performance.

With this premise in mind, this paper looks at the relationship between IS/IT investments and firm performance, moderated by stakeholder management.

Keywords: IS/IT investments, Firm Performance, Stakeholder Theory.

1 INTRODUCTION

1.1 Why firms need IS/IT

The introduction of IS/IT in organizations is likely to have a significant impact within the organization. IS/IT can be used in restructuring organizational activity, improving workers' coordination and interpersonal relationships (Turner 1998) and in strengthening the competitive position of the firm (Ward & Peppard, 2002).

Increased competition and the global economic climate have recently forced companies to cut costs significantly, to reduce their scope of operations through outsourcing, and to improve flexibility and responsiveness. These trends are increasingly supported by developments in IS/IT. In some cases IS/IT has become part of the product itself and, in many firms, particularly in the finance and services sector, IS/IT are regarded as a strategic part of the organizational infrastructure (Serafeimidis & Smithson, 1999).

1.2 Role of IS/IT in firms

Firms invest in IS/IT in order to improve their economic performance and increase their net worth (Powell 1992).

IS/IT can improve information sharing, decision-making, coordination, product quality, responsiveness and distribution (Al-Mudimigh et al. 2001; Shin 2001) as well as to differentiate their products, reduce the cost of their products or services, provide innovative products or services, support grow, or form alliances with suppliers and customers.

IS/IT are often designed to support and improve medium to long-term business, based on a variety of corporate goals. The employment of IS/IT within business has often resulted in the replacement of old problems with new, and the expected business benefits of IS/IT not realized. Despite increasing expenditure on IS/IT, productivity has not increased and this has given rise to a 'productivity paradox' (Love & Zahir, 2004).

1.3 Competitive advantage and IS/IT

IS/IT can impact on the competitive position of the firm, and be used to gain and sustain competitive advantage and to transform entire business processes (Al-Mudimigh et al 2001; Brynjolfsson & Hitt, 1998; Huerta & Sánchez, 1999; Inchusta 1997; Renkema 1998). In the 1980s IS/IT was herald as a key to competitive advantage (McFarlan, 1984; Porter & Millar, 1985). Porter and Millar (1995) concluded that IS/IT has affected competition in three ways: it has led to changes in industry structure and competition, it was used to support the creation of new business and companies using IT outperformed their competition.

The earliest works linking investment in IS/IT to competitive advantage are primarily descriptions of the specific technologies employed by various companies for strategic purposes (e.g., American Airlines' SABRE system). A large portion of the subsequent research in this area has been dedicated to theory development and refinement of how firms may identify and exploit opportunities to use technology as a competitive weapon (McFarlan 1984; Porter & Millar, 1985). Earl (1989) suggests that IS/IT has the potential to be a strategic weapon in at least four ways: to gain competitive advantage, to improve productivity and performance, to enable new ways of managing and organizing and to develop new business. The belief that IS/IT could lead to competitive advantage has become less certain in the 1990s (Stratopoulos & Dehning, 2000).

Many organizations find themselves in a "Catch 22", for competitive reasons they cannot afford not to invest in IS/IT, but economically they cannot find sufficient justification for it (Willcocks 1992).

The use of IS/IT to increase the competitiveness of a firm has been a major area of interest in IS literature.

1.4 IS/IT investment evolution

The cost of IS/IT has plummeted dramatically since the 1960s, generating enormous investment in IS/IT and increasing the pace of IT adoption by organizations (Serafeimidis 1997) and the sums continues to rise at an alarming rate (Ballantine & Stray, 1999).

Ryan and Gates (2004), and Willcocks and Lester (1999) also report that in the last decades, organizations around the world have made enormous investments in IS/IT, those sums are increasing and predict that organizations will continue to invest heavily in IS/IT, although the effect of such investments on firm productivity has been unclear (Dasgupta.et al., 1999; Farbey et al. 1999).

1.5 Limited resources and efficient allocation

The Organizations have limited resources and these resources are expected to be invested in anticipation of the highest future gains. The initial enthusiasm for IS/IT has more recently been overtaken by a sense of pragmatism. Senior management started seeking concrete evidence of the contribution IS/IT make to the success of the business and the value organizations are getting from their extensive IS/IT investments (Serafeimidis 1997; Serafeimidis & Smithson, 2000). Due to the decrease of margins and their limited resources, firms must allocate these resources in the best investment alternatives they can (Pérez 1998). Senior managers need to question the returns from such investments and whether the IS/IT route has been and can be, a wise decision (Willcocks 1992).

1.6 IS/IT investments impact on performance

For most of the past half-century, organizations have been increasing their investments in IS/IT, primarily because of the belief that IT has a significant impact on organizational performance (Osey-Bryson & Ko, 2004).

The initial enthusiasm for IS/IT during the 1970s and 1980s has long since been overtaken by a sense of pragmatism. Management now seeks more concrete evidence of the business and the 'real' value of their often extensive IS/IT investments (Serafeimidis & Smithson, 2000). Despite massive investment in IS/IT by both the public and private sectors (Caldeira 1998), there seems to exist an apparent lack of evidence concerning the impact on productivity and business performance of such investments (the so called "productivity paradox").

During the past decade a great deal of attention has focused on the impact of IT investment. However studies have frequently generated controversial or inconsistent results. Success stories give impressive examples of the effects of investment in IS/IT on a firm's performance and competitive advantage, and therefore, become one of the key areas in organizational investment strategies. At the same time, several empirical studies have failed to find any positive relationships between extensive use of IS/IT and organizational efficiency, performance and success (Kivijärvi & Saarinen, 1995).

At firm, industry and economy level there is contradictory evidence on whether IS/IT expenditure has resulted in business value. The statistical uncertainty adds substance to a continuing business worry about how the value of IS/IT expenditure can be measured (Farbey et al., 1999).

Although it is important that a firm should invest in IS/IT and the competitive advantages from superior IS/IT investments be widely recognized (Brynjolfsson & Hitt, 1998), some research (Harris & Katz, 1989) has shown that it is unlikely that higher expenditures on IS/IT alone will ensure a firm's superior performance and actual returns received on IS/IT investments vary widely (Brynjolfsson & Hitt, 1998).

It is opined that the greatest benefits of IS/IT appear to be realized by organizations when IS/IT investment is coupled with other complementary investments, such as organizational reengineering, restructuring and redesign (Lee & Bose, 2002). IS/IT investments may not automatically improve financial performance; instead, it is one essential tool, but needs to be coupled with organizational factors such as business strategies to be truly effective (Shin 2001).

2 STAKEHOLDER THEORY

The idea that corporations have stakeholders has now become commonplace in the management literature, both academic and professional (Donaldson & Preston 1995). The ruling paradigm of corporate governance holds that those who invest their capital into whatever kind of business, and, by that token, those who risk losing their investment in parts or in total, have an entitlement (and an

obligation) to govern the business they have invested into. Capital investors (principals) either govern the business themselves, or they do so with support of agents (managers) who they may appoint. The observation that principals and agents may have conflicting interests even among themselves has led to the development of agency theory (Jones, 1995).

The exclusively economic perspective on corporate governance has been seriously called into question from various angles. There are obviously more individuals and groups who have something important at stake than the shareowners and managers alone. Furthermore, it is not just the stake, but also the potential for conflict of interest. Stakeholder theory attempts to describe, prescribe, and derive alternatives for corporate governance that include and balance a multitude of interests (Scholl 2001).

Freeman's (1984) landmark work provided a solid and lasting foundation for many continuing efforts to define and to build stakeholder models, frameworks, and theories. According his work, strategic management of private sector firms could become much more effective and efficient, if managerial efforts regard various stakeholders' concerns. In other words, shareholders benefit long-term if other legitimate interests in the firm do not fall by the wayside.

In the view of Scholl (2001) the firm was seen as the hub centric to the spokes representing various stakeholders who were in essence equidistant to the firm. In other words, the perspective of stakeholder theory was partly inside-in (employees, managers), and inside-out (others), viewing very much in the same fashion, corporate managers look at their firms and the world around them.

The stakeholder theory is unarguably descriptive, it presents a model describing what the corporation is and describes the corporation as a constellation of cooperative and competitive interests possessing intrinsic value.

It reflects and explains past, present and future states of affairs of corporations and their stakeholders. Simple description is common and desirable in the exploration of new areas and usually expands to generate explanatory and predictive propositions. The stakeholder theory is also instrumental. It establishes a framework for examining the connections, if any, between the practice of stakeholder management and the achievement of various corporate performance goals. The principal focus of interest here has been the proposition that corporations practicing stakeholder management will, other things being equal, be relatively successful in conventional performance terms (profitability, stability, growth, …). Instrumental uses of stakeholder theory make a connection between stakeholder approaches and commonly desired objectives such as profitability.

Although Donaldson and Preston (1995) consider that these are significant aspects of the stakeholder theory (to be descriptive and instrumental), they argue that its fundamental basis is normative. In normative uses, the correspondence between the theory and the observed facts of corporate life is not a significant issue, nor the association between stakeholder management and conventional performance measures a critical test. Instead, a normative theory attempts to interpret the function of, and offer guidance about, the investor-owned corporation on the basis of some underlying moral or philosophical principles. Normative concerns dominated the classic stakeholder theory statements from the beginning.

Donaldson and Preston (1995) also point that stakeholder theory is managerial in the broad sense of the term. It does not simple describe existing situations or predict cause effect relationships; it also recommends attitudes, structures, and practices that, taken together, constitute stakeholder management. Stakeholder management requires, as its key attribute, simultaneous attention to the legitimate interests of all appropriate stakeholders, both in the establishment of organizational structures and general policies and in case-by-case decision making.

3 STAKEHOLDER THEORY AND IS/IT INVESTMENTS

In the information systems field, there is an extensive work about a wide range of issues such as IS/IT evaluation, design, implementation and management of IS/IT investments, using stakeholder theory.

However, the main focus is about the use of the "stakeholder" concept and with their identification ("Descriptive Stakeholder Theory"). This research also stresses the importance of including stakeholders on several tasks such as evaluation and IS/IT design in order to achieve the expected levels of performance.

Today the benefit of exploiting IS/IT not only relates to making business processes and tasks more efficient. Instead, IS/IT also enables the creation of products, services, distribution channels, and links with costumers, suppliers, and other stakeholders.

Remenyi (1999) defends that IT has no direct value in its own right. IT investment has a potential for derived value. As a consequence of the above it is clear that IT investment only derives its value to the organization though its business applications. This in turn can only be effected in the hands of the information systems principal stakeholders and it is these individuals who need to manage the investment as well as its evaluation. More than any other factor of success or failure of the IT investment is a function of the skill and commitment of the information systems principal stakeholders.

The main implication of this derived value of IT notion is that the actual benefits of an IT investment cannot be perceived directly or on their own. Only when IT is coupled with other resources, and especially the principal stakeholders, can any benefits or value be perceived.

These people are the primary or principal stakeholders of the IT investment. By primary stakeholder of the IT investment is meant the individual or group of people who have the most to gain or the most to lose if the investment is or is not a success. The characteristic of the principal or primary stakeholder which is of most interest is the fact that he or she or they can directly influence the success or failure of the information systems. The lack of correlation of IT spending with financial results has led Strassman (1997) to conclude that it is not computers that make the difference, but what people do with them.

Placing the principal or primary stakeholders at the center of the information systems investment does indeed reposition the locus of responsibility for the success of the information system.

Any organization ultimately makes investments in IS/IT to create value for its stakeholders, whether they are shareholders, costumers, employees or others with a vested interest in sharing in its success (Ward & Peppard, 2002). The literature cites many examples of IS/IT projects in which multiple stakeholder groups are involved, with substantial influence. Farbey et al. (1999) found that external stakeholders could play a decisive and crucial role in many IS/IT investments.

4 IS/IT INVESTMENTS AND FIRM PERFORMANCE

The In spite of theoretical arguments and professional belief in favour of a positive relation between investment in IT and firm performance (Thatcher & Oliver, 2001), empirical evidence on this relation has been inconclusive and has arrived at multifaceted conclusions that have sometimes been conflicting (Lee & Bose, 2002).

Beyond theory development, numerous attempts have been made to relate IS/IT expenditures, computational intensity, MIS budget, or other particular strategies to firm performance (Brown et al., 1995).

Several empirical studies and ample anecdotal evidence indicate that companies that spend more on IT are not rewarded with superior financial performance (Stratopoulos & Dehning 2000). Kauffman and Weill (1989), among others, have failed to find a convincing body of evidence that IT investment is always associated with superior performance. Stratopoulos and Dehning (2000) report empirical evidence that suggests the financial performance of a firm, is more related to the way IT assets are managed than the level of organizational spending on new technology, and thus, adding further dimensions to the productivity paradox.

The traditional IT productivity paradox literature seeks a direct casual relationship between IS/IT investments and productivity, as opposed to viewing productivity gains as a result of an alignment between managerial and technological choices. By not including other important organizational variables, explanatory models of performance become vulnerable to mis-specification and may produce distorted findings (Francalanci & Galal, 1998).

Research at the firm level has demonstrated that IS/IT investment has a significant effect on productivity levels, productivity growth, stock market value of firms, and also on the internal performance metrics such as inventory turnover (Hitt et al., 2002). Although some of the studies found a significant correlation between IS/IT spending and productivity, others were still unable to identify productivity gains from IS/IT. Researchers have put forth several explanations for these seemingly contradictory and paradoxical findings, but slight work has been done to identify the conditions under which managers should expect IS/IT investments to contribute to productivity.

Researchers have been unable to conclude that IS/IT spending by an organization results in increases in key performance indicators (Sircar et al., 2000).

5 CONCLUSIONS AND FUTURE RESEARCH AGENDA

Mixed empirical results are always an invitation to seek better theory. A productive approach would be to move from the question of whether IT creates value to how, when and why benefits occur or fail to do so (Soh & Markus, 1995).

Actual research conducted in the Information Systems field, relating IS/IT investments with firm performance (using a wide range of performance measures) use transactions costs economics and resource-based view of the firm to try to explain and understand that relationship. However, it lacks to stress the importance of stakeholder management, as a moderator variable in that relationship.

Stakeholder theory (in its instrumental version) argues that if a firm pays attention to the stakes of all stakeholder groups (and not just shareholders), it will obtain a better performance, than not doing so.

The impact of IS/IT investments on firm performance, moderated by stakeholder management it is an interesting area and worthy of investigation.

Future research will be conducted using data selected from two surveys, Survey on the Use of IS/IT by Portuguese Firms (IUTIC) and Annual Harmonized Inquiry to Business (IEH), both executed by the Portuguese National Institute of Statistics (INE), for the years of 2004 and 2005 (they are the first 2 years in which firms answered the question "how much did you spent in IS/IT?"). Using OLS, it intents to relate IS/IT investments with firm performance (measured by ROE, ROA, ROS and ROI) moderated by a "stakeholder management" variable, and conclude if in firms with "stakeholder orientation" this relation is stronger, than with other companies.

It is argued that the key in the positive impact of IS/IT on firm performance is the "stakeholder orientation" of the firm and its stakeholder management practices, that motivates all stakeholder groups to act in order to create value.

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