

Executives' Perspectives on IT: Unraveling the Link between Business Strategy, Management Practices and IT Business Value¹

Paul P. Tallon (ptallon@uci.edu)

Kenneth L. Kraemer (kkraemer@uci.edu)

Center for Research on Information Technology and Organizations,
Graduate School of Management,
University of California, Irvine, CA 92697-4650

Abstract

Executives' perspectives on realized IT payoffs are clearly important in IT investment decisions. In this paper, we investigate the link between business strategy, management practices and IT business value. Our results indicate that corporations with more focused goals for IT achieve higher payoffs from IT throughout the value chain. We also find that management practices contribute to IT payoffs and that a corporation's use of management practices relates to their strategic intent or goals for IT.

Introduction

Although previous research suggests that investments in information technology (IT) have a positive impact on firm performance, many business executives remain skeptical about the payoffs from IT. Already frustrated by an inability to quantify certain intangible benefits from IT, executives cite frequent delays and budget overruns to support their claim that IT is not delivering on its promise. As decentralization continues to place business executives in a position of authority and control over IT, these sentiments will have an impact on the scale and direction of future IT investment decisions. As a consequence, executives' perspectives are clearly relevant to the debate on IT payoffs and beyond that, to a broader discussion of how IT can support the business strategy.

In this paper, we present findings from a global survey of business executives in "Fortune 1000" firms. Faced with conflicting views of IT payoffs, we asked business executives to reveal their strategic intent or corporate goals for IT, and to then assess (in perceptual terms) the

impact of IT on different aspects of firm performance. By considering the goals behind a firm's IT investments, we can provide a more meaningful assessment of IT payoffs. For example, we can evaluate payoffs in specific areas such as sales and marketing or customer relations, areas that have traditionally eluded objective measures of IT payoffs. Finally, evaluating IT payoffs against a set of underlying goals for IT can generate insights into whether a firm's IT investments are providing direct support for the business strategy.

A Process Model of IT Business Value

Insights into IT payoffs at the firm-level can be gleaned from research on the "productivity paradox" (Brynjolfsson and Hitt 1996; Dewan and Min 1997; Lichtenberg 1995). However, as the primary focus of these studies has been on the productivity impacts of IT, a wide variety of impacts in areas such as improved inventory management, greater product variety and enhanced customer service, have been excluded from a broader analysis of IT payoffs. Therefore, in response to calls for a more inclusive and comprehensive assessment of IT payoffs, we introduce a process-oriented model of IT business value (Figure 1). While there are many ways of depicting the processes within a corporation, the value chain is perhaps the most widely used (Porter 1985). A process-oriented model also provides a mechanism for representing goals for IT in the sense that different business strategies emphasize different parts of the value chain. Therefore, by using the value chain to identify key business processes, we can construct a framework within which to evaluate IT payoffs.

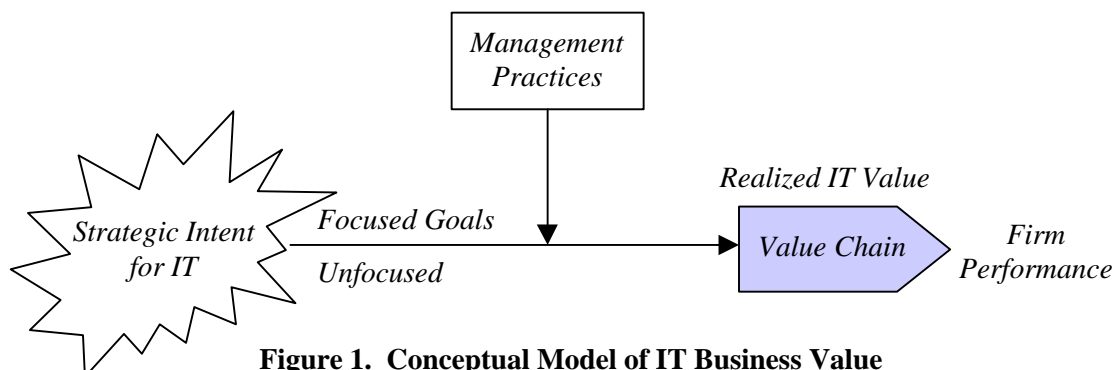


Figure 1. Conceptual Model of IT Business Value

Although the primary focus of our model is on the link between strategic intent for IT and realized IT payoffs, previous research has also shown that firm effects are an important determinant of firm performance (Brynjolfsson and Hitt 1995). IT management practices, as one particular type of firm effect, are related to strategic intent for IT. For example, a corporation with clearly defined goals for IT might be more conscientious and diligent in selecting IT management practices whereas a corporation with less defined goals for IT might not be so concerned. Related to this, researchers argue that IT management practices contribute to strategic alignment (Reich and Benbasat 1996), while in turn, strategic alignment is seen as an important determinant of IT business value (Chan et al. 1997; Henderson and Venkatraman 1993). Based on these arguments, in Figure 1, we depict IT management practices as having a moderating influence on the link between strategic intent for IT and IT payoffs.

Data Analysis

In 1998, researchers at the Center for Research on Information Technology and Organizations (CRITO) at the University of California, Irvine, in cooperation with IBM Consulting and the Economist Intelligence Unit (EIU) conducted a global survey of approximately 1,500 companies – 292 usable responses were received (57%: U.S.: 43%: non-U.S.). In addition, 43 semi-structured interviews were held with senior business executives (i.e., CEO, CFO, COO) in twenty-five U.S. corporations.

Our analysis begins with an assessment of corporate goals for IT. Business executives were asked to rate the extent to which they agreed with different statements on goals for IT in their corporation. These statements were

based on research that suggested that corporations focus on two key business objectives: operational effectiveness and strategic positioning (Porter 1996). While both foci are required for superior firm performance, each contributes to firm performance in a unique way. For example, while operational effectiveness entails performing similar activities better than competitors, strategic positioning entails performing different activities or performing similar activities, but in strategically different ways. In Figure 2, we use this distinction to define corporate goals for IT according to whether a firm’s IT investments are more internally focused (operations focus), externally focused (market focus), a combination of both internal and external foci (dual focus), or neither (unfocused). A discussion of each focus type is particularly relevant to our discussion of executives’ perspectives on IT.

Unfocused: Despite numerous examples showing how IT has enabled corporations to achieve efficiency and effectiveness, a group of executives, in what we call unfocused firms, challenge this view. Representing 16% of the firms in the study, unfocused firms lack concise goals for IT while their executives doubt whether IT can contribute to their current or future business success.

Operations Focus: Firms that use IT to streamline internal business processes and to achieve efficiency and effectiveness are labeled operations focus firms. These firms use IT to reduce cost, increase productivity, reengineer key business processes and to improve corporate planning. With 46% of the firms in the study in this category, operations focus represents a dominant strategic intent or corporate goal for IT.

Market Focus: In contrast to operations focus firms, market focus firms – comprising 8% of the firms in the study – use IT for more external-oriented purposes such as expanding existing markets and creating new markets. Market expansion involves using IT to extend the corporation's reach into new geographic areas or through increasing sales to existing customers. Market creation, on the other hand, involves using IT to identify new customer segments or new product or service varieties.

Dual Focus: While some firms use IT for either internal or external purposes, certain leading-edge firms recognize that IT can support both foci simultaneously. Firms who espouse this dual focus extend their use of IT beyond the pursuit of efficiency and effectiveness to

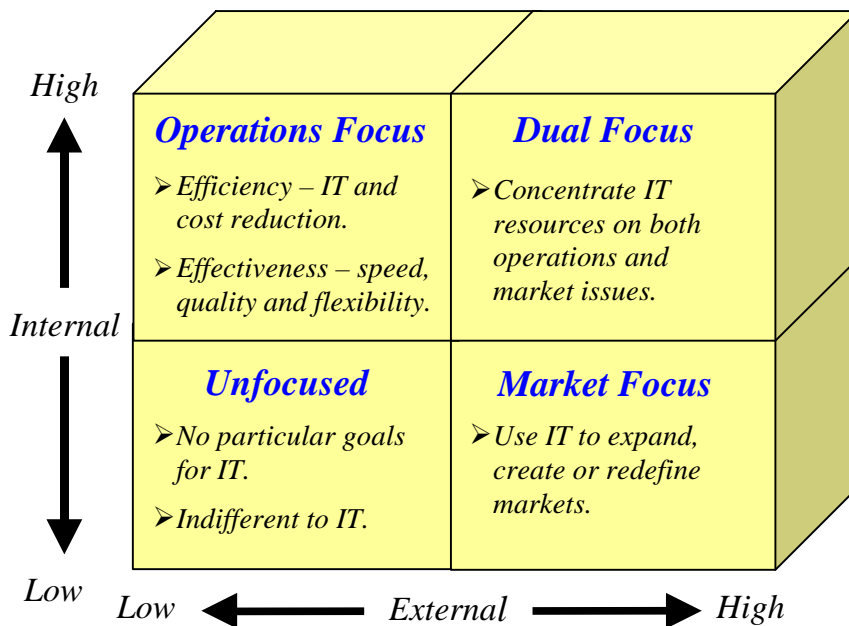


Figure 2. Corporate Goals for IT

include market expansion and new market creation – 30% of the firms in the study fall into this category.

Results

Based on the above discussion of strategic intent or corporate goals for IT, we hypothesized that firms with more focused goals for IT would achieve higher payoffs from IT. Accordingly, we asked business executives to evaluate realized payoffs from IT at multiple points along the value chain – 30 items were used to span the value chain (5 items per link). IT payoffs were measured on a 7-point Likert scale, where “1” denotes “no impact” and “7” denotes “high impact”. As shown in Figure 3, the results indicate that unfocused firms, who have the least focused goals for IT, achieve consistently lower payoffs at each point along the value chain. As firms increase their focus on IT, moving from operations focus through market focus, the level of payoffs from IT rises accordingly. Finally, dual focus firms, who have the highest focus on IT (their strategic intent for IT combines both operations and market focus), realize consistently higher payoffs from IT throughout the value chain.

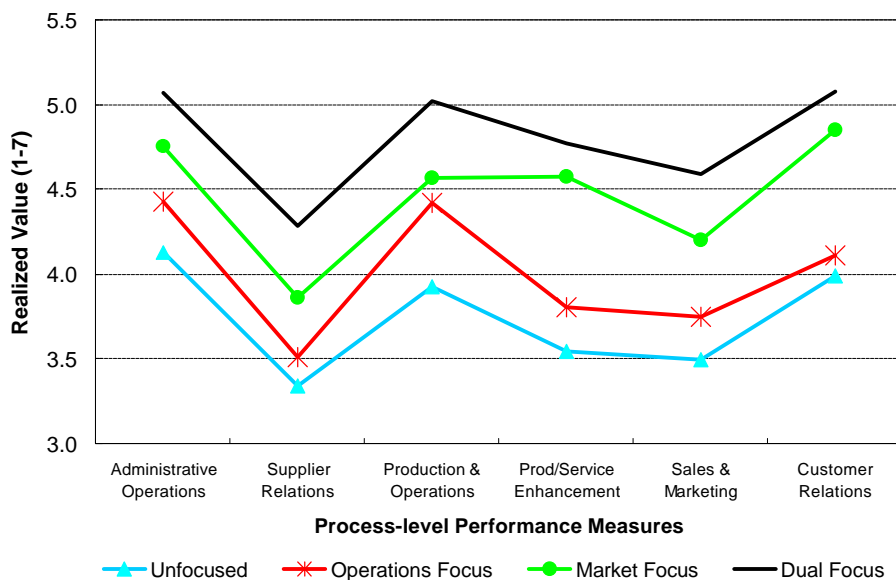


Figure 3. Realized IT Business Value

Our findings also uncover a link between strategic intent for IT and the locus of IT value within the value chain. For example, market focus and dual focus firms – who, by definition, invest in IT for external market purposes – realize significant payoffs from IT at the point where IT matches their business strategy, namely within product/service enhancement and customer relations. Similarly, operations focus firms achieve significant IT payoffs in production and operations; something which is again consistent with using IT to support internal efficiency and effectiveness. This implies that strategic intent for IT is clearly related to strategic alignment.

Although space restrictions prevent a more detailed presentation of our findings, we also found a relationship between strategic intent for IT and management practices (IT investment appraisal, strategic alignment, outsourcing, organization structure and future IT spending patterns). For example, firms who have a broader focus on IT achieve higher levels of strategic alignment and higher IT payoffs. Our findings also indicate that dual focus firms are more likely to use post-implementation reviews to assess the performance of their IT investments on an on-going basis. This level of diligence is useful for firms in that lessons learned from previous IT investment decisions can be brought to bear on future IT investment decisions. The learning that is bound up in this virtuous cycle is of immense benefit since it promotes best practice for creating value from IT investments. We also found that corporations’ goals for IT are evolving and that firms have plotted “migration paths” that will allow them to expand their focus on IT. Finally, business executives show a willingness to increase future IT spending in an effort to migrate to a higher IT focus where greater potential for IT payoffs exists.

Conclusion

This study finds that executives’ perspectives are an important factor in evaluating payoffs from IT investment. Contrary to media reports that executives are dissatisfied with IT, this study finds that, with some exceptions, executives are satisfied with IT payoffs and the level of IT spending within their corporations. When firms have clearly defined goals for IT, there is evidence that IT is positively related to firm performance.

The use of IT management practices also leads to increased payoffs from IT. This is particularly important when these management practices facilitate learning that contributes to more informed IT investment decisions.

References

References are available on request from the first author (ptallon@uci.edu).

¹ A longer version of this paper is available upon request from the first author.