

# Chapter XI

## IT Project Planning Based on Business Value Generation

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### ABSTRACT

*This chapter introduces the Firm-Level Value Creation Model as a means of planning Information Systems projects based on their potential for generating business value. It presents a review of economic literature on firm-level value creation based on the premise that ex-ante economic inefficiencies embedded in the firm processes are the key enabler of effectiveness in IT project implementations. After presenting a detailed case study in the banking industry to discuss the argument, the chapter describes how to implement a practical assessment of the potential effectiveness of any IT project. By presenting the underlying theoretical foundations of the business value generation mechanism, the author intends to contribute to the academy by bringing the economic theories to the center of the analysis of IT value generation. On the other hand, the chapter also assists practitioners by presenting a tool that can identify projects more likely to deliver value.*

### INTRODUCTION

Achieving effectiveness in Information Technology (IT) projects is becoming increasingly important for organizations as market competition changes and poses threats to value creation

at the firm level (Kohli & Devaraj, 2003). Recent literature has emphasized how IT deployment can improve firms' strategic positions based on the difficulty of imitation of the combination of IT and organizational resources (Wade & Hulland, 2004); it has also underscored how rare IT resources can allow a firm to reach a sustainable

position of competitive advantage (Melville, Kraemer, & Gurbaxani, 2004).

Many works have shown that the amount invested in IT has reached over 50% of the total of firms' investments. In addition, the proportion of IT investments to net income has increased as business complexity has increased. While it is argued that the use of IT is becoming more expensive to firms as businesses' environmental conditions increase in complexity, other streams of research have argued that it is difficult to evaluate the firm-level benefits of IT uses given the intangibility of many of those benefits.

These intangible benefits are usually associated with the business side of the firm, mainly related to market aspects, geographical presence, and customer satisfaction, among other things. In this sense, IT investment decision prioritization skills tends to become part of the job description of business executives rather than that of IT executives (Bassellier, Benbasat, & Reich, 2003; Tallon, Kraemer, & Gurbaxani, 2000).

Nevertheless, decisions about IT investment have been seen as complex and risky. In an attempt to cope with this complexity and risk, a myriad of interdisciplinary financial and non-financial techniques and methods have been used to support the prioritization processes. These include ROI, Payback, EVA, BSC, cost/benefit, transaction costs, gap analysis, etc. (Schniederjans, Hamaker, & Schniederjans, 2004). In practice, however, organizations usually deal with a number of simultaneous IT projects in a situation in which the costs tend to be more easily identified than the benefits.

Consequently, the ability of executives to identify the benefits of any specific future IT deployment is an important determinant of better investments prioritization, which constrains the possibility of delivering value and business performance. Therefore, shared knowledge between business managers and IT professionals is an important enabler of the alignment of business and IT objectives (Reich & Benbasat,

2000). Based on the above, we have observed two tendencies:

- a. Business executives are required to be more involved in IT decisions because they are in a better position to evaluate an intangible, business-related parcel of benefits and,
- b. IT executives are demanded to be more involved in business aspects, lowering the emphasis on exclusively technical issues (Bassellier *et al.*, 2003).

However, executives' perceptions of the business value generated by IT deployment is limited (Simon, 1978) because both business and IT executives lack the personal skills necessary to produce an appropriate analysis that encompasses two such diverse domains, with very different rationales (Bassellier *et al.*, 2003; Tallon *et al.*, 2000). Additionally, the success or failure of a firm using IT in business is only partially dependent on how deeply the executives understand the aspects involved. There are some emblematic cases of failure or even unexpectedly sound success in using IT that still require explanation. Some inconsistencies remain unexplained when the best practices are applied, but even so, there has been no IT investment effectiveness observed (Santhanam & Hartono, 2003).

This chapter posits an explanation for those cases through a conceptual framework that supports an understanding of the determinants of the business value that IT generates, revealing situations where potential value is not identified by the methods of analysis currently available. This framework is supported by the *Ex-ante Economic Inefficiency Hypothesis (EEIH)*, borrowed from the body of economic theories. This proposition poses that informational inefficiencies may be found inside the economic relationship of two agents and lead to sub-optimal allocations of resources—the inadequate uses of the resources involved—which then yield results inferior to the ones that would be possible if those inefficiencies

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