

# Chapter 6.1

## Motivations and Trends for IT/IS Adoption: Insights from Portuguese Companies

**João Varajão**

*Centro Algoritmi and University of Trás-os-Montes e Alto Douro, Portugal*

**Antonio Trigo**

*Escola Superior de Tecnologia e Gestão de Oliveira do Hospital, Portugal*

**João Barroso**

*Instituto Superior de Engenharia do Porto, Portugal*

### ABSTRACT

Over the past few decades, information systems and technologies have taken on a wide variety of roles within organizations, ranging from operational support to the strategic support of the company. Therefore, there have been significant changes in the motives for their adoption that are vital to understand to guarantee that investment is properly managed. With the purpose of identifying and characterizing the motivations currently behind the adoption of information technologies in large Portuguese companies, which systems the companies have been implementing, in which systems they intend to invest in short-term, and what is the current role of information technology within the organization, we carried out a study with the participation of several chief information officers. The findings of this study reveal that the reasons for adoption and the role that information systems and technologies play is evolving in

Portuguese companies and that the adoption of certain types of systems like Enterprise Resource Planning systems is now consolidated, whereas the adoption of other systems like Business Intelligence systems should increase significantly in the near future.

### INTRODUCTION

Over the past few decades, Information Technologies and Information Systems (IT/IS) have known very different roles within organizations: much has changed from the time when computation surged, where IT/IS were used merely for operational support, to the most recent role of being the driver of an organization's competitiveness.

Initially, its use was practically restricted to the operational level, in the scope of the systems for processing transactions. But, over time, with the development of new features and potential-

ties, companies began finding other applications at the most diverse levels and today IT/IS play an absolutely central and crucial role in organizations.

Companies currently use multiple solutions of IT/IS to support their activities at all management levels and few of them try to conduct their businesses without exploiting the advantages of IT/IS solutions (Trigo, Varajão, Figueiredo, & Barroso, 2007). Among the systems adopted by companies we can find Enterprise Resource Planning (ERP) systems, Customer Relationship Management (CRM) systems, Business Intelligence (BI) systems, and many others. Such systems assure a wide spectrum of activities, ranging from operational support to the strategic support of the company.

Although the scope of application of the information technologies was confined to the operational level, the motives for its adoption were, in a certain way, clear and had to do, generically, with task automation to increase work productivity and reduce costs. As the scope of its use began covering, first the tactical level and, later, the strategic level of enterprises, the set of motivations was extended; therefore, the motivations for the adoption of IT/IS have also evolved significantly to include, for example, improving the time to market, the establishment of strategic partnerships, or the exploration of new markets.

The great diversity of IT/IS applications implies a great diversity of motivations for their adoption. For instance, the inherent set of motives for the adoption of a CRM system will probably be different from the set of motives for investing in a new version of an operational system. On the other hand, the motives for adopting a specific system of BI could be the same as those leading to the acquisition of a particular expert system.

Nevertheless, there is a set of generally inherent motivations to IT/IS adoption that is important to identify and understand to conduct investments, and serve as a guide to maximizing the degree of satisfaction with IT/IS investment initiatives, given the generally significant sums involved in these investments.

With the purpose of identifying and characterizing the motivations for IT/IS adoption, which systems the Portuguese companies have been implementing, in which systems they intend to invest in the short-term, and what is the current role of information technology within the organization, we developed a survey with the participation of several chief information officers of Portuguese companies.

The general methodology involved a questionnaire that was sent to 500 Chief Information Officers (CIOs) of Portuguese companies. The questionnaire was sent to the subjects in February 2008. Three months later, after three rounds, the data collection process was concluded, with a response rate of 12.9%.

In this article, we present the results obtained from the study conducted: current motivations for IT/IS adoption; current implemented systems; current role of IT/IS; and trends for IT/IS adoption.

Next, after a literature review, we present the scope, research process, analysis, and discussion of the results obtained.

## **BACKGROUND**

A common approach to examining the types of IT/IS solutions used within organizations is to categorize them by the roles they play at various management levels within the organizational structure (Belle, Eccles, & Nash, 2003; Laudon & Laudon, 2005), according to Robert Anthony's pyramid (1965) of operational control, managerial control, and strategic planning.

At the lowest level of the organizational hierarchy, we find the transaction processing systems (TPS) that support the day-to-day activities of the business. These applications are normally the first to be computerized and are characterized by large numbers of transactions updating the corporate database. Clerical staff performing routine daily business activities, such as invoicing or issuing of stock, and following well-defined business procedures mainly uses these systems.

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