Chapter 2
An Analytical Survey of Free/Open Source ERP Systems and their Potential Marketplace in Brazil

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ABSTRACT

With the growing complexity and dynamics of modern organizations, ERP systems contribute to the management of business processes and allow strategic decisions to be taken more quickly and more safely, through a systemic, integrated view of the corporation. Free/Open Source software has consolidated as an increasingly viable alternative for this kind of systems, through the flexibility provided by its business and development model and the consequent possibility of total cost reduction. The objective of this chapter is to present a comparative survey of the main free/open source ERP systems currently available in the marketplace, their features focused in Brazilian companies and a general overview on its potential market.

INTRODUCTION

In a general perspective, software products can be distinguished between the so called "off-the-shelf software" products, like text editors and spreadsheets, internet browsers, e-mail clients and multimedia players, and "customized software" products, which are those that, in addition to being acquired, also require aggregated services in order to be used according to the particular needs of each company. ERP systems fit into this second category.

As there are not two identical companies, besides installation, the ERP system will need parameterization and, probably, will also need customization. It is important that the ERP system holds the possibility of being functionally adapted to the company's business processes with few modifications, permitting the customization costs and the deployment time to be reduced. For this to occur optimally, flexibility is a mainstay. More than customization, this flexibility should also provide consistent interfaces for the development of additional modules. From this point of view, the unrestricted access to the source code, allied with the possibility of analysis and modification, makes Free/Open Source software model a viable alternative for ERP systems.

The aim of this paper is to present the results of an analytical survey conducted in 2009 and updated in 2010 on development projects of free/open source solutions for ERP systems, the major alternatives and their features focused in Brazilian companies and their potential market. From this point on, the free/open source and proprietary ERP systems will also be referenced using the nomenclature proposed by de Carvalho (2006): respectively FOS-ERP and P-ERP.

Until recently, packages of integrated management systems provided by a single supplier were not the preferred kind of solution by small companies, which normally would opt for the internal development of their own systems or even the manual control of their operations (FIESP, 2004; Bigaton, 2005), through simpler applications like electronic spreadsheets. According to Bigaton, the Integrated Management Systems propagation between the companies of this size is hampered by their financial situation, since the investment needed for deployment of the systems available today almost always exceeds values available in their budgets (Bigaton, 2005). In this regard, the FOS-ERP tend to get a bigger slice of market acceptance of this, once they make possible for companies to reduce costs with features like

software licensing and stimulation of competition. Obviously, the costs reduction of this kind of software opens new possibilities for small and medium companies to adopt them (de Carvalho & Johansson, 2009).

The remainder of this paper presents an overview of the marketplace for FOS-ERP systems from a survey of registered projects in the Sourceforge repository and a comparison of seven major FOS-ERP systems. After it there is also an overview about future researches related to this topic and a conclusion with the final considerations.

BACKGROUND

There are different criteria in the market that can be used to rank organizations by its size, according to the context in which the analysis is done. Mercosul, NAFTA and The European Union, for example, adopt their own official classifications, different from each other. Some commonly used criteria are: (Longenecker et al., 1997):

- Number of employees
- Sales amount
- Financial status
- Assets value
- Workforce insurance
- Warehouse volumes

The increasingly strained competition and the consequent increase in market requirements have brought to small and medium enterprises needs of organization and control in levels previously required only by large companies. On the other side, the trend of higher costs withdraws small and medium enterprises from the major P-ERP systems. Since they have less favorable credit terms than large companies and therefore are more sensitive to economic cycles, this inhibits their efforts with technological improvements (la Rovere, 2001).

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