

Chapter 3

The Ontology of the OSS Business Model: An Exploratory Study

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ABSTRACT

This study focuses on theory building providing a holistic conceptual framework that consists of an ontology based OSS business model and an OSS business model taxonomy. The study extends existing theory in OSS business models and corresponding taxonomies, based on the structured-case methodological approach. An exploratory study is conducted in two research cycles, for the identification, validation, and evaluation of the critical constructs of an OSS business model. Results reveal that OSS business models differ from traditional software business models, having specific features that affect the software value chain, the infrastructure, and the revenue model of an OSS oriented firm.

INTRODUCTION

When Richard Stallman first set the Free Software (FS) definition, FS was considered more as an ideological movement against commercial exploitation of software (Stallman, 2002) stressed that free software was more a matter of liberty rather than price. The recasting of Free Software as Open Source Software (OSS) or Free/Libre Open Source Software (FLOSS), emphasized

on the importance of making source code freely available implying that a company can choose to make source code freely available and still serve its own business interests as a for-profit organization. The increasing number of profitable activities around the OSS ecosystem (i.e. open communities, standards, and technologies) proves that OSS is not only an innovative model of production, but also a sustainable business model.

It has matured to a point where there are growing numbers of business solutions delivering real business value today. At the same time,

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more and more IT and business decision-makers are identifying, pursuing, and succeeding with initiatives that employ elements of that ecosystem to achieve meaningful immediate and sustained business benefits. From a managerial perspective, there are still risks associated to the OSS adoption, revealing issues of whether, to what extent and when it is best to change a business' strategy towards an 'open source' approach. Related research (Ågerfalk et al., 2005; Goode, 2005; Ven et al., 2008) showed that the lack of strategic planning and clear business model are among the inhibitory factors that shape their decisions towards OSS.

Although a number of researchers have studied the different OSS Business Model (OSS BM) implementations recorded in industry (Daffara et al., 2007; Dahlander, 2007; Fitzgerald, 2006; Koenig, 2004; Krishnamurthy, 2003; Rajala et al., 2006), none of them have considered of its structural elements. The OSS BM domain knowledge is fragmented and the concept is rarely clarified explicitly. Such clarification is therefore required to unify the different points of view into one comprehensive framework providing a common understanding, language, and labeling, so as to leverage our communication in this context and our utilization of the concept.

Towards this gap in the literature, the objective of this paper is to provide with a comprehensive and generic OSS BM framework that explicitly defines its structural elements, describing the deeper structure of what firms adopting an OSS strategy, actually do. The study focuses on knowledge and theory building by providing answers to critical research questions regarding the critical constructs and common characteristics of an OSS BM, as a linkage between empirical data collected and conclusions drawn. The paper reports on the findings of the use of the structured-case approach and proposes a holistic conceptual framework composed of two models; the ontology-based OSS BM and the OSS BM taxonomy, which is derived as a vertical decomposition of the 'Value offered' structural element. Finally, the opportunities and

threats stemming from the different OSS BM implementations are also discussed.

The rest of the paper is organized as follows: First, the theoretical background of the study and the research methodological approach are described. The next two sections report on the main findings of the two conducted research cycles. Finally, the conclusion section discusses the results and concluding remarks obtained from the study.

THEORETICAL BACKGROUND AND METHOD DESCRIPTION

The research focused on the key issues and challenges that affect a holistic OSS framework. In the spirit of the interpretivist school (Hussey et al., 1997; Lee et al., 2003; Myers, 1997; Orlikowski et al., 1991; Remenyi, 1998; Walsham, 1995), the approach throughout the study was to understand existing OSS models and build a new theory, rather than to test established theories. This was achieved by studying a number of existing theories and OSS perspectives as different theoretical lenses through which a complex phenomenon might be viewed.

The research that has been undertaken proposes theory as a result of interconnected ideas that condense and organize knowledge (Neuman, 1991). The study involves a series of case studies of OSS oriented organizations by means of the structured-case research method (Carroll et al., 2000), which can be widely used to extend knowledge about existing theories in order to actually use them. The structured-case approach provides a focused but flexible methodological approach to the field research process, through outcomes integration allowing theory, knowledge and practice to emerge from the data collected; researchers guidance to follow and ensure accuracy; and ability to record the processes of knowledge and theory-building.

The method attempts to explain, predict and provide understanding, determining the relationships between concepts in order to build a

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