Chapter XXVIII
Delivering the 'Whole Product':
Business Model Impacts and Agility Challenges in a Network of Open Source Firms

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ABSTRACT

It has been argued that competitive necessities will increasingly require OSS companies to participate in cooperative business networks in order to offer the complete product/service (whole product) demanded by customers. It is envisaged that these business networks will enhance the business models of participant firms by supplementing their value-adding activities and increasing responsiveness to customers. However, while such propositions have intuitive appeal, there is a lack of empirical research on such networks. This article examines Zea Partners, a network of small open source companies cooperating to deliver the 'whole product' in the area of content management systems (CMSs). It investigates how participation in the network augments the business models of participant companies and identifies the business agility challenges faced by the network. The article concludes that reconciling the coordination needs of OSS networks with the operational practices of participant firms is a critical issue if such networks are to achieve adaptive efficiency to deliver whole products in a 'bazaar-friendly' manner.

INTRODUCTION

Researchers (Agerfalk, Finnegan, Hayes, Lundell, & Ostling, 2006; Feller, Finnegan, Hayes, & Lundell, 2006a; Fitzgerald, 2006) have recently argued that open source software firms should adopt a 'whole product' approach (cf. Moore, 1999) by forming a network/ecosystem of partners with complementary capabilities "to offer a professional product and service in an agile, bazaar-friendly manner" (Fitzgerald, 2006, p. 294). This 'whole product' approach is consistent with the challenges of "productizing OSS" discussed by Woods and Guliani (2005), as well as developments in the production and use of other complex product/service offerings as discussed by Davidow and Malone (1992). This approach is regarded as appropriate when there is a need for firms to quickly deliver a variety of customized products, and when the nature of the product development process means that individual organizations do not have sufficient competencies to deal with all parts of product design (Davidow & Malone, 1992; Huang, 2001). In such circumstances, market forces require organizations with similar goals to align themselves in IT-mediated partner networks in order to meet customer requirements (Stafford, 2002).

Moore (1999) popularized the concept of the 'whole product' as the cornerstone of market-driven, rather than product-driven, businesses. However, the concept resonates with the dynamics of the open source software phenomenon, which, due to the licensing structure, emphasizes services and meta-services surrounding the artifact. Indeed, Woods and Guliani (2005) describe as the challenge of 'productizing' open source software as the need to offer support, implementation, modification, and related services. Thus, networks of cooperating, small, open source software organizations may represent what Clemons and Row (1992) term a "move-to-the-middle," where networks of organizations interact in order to deliver value (in the form of the whole product) to the end consumer.

This article examines Zea Partners, a business network of firms developing content management systems and selling related services, all based around the Zope application server. It investigates how participation in the network augments the business models of participant firms in order to adopt a 'whole product' approach, and identifies the challenges faced by the network in trying to ensure the business agility necessary to offer the 'whole product'. The article begins by discussing the theoretical foundation for the study. Next, the research objective and research methods are discussed. The case environment is then outlined and the findings presented. The article illustrates that participation in the network allows firms to share business model components within a centrally managed network, and to engage in agile competitive practices by making network-level changes in response to changes in the external environment. The need to address adaptability and alignment issues in addition to business agility is highlighted, however. Consequently, the article concludes that reconciling the coordination needs of OSS networks with the operational practices of participant firms is a critical issue if such networks are to achieve adaptive efficiency to deliver whole products in a bazaar-friendly manner.

THEORETICAL FOUNDATION

OSS has been investigated from a variety of disciplinary and theoretical perspectives. The two dominant research themes, however, have been: (1) OSS software engineering tools and techniques and (2) the socio-cultural analysis of OSS communities. Commercial organizations are under-represented in the research, not just in terms of quantity, but more importantly in terms of depth of research. In particular, the understanding of economic and business model issues surrounding OSS is limited (Feller, Finnegan, Kelly, & MacNamara, 2006b). In this section, we draw on the wider literature on business models and business

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