E-Government Business Models for Public Service Networks

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ABSTRACT

Whilst the concept of business model has become popular in the networked economy, unexplored is whether it is equally applicable to e-government, which emphasizes cross-agency collaboration in form of public service networks. Drawing upon the literature on resource-based views, dynamic capability, and coordination theory, we develop a framework comprising of six elements: (1) organizations in the public service network, (2) service offerings, (3) network coordination, (4) business processes, (5) shared resources and (6) network capabilities. We use this framework to analyze three case studies in detail. The model is useful for understanding the relation between service offering and the challenges of coordinating public service networks. Overcoming these challenges results in better leveraging the advantages of business models. Our findings indicate business models that facilitate knowledge transfer and understanding of shared resources and network capabilities can further enhance better resource mix in migrating toward citizen-oriented business models.

Keywords: coordination theory; dynamic capability; e-government business models; orchestration; portal; public networks; resource-based view; shared services

INTRODUCTION

Countries worldwide are using e-government as a logical response to the changes in the Web-based era. Delivering government services to the public electronically requires innovation which entails the adaptation of policy and strategy, and the associated changes in technologies and infrastructures. Often governments are imitating each other and pursuing a similar set of novel business models without careful examination of the hidden challenges. This article aims to provide a framework that examines the business and the coordination logics underpinning an e-government business model which involves the design and implementation of a public service network.

In recent years the study of the concept of business model has become a popular and important strand within the field of information systems and strategic management (Hedman & Kalling, 2003), specifically its application to the electronic business environment (e.g., Afuah & Tucci, 2000; Timmers, 1998; Weill & Vitale, 2001). Initially, different types of
business models were tried and tested. The ones contributing to the financial success are widely promoted by the e-commerce and e-business practitioners. Despite the lack of a universal definition (Alt & Zimmerman, 2001) and the fact that the theory often lags behind the practice it attempts to describe and explain (Hedman & Kalling, 2003), there is little difficulty for direct adoption and transfer of the business model concept across domains and from the private to the public sector. The latter underscores the mentality that the practical rationality will compensate for the lack of theoretical underpinnings (Kuk, 2003).

However, the concept of business models developed and tested in the network economy may not be applicable to the public sector. One of the notable differences is the level of interfirm rivalry and mistrust which can limit resources and knowledge sharing in private networks (Adner, 2006). Whereas public networks which are often grounded on the nonexclusive and nonrival properties of public goods can facilitate a greater extent of resources and knowledge sharing among governmental agencies. Yet increased sharing will also lead to an increase in the coordination challenges consisting of how to route and reuse the existing silo-based types of functions and resources which are developed and reside within a public agency to a network arrangement; and crucially, how to generate new capabilities in support of developing new service offerings.

New types of service offering are made possible due to the crossagency collaboration in the form of a public service network (Provan & Milward, 2001). Different networked business models tackle different coordination challenges and will likely have other benefits. Consequently, in this paper we argue that when it comes to the decision of which business models to adopt, consideration should be given to what coordination challenges that different business models may engender. Organizations should consider which ones are worthwhile to invest their resources. And by successfully tackling these challenges, organizations can acquire a new and useful set of knowledge which in turn improves the business and coordination logics of offering new Web-based services.

Whilst there is a small but growing body of research on using Internet-based models as a front-end proxy of e-government business models (e.g., Janssen, Kuk, & Wagenaar, 2005), the concept of business models in the context of e-government is relatively unexplored. Specifically, we know little about the components of a business model, intermediate variables and processes that translate an e-government business model into new service offerings. In this article, we draw upon the literature on resource-based view, dynamic capability and coordination theory to develop a framework to examine three types of e-government business models. The framework aims to provide insights into the coordination challenges and the potential benefits that accrued to a government as a result of adopting a particular business model. The rest of the article is structured as follows. In the next section we discuss the concept of business models as found in literature. In section three, we use resource-based, dynamic capability and coordination theory to translate the business model concepts as found in e-commerce literature and to derive a framework for analyzing, and ultimately designing, the logic of service provisioning. Three case studies are presented and underlie the specifics of an e-government business model in the next session. In section five we discuss the results and the implications for the use of the business model concept in e-government. Finally, we draw conclusions and recommend further research.

**THE BUSINESS MODEL CONCEPT**

The concept of business model is originated in the field of e-commerce in which firms tried to copy the successful business models. New types of Web-based businesses often create new business models and new forms of organizations. In e-commerce the concept of business model is not well defined, and generally lacks the consensus regarding what comprises the key elements of a successful business model (Alt & Zimmerman, 2001; Rappa, 2002). Also, the
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