

# Transformation of business models from non-digital to digital

A dominant logic perspective

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## Abstract

Digital innovations are persuasively shifting the business landscape thus challenging traditional business models of incumbents. Information intensive sectors have been most affected and challenged to embrace the new realm. The central argument is that transformation of the business model from non-digital to digital involves a distinct set of activities and distinct assumptions about value creation and capture. Non-digital businesses operate and are guided by the conventional economic rules, whereas digital world of businesses function based on digital economics and economics of digital information (negligible marginal costs, transaction cost reduction, distinct cost structure mechanisms, different sources of revenues, etc). Thus a change of the business model involves a fundamental shift of existing core assumptions that profoundly challenges managers' beliefs about value creation and capture.

Key words: business models, digitalization, cognition, dominant logic, transformation.

## Introduction

Last decade is marked with a significant digitization of tangible products (Yoo et al. 2010). Particularly, the potential of information products to be fully digitized (Nylén and Holmström, 2015) is driving profound transformations of existing business logics of incumbent organizations. Whilst this transformation offers numerous opportunities, it also challenges established business models in industries that were traditionally proven stable and successful. In order to succeed, incumbents must transform their business models. Nevertheless, this transformation is anything but easy, and often results as an unsuccessful endeavor. During the course of time business models become path-dependent and represent the taken for granted logic about value creation. This dominant logic is shaped by cognitive frames that are the core carrier of path-dependent behavior (Kaplan and Tripsas, 2008; Tripsas and Gavetti, 2000). As such, it acts as a funnel that filters information, with an attention directed only on the data that conform to the dominant logic while discharging others. It involves the belief system and mental maps used for decision making and subsequent actions (Prahalad & Bettis, 1986; Tripsas and Gavetti, 2000). Digitalization yields a new innovation regime (Henfridsson et al. 2014) characterized by a new set of rules and mechanisms of value creation (Amit and Zott, 2001) that require the modification of existing cognitive logic of operational setup and responsibilities. As a result, creation of new paths is characterized with a cognitive tension between an accustomed past and uncertain future (Henfridsson et al. 2009). Hence, during this transformation, an understanding of cognitive foundations and logics that guides the activity system that represents the business model should be carefully taken into consideration

In this study we draw upon two central arguments. Firstly, digital operations and businesses manifest some inherent characteristics that significantly differ from traditional business models. These peculiar characteristics impose certain cognitive challenges and will affect the ways the transformation will unfold over time. Secondly, the business model construct involves a systems of interdependent activities conducted by multiple actors, who simultaneously govern (Selander et al. 2010) their position and role within business models, hence this type transformation encapsulates a broader scope of change beyond the boundaries of a single organization and its technologies. This network comprised does not only entangle cooperation and interdependent activities among actors, but also competition and struggle for control and domination, that it is expected that the interplay of these logics may result in cognitive tensions within the network. This unbounded nature of transformation has further implications that goes beyond mere product innovation or technological innovation, that represents a further challenge to organizations who want to engage in business model transformation from non-digital to digital. Thus, the objective of this research is to contribute to our understanding of an organization's business model transformation from non-digital to digital. In particular, we seek to generate insight into the cognitive factors that



hinder and enable business model transformation from non-digital to digital, with a particular emphasis in the distinct logics that they bear.

## Literature review

### Business models and business model transformation

Broadly speaking business model notion represents a way to comprehend the economic value creation and capture from the utilization of digital technologies (Amit and Zott, 2001). In this study I adopt a particular conceptualization of business model as advanced by Amit and Zott (2001) and Zott and Amit (2010) who define business models as “content, structure, and governance of activity systems designed so as to create value through the exploitation of business opportunities”. This is the most established conception of business models, being both theoretically grounded and empirically supported. Amit and Zott (2001) explored the theoretical foundations of the business model construct by studying value creation in several digital businesses. They argued that none of the established frameworks of value creation such as value chain, Schumpeterian innovation, transaction cost economics, resource based view of the firm and strategic networks could fully explain this phenomenon alone. Instead, they could only address different parts of value creation in digital businesses. Thus, business model construct emerges as a perspective that merges these bodies of literature and explains the value creation and capture in the digital world. In this paper we will refrain from providing an exhaustive review of business models literature and the various underlying schools of thoughts, but for a detailed review of business models literature see Zott et al. (2011).

This study builds upon the business model construct as a core conceptual foundation for digitalization. It is central to distinguish between digitization and digitalization, being that they are both central to the study. Digitization refers to the encoding of analog information into digital format (Yoo, 2010; Yoo et al. 2010). Digitalization refers to wider implications of digitization, such as the transformation of existing socio-technical structures that were previously mediated by non-technological artifacts or relationships into technologically mediated artifacts or relationships (Yoo et al. 2010). Digitized products bear some intrinsic features that make them seemingly distinct from their physical counterparts. Therefore, the value creation and capture in digital context requires a new set of assumptions, because the production, distribution and consumption of digital information products encompass a distinct inherent logic that differs from material products in several dimensions (Shapiro and Varian, 1998; Benkler, 2006). Transactions costs for digital products are significantly reduced (Amit and Zott, 2001). Marginal costs or reproduction costs for digital products are negligible (Faulkner and Runde, 2010). For instance, once an e-book is produced, reproduction costs of extra copies of that book are equal to zero. As a result, the pricing of digital information products cannot solely rely on cost structure. This peculiar cost structure challenges tradi-



tional pricing of products based on the cost structure. For example, some newspapers offer a free version of the digital newspaper to users subscribed to their print edition. Or libraries struggle with several pricing models set by publishers for digital resources, which is often bundles for a collection of journal articles or books. Moreover, technological platforms enable quick distribution of digital information products.

All these feature of digital businesses fall outside conventional economic thinking, challenge the managers' wisdom as they act as filters that enable and hinder opportunities, adequate analysis, planning and decision-making.

#### Dominant logic and its role in business model transformation

The concept of dominant logic was first developed by Prahalad and Bettis (1986) to provide insights on the organizational adaptation. Dominant logic originally has been defined as "*the way in which managers conceptualize the business and make critical resource allocation decisions*" (Prahalad and Bettis, 1986). It involves the belief system and mental maps that managers use for decision making (Prahalad and Bettis, 1986). These cognitive frames are shaped by previous experiences and the interactions in internal and external markets. Dominant logics acts as an information filter and in facts it represents the '*DNA of the organization*' (Prahalad and Bettis, 1986). It involves the belief system and mental maps that managers use for decision making (Prahalad and Bettis, 1986), shaped by previous experiences and the interactions in internal and external markets.

#### Research methods

The study adopts a multiple qualitative case study strategy. Cases will focus on information-intensive organizations that are in the process or have already undergone business model changes from traditional to digital. Information-intensive organizations have been significantly affected by the digitalization that has challenged their existing business models. Currently an ongoing empirical study is taking place in a University Library and a local newspaper. Data collection techniques involve semi-structured interviews, organizational documents, participant observations and other secondary data sources.

#### Expected results

This paper presents a research in progress that aims to explore the key challenges and success factors involved in this transformation through multiple case study research design. It investigates a University Library and a Local Newspaper as empirical contexts highly affected by digitalization. The study will contribute to the rather nascent literature on the dynamics of business models. While previous scholarly contributions have given insights about the role of cognitive frames, digital context exposes organizations to novel forms of value creation and capture that are quite distinct from the conventional ones, thus requiring a fundamental



shift of dominant logic. This study will also unleash significant implications to the practice. It will inform organizations by providing a set of structured processes and guidelines that firms can use systematically about cognitive hindrances and success factors to overcome these challenges.

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