

**PhD in Management**

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**BUSINESS MODEL INNOVATION: ANTECEDENTS OF BUSINESS MODEL  
INNOVATION AND EFFECTS ON FIRM PERFORMANCE**

**ABSTRACT**

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## **ABSTRACT**

This Ph.D. thesis addresses the antecedents and performance effect of business model innovation. The business model innovation construct describes the value creation and value capture mechanisms of the firm (Teece, 2010). It is seen as distinct from other constructs in the management field. In particular, it is set apart from firm strategy (Casadesus-Masanell & Ricart, 2010) or technological innovation (Teece, 2010). There is a clear difference between business models and firm strategy. The strategy of a firm relates to the choice of business model rather than to the business model itself. Consequently, business model innovation is also distinct from a strategic change (Amit & Zott, 2010; Casadesus-Masanell et al., 2010; Teece, 2010). Strategic change is the necessary first step to decide on the new positioning of a firm in the market landscape. Business model innovation on the other hand redefines how value is created, delivered and appropriated.

Also, technological innovation addresses different elements than business model innovation. Technological innovation is for example a new product that has reached market introduction or the first use of a production process (Utterback, 1971). The business model on the other hand provides the link between technological innovation and expropriation of value (Chesbrough & Rosenbloom, 2002). Business model innovation can hence derive from a technological innovation, but does not per se necessitate it (George & Bock, 2011).

Past work has started to shed light on the relevance of business model innovation for firms. Work on business model innovation mainly looked at new business model design (Amit & Zott, 2001; Zott & Amit, 2007) or the relationship between business model innovation and successful technology exploitation (Chesbrough, 2010; Chesbrough et al., 2002; Gambardella & McGahan, 2010). However, the understanding of the forces that facilitate and shape extant

business model designs and the effect of business model innovation on performance still merit further attention (Chesbrough et al., 2002; George et al., 2011; Wirtz, Schilke, & Ullrich, 2010; Zott et al., 2007). Recent work introduced the notion of business model reconfiguration (Massa & Tucci, 2013) in contrast to new business model design. Business model reconfiguration relates to incumbent firms that innovate an existing business model in contrast to new ventures that decide on a novel business model. Business model innovation can be found in both areas depending on the radicalness of the approach.

In order to better understand the mechanism behind business model innovation and its importance for the performance of the firm, this thesis analyses three distinct research questions surrounding the overall topic of business model innovation. The first paper focuses on the antecedents to business model innovation and answers the following research question: "What factors influence the propensity of a firm to reconfigure its business model?".

The second paper relates to the performance effect of business model innovation and gives an answer to the following research question: "What influence does business model reconfiguration have on the performance of a firm and in which conditions is this most prominent?"

The final paper focuses on the role leaders and stakeholders play in the evolution of a fund. Business model innovation is hereby seen as one possible area where a fund can evolve over time. It answers the third research question of my thesis: "How do fund leaders influence fund evolution over time and what role do other stakeholders play in promoting fund evolution?"

Each research question is looked at separately and analyzed empirically. In order to analyze the business model innovation construct empirically, a quantitative methodology was developed. The method allows an analysis of the changes in the components of a business

model over time. This is a novel approach and it has not been used in previous work. This method depicts the evolution of the business model of a firm in a quantitative way and hence enables the empirical testing of the hypotheses related to the various research questions.

The research setting for each of the papers is the Australian pension fund industry. The Australian pension fund industry has the advantage of showing a turbulent firm evolution over the past years with a multitude of firms changing their business model (APRA, 2007; Cooper et al., 2010). This research setting consists of incumbent firms in an industry outside of the high-tech field. Thus, it addressed the call for research in more varied settings (Zott et al., 2007). Furthermore, through the combination of three separate data sources (government data, industry body surveys, firm annual reports) I was able to develop a unique panel dataset spanning the years 2003-2010.

Each presented research question is addressed in a separate paper of my thesis and analyzed empirically. The results of each analysis are briefly summarized in the following paragraphs.

The first paper explores the antecedents to business model reconfiguration. The study relates firm characteristics to the intensity of business model reconfiguration. In order to test the hypotheses, it draws on the developed quantitative model and the unique dataset of incumbent Australian pension funds. The empirical results indicate that changes within the top management team and the ability to recombine resources positively impact the intensity of business model reconfiguration of a firm. In addition, the heterogeneity of industry experience on the top management team produces a positive, albeit u-shaped effect. In contrast, dependence on an old business model has a significant negative influence on the intensity of a firm's business model reconfiguration.

My first research paper was accepted at the 2013 AOM conference and the SEI consortium.

The second research paper looks at the relationship between business model reconfiguration and the performance of the firm in an environment where IP protection is not possible. Furthermore, this paper looks at the influence of contingency factors on the relationship of business model reconfiguration and performance. Business model reconfiguration is operationalised according to the developed method and tested empirically. The same dataset as in the first paper is used. The empirical analysis shows a positive, inverse u-shaped effect of business model reconfiguration within incumbents on their operational performance. This effect is moderated by the size of the firm and the resource munificence of the firm. Smaller sized firms are better able to exploit the opportunities of business model reconfiguration and show a reinforcement of the effect. Firms with low resource munificence show a lower ability to exploit the opportunities of business model reconfiguration.

My second research paper was accepted at the 2014 AOM and 2013 DRUID conferences.

The third paper focuses on the role leaders and stakeholders play in influencing the evolution of pension funds over time. This paper was written with an industry specific focus on the Australian pension fund industry, locally referred to as superannuation industry. The evolution and innovation within the funds is analyzed by drawing on the business model innovation framework and tracking the changes in the business model of the funds. This paper focuses on two main factors as potential drivers of change and renewal of fund structures. Firstly, it considers governance issues related to trustee board characteristics and secondly, the regulatory influences, namely a licensing requirement, on the funds. The empirical analysis is based on the develop method and the dataset used throughout my thesis. Empirical

results show that member elected trustees, when compared to union trustees, increase the propensity of a fund to alter its approach to doing business. Trustee board size shows an inverse u-shaped effect on the propensity of a fund to evolve, indicating the advantage of a limit when introducing more trustees to the board. The licensing requirement is also found to be a catalyst for funds to introduce changes to their business model.

My third research paper was presented at the 21st Colloquium of Superannuation Researchers in Australia.

Overall, the results of all three papers allow a better understanding of the mechanisms at work when a firm considers innovating its business model. Furthermore, the second paper gives an insight into the expected performance effect of business model innovation in incumbent firms and the contingencies that influence this effect.

The contributions of this thesis to the existing work on business model innovation are several. Firstly, I propose a definition of business model innovation that allows empirical testing of the construct. The proposed definition builds on past work (e.g., Amit et al., 2001; Casadesus-Masanell et al., 2010; Teece, 2010), but extends it to include the idea of different components of a business model. This component approach simplifies the empirical analysis of business model innovation.

Secondly, on the methodological side, this thesis develops a novel method to analyzing business model innovation empirically. The focus of existing work is on qualitative, case-study approaches (e.g., Amit et al., 2001; Sosna, Trevinyo-Rodríguez, & Velamuri, 2010). Here, I introduce a quantitative method to analyze the development of business models over time and test proposed hypotheses.

Thirdly, the three research papers shed light on three different research questions surrounding the topic of business model innovation. Two of them help understand factors that can lead to business model innovation within an incumbent firm. One gives an indication of the performance effect an incumbent can expect from business model innovation. All three papers close a research gap identified in the literature.

Lastly, I hope to also contribute to managerial practice by giving a better understanding of the mechanisms behind business model innovation in incumbent firms. The understanding of how business model innovation can come about might also help managers in generating the right environment to foster business model innovation within their firm.

**Keywords:** business model innovation, business model reconfiguration, pension funds, incumbent firms, performance, superannuation industry

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