

## Paper Session

# [H31] Windows of opportunity for business model innovation in a transitioning automotive industry

Thomas Boersma [Netherlands]<sup>1</sup> , [Joeri Wesseling](#) [Netherlands]<sup>1</sup>

Utrecht University<sup>1</sup>

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### Introduction

It is important to better understand the micro-dynamics of innovation that take place within a systemic context. Innovation and socio-technical systems perspectives tend to overlook the firm level considerations for engaging in innovation (Farla et al. 2012). Within a stronger actor-perspective it is hard, if not impossible, to understand why transitions unfold in certain ways (Ibid.). This paper aims to integrate the actor and systems perspectives, so develop a framework/approach that enables for a better understanding of transition dynamics.

### Theory

The business model is a conceptual tool, containing objects, concepts and their relationships with which the business logic of a firm can be explained (Osterwalder, Pigneur & Tucci, 2005). It serves to deal with technical and economic uncertainties (Chesbrough & Rosenbloom, 2002) and is comprised of three components. First, the *value proposition* defines the offered product or service and the consumer segments it targets (Morris et al., 2005). Second, the *value network* entails the internal resources and competencies of the firm, as well as its positioning in the larger value chain (Ibid.). Third, *value capture* describes how the cost and the revenue model are designed (Richardson, 2005).

Business Model Innovation (BMI), i.e. innovation in one of the three components of the business model or in its interrelation (Demil & Lecocq, 2010), is often required to commercially exploit sustainable innovations because they are not as well embedded within the existing regime as mature technologies are and because of their often inferior technological performance (Massa & Tucci, 2013; Christensen et al., 2012). Such BMIs can help commercialize an innovative technology, but can also be considered an institutional innovation in itself (Massa & Tucci, 2013). BMI emerges particularly in turbulent economic, technological or regulatory contexts (Christensen et al., 2012), such as regime destabilization.

The socio-technical regime is described as a socio-technical system that is comprised of several interdependent dimensions. This interdependence makes it hard for the dimensions to change and creates stability (Geels 2004, 2011). The dimensions are industry, market, science, policy, technology and culture (Ibid.). Regime destabilization, interpreted as change in these six dimensions, is expected to create windows of opportunity for BMI.

### Research goal and question

This study analyses how change in the different regime dimensions affects BMI in terms of value proposition, value network and value capture. The connection between these system and firm level literatures enables us to better understand how entrepreneurial organizations respond to systems transformation. We pose the following research question:

*"How does change in the different regime dimensions affects BMI in terms of value proposition, value network and value capture?"*

### Case study

We focus on the case of the automotive regime in the Netherlands, as it is empirically found to be in a state of regime destabilization (Dijk et al., 2013).

### Methods

The study builds on the qualitative content analysis of various types of documents and semi-structured interviews, using analytical 'bins' (Baxter & Jack, 2008) that are defined along the dimensions of the regime. For each bin (regime dimension) the effect on BMI is assessed (i.e. its effect on changes in value capture, proposition and network).

Data collection takes place in two steps. The first step uses desktop research to operationalize the regime dimensions and identify entrepreneurial firms. The second (well-informed) step uses semi-structures interviews to a) confirm the desktop researcher's evaluation of the regime dimensions and to b) assess how these changing regime dimensions affect the business model innovation of entrepreneurs.

### Expected findings

We expect to find that BMI is closely connected to the destabilization of the different regime dimensions. Specifically, we expect that

- - Industry destabilization translates into new value networks (new players change the value chain) the same rationale applies to changes in the science component.
- - Market change generate changes in value capture and value proposition (new products are demanded and when these products are expensive like electric cars, new ways of capturing value (e.g. renting the battery) are required).
- - Change in technology affects product offering and value chains and therefore affects the value network, proposition and capture.

- - Cultural change such as change in norms and values triggers innovation the value proposition (products offered) and value capture (the way the product is offered).
- - Policy destabilization affects all dimensions of BMI, as policy can support change in science and industry but also in markets and new technologies.

Hence, this study gives an integrative perspective on how innovators respond to change in the different dimensions of a socio-technical regime, allowing for a better understanding of the transition process.

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