

A HYBRID BUSINESS MODEL SOLUTION: MULTI-SIDED BUSINESS PLATFORMS AS DRIVERS OF CHANGE

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27th January 2021

1 Introduction

1.1 Situation

According to Khanna (2016), the first industrial innovations lead back to Britain in the second half of 18th century, during the so-called Industrial Revolution. Britain was the pioneer in reinventing the production through significant advancements in technologies, methods and machinery. It was soon after followed by many other countries. Firms were steadily concerned with maximizing profits and competing with rivals. The focus was set on how to optimize the production processes to lower costs and how to market the products to create a greater demand. This type of business is often referred to as the linear product development business model. However, the linear product development business model, or often also referred to as pipeline business model, encompasses an important limitation. Eventually, improving product quality or supplementing a product family with a new product provides lower returns for the reason that markets get saturated (Khanna, 2016).

The introduction of internet and information technologies in the 1970s marks a new industrial revolution that affected all possible markets which has created new opportunities for business models exceeding the traditional linear business model (Parmentier & Gandia, 2017; Ustyuzhanina, Sigarev, Komarova, & Novikova, 2017). As highlighted by Vargo and Lusch (2016), one with increasing diffusion is the multi-sided business model which highlights the shift from a goods-dominant to a service-dominant logic. In a service-dominant logic, a firm's activity does not include producing and distributing a product as it does in a goods-dominant logic, it rather involves establishing an infrastructure for connecting relevant parties and supporting customers in co-creating value (Vargo & Lusch, 2016).

A multi-sided business platform consists of a common set of technologies, components, tools and services, generally of modular design, that acts as a base for product and service developments (Gawer & Cusumano, 2014). It serves as a foundation for offering value and leads to the emergence of ecosystems which enable users of the platform to co-operate, transact, innovate and co-create across borders (Gawer & Cusumano, 2014; Nambisan, Zahra, & Luo, 2019; Van Alstyne & Parker, 2017). However, the value creation of the platform ecosystem is determined by more factors than just the collaboration between platform users (Tura, Kutvonen, & Ritala, 2018). This includes choices made on the platform openness (Parker & Van Alstyne, 2008; Eisenmann, Parker, & Van Alstyne, 2008) and governance (Tiwana, Konsynski, & Bush, 2010; Gawer & Cusumano, 2014) along with the quality and management of customer expectations (Zhu & Iansiti, 2012).

Unlike product platforms, industry platforms create network effects which can grow exponentially (Gawer & Cusumano, 2014). Network effects arise when additional users of the platform generate value for existing users, thus, the more users a platform attracts, the more value it creates (Katz & Shapiro, 1985). The choices on the platform design must be aligned with one another since this is crucial for the value creation process (Tura et al., 2018). Although, multi-sided business models are increasing in popularity, many markets have not made use of them yet. Depending on the incumbents' willingness to adopt to this potentially

disruptive innovation, it can either be seen as a threat or as an opportunity (Van Alstyne, Parker, & Choudary, 2016).

1. 2 Problem Definition

The improvements in digitalization have increased the popularity of platforms which leads to disruptions in different industries. As stated by Osterwalder and Pigneur (2010) “a competitive business model that makes sense in today’s environment might be outdated or even obsolete tomorrow” (p. 210), hence, for incumbents who are not willing to innovate and rather want to follow their current pipeline business model, it imposes a threat. On the contrary, incumbents who are open to transform into a platform business can leverage this opportunity and strengthen its competitive position in the market. However, the adoption of a platform business model is an entire changeover for an incumbent following a pipeline business since it requires significant changes like developing new competences and making large investments (Van Alstyne et al., 2016). Thus, it might be appropriate to adopt multi-sided business practices gradually. This will not transform the current pipeline business model immediately into a business platform, but rather introduce a hybrid business model. A hybrid business model will combine the benefits of a platform business model while still maintaining the current pipeline operations (Endres, Stoiber, & Wenzl, 2019).

The activities of hybrid businesses are more complex compared to purely pipelines or platforms since they perform both activities simultaneously. Therefore, the establishment of a hybrid business model is rather challenging and unique in its nature. Although a few familiar companies, like Microsoft and Amazon, emerged in early years as hybrid businesses (Cusumano, Yoffie, & Gawer, 2020), only little is known about practices for transforming from a pipeline into a hybrid business. Thus, this research attempts to fill this gap by defining practices on how incumbent firms following a pipeline business model can transform into hybrids. This will assist incumbents whose industry is threatened by platform businesses to remain competitive. Especially, sectors like automotive, software, media and health care are heavily affected by the digitalization (Endres et al., 2019; World Economic Forum, 2016).

The research will be executed with an example from the automotive industry. Up to the present, the automotive industry has been strongly focused on the vehicle architecture, thus typically adopting a pipeline business model with linear activity flow. Trends like vehicle digitalization and electrification allowed for platform businesses like Google and Apple to enter the automotive industry. For traditional automotive manufacturers, this creates great challenges. On the one hand, they have to develop software capabilities in order to meet the market demands (Fletcher, Mahindroo, Santhanam, & Tschiesner, 2020). On the other hand, the competition does not only evolve around existing players in the automotive market but has opened to the technology industry as well. Also, the focus within the automotive industry is not the physical good anymore, but the software and services that can be offered with the vehicle (Ball, Cordier-Deltour, & Magrath, 2018). Therefore, in order to remain competitive, automotive manufacturers have to deliver in combination with the electric vehicle also a software that meets the consumer demands. This in turn requires changes in the current business model of the automotive manufacturers.

1. 3 Purpose and Research Question

The research goal is two-fold. Firstly, to test and evaluate existing theoretical frameworks and identify practices for the design of a hybrid business model solution. Secondly, to advance the current literature on hybrid business models in the platform industry. In line with the research goal, the following research question has been formulated: “How can incumbents leverage the power of platform business models to transform their pipeline business into a hybrid business?”. In order to guide the main research question, six sub-questions have been defined:

1. *How are platforms defined?*
2. *What makes platforms successful?*
3. *What are common platform failures?*
4. *What is a business model?*
5. *What is a hybrid business model?*
6. *How can incumbents adopt a hybrid business model?*

The research builds upon relevant literature on hybrid business models and contributes to academic research in the automotive industry. The subject is of particular relevance due to its limited appearance in literature despite the increasing popularity. While there is extensive literature on pipeline business models and on multi-sided business models, only little is known about the emergence and existence of hybrid business models. Thus, this research aims to fill this gap in literature and contribute towards the theoretical development on hybrid business model solutions. From a practical perspective, the research encourages a better understanding of the business operations through the use of the business model canvas. Moreover, considering the increasing trend for platform business models, managers can apply the recommended practices in order to shift towards a hybrid business model solution and thereby increase their competitive position in the market. While these practices have been developed based on case study research from the automotive industry, they can still be applicable to other industries as well. Thus, managers aiming to complement their pipeline business with platform transactions can test the recommended practices.

1. 4 Research Outline

This research consists of five main sections. The first section discusses the theoretical background of pipeline and multi-sided businesses. This includes outlining definitions and key characteristics to create a shared understanding of the terms used. It also formalizes the benefits and challenges for showcasing the trade-offs of each business type. The second section defines the meaning and importance of business models which will be used as a tool to delineate a systematic understanding of a firm's business operations. Additionally, the key differences between pipeline and platform business models will be underlined. In the third section, the study introduces existing frameworks for hybrid business model transformation to showcase the current state on hybrid business model literature. In the following section, the research methodology will be elaborated upon to provide details about the research design, data collection and data analysis. The fifth section deals with the execution of the empirical analysis. This contains the case study research with the example of an automotive manufacturer which will be evaluated in terms of the hybrid business model transformation. Thereby, the company will be tested using the presented theoretical frameworks in order to identify benefits and challenges faced during transformation and define practices for transformation. Finally, a discussion and conclusion will be provided.

2 Literature Review

2. 1 Platforms

According to Gawer and Cusumano (2014), platforms can be identified in two predominant forms, namely product platforms and multi-sided business platforms. In synthesis, product platforms consist of a set of assets and interfaces which build the foundation from which a stream of related products can be efficiently developed and produced (McGrath, as cited by Halman, Hofer, & Van Vuuren, 2006). Multi-sided business platforms are defined by Gawer (2009) as the base whereupon all parties involved in the ecosystem can create complementary and innovative products, services and technologies.

The idea of product platforms can be viewed as a response to the intense competition and fast-changing customer demands. Firms were able to establish a greater product variety while reducing the level of internal complexity and maximizing the bargain on investments made into product design, manufacturing and marketing (Krishnan & Gupta, 2001). Product platforms consist of similar sub-elements which can follow the same logic in consideration of design, production, marketing and supply. This also refers to modular design, which is the concept of dividing a product or process into several sub-elements which are designed and operated autonomously, but together they form a complex product or process (Baldwin & Clark, 1997). During the design of each sub-element, specific design rules must be followed to ensure that it matches other sub-elements in the production process whereby sub-elements can either be fixed or change over time (Baldwin & Woordard, 2008). Therefore, the understanding of interconnections between offerings, markets and processes is vital to the growth and success of the firm (Sanderson & Uzumeri, 1995).

According to Eisenmann, Parker and Van Alstyne (2006) multi-sided business platforms do not mark a new phenomenon, however, their appearance has increased with the trend towards digital businesses. A significant difference between product and multi-sided platforms is that the final product delivered to customers on a platform is not fully defined since the platform only provides the separate modular elements and not the complete end product (Nambisan et al., 2019). Multi-sided business platforms can be defined as a common set of technologies, elements, architecture, services and relationships which a number of distinctive participant groups use as the basis to create and deliver value to the end user (Gawer & Cusumano, 2014; Hagiu, 2014; Muzellec, Ronteau, & Lambkin 2015). Van Alstyne et al. (2016) categorize the user groups into four roles (1) supplier; (2) buyer; (3) provider; and (4) sponsor. The provider and sponsor are in many cases the same firm and refer to the platform leader who controls and owns the platform (Iansiti & Levien, 2004). In terms of monetization, revenue is created through the transactions between the user groups, where the leader captures a predefined amount of the value (West, 2003). The network in which the user groups interact is called the ecosystem, which is characterized through its modular design and network across geographical borders (Jacobides, Cennamo, & Gawer, 2018). Another important element of multi-sided business platform are network effects which arise when the value increases through an increasing number of users joining the platform. The stronger network effects can improve the competitive position and create barriers to entry (Rochet & Tirole, 2006).

2.2 General Overview of Business Models

A popular tool to establish a better business understanding is the business model (Magretta, 2002). The business model provides a systematic view on how the business and the market operates and if the firm succeeds in creating a successful business model, it can result in a competitive advantage (Magretta, 2002; Pekuri, Pekuri, & Haapasalo, 2013). Moreover, business models deliberate the importance of value creation to and capturing from customers (Zott, Amit, & Massa, 2011). Especially, with regard to multi-sided business platforms, this constitutes a critical aspect since platforms emphasize the importance of customer-focused value creation. Thus, in order to successfully deliver value to customers, managers have to consider the business as a whole. This includes designing, comparing and analyzing the organization's value creation logic (Pekuri, Pekuri, & Haapasalo, 2015).

The visualization of the business model is considered an effective management tool for communicating and executing the firm's strategy. The study adopts the business model canvas, which consists of nine building blocks to assist in understanding how a firm attempts to create revenue. Hereby, the nine building blocks emphasize four essential business sectors, namely customers, value proposition, infrastructure, and financial viability (Osterwalder & Pigneur, 2010). A currently successful business model cannot assure a firm's competitive market

position overtime. The business model must be difficult to replicate and sufficiently differentiated from competitors (Wrigley & Straker, 2016). Moreover, it requires managers to constantly innovate the current business model. Therefore, business model innovations are essential for sustaining a competitive market position (Osterwalder & Pigneur, 2010). Thereby, a forward-looking perspective is required to identify and implement disruptive technologies (Christensen, 1997). In pipeline dominated industries, platform businesses are currently disruptive, therefore its implementation needs to be considered (Van Alstyne et al., 2016).

2.3 Introducing a Hybrid Approach for Pipeline Transformation

Pipeline and platform business models do not have to be mutually exclusive. Van Alstyne et al. (2016) argue that firms can adopt a hybrid approach which includes both business models. In fact, the number of incumbents merging platforms into their business models has increased significantly over the years. A prominent example is Apple, which proved that a firm could do both incorporating a linear set of activities and at the same time creating a network for outside interactions. Despite the relatively high competitiveness of pipeline business models, it has been stated that if firms with platform business models enter the same market, they usually win. Thereby, there are three key elements which have to be adjusted in the business model of incumbents who aim to become also a platform business (Van Alstyne et al., 2016):

1. From resource control to resource orchestration.
2. From internal optimization to external interaction.
3. From a focus on customer value to a focus on ecosystem value.

In line with these shifts, Markfort, Haugk, and Tangour (2019) propose an integrated framework which is divided into six steps:

1. Analyze the core business: Identify the most important revenue streams and consider reinventing them.
2. Ideate products/services that serve the core business: Build innovations that are connected to the core business and establish an outside-of-the-box way of thinking.
3. Evaluate the possibilities for monetization: Evaluate the ideas in terms of profitability.
4. Do not play an All-In-Game: Test the business innovations before merging them into the overall business.
5. Think global, act local: Retrieve feedback from local communities to optimize the business idea before going global.
6. First come, first serve: React fast to market changes to identify new customer trends.

3 Methodology

A qualitative research approach will contribute towards the identification of recommended practices for incumbents willing to adopt a hybrid business model solution. An in-depth case study with Volkswagen AG as the unit of analysis has been conducted in order to provide a deeper understanding of the phenomena of hybrid business model transformation within the real-life context. The case has been chosen under the perception that it will reveal and/or confirm new and existing knowledge about the phenomena which will lead to the identification of possible practices for transformation. Data has been gathered through documentation analysis which is also referred to as an independent data collection method (Runeson & Höst, 2009). This means that a desk research has been executed. The desk research includes the collection of secondary data, which contain annual reports, organizational charts, newspaper and magazine articles, press releases, journals and websites. The main sources for acquiring the secondary data were the world wide web, university library and Nexis Uni. As an alternative to data triangulation, secondary data has been analyzed with a careful judgement (“critical

eye”). Specifically, information from different data sources have been evaluated against each other to ensure that the information is valid and of high-quality. Figure 1 illustrates this process of comparing different data sources to each other.

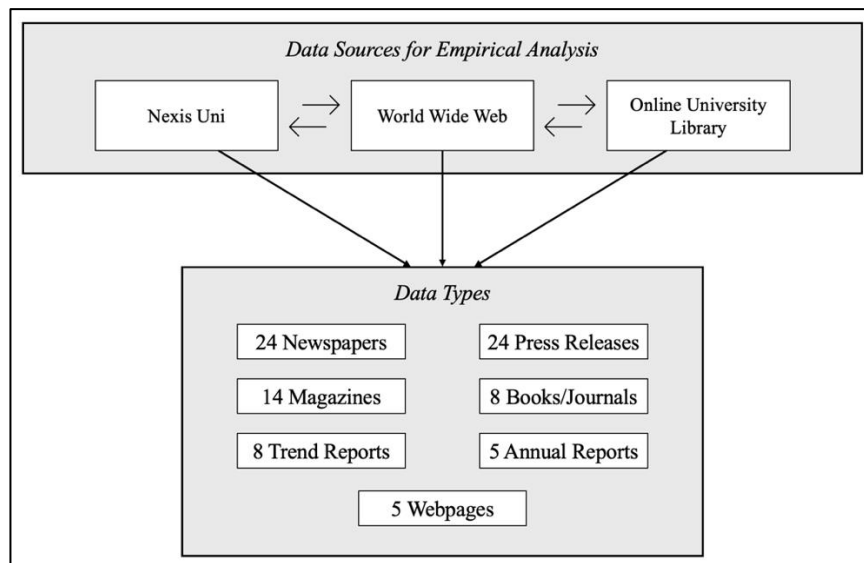


Figure 1. Data Collection Sources

So, high-quality secondary data has been used to acquire a richer knowledge of the business model and test and evaluate two theoretical frameworks on their applicability. This has led to the identification of recommended practices for redesigning the business model.

4 Findings

The first key finding of this research is related to the benefits and challenges of the hybrid business model transformation. The results indicate that existing literature has overlooked the benefits of being a pipeline before becoming a platform business. When establishing a platform business, pipelines can profit from their existing brand equity among customers and the prior market and product knowledge. Moreover, in some cases pipelines have more brands within their portfolio which allows for a greater platform scalability. Also, the research has shown that during the transformation from a pipeline to a hybrid, firms encounter more challenges than benefits. These are restructuring the organization, developing a hardware and software, expanding the ecosystem, establishing network effects, defining a pricing strategy and preparing for market competition. While most of them are already supported by literature, two challenges have been extended and one has been rejected.

The second key finding includes the identification of recommended practices for realizing a transformation from a pipeline to a hybrid. In total, the research has revealed nine practices which are: (1) Develop an agile and innovative mindset; (2) Understand and maintain your core business while reinventing it; (3) Let the innovation cannibalize existing products; (4) Control and orchestrate resources; (5) Optimize customer value, before focusing on the ecosystem value; (6) Engage and connect user groups; (7) Monetize only once sufficient value has been created; (8) Possess financial incentives; and (9) Prepare for intense competition. The practices have been formulated with two-folded intentions. On the one hand, they should highlight that the existing benefits of pipelines should be utilized and not disregarded. On the other hand, they should make pipelines aware of the challenges that have to be mastered in order to be successful as a hybrid business.

The definition of practices for a hybrid business model transformation has enriched the literature on hybrid business models and fills the gap on how to redesign the business model in order to complement the pipelines with platform activities. Moreover, the research contributes to practice with providing guidance during the transformation.

5 Discussion

5.1 Limitations

This research paper follows a qualitative research approach with an in-depth case study analysis. During the research, several shortcomings have been encountered which should be addressed in order to improve potential future investigations on this subject.

A single in-depth case study has been conducted which allowed to collect detailed and rich information. The general limitations of such an approach are associated with the failure to provide statistical proof and generalizability. Regarding the data collection, only secondary data has been used to gather information on the case and generate new findings. This offers a lower data validity due to the lack of data triangulation. Lastly, this research has been executed in the context of a final graduation project which means that it was exposed to time constraints.

5.2 Recommendations

This study has extended the literature in the research field of hybrid business model solutions by identifying and defining recommended practices for complementing the pipeline business with platform activities. However, at the same time it has also opened new paths for research.

The in-depth case study research allowed for defining recommended practices. Since these have been defined based on one case, it is suggested to reconstruct the study. There are two ways to do so by either selecting another case (1) within the same industry or (2) from a different industry. It could reveal new insights and increase the generalizability of the results. One of the recommended practices is related to the organizational mindset of the pipeline business. A suggested area of research would be to analyze the impact of the organizational culture on the hybrid business model transformation. Also, the study focusses on the perspective of the platform owner. Thus, it is suggested to analyze the success of a hybrid business model from different perspectives.

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