

A MULTI-DIMENSIONAL FRAMEWORK OF BUSINESS MODEL INNOVATION –  
VALUE CREATION OF AN AIRCRAFT ENGINE SERVICE PROVIDER

MASTERARBEIT

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## **1 INTRODUCTION TO BUSINESS MODEL INNOVATION**

Today, the terms “innovation” and “business model” are used in various ways within the business world and literature; they are often related to best practice and wise organizational management, but end up meaning nothing. The restlessness of the ever-changing company landscape is as high as ever before and demands for new business concepts to be manageable. For most people involved, those concepts remain confusing and difficult in order to relate them to value creation and performance management. Building a common understanding of what those terms actually mean, a detailed description will increase the willingness to deal with and, on the other hand, invest into them. In this thesis, a practical example of an aircraft engine service provider will help to close the literature gap. In the last decade, next to new product and service creation, innovative business models gained more and more attention. Questions arose of how business models can be systematically developed and which problems evolve out of them. Literature discussion tried to combine entrepreneurial establishment and the comprehensive development of innovative business models.<sup>1</sup> This combination is now applied to the specific case of new ventures born out of established enterprise, the engine service provider (ESP). The respective ESP is dealing with aircraft engines owners which are in need for maintenance, lease and spare parts. This business is seen as separated from the typical airline-passenger or transportation industry, but as a necessary key component of their operation and cost structure.

### **1.1 CURRENT CHALLENGES AND RELEVANCE**

In order to examine current problems and challenges related to the field of business model innovation (BMI) in a qualitative assessment, we need to understand the major content first. A brief discussion about the current literature in combination with the case study presented will shed some light to this. Especially the linkages to other internal and external sources will be made. In addition, activities across the innovation and their impact on the components of the model are examined. This thesis tries to show the fundamentals of business models as well as their innovation content based on the ESP and triggers pulling these changes to reality.

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<sup>1</sup> Cf. George & Bock (2011), Crossan & Apaydin (2010); Drucker & Drucker (2007); Morris, Schindehutte, & Allen (2005).

Today, highly industrialized marketplaces and their playgrounds for large firms become highly competitive and complex. Due to various determinants, such as the competition worldwide as well as the altering business environment, the importance of changing a company structure and the way it is doing business has dramatically increased. This is especially true for the aviation industry, where dynamic environments prevail. Topics like shorter lifecycles, market exploitation and service development are only a few points named in this respect and affecting business models. Understanding the linkages of the value creating system will help to dive into the general question of what an aircraft engine business model consists of and how it has been adjusted over time by the ESP. Literature has shown only one paper related to the field of aircraft maintenance from Schneider et al. (2013) so far.<sup>2</sup> Building on the principles of these authors and their recent research agenda<sup>3</sup>, this thesis will examine the developments from the inside-out perspective. The internal view will extend the knowledge about current challenges and helps us to understand this kind of innovative behavior in more detail.

Other industries have been widely analyzed in history, such as the global enterprises Apple and Amazon.<sup>4</sup> In most cases, after innovating and implementing their business models they became market leaders in their respective segments. But what was the reason for their change? The major dimensions which enhanced their corporate performance were related to the value proposition and realization for their customers. This is a core component within the business model of a firm and therefore it is centered in the title of this thesis. Analyzing cases like Apple show that a majority of research examination was not made based on newly established companies, but large enterprises. In the assessment of this master thesis (MT), the focus shifts to the industry of aircraft engine servicing again and builds a bridge to current literature of how a company can actually create value through BMI. The findings will contribute to existing studies related to organizational change and innovation of established companies, but in a new way. The aim of this thesis needs careful consideration and can be displayed especially within reference model formation which differs across companies.

Companies seek to find and consider a way of how their performance interacts with their defined business model. They target is to understand common relationships, to

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<sup>2</sup> See Schneider, Spieth & Clauss (2013), p. 305.

<sup>3</sup> See Schneider & Spieth (2013), p. 21.

<sup>4</sup> See Amit & Zott (2010), p. 4.

evolve a competitive advantage. Business models, in this case, also represent a source of future value proposition. This MT centers the creation of value and the influence of value-seeking behavior on all components of a company.

What we know today is that margins of companies outperforming their competition were twice as likely caused by BMI, opposed to product or process improvement-related innovations.<sup>5</sup> Furthermore, managers favor new business models over new products and services as a source of corporate success.<sup>6</sup> Drivers like customer satisfaction and competitive pressure lead to this development in the mindset of management boards today. Amit and Zott (2010) explain the business model to be a “sustainable performance advantage” comparing themselves to other industry-parties.<sup>7</sup> Therefore we could say that continuous achievement is not depending on product cost savings alone anymore but on developing new competencies, alliances and other such innovations.<sup>8</sup> In relation to this, the rise and fall of most international enterprises depends heavily on their (pre-)defined business model.<sup>9</sup> Furthermore, discussions include the managerial view on an open minded management with an understanding of competitive threats that may use the transformation of business models to prevent undesirable developments. It is now seen as a concrete factor for management interests because competition can hardly imitate the activity system as a whole. Therefore, this MT seeks to find out how companies can develop a successful business model.

Critical assessment now asks for a deeper analysis of processes based on business innovation itself as well as their related impact on costs and value propositions. Changing corporate activities is usually not simple and costless. In fact, changing previous established product and service processes takes a lot of effort and preparation. Hence, large corporations restructured themselves in the last years to have their own business development departments. The employees of those departments are responsible to establish continuous flexibility, a detailed plan, workaround and development of innovations within and across business unit. In close corporation with the business development officials and the use of their documentation, this MT has been written to show the particular case of the ESP innovation.

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<sup>5</sup> See Pohle & Chapman (2006), pp. 38-40.

<sup>6</sup> See Business (2010), p. 2.

<sup>7</sup> See Amit & Zott (2010), p. 5.

<sup>8</sup> See Pohle & Chapman (2006), p. 36.

<sup>9</sup> See Chesbrough (2010), pp. 12-13.

## 1.2 RESEARCH QUESTION AND PROBLEM EXPLANATION

The evaluation of new venture creation through innovation in a global sense but within an existing company framework is nothing new but still not fully understood.<sup>10</sup> However, the field of market-driven BMI has recently come into the theoretical focus in academics with connections to various other fields like competitive advantage, strategic management, product innovation, entrepreneurship, network theory and others.<sup>11</sup> Whereas the fundamental concept becomes more and more clear, a bridge to practical cases may help to improve and show the relevancy of this topic. This thesis will contribute to this emerging research field in alignment with the ideas of the future research agenda of Schneider and Spieth (2013) and their single case study about the aviation industry.<sup>12</sup> The extended understanding itself should enhance the business model thinking as a corporate priority. In order to do so, this MT is written in alignment with the thoughts of Kohlbacher (2004) using the methods of qualitative content analysis to examine this topic. Furthermore a reference model analysis is used out of practice. Both are presented later within the methodological chapter with the aim of evaluating the research question as major orientation in the right academic frame. The targeted research question is as follows:

*Does business model innovation enhance the value creation of a transformed ESP? If so, could we describe the dimensions of their determinants, elements and results in a clear way?*

In general, aero engine leasing companies have a long history in the aviation and airline business. Nevertheless, the development to a lease and material service provider launched from a maintenance repair and overhaul shop for engines (MRO) is rare to the aviation industry. One special characteristic of this study is the direct observation of establishment of the company. Current questions in other fields of BMI as well as service innovation literature may help to understand and structure its complex prerequisites, processes and effects during the implementation of the diverse components.<sup>13</sup> In addition, this study makes substantial efforts to shift the existing focus on product and service innovation literature to the conceptual “superior” level of BMI. Due to the understanding of value-creating activity systems, recent literature sees the

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<sup>10</sup> See Morris et al. (2005), p. 733; Alvarez & Busenitz (2001), p. 771.

<sup>11</sup> See Hvass (2012), p. 2; Hابتay (2012), pp. 33-34; Bucherer, Eisert & Gassmann (2012), p. 183.

<sup>12</sup> See Schneider & Spieth (2013), pp. 21-22, p. 25, Schneider et al. (2013), p. 288.

<sup>13</sup> See Zott, Amit & Massa (2011), pp. 2-5, Crossan & Apaydin (2010) pp. 1155-1557.

modifying of *how* we do business as more important than what, when and where.<sup>14</sup> A more holistic view will allow giving answers to diverse questions regarding the elements of innovation.

### **1.3 AIM, SCOPE AND STRUCTURE OF THIS THESIS**

The general objective of BMI is to create value by linking new or existing activities to satisfy a perceptual need of a party. Examination is needed to conceptualize parts of this value-creating activity system in order to show a multidimensional picture projected to an engine service provider (ESP). This will lead to a cause-and-effect view that investigates the innovation procedure. The design elements of the business model and its interdependencies will be reviewed in order to reflect the change. Therefore, this study uses the application of modeling the theoretical problem first and then applies a deductive research in order to solve a complex structured framework.<sup>15</sup> Furthermore, it aims at providing a comprehensive review of academic publications on the emerging concept of BMI itself. In the end, the understanding of common relationships across the main fields of observation now target to contribute to future academic research and as guideline practical cases. It is expected, that this case study will extend the evolved and existing literature framework but with critical questioning.

Structuring the concept of BMI, this thesis will divide the topic into several parts. This parts-framework will be explained later within the methodological abstract of this thesis. It should provide a designed overview of BMI reviewing most of the recent papers and models. The research is in alignment with the guideline of Becker et al. (1995), describing a logical way of modeling a complex topic.<sup>16</sup> The presented model attempts to find a pattern of characteristics explaining the observations from practice. In this sense, originality and scientific findings of a particular theoretical framework will be found and used in company related questioning.<sup>17</sup> Second, literature on BMI will be grouped into distinct research streams. Third, a theoretical framework is suggested in order to discuss all observed changes and innovations to the business model of the aircraft engine service provider. Determinants of this development will be reviewed and explained. Afterwards, rules can be derived in order to generalize the phenomena seen. In the end, the outcomes related to value creation are observable. Direct comparison of

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<sup>14</sup> See Amit & Zott (2011), p. 2.

<sup>15</sup> See Schneider & Spieth (2013), p. 3.

<sup>16</sup> See Becker, Rosemann & Schütte (1995), p. 437.

<sup>17</sup> Cf. Disterer (2011), p. 44.

the BMs will help to display the newness to some elements of the BM. As the fourth step, conclusions are advised of how to manage a BMI in practice. Finally, the findings and implications of this thesis will be discussed. This covers the general flow of writing a MT in economic science described by Disterer (2011), and the streamlined model approach to current literature by Schneider & Spieth (2013).<sup>18</sup>

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<sup>18</sup> Cf. Disterer (2011), pp. 30-31; Schneider & Spieth (2013), p. 3.

## **8 OUTLOOK AND CONCLUSION**

Innovation in this thesis has been viewed as renewing business solutions and applications in order to better meet customer requirements, growth expectations and market trends. Shifting away the focus from technical, process and product innovation, the thesis makes substantial efforts to support large-scale or superior BM thinking. Therefore, this thesis utility lies within the understanding of corporate success in regard to BMI itself. Connecting both fundamental topics, the research gained more and more importance within the last years. Showing up their determinants and perceived obstacles influencing the companies' economic feasibility could lead to new insights on competitive advantages.<sup>163</sup> In this regard, the case of the ESP has named and connected the triggers from external as well as internal sources in combination with managerial behavior and planning. This field still needs more assessment by explorative and empirical research.

The purposeful innovation of the components of this business model may bore more insights for other companies and management. The results presented support the necessity and usefulness of a comprehensive change across the business model with innovative or even disruptive character. This MT showed the detailed characteristics for the ESP but may be expended to other companies too. Generalizing managerial implications would then lead to more practical relevance and therefore more theoretical attention as well. In the end, this MT concludes that the process and use of efficient BMI can be key to corporate success. Unfortunately, it was not clearly set for the ESP due to non-standardized procedures and may be different in other industries. Following a standardized way of innovating and therefore improving the business model through different stages should be focused in future research. Furthermore, the subjective view on the process has diverse influences such as company background and profession of the employee. Excluding those characteristics, most of the interviewed have shown a process of at least three to four stages including an idea generation, planning and implementation phase. Further research could discuss a controllable and observable process for managerial uses. A better understanding could lead to lean structures and standardized processes helping to avoid unfavorable developments arising out of globalized market trends, as well as crucial environment changes or customer needs.

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<sup>163</sup> See Hvass (2012), p. 9.

According to the demanding research agenda of Schneider & Spieth (2013) and related structures of their research with Clauss on the aviation industry (2013), this thesis has tried to build and extend a comprehensive picture of BMI for an ESP.<sup>164</sup> Only a few empirical studies have been made on this field of research so far, especially in combination with entrepreneurial establishment. The findings suggest that the ESP has chosen to respond to current and future developments by innovating the way of doing business. It seems that the understandings of such potential can be generally beneficial to all kind of businesses. In the end, the presented model included the thoughts about the topic coming from literature in two ways. First, the projection of the suggested theoretical review to the case has proven to find common structures across theory and practice in a deductive way. Second, it represents a conceptual frame itself for a value based focus in combination with innovative new venture creation in service industries. However, this could be highly relevant for all kinds of businesses today in order to assure future profitability and growth. Whereas the practical view was restricted to the aircraft engine service business, the implications may not, and could create value by further discussion. Essential rules about how to innovate the own business model could give this competitive advantage businesses today are searching for.

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<sup>164</sup> See Schenider & Spieth (2013), pp. 2, 23.