Why an innovation may result in the 'dark side'? An exploratory study on business model innovation

La Ode Sabaruddin
The York Management School, University of York, United Kingdom

Jill MacBryde (jill.macbryde@york.ac.uk)
The York Management School, University of York, United Kingdom

Beatrice D'Ippolito
The York Management School, University of York, United Kingdom

Abstract

Existing literature has tended to focus on the positive benefits and outcomes of business model innovation. But, there is evidence to suggest that business model innovation can also have a dark side – with negative consequences and/or unintended outcomes. This paper starts with a systematic review of literature to document examples of the negative consequences and/or unintended outcomes and further populates the negative consequences and/or unintended outcomes through a Delphi study. Combining these two the paper presents a generic description of the dark side. Following the same steps, the paper identifies the driving factors/circumstances of the negative consequences and/or unintended outcomes

Keywords: Business model innovation, negative consequences, risk

Introduction

A business model is "a model that links the working inside the firm to outside elements including value creation processes (Amit and Zott, 2001; Teece, 2010) and value capture processes" (Baden-Fuller and Mangematin, 2013:419). Business model innovation (henceforth referred to as BMI) can be defined as the development of a new business model or replacement of firm's existing business model with a new one (Massa and Tucci, 2014) through altering "key elements of a firm's business model and/or the architecture linking these elements" (Foss and Saebi, 2017:216). Existing literature has tended to focus on the positive benefits and outcomes of BMI (see Foss and Saebi, 2017). Typically, current studies emphasize BMI as a powerful tool for firms to sustain competitive advantage, promote growth, and generate superior returns.

But there is evidence to suggest that BMI can also have a dark side – with negative consequences and/or unintended outcomes (e.g. Neely, (2008; Halecker et al., 2014; Chesbrough and Rosenbloom, 2002; DeYoung, 2005; Kim and Min, 2015). While a number of studies in BMI literature have drawn attention to a number of negative consequences that firms could encounter when innovating their business model, the examples described mostly are conceptual or illustrative, scattered across studies with no studies focus exclusively on the phenomenon, and an in-depth theoretical investigation of the phenomenon is needed. Furthermore, from a practical perspective, understanding the phenomenon is important as the 'dark side' of BMI represents the risk which often creates a dilemma for firms whether they should innovate their business model or pursue another strategy. The present paper aims to explore phenomenon of the dark side of BMI with an obsession that through such understanding possible strategies or interventions on managing the dark side of BMI may effectively be developed.

Business Model and Business Model Innovation

There are multiple interpretations of business model and most likely BMI thereby as suggested by Massa et al. (2017) an explicit interpretation of business model adopted in a study need to be made. In the present paper, business model is assumed as a formal conceptual representation, and accordingly business model is viewed as simplification of a more complex system or activities describing the way of how firm create, deliver, and capture value (Teece, 2010; Foss and Saebi, 2017; Baden-Fuller and Mangematin, 2013). An interpretation of business model as a formal conceptual representation implies that, depending on the level of aggregation, a business model being described in most cases merely represents simplification of a more complex reality of a real business model (Massa et al., 2017). There are almost as many scholars of business model as simplifications of business model in literature (Baden-Fuller and Mangematin, 2013; Massa et al., 2017), but referring to Foss and Saebi (2017), the present study describes simplification of a business model as "key elements" and the "architecture" linking the elements (p. 216, cf. Teece, 2010). Accordingly, BMI by means the development of a new business model or replacement of a firm's existing business model would comprise choices made by management about which "key elements of a firm's business model and/or the architecture linking these elements" (Foss and Saebi, 2017:216) need to be made or reconfigured (Casadesus-Masanell and Ricart, 2010) and how those choices are enacted (Teece, 2010). As the choices could be infinite and each of them would have consequences (Casadesus-Masanell and Ricart, 2010), managers need to analyze which key choices at best can enact the reconfiguration or creation of the new business model. These choices as described in BMI literature may involve changes in a particular component to a complete replacement of existing business model.

Methodology

In achieving aim of the paper, three research strategies are deployed: (1) content analysis of existing literature, (2) Delphi study, and (3) case study. Content analysis of existing literature aims to document examples of negative consequences and/or unintended outcomes resulting or may result from BMI have been described in literature and further identifies the driving factors/circumstances to lead to the negative consequences and/or unintended outcomes. Aiming for a systematic approach and comprehensive inclusion of pertinent literature, a systematic review approach following three-stage process suggested by Tranfield et al. (2003) is selected: planning, execution, and reporting. ISI Web of Science's Social Sciences Citation Index (SSCI) is chosen as the primary reference. In total, there are 129 articles retrieved from SSCI and Informed by these articles, a further manual search adds 28 publications thereby the final sample consists of 157 publications. In analysing the articles, aiming to build concepts, categories, or framework, qualitative approach of content analysis is selected (Morgan, 1993). More specifically, the paper followed stage model of inductive category development (Mayring, 2000; see also Hsieh and Shannon, 2005).

At the outset, it was expected that while current literature has suggested a number of negative consequences and/or unintended outcomes may result from BMI, current studies have been limited in capturing the phenomenon. For this reason, a Delphi study aiming to provide a more generic description is conducted. The first and foremost, the Delphi study is relying on academics' expert aims to include the most ‘knowledgeable' and ‘reliable' experts in answering the question (Hasson et al., 2000). The Delphi study is further extended to professional experts who have relatively gained significant practical experience on BMI. In total, the Delphi study involves 10 highly reputable academics in the area of BMI and 16 professional experts. To investigate empirical examples of the dark side of BMI, two case studies on companies experiencing the dark side of BMI are conducted.

Negative Consequences Resulting or May Result from BMI

Figure 1 summarizes the negative consequences and/or unintended outcomes resulting or may result from BMI derived from content analysis of existing literature and the Delphi study. These include three categories: (1) negative consequences that affect firm as an entity (strategic and operational), (2) negative consequences on firm’s stakeholders, and (3) specific/context dependent negative consequences.

<u>Negative consequences affecting firm as an entity</u> refer to negative consequences resulting from BMI at organizational level irrespective of its impact on specific firm’s stakeholders. These include consequences at strategic level that captures the ultimate impact of BMI on various measures of performance and consequences at operational level that captures the execution and day-to-day process of BMI design and implementation. At the strategic level, a significant number of past studies in BMI literature have suggested a number of negative consequences notably on financial measures. These coded as profitability and broader financial measures category. The second category is competitive position, capabilities, and other non-financial measures. With exception to competitive imitation, existing literature seems to have overlooked this category where only a few studies provide examples of the possible negative consequences and the examples described mostly are conceptual or illustrative. In fact, our Delphi study found a number of new examples (e.g., loss of core capabilities, weakened reputation or legitimacy, brand dilution, and strategy defocus). Moving to the negative consequences at operational level, two aggregate categories are identified. The first category which gained significant attention in literature is complexity and ambiguity in enacting the BMI. These include five sub categories: sense making difficulties, difficulty in establishing new activities/processes, difficulty in integrating and aligning new activities/process, difficulty in balancing exploration and exploitation, and operation defocus (i.e., difficulty to see what firm operation stands for and either purposely or arrived by default moving toward different operational model that contradicts overall design of the new business model). The second category is conflict between involved actors. This category comprises four sub categories: (a) managerial conflict, (b) bad team dynamics, (c) employees resistance, and (d) conflict with networks.

<u>Negative consequences affecting firm’s stakeholders.</u> With the exception to few studies with limited coverage (e.g., de Oliveira and Cortimiglia, 2017; Lange et al., 2015), negative consequences may result from BMI that affect firm’s stakeholders remain widely unexplored phenomenon. On internal firm’s stakeholders, content analysis of existing literature and the Delphi study identify two aggregate categories: (1) career consequences, and (2) psychological and well-being. The examples include employability termination, stress and frustration, work insecurity, and reduced

compensation. On external firm stakeholders, the negative consequences identified include invasion of privacy, social and environmental issues, and economic externalities due to changes in supply chains.

Specific/context dependent negative consequences refer to negative consequences experienced by certain firms due to certain contextual factors or setting in which the BMI situated. Content analysis of existing literature and the Delphi study identify at least seven specific contexts/settings. These include internalization, collaborative/open BMI, family business, cross-channel retailer, high technology-based BMI, sharing economy-based BMI, and low income market.

Research Process	**Output – Negative Consequences and/or Unintended Outcomes**
Content Analysis of Existing Literature	Three categories: (1) negative consequences that affect firm as an entity (strategic and operational); (2) negative consequences on firm's stakeholders (internal and external); (3) specific context dependent negative consequences: • Negative consequences at strategic level comprise two categories: financial and non-financial consequences with a greater focus on profitability and broader financial consequences. • Negative consequences at operational level comprise two categories: complexities and ambiguities in enacting the BMI and conflict between involved actors. Literature to a greater extent focuses on the first category. • Negative consequences on firm's stakeholders: few studies with limited coverage notably on career consequences for internal and ethical issues, social and environmental for external. • Specific context dependent negative consequences: few studies with limited coverage notably on risk-sharing/collaborative BMI, sharing-economy based BMI, and low income market.
Delphi Study on Academics	Confirm the categories and suggest a number of new possible negative consequences and/or unintended outcomes: • Negative consequences at strategic level: Some new examples on the category of financial-related consequences and a number of new examples including new sub categories on the non-financial consequences category. • Negative consequences at operational level: more examples and new sub categories. In particular on the category of conflict between involved actors, the participants suggest critical impact of managerial conflict. • Negative consequences on firm's stakeholders: one new sub category (psychological and well-being) on internal stakeholders and economic externalities on external stakeholders. • Specific context dependent negative consequences: examples related to different types of BMI and firm characteristics.
Delphi Study on BMI Professionals	Suggest some new examples of the possible negative consequences and/or unintended outcomes and examples that often occur in practice based on their professional experience.

Figure 1 Research Process and Output on the Negative Consequences and/or Unintended Outcomes Resulting or May Result from BMI

Driving Factors/Circumstances to Lead to the Negative Consequences and/or Unintended Outcomes

Having identified the negative consequences and/or unintended outcomes may result from BMI the paper identifies the driving factors/circumstances to lead to the negative consequences and/or unintended outcomes. The results are summarized in figure 2, which as it will be explained in the following comprises at least sixteen themes/sub categories that further aggregated into three categories: managerial choices (including the process), internal firm circumstances, and external firm circumstances.

Managerial choices (including the processes). Managerial choices in BMI refers to choices made by management about which "key elements of a firm's business model and/or the architecture linking these elements" (Foss and Saebi, 2017:216) need to be made or reconfigured and how those choices are enacted. Based on content analysis of existing literature and the Delphi study, there are at least six themes/sub categories identified to constitute as managerial choices. These include (1) poor design of the new business model, e.g. (2) poor complementarities related to the design of new business model, (3) inappropriate timing, (4) poor organizational design, (5) inappropriate innovation mode, and (6) poor governance of BMI process. The first three managerial choices represent the perspective of BMI as an outcome, and the last three represent BMI as a process.

Internal firm circumstances. Internal firm circumstances refer to conditions or forces within the firm that forcedly or voluntarily has a potential to influence management choices in BMI such a way 'wrong' choices or 'sub optimal' processes to enact the BMI are taken including the possibility of the conditions or internal forces to neutralize or reverse positive consequences of choices made by management. Five internal firm circumstances are identified: four categories are identified from content analysis of existing literature and one category identified from the Delphi study. Four categories identified from the literature are: trade-off between the new and current firm's business models, poor organization cognition, resource restrictions, and lack/poor stakeholders buy-in. One category identified from the Delphi study is work environment which comprises two sub categories: poor workplace setting and comfortability to think innovative ideas and lack of/poor facilitating tools.

External firm circumstances. External firm circumstances refer to conditions or forces outside the firm, often beyond control of the firm, that influence managerial choices in selecting which key elements of a firm's business model and/or the architecture linking the elements need to be made or reconfigured and how those choices are enacted. These include five categories: trade-off between the new and dominant business models in the industry, opportunities of competitors or new entrants to imitate the new business model in competitive ways, poor public munificence, environmental dynamics, and time requires by the new business model to become successful.

Overall, the driving factors/circumstances suggested often leading to the negative consequences and/or unintended outcomes in practice include lack of stakeholder buy in, poor organizational cognition, poor governance of BMI process, and opportunities of competitor or new entrants to imitate the new business model in competitive ways.

Research Process	**Output – Driving Factors/Circumstances**
Content Analysis of Existing Literature	Three clusters: (1) Managerial choices (and the processes); (2) internal firm circumstances (3) external firm circumstances. • Managerial choices (and the processes) comprise six categories: design of the new business model, complementarities related to the design of new business model, timing, innovation mode, organizational design, and governance of business model innovation process. Literature to a large extent has focused on the first four categories and overlooked the last two categories (on the category of organizational design there is a massive discussion about organizational structure but broader organizational design remains missing). • Internal firm circumstances comprise four categories: trade-off between the new and current business models, organization cognition, resource slack, and stakeholders buy-in. To a large extent literature focuses on the first three categories. • External firm circumstances comprise five categories: trade-off between the new and dominant business models in the industry, time requires by the new business model to become successful, opportunities of competitors to imitate the new business model, public munificence, and environmental dynamics. To a large extent literature focuses on the first two categories.
Delphi Study on Academics	Confirm the categories and suggest a number of new driving factors/circumstances including new sub categories. • Managerial choices (and the processes): Negative consequences at strategic level: Some new examples on the category of financial-related consequences and a number of new examples including new sub categories on the non-financial consequences category. • Internal firm circumstances: one new category identified, i.e., work environment; some new examples on the category of stakeholder buy-in notably employees and lower managerial levels ; and more detailed examples on the categories of trade-off between the new and current business models, organization cognition, and resource slack. • External firm circumstances: two new sub categories on the category time requires by the new business model to become successful (i.e. behavioural adaptation of customers and new process development; more detailed examples on other categories.
Delphi Study on BMI Professionals	Provide a more detailed description on the categories/sub categories of the driving factors/circumstances and based on their professional experience suggest the often driving factors/circumstances to lead to the negative consequences and/or unintended outcomes in practice.

Figure 2 Research Process and Output on the Driving Factors/Circumstances to Lead to the Negative Consequences and/or Unintended Outcomes May Result from Business Model Innovation

Cases and Insights

To investigate empirical examples of the link between the negative consequences and/or unintended outcomes may result from BMI and the driving factors/circumstances to lead to the negative consequences and/or unintended outcomes, case studies on two companies that experienced the dark side of BMI, with an approach of maximum variation (Paton, 1990), are conducted. The first case study, referred to as Company A, is an established and leading supermarket in ethnic minority sector in UK that currently is struggling to develop online shopping in addition to its 'brick and mortar' chains. Development of the online shopping is traced from the beginning it was launched, April 2013, to December 2017. Findings from company A revealed that during the period of investigation Company A has experimented with different designs of new business model and experienced a number of negative consequences. Notably, at strategic level are constant financial losses as no profit were made and strategic defocus of compromising the new business model with short term objectives. At operational level, Company A continuously experiences sense making difficulties and difficulty in balancing exploration and exploitation which in many occasions create tensions between board members. The second case study, referred to as Company B (established in UK in 2013), is a small young firm in the dessert industry in UK that shifts from its established business model as a producer/wholesaler firm to directly serves the public with both 'direct' and online selling. Company B was going unsuccessful in its first attempt of developing new business model and during the period of investigation, it is in internal dispute whether it would continue the development of its new business model or be terminated. It is not the purpose of this paper to provide a detailed result of the two case studies but several key findings are worth highlighting here. First, in addition to difficulties of comprehending the dark side, both of our case firms demonstrated difficulties in explaining the dark side in particular the link between the negative consequences and the driving factors/circumstances to lead to the negative consequences. Introducing the categories of the negative consequences and the driving factors/circumstances built upon content analysis of the literature and the Delphi study seem to provide valuable help for firm. Second, combining the driving factors/circumstances of the dark side of BMI in company A and company B, three important factors identified to lead to the negative consequences and/or unintended outcomes include governance of BMI process, organizational cognition, and time requires by the new business model to become successful. No simple answer however can be proposed to link the driving factors/circumstances to the negative consequences and/or unintended outcomes. The links are complex, forming a (vicious) cycle involves dynamic interactions between managerial choices (and the processes) and firm's environment (internal and external).

Discussion and Conclusion

The first contribution of the paper is opening the lid on the dark side of BMI by accumulating prior studies on the negative consequences, populating the negative consequences through a Delphi study and thereby a generic description, and through case study providing empirical examples of the dark side. Together with identification of the driving factors/circumstances that are more likely to lead to the negative consequences and/or unintended outcomes, it suggests answers for the question why an innovation, in particular in this paper a BMI, may result in the dark side. However, no simple answer can be proposed.

Our case studies reveals a complex link between the negative consequences and/or unintended outcomes may result from BMI and the driving factors/circumstances to lead to the negative consequences and/or unintended outcomes forming a (vicious) cycle that involves dynamic interactions between managerial choices and firm's environment (internal and external). This suggests systemic nature of the causality thereby a study seeking to understand why a BMI may result in the dark side needs to consider such 'systemicity', not just the driving factors/circumstances. For such analysis (see for example Ackerman et al., 2007), in the context of BMI our paper provides a starting point.

In connection to the complex link between the negative consequences and/or unintended outcomes may result from BMI and the driving factors/circumstances to lead to the negative consequences and/or unintended outcomes, our case study found difficulties of firms to understand the dark side of BMI they experienced. This suggests the potential use of ‘problem' as a unit of analysis (Bjorkdahl and Holmen, 2016). In both of our case companies for example introducing categories of the negative consequences and the driving factors/circumstances which could be thought as BMI-related problems seem to provide valuable help for firm not only to understand the dark side of BMI they experienced but also finding the solution.

Limitations and Avenues for Future Research

Our findings open a number of avenues for future research. First, since empirical investigation on the negative consequences and/or unintended outcomes may result from BMI remain underrepresented in current literature, for future research, our paper can serve as a starting point. Some of the fruitful areas in particular are studies on the negative consequences and/or unintended outcomes across BMI types and contextual settings. Second, understanding systemic links between the negative consequences and/or unintended outcomes may result from BMI and the driving factors/circumstances to lead to the negative consequences. This is a promising area for operation researchers as not only elucidating the ‘systemicity’ is an area of contribution, the approach to understand the ‘systemicity’ is also a separate contribution on its own. Moreover, operation researchers can also take advantage of researching the BMI as a process which arguably a more proper approach to investigate phenomenon of the dark side of BMI.

Moving to limitation of the paper, while we hope that the present paper successfully systemizes the dark side of BMI and suggests an intuitive answer of why a BMI may result in the dark side, our deployed research strategies may not allow us to capture full set of the phenomenon. Case study with a relatively large number of cases is generally suggested for future research.

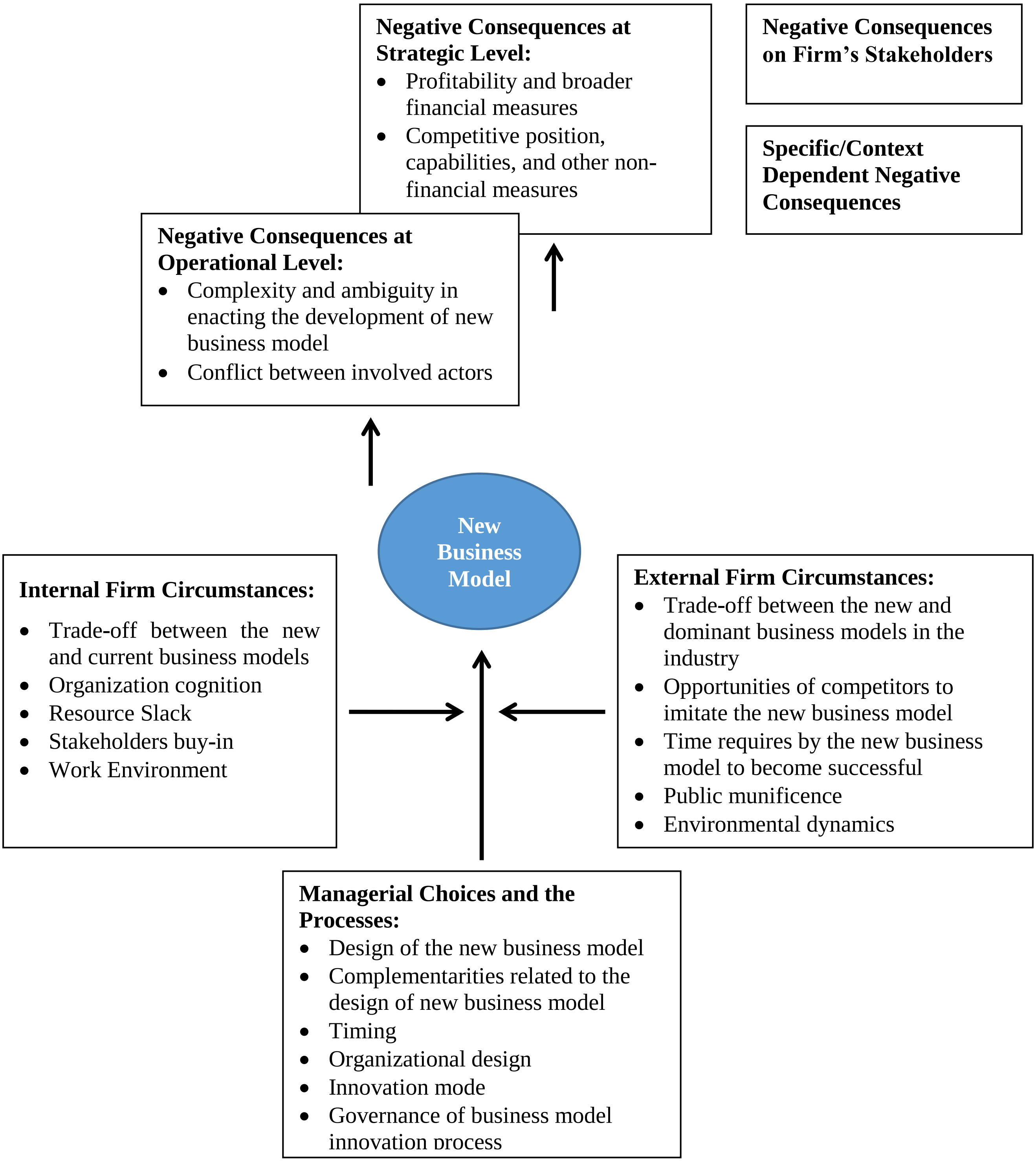

Figure 3 - Research Model for the Dark Side of Business Model Innovation

REFERENCES

Ackermann, F, Colin, E. and Howick, S. (2007), "Systemic risk assessment: a case study", *Journal of the Operational Research Society*, Vol. 58, No. 1, pp. 39-51.

Amit, R. and Zott, C. (2001), "Value creation in e-business", *Strategic Management Journal*, Vol. 22, No. 6/7, pp. 493-520.

Baden-Fuller, C. and Mangematin, V. (2013), "Business models: a challenging agenda", *Strategic Organization*, Vol. 11, No. 4, pp. 418-427.

Björkdahl, J. and Holmén, M. (2016), "Innovation audits by means of formulating problems", *R&D Management*, Vo. 46, No. 5, pp. 842–856.
Casadesus-Masanell, R. and Ricart, J.E. (2010), "From strategy to business models and onto tactics", *Long Range Planning*, Vol. 43, No. 2/3, pp. 195-215.
Chesbrough, H. and Rosenbloom R. (2002), "The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies", *Industrial and Corporate Change*, Vol. 11, No. 3, pp. 529-555.
de Oliveira, D.T. and Cortimiglia, M.N. (2017), "Value co-creation in web-based multisided platforms: A conceptual framework and implications for business model design", *Business Horizons*, Vol. 60, No. 6, pp. 747-758.
DeYoung, R. (2005), "The performance of Internet-based business models: Evidence from the banking industry", *Journal of Business*, Vol. 78, No. 3, pp. 893-947.
Foss, N.J. and Saebi, T. (2017), "Fifteen years of research on business model innovation: How far have we come, and where should we go?", *Journal of Management*, Vol. 43, No. 1, pp. 200-227.
Halecker, B., Bickmann, R. and Holzle, K. (2014), "Failed business model innovation - A theoretical and practical illumination on a feared phenomenon", R&D Management Conference 2014, Available at SSRN: http://ssrn.com/abstract=2449211.
Hasson, F., Keeney, S. and McKenna, H. (2000), "Research guidelines for the Delphi survey technique", *Journal of Advanced Nursing*, Vol. 32, No. 4, pp. 1008-1015.
Hsieh, H.-Fang and Shannon, S.E. (2005), "Three approaches to qualitative content analysis", *Qualitative Health Research*, Vol. 15, No. 9, pp. 1277-1288.
Kim, S.K. and Min, S. (2015), "Business model innovation performance: When does adding a new business model benefit an incumbent?", *Strategic Entrepreneurship Journal*, Vol. 9, No. 1, pp. 34-57.
Lange, K., Geppert, M., Saka-Helmhout, A. and Becker-Ritterspach, F. (2015), "Changing business models and employee representation in the airline industry: A comparison of British Airways and Deutsche Lufthansa", *British Journal of Management*, Vol. 26, No. 3, pp. 388-407.
Massa, L., Tucci, C.L. and Afuah, A. (2017), "A critical assessment of business model research", *Academy of Management Annals*, Vol. 11, No. 1, pp. 73-104.
Massa, L. and Tucci, C.L. (2014), "Business model innovation", In M. Dodgson, D. M. Gann, and N. Phillips (Eds.), *The Oxford Handbook of Innovation Management*, Oxford University Press, Oxford, pp. 420-441.
Mayring, P. (2000), "Qualitative content analysis", *Forum Qualitative Sozialforschung*, Vol. 1, No. 2, pp. 1-10.
Morgan, D.L. (1993), "Qualitative content analysis: A guide to paths not taken", *Qualitative Health Research*, Vol. 3, No. 1, pp. 112-121.
Neely, A. (2008), "Exploring the financial consequences of the servitization of manufacturing", *Operations Management Research*, Vol. 1, No. 2, pp. 103–118.
Patton, M.Q. (1990), *Qualitative Evaluation and Research Methods*, Sage Publications, Thousand Oaks, CA.
Teece, D.J. (2010), "Business models, business strategy and innovation", *Long Range Planning*, Vol. 43, No. 2/3, pp. 172-194.
Tranfield, D., Denyer, D. and Smart, P. (2003), "Toward a methodology for developing evidence-informed management knowledge by means of systematic review", *British Journal of Management*, Vol. 14, No. 3, pp. 207-222.