Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 181 (2021) 93–101

Procedia Computer Science

www.elsevier.com/locate/procedia

CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies 2020

The Business Model Innovation and Lean Startup Process Supporting Startup Sustainability

Vinícius Figueiredo de Faria, Vanessa Pereira Santos*, Fernando Hadad Zaidan

Instituto de Educação Tecnológica, Belo Horizonte - MG, 30140-138, Brasil

Abstract

In order to support entrepreneurs facing Business Model Innovation, the Lean Startup methodology is considered to be a powerful tool. However, the theoretical and practical evidences that relate both methodologies to startup sustainability is still to be investigated. The aim of this paper is to develop a unified theoretical perspective for understanding Business Model Innovation and Lean Startup processes and their contribution to a better organizational, economic, environmental and social performance of startup business.

Keywords: Innovation; Business models; Business Model Innovation; Sustainability; Lean Startup.

1. Introduction

A precise Business Model (BM) is the core enabler of any company's performance. [1] explains that the business model concept lacks theoretical grounding in economics and business studies, including organizational and strategic

* Corresponding author.
E-mail address: vanessaps.santos@gmail.com

10.1016/j.procs.2021.01.106

studies. According to [2], business model is not simply the means by which a firm creates and captures customer value. It requires vigilance and must be adapted and strengthened over time as the competitive environment evolves.

This competitive environment demands great corporate effort towards innovation models. Innovation was defined by [3] as "the creation of a new product-market-technology-organization-combination". [4] defined innovation as the ability to develop existing knowledge and enhance new knowledge. Includes the company's ability to develop novel products and any innovative ideas. It is not surprising, therefore, that a stream of research relates Business Model Innovation (BMI) to organizational change processes. BMI is not only becoming more and more important due to increasing and globalizing competition, but also an enormous challenge, both theoretically and practically.

At root, BMI refers to the search for new logics of the firm and new ways to create and capture value for its stakeholders. It focuses on finding new ways to generate revenues and define value propositions for customers, suppliers and partners [5]. BMI has recently aroused important academic researches and business practices and the recognition of changes due to business models is a fundamental approach to realize innovations for sustainability. The ability to innovate in the domain of sustainability represents a necessary business capability, whether related to small incremental steps or to radical. BMI is emerging as a potential mechanism to integrate sustainability into business [6], [7]. The academic and practitioner interest in sustainable business models has grown rapidly. As mentioned by [8], [9] and [10], when the concept was first conceived, its main purpose was to put companies into the service of the transformation to a more sustainable economic system and to provide leverage for integrating sustainability considerations into organizations and helping companies to achieve their sustainability ambitions.

It is rather common in literature to see sustainable business models as a modification of the conventional business model concept, that incorporate either concepts, principles, or goals that aim at sustainability, or integrate sustainability into their value proposition, value creation and delivery activities, and / or value capture mechanisms. According to [11], [12], [13], [14] and [15], it implies a process of continually business model exploration, adjustment, improvement, redesign, revision, creation, development, adoption, and transformation. Targeting cost reduction, process optimization, introduction of new products, accession to new markets, and, of course, ultimately financial performance improvement.

Lean is a way of thinking and acting for an entire organization, and not merely a tactic or a cost reduction program [16]. [17] adapted the lean principles to the entrepreneurial strategy area by elaborating the lean startup process. Considered practitioners, [18] have given substantial contributions to the recently introduced lean startup methodology [17]. It rejects long-term planning and embraces experimentation and iterative learning. Attracting much attention from entrepreneurs, practitioners and academics [17] and [19].

The aim of this paper is to develop a unified theoretical perspective for understanding Business Model Innovations and Lean Startup Process, that lead those recently started firms to better organizational, economic, environmental and social performance. This paper is structured as follows: on this introduction a contextualization was made, also was presented the objective of this article. On Section 2 will be presented the method used on this work. On Section 3 the most important concepts regarding the objective will be presented. On Section 4 will be presented the correlation found between the author regarding the BMI and Lean Startup Process. Following, will be presented the final considerations and the references used on the article.

2. Methodology

The development of this article is based in an exploratory and descriptive research on the data published on BMI and Lean Startup, to contextualize and define the BMI and Lean Startup methodologies, both in a qualitative way. According to [20], an exploratory research helps understanding the context of an unfamiliar area or situation and the descriptive approach can explore a correlation between subjects. Our study at hand draws especially attention to startups by exploring factors that influence BMI in the pivoting process. This paper explores how the BMI methodology and the lean startup methodology contribute to a prescriptive accelerator.

In order to assure that the references chosen are in accordance with the objective of this study, the authors decided to use the Systematic Literature Review (SLR) protocol, which is used to identify, evaluate and interpret all available research relevant to a particular research question [21]. The protocol consists in several activities, divided in three stages: planning, conducting and reporting [21]. Table 1 describes the procedures adopted on this SLR.

Table 1 – Systematic Literature Review

SLR steps	Description
Main question	Can business model innovation and lean startup methodology, contribute to deliver sustainability to startups?
Data selection	Among databases, indexers, virtual libraries and search tools, the following were selected: Ebsco: < https://search.ebscohost.com>; Library:< https://onlinelibrary.wiley.com>; Scopus Preview:< www.scopus.com>; Google Scholar:< scholar.google.com.br>.
Search strings	The search strings were generated from the combination of key terms and synonyms using OR (or) and AND (e), and possible search peculiarities of the digital libraries. String used: [((("Business model innovation" OR "BMI") AND ("Start-up" OR "Startup") AND "Sustainability" AND ("Lean startup" OR "LS") AND "Sustainability"))]
Study selection criteria - (I) inclusion and (E) exclusion)	(I) Studies that answer the research question; (I) Studies that present primarily or secondarily good practices, strategies and successful techniques, related to the objective of this study, and that can be adopted in the identification of this objective;(I) Papers discussing the relation between business model innovation, lean startup methodology an startup sustainability; (I) Papers discussing the technical aspects of BMI and LS.
	(E) Studies that are clearly irrelevant to research, according to the research questions raised; (E) Studies that are clearly irrelevant to research, according to the research questions raised; (E) Redundant studies; (E) Studies that do not answer any of the research questions; (E) Studies that have not been published between January / 2010 and January / 2020.
Document analysis and criteria application	Out of a total of 1.756 studies obtained in the research, 200 (11,39%) Scopus, 412 (23%) Google Scholar, 1005 (57,23%) Ebsco and 139 (7,92%) Wiley Online Library. In total 32 studies were selected, all articles A final amount of 41 academic articles was obtained, 32 academic articles from the SLR and 09 academic articles from the preliminary review.

On the initial phase of the research, 1756 documents were found, divided between books and articles. To analyze all the 1756 documents, a few criteria were applied, such as analyzing the title and abstract of each document, searching for any of the keywords defined on it. After this analysis, 63 documents were selected, shown in table 2, for the next criteria, which was to read the introduction and conclusion of the already selected documents. In the end, a total of 41 articles were selected to compose this study.

Table 2 - Total references by keywords and line of work

Research line	Innovation	BM	BMI	Sustainability	Startup	LS	Total
Lean Startup	3	3	1	2	3	3	15
Business Model & Sustainability	3	3	2	3			11
BMI	3	3	3	1	1		11
BMI & Sustainability	2	3	3	3			11
BMI & Lean Startups	1	1	1		1	1	5
BMI & Startups	1	1	1	1	1		5
Business Model	1	1	1				3
Innovation & Sustainability	1			1			2
Total	15	15	12	11	6	4	63

To select the related work, the authors took in consideration the documents that had mentioned those previously selected words on any part of their work, prioritizing the ones that mentioned all of them, leading to 8 related work, as shown below in table 3. These articles selected as related work were used on section 4, for the discussion proposed.

Table 3 - List of references for Section 4

Research line	Author	Article	Innovation	BM	BMI	Sustainability	Startup	LS
Business Model & Sustainability	Achtenhagen et al. (2013)	[27]	X	X	X	X		
Business Model & Sustainability	Bocken, Short, Rana, & Evans (2014)	[43]	X	X	X	X		

Business Model Innovation	Amit & Zott (2012)	[39]	X	X	X	X	X	
Business Model Innovation & Lean Startups	Ghezzi and Cavallo (2018)	[53]	X	X	X		X	X
Business Model Innovation & Sustainability	Teece (2010)	[1]	X	X	X	X		
Business Model Innovation & Sustainability	Zott, Amit, & Massa (2011)	[38]	X	X	X	X		
Lean Startup	Balocco, Cavallo, Ghezzi and Mirabent (2019)	[16]	X	X	X	X	X	X
Lean Startup	Eisenmann et al. (2012)	[19]	X		X	X	X	X

A traditional literature review was carried out to collect references on methodology and research methods used and the SLR protocol was used only for the research performed on the subject of this study. The following section, literature review, the main concepts regarding the objective of this article will be presented.

3. Literature Review

In this literature review, we will present a review on the BMI theory and methodology. It will be followed by an overview of the lean startup methodology, as a powerful theory deeply influencing startup sustainability.

3.1. The Business Model Innovation (BMI) and The Business Model Innovation methodology

As mentioned by [22], innovation is known to often strongly challenge organizational processes. Therefore, it is true that a stream of research relates BMI to organizational change processes. This stream emphasizes the capabilities, leadership, and learning mechanisms that are needed for successful BMI. Studies within this stream describe BMI as a dynamic process by highlighting the different stages of the BMI process [23], [24], [25] and [26]. They identify the different organizational capabilities and processes required to support this change process [27], [28] and [29], citing the importance of experimentation and learning [30], [31], [32], [33] and [34], and proposing practitioner-oriented tools for managing the process [35] and [36].

The definition and assessment of business models and their innovation process has become a topic of paramount importance in the fields of strategy, innovation and entrepreneurship, and have become influential in macro management research in recent years [37] and [38]. The BMI involves innovation to at least one of the foundational elements of value creation, delivery and capture, and thereby gives a firm the potential to activate overlooked value sources within the company or create new systems that are difficult to imitate [39]. [40] notes that BMI can be defined as 'the discovery of a fundamentally different business model in an existing business. [41] defines that "BMI is about generating new sources of profit by finding novel value proposition/value constellation combinations." [42] believes that the success of a business model should be measured considering the extent of the revenue generated by the new model and how it helps the company in achieving a sustainable competitive position by creating and delivering value to its customers. Moreover, according to [43] BMI can help companies achieve triple-bottom line results that is, social, environmental, and financial goals.

As mentioned by [38], [44], [45] and [46] in general a considerable amount of effort has been observed by researchers while exploring BMI and its methodology. [13] describe numerous benefits of applying a BMI methodology such as an increase in financial performance. Moreover, [47] confirm ability of BMI to strengthen a firm's strategic position and [48] refers to BMI as a powerful tool to attract new customers.

A relevant change in Customer value proposition (CVP), profit formula (PF), key resources and processes (KR&P) is stated by [39] and [46], as the result of BMI methodology, that has taken together, creation, deliver, and capture value. Perceiving usefulness for customers, identifying the manner incomes are generated and costs are structured and describing the need of resources and processes, respectively.

3.2. Entrepreneurship and sustainability

Entrepreneurship is intrinsically linked to BMI: For start-ups, any act of entrepreneurship means the choice of a BM, while in established firms the exercise of entrepreneurial judgment results in changes in the BM's components or architecture. According to [49], BMI is tightly linked to the idea of entrepreneurial vision, imagination, and judgment. Predominantly referring to BMI in the context of innovative start-ups. To be sustainable, a startup needs to grow. The business model needs to be designed in a way that the company can scale up quickly and maybe even go international. Besides growth, startups need capital and investors to sustain months or even years of non-profitability. If the business model is no longer attractive to investors, startups will find it difficult to pitch for new money.

3.3. The lean startup and The lean startup methodology

The "Lean philosophy" and its principles originated in the manufacturing world after the end of the Second World War, as a result of customers' needs evolving towards higher value in combination with companies' increasingly diverse offer [50; 51].

According to [51], this significant redirection of production systems towards customer value refers to the concept where value is created by a decrease of internal waste, reducing cost production, and by an increase of new services or function offer to the customer, enhancing profit. They also call the attention that the costs of every firm must be transparent to all supply chain partners. Another major issue stated was the importance of flow creation, avoiding any stoppage, such as changes in production, breakdowns, incorrect batches in terms of quantity or timing, lack of necessary information and re-entrant loops. [17] made an attempt to adapt and combine the lean philosophy and its principles to the startups' development area by elaborating the Lean Startup Methodology. In his 2011 New York Times bestseller "The Lean Startup", [17] introduces the term "pivot" in the context of business models to the academic world. It centers on the question whether a startup should decide to pivot or to persevere. He defines a pivot as a major change, a structured course correction "designed to test a new fundamental hypothesis about the product, business model, and engine of growth". According to him, pivoting, refers to major changes and course corrections instead of incremental adjustments and can be viewed as a concept of BMI.

Inspired by the lean manufacturing principles (avoiding waste and optimizing resource spending) and [52] ideas, [17] introduced the lean startup methodology, defined as the startup's attempt to cut its own waste, understood as all the activities and processes which the target customer does not want or does not ask for. In his 2011 New York Times bestseller "The Lean Startup", the term "pivot" is introduced in the context of business models to the academic world, centering on the question whether a startup should decide to pivot or to persevere. According to [17], pivoting, refers to major changes and course corrections instead of incremental adjustments and can be viewed as a concept of BMI.

The Lean Startup Methodology consists of a scientific, hypothesis-driven approach to entrepreneurship, where entrepreneurs translate their vision (i.e. business idea) into falsifiable hypotheses which are embedded in a first version of a business model. These hypotheses are then tested through a series of minimum viable products (MVPs). [19] define the MVP as "the smallest set of activities needed to disprove a hypothesis". The process is iterated until all key hypotheses are confirmed or validated through MVP tests. When this condition is reached, the startup has achieved its "product-market fit" [19], which means that the value proposition designed and iteratively revised by the startup actually satisfies the needs of its target customers. According to [18], this fit hence represents the successful conclusion of the "build-measure-learn" loop, where the startup builds an MVP and associated tests, measures the test results and customer feedback and learns how to change its business idea and business model accordingly. The ultimate goal of the methodology is to guide entrepreneurs in finding this fit.

It engages entrepreneur into process designing to test the assumptions that constitute the business model [17], and creating a "minimum viable product" (MVP). Through rigorous evaluation of the results, the invalidated assumptions are replaced and new assumptions are tested. This process continues until a reasonable number of tests point to the validation of critical assumptions. Finally, when all the remaining assumptions are validated, "product-market fit" is achieved [17].

4. Discussion

Throughout our review, our qualitative research on the data published on BMI and Lean Startup, led us to consider eight articles, which were identified as important documents to explain and address the contribution of BMI and Lean Startup Methodologies in startup´s sustainability. Table 4 shows the articles to be considered and their publisher.

Table 4 - List of publishers by article

Author	Article Title	Publisher
Teece (2010)	Business model, business strategy and innovation	Elsevier
Zott, Amit, & Massa (2011)	The business model: Recent developments and future research	University of Pennsylvania ScholarlyCommons
Amit & Zott (2012)	Creating value through business model innovation	MITSloan
Eisenmann et al. (2012)	Hypothesis-driven entrepreneurship: The lean startup	Harvard Business School
Achtenhagen et al. (2013)	Dynamics of business models—strategizing, critical capabilities and activities for sustained value creation	Elsevier
Bocken, Short, Rana, & Evans (2014)	A literature and practice review to develop sustainable business model archetypes	Elsevier
Ghezzi and Cavallo (2018)	Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches	Berkeley haas school of business
Balocco, Cavallo, Ghezzi and Mirabent (2019)	Lean business models change process in digital entrepreneurship	Emeraldinsight

Bellow, we aim to describe the knowledge construction, by presenting chronologically the author's ideas, that corroborates with the assumption that BMI and lean startup methodologies contribute to startup sustainability.

BMI helps to establish a differentiable competitive advantage, as observed on [1] research. Phenomena also observed by [38] when they stated that there is an increasing consensus that BMI is key to firm performance. Those ideas were apparently confirmed by [43]. They concluded that BMI may provide mechanisms to assist the innovation process for embedding sustainability. Correlating the researches done by [27] and [39], we can identify that more and more companies now are turning toward BMI business model innovation as an alternative to product or process innovation. As well as cost and waste reduction via a prototyping process. [27] considered BMI to be a great tool to experimentation that can lead to through trial-and-error learning.

A focus on the sustained value creation was presented by [27] as guideline for companies which manage to successfully adapt and renew their business models over time. Statement that was also noted on the research placed by [39] that presented an inductive theory on the sources of value creation, showing how value-creation enhances the potential of a business model. [43] demonstrated possibilities for sustainable business models and how to translate social and environmental value creation into economic profit and competitive advantage for the firm. Discussing the main purpose of a business model and why the business model concept is offered, [38] defined the value creation mechanism as competitive advantage and strategic to understand new networked modes of innovation. [19] concluded that the lean startup is a business model that allows new ventures unique value creation and sustainable profits. Researching the BMI in digital entrepreneurship, [53] also identified the importance of value creation to startup´s early stages of development.

Finally, [19] affirmed that the lean startup methodology unlike other methods, balances the strong direction that comes from a founder's vision with the need for redirection that follows from market feedback, corroborating with the strategic perspective of this business model. While investigating digital startups in the early stages, [53] concluded throughout the data collection and analysis steps, that BMI and Lean Startup are related. The Lean Startup methodology can be perceived as a strategic business model, and as concluded by [16], may play a significant role in advancing the BM research in its theory and operative tools.

5. Conclusion

This study investigated the relation amongst BMI and Lean Startup and how they may contribute to deliver sustainability to startups. Our work provides value for theory by combining and connecting author´s lines of works towards a sustainable value creation for those new enterprises.

The mainstream of a business model is that it hardens customer needs, defining how the business enterprise delivers value to customers, attract customers to pay for value, and transform payments into profit. BMI Business model innovation and lean startup methodologies are certainly built on these ideas, but especially the lean startup approach evaluates an early stage startup's entire business model. It introduces the minimum viable products concept that efficiently test business model hypotheses, and pivots that change certain business model elements in response to failed hypothesis tests.

Ultimately, our study guided us to conclude those methodologies balance the strong direction that comes from a founder's vision with the need for redirection that follows from market feedback. The key conclusion of our analysis is that, to be a source of competitive advantage, a business model must be something more than just a good logical way of doing business. A sustainable model must meet particular customer needs. It arouses the need of innovative forms to approach customers and it certainly guides enterprises' value capture strategies to achieve superior results.

Overall, we conclude that advancing the understanding of startup´s business sustainability is a relevant topic. More research remains to be done to validate our conclusion and to advance the current understanding of the startup environment.

6. Limitations and future research

Further research can mend this study's limitations, related to the lack of reliable sources of literature that validates a strong correlation among those variables. Moreover, we recognize that quantitative studies may also be necessary to confirm our qualitative analysis.

The resulting value for practice takes the form of identifying the core elements that startups should consider carefully while building their business model.

References

[1] Teece, D. J. Business model, business strategy and innovation. Long Range. 2010.

[2] Euchner, J. and Ganguly, A. Business Model Innovation in Practice, Research-Technology Management, 57:6, 33-39, 2014. http://dx.doi.org/10.5437/08956308X5706013.

[3] Boer, H. and During, W.E. Innovation, What Innovation? A Comparison between Product, Process and Organizational Innovation. International Journal of Technology Management, 22, 83-107, 2001. http://dx.doi.org/10.1504/IJTM.2001.002956

[4] Tseng, C. and James Goo, Y. Intellectual capital and corporate value in an emerging economy: empirical study of Taiwanese manufacturers. R&D Management, 35: 187-201, 2005. https://doi.org/10.1111/j.1467-9310.2005.00382.x.

[5] Casadesus-Masanell, R., & Zhu, F. Business model innovation and competitive imitation: The case of sponsor-based business models. Strategic Management Journal, 34: 464-482, 2013.

[6] Schaltegger S, Lüdeke-Freund F, Hansen E. Business cases for sustainability and the role of business model innovation. International Journal of Innovation and Sustainable Development 6(2): 95−119, 2012.

[7] Jolink A, Niesten E. Sustainable development and business models of entrepreneurs in the organic food industry. Business Strategy and the Environment 24(6): 386–401, 2015.

[8] Rashid, A., Asif, F.M.A., Krajnik, P., Nicolescu, C.M. Resource Conservative Manufacturing: an essential change in business and technology paradigm for sustainable manufacturing. J. Clean. Prod. 57, 166e177, 2013. https://doi.org/10.1016/j.jclepro.2013.06.012.

[9] Stubbs, W., Cocklin, C. Conceptualizing a sustainability business model. Organ. Environ. 21,103e127, 2008. https://doi.org/10.1177/1086026608318042.

[10] Wells, P.E. Business Models for Sustainability. Edward Elgar, Cheltenham. 2013.

[11] Zott, C., & Amit, R. Business model design and the performance of entrepreneurial firms. Organization Science, 18: 181-199, 2007.

[13] Aspara, J., Hietanen, J., & Tikkanen, H. Business model innovation vs. replication: Financial performance implications of strategic emphases. Journal of Strategic Marketing, 18: 39-56, 2010.

[14] Bock, A. J., Opsahl, T., George, G., & Gann, D. M. The effects of culture and structure on strategic flexibility during business model innovation. Journal of Management Studies, 49: 279-305, 2012.

[15] Denicolai, S., Ramirez, M., & Tidd, J. Creating and capturing value from external knowledge: The moderating role of knowledge intensity. R&D Management, 44: 248-264, 2014.

[16] Raffaello Balocco, Angelo Cavallo, Antonio Ghezzi, Jasmina Berbegal-Mirabent. "Lean business models change process in digital entrepreneurship", Business Process Management Journal, 2019. https://doi.org/10.1108/BPMJ-07-2018-0194.

[17] Ries, E. The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses. Crown Books, 2011.

[18] Blank, S., & Dorf, B. (2012). The startup owner's manual: The step-by-step guide for building a startup, 2012.

[19] Eisenmann, T. R., Ries, E., & Dillard, S. (2012). Hypothesis-driven entrepreneurship: The lean startup, 2012.

[20] VERGARA, S. C. Projetos e relatórios de pesquisa em administração. São Paulo: Atlas, 2009.

[21] Kitchenham, Barbara. Procedures for Performing Systematic Reviews. Joint Technical Report, July 2004.

[22] Damanpour, F. Organizational complexity and innovation: Developing and testing multiple contingency models. Management Science, 42: 693-716, 1996.

[23] de Reuver, M., Bouwman, H., & Haaker, T. Business model roadmapping: A practical approach to come from an existing to a desired business model. International Journal of Innovation Management, 17(1): 1340006, 2013.

[24] Frankenberger, K., Weiblen, T., Csik, M., & Gassmann, O. The 4I-framework of business model innovation: A structured view on process phases and challenges. International Journal of Product Development, 18: 249-273, 2013.

[25] Girotra, K., & Netessine, S. Business model innovation for sustainability. Manufacturing & Service Operations Management, 15: 537-544, 2013.

[26] Girotra, K., & Netessine, S. Four paths to business model innovation. Harvard Business Review, 92(7/8): 96-103, 2014.

[27] Achtenhagen, L., Melin, L., & Naldi, L. Dynamics of business models—strategizing, critical capabilities and activities for sustained value creation. Long Range Planning, 46: 427-442, 2013.

[28] Demil, B., & Lecocq, X. 2010. Business model evolution: In search of dynamic consistency. Long Range Planning, 43: 227-246, 2010.

[29] Doz, Y. L., & Kosonen, M. Embedding strategic agility: A leadership agenda for accelerating business model renewal. Long Range Planning, 43: 370-382, 2010.

[30] Andries, P., & Debackere, K. Business model innovation: Propositions on the appropriateness of different learning approaches. Creativity & Innovation Management, 22: 337-358, 2013.

[31] Cavalcante, S. Preparing for business model change: The “prestage” finding. Journal of Management & Governance, 18: 449-469, 2014.

[32] Eppler, M. J., Hoffmann, N. F., & Bresciani, S. New business models through collaborative idea generation. International Journal of Innovation Management, 15: 1323-1341, 2011.

[33] Günzel, F., & Holm, A. B. One size does not fit all: Understanding the front-end and backend of business model innovation. International Journal of Innovation Management, 17(1): 1340002, 2013.

[34] Moingeon, B., & Lehmann-Ortega, L. Creation and implementation of a new business model: A disarming case study. Management, 13: 266-297, 2010.

[35] Deshler, R., & Smith, K. Making business model innovation stick. People & Strategy, 34: 18-23, 2011.

[36] Evans, J. D., & Johnson, R. O. Tools for managing early-stage business model innovation. Research Technology Management, 56: 52-56, 2013.

[37] Spieth, P., Schneckenberg, D., & Ricart, J. E. Business model innovation: State of the art and future challenges for the field. R&D Management, 44: 237-247, 2014.

[38] Zott, C., Amit, R., & Massa, L. The business model: Recent developments and future research. Journal of Management, 37: 1019-1042, 2011.

[39] Amit, R., & Zott, C. Creating value through business model innovation. MIT Sloan Management Review, 53: 41-49, 2012.

[40] Markides, C. Disruptive innovation: In need of better theory. Journal of Product Innovation Management, 23: 19-25, 2006.

[41] Yunus, M., Moingeon, B., & Lehmann-Ortega, L. Building social business models: Lessons from the Grameen experience. Long Range Planning, 43: 308-325, 2010.

[42] Taran, Yariv & Boer, Harry & Lindgren, Peter. A Business Model Innovation Typology. Decision Sciences. 46, 2015. https://doi.org/10.1111/deci.12128.

[43] Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. A literature and practice review to develop sustainable business model archetypes. Journal of Cleaner Production, 65: 42-56, 2014.

[44] Mitchell, D. W., & Coles, C. B. Business model innovation breakthrough moves. Journal of Business Strategy, 25: 16-26, 2004a.

[45] Mitchell, D. W., & Coles, C. B. Establishing a continuing business model innovation process. Journal of Business Strategy, 25: 39-49, 2004b.

[46] Mitchell, D.W., & Coles, C. The ultimate competitive advantage of continuing business model innovation. Journal of Business Strategy, 24: 15-22, 2003.

[47] Gambardella, A., & McGahan, A. M. Business-model innovation: General purpose technologies and their implications for industry structure. Long Range Planning, 43: 262-271, 2010.

[48] Kim, W. C., & Mauborgne, R. Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant. Boston, MA: Harvard Business School, 2005.

[49] Foss, Nicolai J., & Saebi Tina. Economist Intelligence Unit. Business 2010: Embracing the challenge of change. New York, 2005.

[50] Hines, P., Holweg, M., & Rich, N. Learning to evolve: A review of contemporary lean thinking. International Journal of Operations & Production Management, 24(10),994–1011, 2004.

[51] Womack, J. P., & Jones, D. T. Lean thinking - Banish waste and create wealth in your corporation. Journal of the Operational Research Society, 48(11), 1148, 1997.

[52] Blank, S. The Four Steps to the Epiphany, Cafe Press, San Francisco, CA, 2006.

[53] Ghezzi, Antonio., Cavallo, Angelo. (2018). Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. Journal of Business Research, 2018. https://doi.org/10.1016/j.jbusres.2018.06.013.