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Article

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JOURNAL OF BUSINESS MODELS

Business Model Innovation in the Era of Digital Technologies and Societal Challenges

Abstract

This article proposes a conceptual framework for analysing future business model innovation scenarios. It also introduces the special issue "The Future of Business Model Innovation: Core Themes and Pivotal Technologies." Drawing on existing knowledge, the article identifies two key dimensions that will shape the boundaries and directions of business model innovation in the near to mid-term future. Thus, this article frames the contributions of the special issue to provide a starting point for academics and practitioners seeking to engage in the field.

Setting the Scene

This article offers a conceptual framework for analysing future business model innovation scenarios. At the same time, it comprises an introduction to the special issue "The future of business model innovation: core themes and pivotal technologies." Based on existing knowledge, it identifies two key dimensions that will influence the boundaries and directions of business model innovation in the near to mid-term future. Hence, this article frames the contributions of the special issue to provide a point of departure for academics and practitioners looking to get engaged in the field.

Dumay (2016) argues that it is necessary to move away from a wealth creation perspective to value creation; in doing so, it defines value in four ways: monetary, utility, social and sustainable value. This

definition challenges contemporary definitions of business models because they generally need to pay more attention to the aspect of sustainable value. However, in recognising the fact that today's business models are substantially interwoven with the business models of the value chain and society in which they operate, sustainable value is a question of how the value creation and value destruction of the business model is dispersed among relevant stakeholders (Nielsen, 2023a). A proposition is, therefore, to adjust the definition of business models provided by Osterwalder and Pigneur (2010) to include value dispersion. It could, therefore, be:

A business model describes how an organisation creates value, delivers value, captures value, and disperses both value creation and value destruction among its stakeholders.

Key words: Digital technology, societal challenges, business model innovation, research strategy, foresight

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Future perspectives, foresight and transformative insights are not new to the Journal of Business Models, which houses many a discussion of the developments in business model research over the years. However, the business model field has always been associated with technology development and the fact that new technologies disrupt existing industry-based ways of doing business. Much like when Drucker (2008) articulated that culture eats strategy for breakfast, business models seem to eat industry-based thinking for breakfast, including strategy, culture and existing ways of organising and governing businesses.

The field of business models came to fame with the Internet in the late 1990s (Nielsen et al., 2018). The Internet changed the way we as people could communicate. It created ease and reach and lowered communication costs, to name a few of the value propositions of www. The same was the case for companies. All of a sudden, companies that were used to just selling their products to those who could commute to their physical location or were able to receive advertisements in their letterbox could sell worldwide.

On the business side of the Internet came the e-business model revolution, sparking the initial interest in the field. For some, e-business became synonymous with business models, and as the dot.com bubble burst in March 2002, discussing business models became bad excuses for not making money, not having a viable economic model, or even ways to cheat ordinary hard-working people with the honest money they earned. At least, that was the perception.

Interestingly, many good examples of companies that boomed in e-business are not stories of companies inventing whole new value-creation mechanisms or “unique ways of doing business”. They digitalised existing business models, thereby making them globally accessible. Take Amazon as a well-known example. A part of Amazon’s early success, in addition to entering the global market for books, DVDs and other goods, came with referrals and recommendations from other customers. Remember, for example: “Other customer also bought...”; “If you liked X, then you might also want to look at Y”; and “Clarissa liked X and also recommended Y because...”. Recommendations and referrals were not

new at all. This was what good salespeople in bookstores did every day. However, digitalisation created an enormous reach and disrupted the retail industry forever.

Apple’s business model in the early 2000s was also extremely strong, but it was not new either. Apple succeeded in creating customer lock-in to their products by offering access to the world’s biggest APP market. They used the massive customer base to position themselves so that companies wanting access to the customer base paid up to 30% of their revenues to get onto the iTunes platform. However, selling access to customers is merely an age-old retail model tweak. Supermarkets use their data about how many customers enter their stores and their buying behaviour to lure consumer product companies to pay to be in their advertisements.

During the years following the dot.com bubble (Nielsen & Lund, 2014), business model researchers explored the links between business models and strategy and what it meant to be innovating business models. While Porter (2001) didn’t quite understand what business models were in a competitive strategy context, Magretta (2002) argued that business models did not factor in strategy. In this light, the strategy was the execution of the mechanisms set out by the business model. Nielsen et al. (2018a) argue that in the first phase of business model research, authors focussed on the relations between the business model and their own fields of interest and used this to define the concept through similarities and differences. Magretta’s (2002) account of the relationship between business models and strategy is a good example of this. The second phase of business model research concerned business model innovation, and here, technology and sustainability were significant levers for such change. For example, O’Reilly (2007) conceptualised several business model innovation patterns, while Seelos and Mair (2007) studied the potential of creating profitable business models in a deep-poverty setting.

With the technology and sustainability themes taking prominence, but maybe positioning the field as a specialist subject, Osterwalder and Pigneur (2010) once and for all transposed the field of business models to

a game-changing mainstream popularity field within business and entrepreneurship with their book *Business Model Generation*, in which they pitched their open access tool, the Business Model Canvas.

The Business Model Canvas quickly became, and still is, a favourite tool for many business developers, consultants and entrepreneurs (cf. Brix & Jakobsen, 2015). A good example of the latter is Lund & Nielsen's (2014) account of a company's development using the Business Model Canvas to illustrate changes in the business model or Sort & Nielsen's (2018) depiction of how the Business Model Canvas was used in investment processes in start-ups. Even for university professors teaching the basics of business economics, it provides an invaluable overview of what you need to know to create a viable business. As the field of business models matures, several recent contributions have tracked its developments (Zott et al. 2011; Wirtz et al. 2016, LRP; Nielsen et al. 2018b) while other contributions have posed foresight into the future developments of the field, depicting a performative stage (Nielsen et al. 2018b), and a fifth stage discussing the role of business models in times of uncertainty (Aagaard & Nielsen, 2021).

Alongside these contributions, a rich body of literature has examined past and present forms of engagement specifically related to business model innovation. While some of the earlier works were aired above, recent notable contributions include Foss and Saebi (2017) and Massa et al. (2017). This journal featured an excellent piece by Wirtz & Dauser (2017), which confirmed business model innovation as a mature area of research and argued that future research into this topic should aim at empirically consolidating and confirming existing frameworks.

According to Snihur and Eisenhardt (2022), business models as a concept have now taken over the role that strategy used to have a role that for many companies is about execution and implementation (Nielsen et al. 2020). Today, the field encompasses many different tools and methodologies based on service design and design thinking. Still, it lacks tools that link more directly to companies' financial systems, business intelligence and decision-support tools. One recent attempt at designing a holistic

methodology for mature companies is provided by Taran et al. (2022). In the future, mature companies will need data that can help them calculate the consequences of new business models, including potential cannibalisation from existing modes of doing business.

Peeking Into the Future

Digital technologies and societal challenges are the two cornerstones for the development of the field of business model innovation. Therefore, this conceptual article aims to provide a platform from which anyone interested in business model innovation can better assess what she/he needs to understand to increase the probability of creating stronger and more resilient organisations. A Delphi method was used to screen for relevant digital technologies and societal challenges, mobilising short interviews at the most recent gatherings of the Business Model Conference¹. Most of the "who's who" in business models research regularly attend this event. A few of these notable experts provide insights in the first part of this special issue, while several more give us their wisdom on specific themes you need to understand to be successful at doing business model innovation in the future.

Who would possibly be interested in understanding how to succeed at business model innovation in the future – you might ask? From the business side, managers, business developers, owners, investors, creditors and board members are naturally interested in understanding an organisation's future prospects, potentials and profitability outlook. However, many more stakeholders also have an interest in this theme. In addition to university academics, authorities, government agencies and regulators, an array of other stakeholders are affected by the organisation's value creation and value destruction (Nielsen, 2023b). Take a moment to consider some of the following:

- Business partners, including suppliers, production and logistics
- Customers

¹ See www.businessmodelconference.com

- Consumers
- Employees and other workers
- Media
- Communities
- NGO's and other public organisations
- Trade unions

Another concept worth spending a few moments considering is that of resilience. Strength and resilience take on different forms depending on whether the company is private, public, or NGO and whether the company is a start-up, an SME, or a large multinational corporation. Nielsen (2023c) argues that resilience is just as important to depict in a sustainability report as the E, S and G categories of Environmental, Social and Governance disclosures. Resilience can take many forms. For example, it could be in the form of flexibility and adaptability, leading to agility towards exogenous shocks or the physical impacts of climate change. Resilience could also take the form of business model innovation, supply chain management, innovation performance and improving the use value of product-service offerings. Finally, resilience may be concerned with achieving profitable growth at the EBITDA level, reasonable reserves valuation, and sufficient cash for capital expenditures for innovation.

Business model innovation foresight refers to identifying themes, practices, methods, tools and techniques that help your organisation explore, shape and manage the future. Among such techniques are, for example, creating an understanding of the future of decision-making and translating this to a business model innovation context.

How Technological and Transformational Forces will form Business Model Innovation in The Decade(S) To Come

Existing contributions to the field of business models and business model innovation are rich with depictions and discussions of differing perspectives or schools of thought and how they relate to and contribute to the development of the field. This article

does not build upon a validated framework that organises the contributions according to schools of thought, disciplinary perspectives or research phases. Rather, it corroborates that a fruitful forward-looking outlook for business model innovation is to be found in combinations of perspectives and inspiration from age-old so-called core management disciplines, grand challenges to society and risks to the existence of mankind, and newly invented technologies and their applications.

This is among the reasons that makes the field of business models so appealing for researchers to engage in. It is also a major reason why the Journal of Business Models is a cornerstone for relevant research to society, businesses and people. It is a reason why the Journal of Business Models is an essential foundation of knowledge creation for the benefit of future generations, and remember, it's still free, even though Nielsen et al. (2013) threatened to figure out a way to make you pay someday.

Expert insights

The first three articles in this special issue are expert insights. In fact, they are comprised of three keynote speakers from the 2018 Business Model Conference held in Florence, namely the closing keynote, the opening keynote, and the PhD keynote (in that order).

Nicolai Foss (2023) provides insights into organisational design issues related to business model innovation. It is a well-known fact that Nicolai argues that managers matter (Foss & Klein, 2023). In this context, he points out that different types of business model innovation require different leadership approaches. He also points to the fact that there are opportunities to link business model innovation to top management cognition, which still needs to be done. Another item on Professor Foss' wishlist is linking business model innovation theory to existing theories systematically and cumulatively rather than constantly reinventing the wheel. One opportunity to do this is in understanding the basic coordination and cooperation needs that different business models and business model innovations give rise to and in linking these to different management and organisation approaches. His main point in the article is

the need for a more accurate dimensionalisation of the unit of analysis by which business model innovation is done and that this would provide a better idea of the performance implications of business models and business model innovation.

One of the critical challenges that Nicolai Foss sees in the literature is understanding the governance and the governance challenges across an ecosystem's lifecycle. Precisely, governance choices are on the mind of Joan E. Ricart, who argues that from an ecosystem perspective, governance choices are crucial, albeit they may be related to immaterial assets or decisions. He argues that introducing a relational stakeholder perspective to business model innovation and design is an essential job to be done (Ricart, 2023). Joan also highlights the role of communities and community-building in establishing such platform-based business model innovation. This links very neatly to the ideas brought forth by Rosenstand et al. (2023) on Society 5.0 and other contributions on, for example, collaborative networks (Peronard & Brix, 2018). Professor Ricart emphasises the importance of considering sustainability in contemporary business model innovation and the education of the next generations so that circular economy is a natural part of their knowledge base. Finally, he revisits the intricate relationship between strategy and business models by stating that the business model is the central node of strategy, now and in the future.

Lorenzo Massa (2023) agrees and adds a "but", which is consistent with Nicolai Foss in many ways. He states that business model innovation is an over-complex field that needs research to create structure and meaning. He exemplifies machine learning as an interesting strategy and wishes to engage with engineers, mathematicians and computer scientists to start modelling for business model innovation. Only then will the field of business models and business model innovation be able to overtake the strategy discipline, as Snihur and Eisenhardt (2022) have proclaimed. Lorenzo argues that creating structures between scientists and business model innovation experts will be important from a research perspective. But this is only half the story because business model innovation needs to create

real impact, for example, by minimising corporate footprint. Lorenzo argues that when markets reward companies for doing the right thing and when value creation and value capture are democratised to a much broader set of stakeholders than at present, then real change takes place. Lorenzo Massa finishes off by contemplating the decision-making around business model innovation, the effects of uncertainties, and how they can be handled to empower management and leadership.

Technological Forces

The next five contributions concern the transformation of business models from a technological perspective. In the first of these contributions, Riccardo Silvi, Andrea Pia, and I present the Digital Transformation Canvas™ as a tool that helps to organise and plan the execution of digital projects (Silvi et al., 2023). The fact is that many digital projects fail, with poor governance and bad leadership being among the key reasons. They argue that although resource scarcity is a problem, there are a series of issues relating to poor execution, including poor or no definition of the digital transformation objective, poor analysis, and continuing despite a bad business case. The Digital Transformation Canvas™ offers a methodology that organises the process, helps to turn business ideas of digital transformation into business opportunities, translates business opportunities into actions, and creates a performance management plan for digital transformations.

The next contributions are the hot generic technologies currently forming business model innovation. Naomi Haefner and Oliver Gassmann (2023) shed light on generative AI, its impending evolution, its transformative implications, and how businesses can use AI to innovate their business models. The potential impact of AI on business model innovation and businesses will naturally cause uncertainty for managers, who will need to analyse how AI aligns with the company's overall digital strategy and transformation, as well as other current technological revolutions such as blockchain, cloud computing, 6G and the metaverse. Besides the ethical concerns surrounding the introduction of AI, potential regulation could also affect companies' operational spaces. A

balanced approach is essential as we navigate these changes, leveraging AI's potential while upholding ethical considerations. The outlook is promising for those who thoughtfully harness AI's power.

In his contribution to the future of business model innovation given Hexa-X and 6G technologies, Petri Ahokangas (2023) argues that connectivity is already the foundation of all digitalisation in modern society. Ubiquitous, affordable, and trustworthy connectivity is becoming increasingly important, and when combined with artificial intelligence, we can expect new opportunities to emerge. However, given the significant regulatory burden, the question remains: how can we capitalise on these opportunities? There is a great deal of variation and difference in values globally, as well as the global rollout of 5G. Professor Ahokangas' concern is whether we will achieve global 6G adoption. He is not entirely convinced at this point. From an innovation perspective, this significantly impacts business models' scalability, replicability, and long-term sustainability.

Kilian Schmück (2023) examines the impact of blockchain technology on business model innovation. He argues that blockchain is not simply about cryptocurrencies but rather a digital trustee that enables secure and reliable management of digital assets in cross-organizational relationships, even those characterised by conflict of interest. This expands the scope of blockchain beyond financial transactions to encompass trusted and distributed interdependencies within ecosystems. As a result, blockchain mitigates the lock-in effects experienced by users, which have been a key value driver in various digital business model configurations. As relationships transition from a Web2 and platform-centric perspective to a Web3 and user-centric perspective, value mechanisms and ecosystems incorporating blockchain must account for this transformative shift. The primary challenges associated with blockchain lie in organisation and governance structures, which present a range of disruptive dynamics. Just as the internet, platforms, and ecosystems disrupted incumbent and non-digital firms in the realm of digitalisation and digital business models, blockchain is now disrupting platform business models and ecosystem management.

In this context, blockchain technology contributes to democratising platforms and ecosystems, linking it to the later article by Bernhard Lingens (2023) and the last contribution to the technology perspective, namely the article covering the Metaverse and Society 5.0. In this article, Claus Rosenstand, Jacob Brix and I discuss how companies should think and do business model innovation in the Society 5.0 and metaverse space. The metaverse can create a more human-centred, sustainable, and inclusive society by introducing new technologies that improve people's lives and create a better world. This article describes the relationship between the metaverse and Society 5.0 and the types of technologies and mechanisms they rely on, including AI, 6G and Blockchain. Sound familiar? ;-)

Transformational Forces

The third group of contributions represent transformational forces from the perspective of the business environment. The first one of these grasps one of the results of an uncertain, hyper-competitive and globalised business world.

Jesper Sort, Romeo V. Turcan and Yariv Taran argue that business model innovation in the future needs to go beyond factoring in notions of internationalisation. In the future, businesses need to be able to handle both de-internationalisation and re-internationalisation at speeds not seen previously (Sort et al., 2023). International business has become increasingly complex and challenging to manage in a volatile, uncertain, complex, and ambiguous (VUCA) world characterised by highly uncertain economic trends, unpredictable market changes, shorter life-cycles of products, competencies, strategic choices, and routine work tasks, and a shift from internal to collaborative innovation increasingly taking place outside the firm's network. Decision-makers must dynamically adapt to and navigate this fluid and rapidly changing environment by adjusting their foreign market presence. Business model innovation will be particularly challenged in a VUCA world, and developing sound de- and re-internationalisation strategies and processes will be pivotal to future success.

As mentioned in several of the opening contributions to this special issue (Ricart, 2023; Massa,

2023), ecosystems, innovation ecosystems, platform-based business models, and network-based business models (see, for example, Montemari & Nielsen, 2013; Nielsen & Montemari, 2012) are all keywords for future business model innovation makers to take careful note of. Bernhard Lingens (2023) asserts that ecosystems have become one of the most topical subjects in industry and academia. They are increasingly important for companies to comprehend in their business model innovation efforts. However, research and practice are evolving in different directions. Therefore, this article aims to bridge the gap between theory and practice and clarify the critical topics in ecosystem management that will be crucial for future business model innovation. This leads to four key areas that require attention: 1) Organisational change and firm culture are the most significant barriers to ecosystems and, consequently, business model innovation, 2) Portfolio strategies and performance evaluation are essential for ecosystem-based business model innovation; 3) New investment approaches are needed to deal with start-ups that are ecosystem orchestrators, and 4) Hands-on approaches are needed for the different roles and tasks in an ecosystem. These four areas make ecosystem thinking an integral part of business model innovation thinking.

According to Nielsen (2023d), firms must be aware of the potential impacts of regulation on their business models, anticipate changes in the regulatory landscape, and innovate their business models accordingly. This article surveys seven regulatory archetypes and identifies six critical regulatory trajectories that are expected to influence and shape business model innovation in the future significantly. The first three trajectories, cybersecurity, artificial intelligence, and telecommunications, are associated with technological advancement. In contrast, the latter three trajectories, taxation, asset sharing and crowdfunding, and accounting and environmental regulation, are primarily associated with sustainability and organisational concerns. Especially the field of sustainability reporting is undergoing heavy regulatory changes. From being reported by managerial choice (Nielsen & Madsen, 2009), sustainability reporting now has to factor in business models (Roslender & Nielsen, 2015) and how these affect a

wider array of stakeholders, including the environment, society, employees and customers (Roslender & Nielsen, 2022a).

To comprehensively analyse and design business models, Xavier Lecocq, Benoît Demil and Vanessa Warnier introduce a framework that complements the concept of externalities with the symmetrical concept of internalities. Despite the growing recognition of the significance of surrounding ecosystems, business models are often viewed as internal configurations involving resources, organisation, and offerings. This narrow perspective relegates the ecosystem to a mere facilitator of stakeholder value creation and focal company value capture. However, we argue that ecosystems are also breeding grounds for externalities generated by the focal business model, which can ultimately erode stakeholder value. Therefore, sustainable business models require a holistic understanding of externalities, with the business model acting as the crucial intermediary between externalities and internalities.

Transformative Conclusions

Business model innovation must accommodate many forces, both internal and external. Internally, resources, processes, knowledge and competencies form the possibilities at hand. External forces, being both positive and negative, can derive from market developments, regulatory developments, societal developments, customer developments, and technological developments.

In this space, managers are expected to make decisions that balance long-term versus short-term horizons, balance sustainable approaches versus profitability, balance innovation versus being reactive.

Which forces will have the most significant impact on your future business models is hard to predict. However, survival and resilience will likely require some aspects of your business to change. Therefore, I urge you to read the articles you find relevant to your particular situation and note how things are anticipated to be different in the future.

References

- Aagaard, A. & C. Nielsen (2021), The fifth stage of business model research: The role of business models in times of uncertainty, *Journal of Business Models*, Vol. 9, No. 1, 77-90.
- Ahokangas, P. (2023), Hexa-X/6G as a general technology platform for business model innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 51-56
- Brix, J., & Jakobsen, H. S. (2015). Business model prototyping: exploring pre-commercialisation opportunities in practice. *International Journal of Innovation and Learning*, 17(1), 98-110.
- Drucker, P. F. (2008), *The Essential Drucker: The Best of Sixty Years of Peter Drucker's Essential Writings on Management*. Collins Business Essentials.
- Dumay, J. (2016). A critical reflection on the future of intellectual capital: from reporting to disclosure. *Journal of Intellectual capital*, 17(1), 168-184.
- Foss, N. (2023), Organisational design issues and the proper dimensionalisation of business model innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 13-17
- Foss, N. J., & Klein, P. G. (2023). Why managers still matter as applied organization (design) theory. *Journal of Organization Design*, 12(1-2), 7-18.
- Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go?. *Journal of management*, 43(1), 200-227.
- Haefner, N. and O. Gassmann (2023), Generative AI and AI-Based Business Model Innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 46-50
- Lecocq, X., B. Demil & V. Warnier (2023), Moving business models forward for positive social, environmental and economic outcomes: Managing externalities (and internalities) for sustainability innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 117-132
- Lingens, B. (2023), How ecosystem management will influence business model innovation: Bridging the gap between theory and practice, *Journal of Business Models*, Vol. 11, No. 3, pp. 97-104
- Lund, M., & Nielsen, C. (2014). The evolution of network-based business models illustrated through the case study of an entrepreneurship project, *Journal of Business Models*, Vol. 2, No. 1., pp. 105-121.
- Magretta, J. 2002. Why Business Models Matter, *Harvard Business Review*, May, pp. 3- 8.
- Massa, L. (2023), Why uncertainty and sustainability will be key drivers of business model innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 24-29
- Massa, L., Tucci, C. L., & Afuah, A. (2017). A critical assessment of business model research. *Academy of Management annals*, 11(1), 73-104.

Montemari, M., & Nielsen, C. (2013). The role of causal maps in intellectual capital measurement and management. *Journal of Intellectual Capital*, Vol. 14, No. 4, pp. 522-546.

Nielsen, C. (2023), How Regulation Affects Business Model Innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 105-116

Nielsen, C. (2023a), The Impact Report: The Report that all Companies with a Conscience should be Disclosing. Working paper, University of Bologna, available at <https://ssrn.com/abstract=4594438>

Nielsen, C. (2023b), ESG Reporting and Metrics: From Double Materiality to Key Performance Indicators, Forthcoming in *Sustainability*.

Nielsen, C. (2023c), The REGS Model. Working paper, University of Bologna, 2023b, available at <https://ssrn.com/abstract=4594453>

Nielsen, C. & M. Montemari. 2012. The role of human resources in business model performance: The case of network-based companies, *Journal of Human Resource Costing & Accounting*. Vol. 16, No. 2, pp. 142-164.

Nielsen, C. & M.T. Madsen. 2009. Discourses of transparency in the Intellectual Capital reporting debate: Moving from generic reporting models to management defined information. *Critical Perspectives on Accounting*, special edition on intellectual capital, Vol. 20, No. 7, pp. 847-854.

Nielsen, C., & Lund, M. (2014). A Brief History of the Business Model Concept. In *The Basics of Business Models* (pp. 21-27). Ventus. <http://bookboon.com/en/the-basics-of-business-models-ebook>

Nielsen, C., & R. Roslender, (2015). Enhancing financial reporting: the contribution of business models, *British Accounting Review*, Vol. 47, No. 3, pp. 262-274.

Nielsen, C., Haslam, C., & Turcan, R. V. (2013). We give you the Journal of Business Models (for free): The inaugural editorial. *Journal of Business Models*, 1(1), 3-12.

Nielsen, C., K. Brøndum, F.G. Laursen K. Tange & M. Lund, (2020), *Kickass Companies: A manual for unlocking growth*, Aalborg: Business Research and Business Design publishing (2nd Edition, English version).

Nielsen, C., Lund, M., Montemari, M., Paolone, F., Massaro, M., & Dumay, J. (2018a). Business Models: A Research Overview. Routledge. State of the Art in Business Research

Nielsen, C., M. Lund, S. Schaper, M. Montemari, P. Thomsen, J. Sort, R. Roslender, K. Brøndum, C. Byrge, C. Delmar, L. Simoni, F. Paolone, M. Massaro and J. Dumay (2018b), Depicting A Performative Research Agenda: The 4th Stage of Business Model Research, *Journal of Business Models*, Vol. 6, No. 2, pp. 59-64

O'reilly, T. (2007). What is Web 2.0: Design patterns and business models for the next generation of software. *Communications & strategies*, (1), 17.

Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers* (Vol. 1). John Wiley & Sons.

Peronard, J. P., & Brix, J. (2018). Sensemaking in collaborative networks: creating and balancing activities in

open business models. *International Journal of Entrepreneurship and Innovation Management*, 22(6), 545-561.

Porter, M.E., 2001. Strategy and the Internet. *Harvard Business Review* 79(3), 62-79.

Ricart, J.E. (2023), Business Model Innovation as the new strategy arena, *Journal of Business Models*, Vol. 11, No. 3, pp. 18-23

Rosenstand, C.A.F., J. Brix & C. Nielsen (2023), Metaverse and Society 5.0: Pivotal for future business model innovation, *Journal of Business Models*, Vol. 11, No. 3, pp. 62-76

Roslender, R. & C. Nielsen (2022), Accounting for the value expectations of customers: re-imagining the Integrated Reporting initiative, *Critical Perspectives on Accounting*.

Schmück, K. (2023), How Blockchain disrupts business model innovation counting on lock-in effects, *Journal of Business Models*, Vol. 11, No. 3, pp. 57-61

Seelos, C., & Mair, J. (2007). Profitable business models and market creation in the context of deep poverty: A strategic view. *Academy of management perspectives*, 21(4), 49-63.

Silvi, R., C. Nielsen and A. Pia (2023), From Insights to Business Model Innovation and Results: Using the Digital Transformation Canvas, *Journal of Business Models*, Vol. 11, No. 3, pp. 30-45

Snihur, Y., & Eisenhardt, K. M. (2022). Looking forward, looking back: Strategic organization and the business model concept. *Strategic Organization*, 20(4), 757-770.

Sort, J. and C. Nielsen (2018), Using the Business Model Canvas to Improve Investment Processes, *Journal of Research in Marketing and Entrepreneurship*, 20(1), 10-33

Sort, J., R.V. Turcan & Y. Taran (2023), De-internationalisation, Re-internationalisation and Business Model Innovation: Exploring the Intersection, *Journal of Business Models*, Vol. 11, No. 3, pp. 77-96

Taran, Y., Boer, H., & Nielsen, C. (2022). *The Business Model Innovation Process: Preparation, Organization and Management*. (1 udg.) Routledge. Routledge Studies in Innovation, Organizations and Technology

Wirtz, B. W., Pistoia, A., Ullrich, S., & Göttel, V. (2016). Business models: Origin, development and future research perspectives. *Long range planning*, 49(1), 36-54.

Wirtz, B., & Daiser, P. (2017). Business model innovation: An integrative conceptual framework. *Journal of Business Models*, 5(1), pp. 14-34.

Zott, C., Amit, R., & Massa, L. (2011). The business model: recent developments and future research. *Journal of management*, 37(4), 1019-1042.