

Appendix A. Selected journals and articles

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
1	Antonio, J.L., Schmidt, A.L., Kanbach, D.K., Meyer, N., 2024. Enacting disruption: how entrepreneurial ventures innovate value propositions to increase the attractiveness of their technologies. <i>IJEBR</i> 30, 885–915. https://doi.org/10.1108/IJEBR-07-2023-0688	Qualitative, explorative research design	Various countries within Europe	Automotive	Analyze how entrepreneurial ventures modify their value propositions to increase the attractiveness of their comparatively inferior offerings, a process referred to as value proposition innovation	Developed a two-aspect framework for value proposition innovation comprising 'determinants' and 'tactics', connected by a continuous feedback loop. Determinants include cognitive antecedents, development drivers, and realization capabilities, guide the scope and focus of various tactics.
2	Axelsson, M., Bjurström, E., 2019. The Role of Timing in the Business Model Evolution of Spinoffs The Case of C3 Technologies. <i>RESEARCH-TECHNOLOGY MANAGEMENT</i> 62, 19–26. https://doi.org/10.1080/08956308.2019.1613116	Exploratory single case study	Sweden	Defense	Analyze the role of timing in the business model evolution of a spinoff	Business model evolution is characterized by an experimental and cost-efficient approach using timing to maximize opportunities and minimize risks. The superior development speed is not simply a matter of being the fastest but of finding the right time to move the venture forward. Timing can be used to resolve uncertainty in the exploration of the latent value of a high-potential technology.
3	Bae, B., & Choi, S. (2021). The effect of learning orientation and business model innovation on entrepreneurial performance: Focused on South Korean start-up companies. <i>Journal of Open Innovation: Technology, Market, and Complexity</i> , 7(4). Scopus. https://doi.org/10.3390/joitmc7040245	Correlational research using Questionnaires	South Korea	N/A	Investigate the importance of learning orientation in the operation of start-up companies.	The study finds that start-ups with high learning orientation are more innovative and have a positive impact on business model innovation, which in turn has a positive effect on technology acquisition and market expansion.
4	Balboni, B., Bortoluzzi, G., Pugliese, R., Tracogna, A., 2019. Business model evolution, contextual ambidexterity and the growth performance of high-tech start-ups. <i>Journal of Business Research</i> 99, 115–124. https://doi.org/10.1016/j.jbusres.2019.02.029	Cross-sectional survey	Italy	Electronics and automation, information and communication technologies, pharma and biotech, and knowledge-intensive business services	Examine the impact of BM ambidexterity (novelty and efficiency) of a high-tech start-up on growth performance (based on the growth of full-time equivalent (FTE) workers) may change over time (different phases of its evolution).	BM novelty does not affect the growth performance of start-ups. New ventures should focus not only on novelty but also on rapidly strengthening their BM with the required degree of efficiency. BM novelty can typically be the focus in the early stages, and successive evolution should instead be driven by the pursuit of progressive improvements in efficiency. Meanwhile, in later phases, start-ups need to clarify their market positioning, and tested their revenue models and cost structures, ambidexterity may release its full potential and encourage growth.
5	Baldassarre, B., Calabretta, G., Bocken, N.M.P., Jaskiewicz, T., 2017. Bridging sustainable business model innovation and user-driven innovation: A process for sustainable value proposition design. <i>Journal of Cleaner Production</i> 147, 175–186. https://doi.org/10.1016/j.jclepro.2017.01.081	Research through design methodology	Various countries within Europe	Energy	Improve sustainable development business practice through combining sustainable business model innovation with user-driven innovation practices.	Proposes an initial methodological framework for mapping and understanding stakeholders in developing a process for designing a sustainable value proposition, which takes a thorough, dynamic, and iterative approach by talking to stakeholders, thinking about the problem, and testing the product/service, resulting in an actual sustainable value proposition and a superior problem-solution fit.
6	Baldassarre, B., Konietzko, J., Brown, P., Calabretta, G., Bocken, N., Karpen, I.O., Hultink, E.J., 2020. Addressing the design-implementation gap of sustainable business models by prototyping: A tool for planning and executing small-scale pilots. <i>Journal of Cleaner Production</i> 255. https://doi.org/10.1016/j.jclepro.2020.120295	Design science research	Netherlands	Environmental Initiatives	Bridging the design-implementation gap of sustainable business models through business experimentation and strategic design support.	This research outlined that before detailing SBM ideas, piloting prototypes from an early stage are crucial to considering simultaneously their desirability, sustainability, feasibility, and viability, and to verify early on if they can be implemented that could avoid operational and financial bottlenecks.
7	B Becker, S.D., Eendenich, C., 2023. Entrepreneurial Ecosystems as Amplifiers of the Lean Startup Philosophy: Management Control Practices in Earliest-Stage Startups*. <i>Contemporary Accounting Research</i> 40, 624–667. https://doi.org/10.1111/1911-3846.12806	Cross-sectional field study using interviews	France	Multiple industry	The influences of Lean Startup philosophy in the earliest-stage startups' towards the design and use of management control systems.	The Lean startup approach allows scientific experimentation that has transformed intuitive entrepreneurial processes into transactions that can be steered and accelerated by MCSs. MCSs play a crucial role in the rapid experimentation and learning process toward finding a scalable business model characteristic of the Lean Startup philosophy propagated by the entrepreneurial ecosystem.

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8	Bel Bell, R., 2022. Innovating to survive in competitive markets: business model innovation of Chinese digital businesses. <i>International Journal of Innovation Science</i> . https://doi.org/10.1108/IJIS-09-2022-0189	Investigative multiple case study	China	Digital businesses	Explore how start-up digital businesses develop and innovate their business models to survive in dynamic and competitive markets.	BMI play an important role and is beneficial in the success of new digital ventures in highly competitive environments. This research highlighted key factors in the BMIs studied, including the importance of BMI as a strategic tool to ensure competitiveness in the market; an openness to innovation and the identification of new opportunities; a close relationship with customers and their requirements; the ability to iterate to meet changing demands; and the ability to create and maximise value through the most efficient use of value delivery, capture and networks.
9	Bergmann, T., Utikal, H., 2021. How to support start-ups in developing a sustainable business model: The case of an european social impact accelerator. <i>Sustainability (Switzerland)</i> 13. https://doi.org/10.3390/su13063337	Single case study	Various countries within Europe	Startup accelerator	Understands the role of accelerator to support start-ups in developing a triple layered Sustainable Business Model.	Presenting the importance intermediary role of social impact accelerator in supporting start-ups and developing a sustainable BM by providing new knowledge to startups, supporting start-ups' assimilation of new knowledge, and supporting startups' application of new knowledge
10	Biancuzzi, H., Massaro, M., Bagnoli, C., 2024. Smart mobility in Venice: An ecosystem perspective. <i>Journal of Cleaner Production</i> 434, 140096. https://doi.org/10.1016/j.jclepro.2023.140096	Qualitative case study utilizing semi-structured interviews	Italy	Environmental Initiatives	Investigate the actors that generate ecosystem value in the field of Smart Mobility, the stakeholders who capture it, and the concept values generated/captured, with a specific reflection on Venice.	Significant obstacles hinder smart mobility, including widespread distrust and scepticism towards innovation, the economic interests tied to existing sales models, difficulties in data management and privacy, stringent regulations, and the general misalignment of business models among ecosystem actors.
11	Bocken, N.M.P., 2015. Sustainable venture capital - Catalyst for sustainable start-up success? <i>Journal of Cleaner Production</i> 108, 647–658. https://doi.org/10.1016/j.jclepro.2015.05.079	Interviews	United States and Various Europe countries	Multiple industry	The contributions of sustainable venture capitalists for the success of sustainable start-ups	Sustainable startups should focus on triple-bottom-line BMI, seek new technology and funding platforms opportunities, and establish various business cases to achieve success outside the “green customer base.” Venture capitalists could provide business advice and network assistance. BMI, collaborations, and a solid business case are key success elements.
12	Bocken, N.M.P., Mugge, R., Bom, C.A., Lemstra, H.-J., 2018. Pay-per-use business models as a driver for sustainable consumption: Evidence from the case of HOMIE. <i>Journal of Cleaner Production</i> 198, 498–510. https://doi.org/10.1016/j.jclepro.2018.07.043	Longitudinal study of single case study	Netherlands	Home appliances	Observe the positive environmental impact in terms of improving consumption patterns in a pay-per-use business model	Pay-per-use models can effectively change consumer behaviour, and have a more positive environmental impact than the conventional product-oriented BM.
13	Bocke Bocken, N.M.P., Schuit, C.S.C., Kraaijenhagen, C., 2018. Experimenting with a circular business model: Lessons from eight cases. <i>Environmental Innovation and Societal Transitions</i> 28, 79–95. https://doi.org/10.1016/j.eist.2018.02.001 and 4	Exploratory case study using experimentation	Netherlands	Circular startups	Explores the role and process of sustainable business model experimentation within companies that shift from a linear to more circular business model.	Experimentation creates internal and external engagement to start business sustainability transitions and helps test assumptions in every building block of the BM.
14	Braun, S., Suoranta, M., 2025. Incubating innovation: the role of incubators in supporting business model innovation. <i>JRME</i> 27, 255–276. https://doi.org/10.1108/JRME-01-2024-0028	Multiple case study using semi-structured interviews	Various countries within Europe	Software, healthcare, energy, online commerce, education, automotive	Exploring how incubators can support startups with BMI	Incubators can support BMI both directly and indirectly. Direct support includes regular business reviews, providing external perspectives, idea validation, emotional support, and hosting experts. Indirect support involves leveraging the incubator's network to facilitate connections with research institutions, partners, and financial investors. Ultimately, incubators act as crucial intermediaries, fostering knowledge exchange and collaboration that pave the way for startup success and adaptability
15	Cavallo, A., Cosenz, F., Noto, G., 2023. Business model scaling and growth hacking in digital entrepreneurship. <i>Journal of Small Business Management</i> . https://doi.org/10.1080/00472778.2023.2195463	Simulation modeling	United States	Digital technology	Investigate how digital startups can scale their business model and the role of growth hacking approach.	Entrepreneurs could use digital business model and computer simulations to experiment and learn before committing high investments to growth-hacking strategies.
16	Chammassian, R.G., Sabatier, V., 2020. The role of costs in business model design for early-stage technology startups. <i>Technological Forecasting and Social Change</i> 157. https://doi.org/10.1016/j.techfore.2020.120090	Semi-structured interviews	Switzerland, France, and the USA	Multiple industry	Investigate the role of costs in business model design.	Technology Startups develop three types of business models that are technology-driven, marketdriven, and exit-driven. Costs act as enablers, moderators, and mediators. The role of costs plays in the BM design phase changes firm value capture mechanisms, potentially enhancing the firm's value.

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17	Cheah, S.L.-Y., Ho, Y.-P., 2021. Effect of space creativity and social climate on business model innovation in Do-it-Yourself laboratories: the mediating role of opportunity discovery in the case of Singapore. <i>Technology Analysis and Strategic Management</i> 33, 1171–1185. https://doi.org/10.1080/09537325.2021.1976404	Correlational research using survey	Singapore	Multiple industry	Investigate the correlation between DIY lab characteristics (space creativity and social climate) and business model innovation (BMI).	Space creativity in DIY labs is critical for value creation that is integral to BMI. Meanwhile the Opportunity Discovery process mediates the effects of DIY lab social climate on BMI outcome. In identifying opportunities, individuals need access to information about the market, technology and the network.
18	Cicellin, M., Canonico, P., Consiglio, S., Mercurio, L., 2019. Understanding the low cost business model in healthcare service provision: A comparative case study in Italy. <i>Social Science and Medicine</i> 240. https://doi.org/10.1016/j.socscimed.2019.112572	Comparative case study	Italy	Healthcare	Analyse new business models of healthcare service provision in Italy and its social component.	Social innovation is the driving force for change and shared value creation in healthcare. The low-cost business model is able to bring together demand and supply in certain categories of healthcare increases access to medical care.
19	Csik, M.B.L., Feldmann, P.R., Salerno, M.S., 2025. What are the strategies for having success in an uncertain market in the new business creation? <i>J Int Entrep.</i> https://doi.org/10.1007/s10843-025-00391-y	Qualitative, exploratory approach, using semi-structured interviews	Brazil	Online commerce, financial, education, health, insurance,	To determine if entrepreneurs use effectuation theory to create business models when faced with unexpected events in highly uncertain environments like Brazil.	Entrepreneurs successfully use the principles of effectuation theory to establish new businesses. Entrepreneurs begin by leveraging their existing resources and knowledge, manage risks by setting affordable loss limits, and form strategic alliances to grow. They demonstrate flexibility by adapting their business models in response to market feedback and unexpected events. However, the research also identified that during the growth phase, challenges such as the “pains of growth” or disadvantageous corporate partnerships can lead entrepreneurs to make a strategic exit or even shut down the venture.
20	Da Silva, W.J., Araújo, G.D.C., Rehder, A., Pedrosa, M.C., 2024. Amaro's business model innovation: DNVB or platform? <i>REGE</i> 31, 371–382. https://doi.org/10.1108/REGE-08-2022-0115	Single case study	Brazil	Online commerce	Analyze Amaro's business model and explore the strategic dilemma of whether to innovate from a DNVB model to a vertical marketplace platform.	The case study highlights Amaro's strengths in technology, its mature digital purchasing process, and its ability to curate products for its target audience as key factors in this strategic decision.
21	De Angelis, R., Feola, R., 2020. Circular business models in biological cycles: The case of an Italian spin-off. <i>Journal of Cleaner Production</i> 247. https://doi.org/10.1016/j.jclepro.2019.119603	Exploratory single case study	Italy	Bio-based industry	Investigate how the ideas of the circular economy are being transformed into activities and business strategies in a bio-based industrial setting.	The circular economy thinking could promote a value creation as well as value capture in BM. Innovative circular actions and BMs can be employed by SME in spite of challenges due to limited organisational resources.
22	Dijkstra, H., van Beukering, P., Brouwer, R., 2021. In the business of dirty oceans: Overview of startups and entrepreneurs managing marine plastic. <i>Marine Pollution Bulletin</i> 162. https://doi.org/10.1016/j.marpolbul.2020.111880	Multiple case studies using secondary data	Northern America and Europe	Environmental Initiatives	Explore the role of entrepreneurial and SME led solutions for marine plastic management	Innovative BM play an important role for small businesses in successfully commercializing goods and services to reduce the damage of plastics on the marine environment.
23	Elia, G., Lerro, A., Schiuma, G., 2022. Leveraging knowledge management systems for business modelling in technology start-ups: an exploratory study. <i>Knowledge Management Research and Practice</i> 20, 913–924. https://doi.org/10.1080/14778238.2022.2144511	Exploratory survey through a semi-structured questionnaire	Italy	Multiple industry	Examine the relationships between BM and knowledge assets grouped by the Intellectual Capital (IC)	The foundation and innovation of BM rely mainly on human capital, followed by relational and structural capital. Highlighting the importance of IC management as a dynamic capability that enables organisations to sense, size and transform their business model to revitalise their competitive advantage
24	Endenich, C., Lachmann, M., Schachel, H., Zajkowska, J., 2022. The relationship between management control systems and innovativeness in start-ups: evidence for product, business model, and ambidextrous innovation. <i>Journal of Accounting and Organizational Change.</i> https://doi.org/10.1108/JAOC-06-2022-0087	Correlational research using questionnaires	Europe (Germany; Austria; Switzerland)	Multiple industry	Analyse the relationship between the use of management control systems (MCSs) and innovativeness in start-ups pursuing product innovation (PI), business model innovation (BMI) or ambidextrous innovation (both PI and BMI).	Formal MCSs can positively contribute to the innovativeness of start-ups, but the significance and direction of each control levers of the MCSs differ between start-ups focusing on PI, BMI and ambidextrous innovation.
25	Font-Cot, F., Lara Navarra, P., Serradell-López, E., Sánchez-Arnanau, C., 2025. Scaling Wheel Framework: A Holistic Approach to Startup Scalability, Governance Models, and Ai-Driven Innovation Ecosystem Competitiveness. https://doi.org/10.2139/ssrn.5117197	Mixed-methods design with a sequential exploratory approach	Barcelona startup ecosystem	Artificial Intelligence	Provide a comprehensive tool for evaluating startup scalability and guiding sustainable growth.	Highlighting several key themes for startup scalability. Team dynamics, including leadership cohesion and expertise, were identified as fundamental. The influence of external factors including market timing and competition also significant. Resource allocation, particularly financial capital, emerged as a common bottleneck. A clear, long-term strategic vision aligned with market trends was deemed essential for sustainable growth.

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26	Franceschelli, M.V., Santoro, G., Candelo, E., 2018. Business model innovation for sustainability: a food start-up case study. <i>British Food Journal</i> 120, 2483–2494. https://doi.org/10.1108/BFJ-01-2018-0049	Single Case study	Italy	Food and beverage	Investigate and present the way in which a food start-up can develop sustainable business model innovations, taking into account the importance of social and environmental issues.	Instead of merely focusing on product innovation, food companies can compete in the current market by developing new BMs due to the nature of small businesses affected by limited resources and constraints. Sustainable innovation is a winning strategy to achieve business success, especially in the food industry through the use of ICT and digital technologies and the establishment of partnerships.
27	Ganguly, A., Euchner, J., 2018. Conducting Business Experiments Validating New Business Models Well-designed business experiments can help validate assumptions and reduce risk associated with new business models. <i>RESEARCH-TECHNOLOGY MANAGEMENT</i> 61, 27–35. https://doi.org/10.1080/08956308.2018.1421381	Single Case Study	United States	Automotive	Develop a framework for designing and focusing effective experiments within established corporations.	Well-designed business experiments can help validate assumptions and systematically reduce uncertainty risks from breakthrough innovation within a business model, resulting in management teams focusing on the main parts of the business model. It is increasing the likelihood that the legacy company will invest in incubating a new enterprise outside its typical core business.
28	Garidis, K., Rossmann, A., 2019. A framework for cooperation behavior of start-ups: Developing a multi-item scale and its performance impacts. <i>Journal of Small Business and Enterprise Development</i> 26, 877–890. https://doi.org/10.1108/JSBED-04-2019-0125	Interview based qualitative study followed up with questionnaire-based studies	Germany	Multiple industry	Create a systematic approach to develop a multi-item scale to evaluate start-ups' cooperation behavior and the impact of such behavioral patterns on startup performance.	Identifies three behavior dimensions (intention to cooperate, cooperation intensity, cooperation quality) and one performance dimension (start-up performance) that can be used to evaluate the relationships between Corporate and start-ups. The results shows that start-ups with a stronger intention to cooperate are more successful.
29	Geissdoerfer, M., Santa-Maria, T., Kirchherr, J., Pelzeter, C., 2023. Drivers and barriers for circular business model innovation. <i>Bus Strat Env</i> 32, 3814–3832. https://doi.org/10.1002/bse.3339	Exploratory, comparative multiple case study	Various countries within Europe	Circular startups	Empirically determine the drivers and barriers for the different types of circular business model innovation (CBMI)	Startups are primarily driven by market and financial factors. Startups face significant legal and financial barriers and are more likely to encounter value chain challenges like immature reverse logistics.
30	Ghezzi, A., Cavallo, A., 2020. Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. <i>Journal of Business Research</i> 110, 519–537. https://doi.org/10.1016/j.jbusres.2018.06.013	Exploratory multiple case study	Italy	Digital multisided platform	Explore how LSAs act as agile methods for Business Model Innovation in Digital Entrepreneurship.	Early-stage BMI for digital startups revolves around the value architecture elements of value creation, value delivery and value capture. The Lean startup approach are the emerging form of a BMI-supporting Agility Development. LSA as a form of AD applied to the BMI as the important driver of BMI in early-stage digital startups that includes experimenting and testing the overall business model, strong entrepreneurial and innovative organizational culture.
31	Ghezzi, A., Cavallo, A., Sanasi, S., Rangone, A., 2022. Opening up to startup collaborations: open business models and value co-creation in SMEs. <i>Competitiveness Review</i> 32, 40–61. https://doi.org/10.1108/CR-04-2020-0057	Exploratory single-case study	Italy	Biotech	Explore the configurations of SMEs to structure open business model through systematic collaborations with startups.	Open BM is necessarily linked with creating systematic structures, processes, and practices to make openness a continuous and permanent attribute of BMs through the willingness to open to startup collaborations.
32	Guckenbiehl, P., Corral de Zubielqui, G., 2022. Start-ups' business model changes during the COVID-19 pandemic: Countering adversities and pursuing opportunities. <i>International Small Business Journal: Researching Entrepreneurship</i> 40, 150–177. https://doi.org/10.1177/0266242621105547	Semi-structured interviews	Australia	Multiple industry	Investigate the impact of COVID-19 on startups and their response in managing crises through business model changes.	Start-ups responded to the crisis through BM changes because of crisis-induced opportunities and crisis-induced adversity. The interplay between firm size and crisis influences whether start-ups focus on business model adaptation or business model innovation or a combination of both.
33	Guckenbiehl, P., De Zubielqui, G.C., Lindsay, N., 2024. Navigating external knowledge sources: impacts on business model innovation and competitive advantage in start-ups. <i>Knowledge Management Research & Practice</i> 22, 588–599. https://doi.org/10.1080/14778238.2024.2346215	Quantitative approach using primary data collected through an online survey	Australia	ICT, education	Test the inter-relationships among external knowledge from research and support actors, business model innovation (BMI), and competitive advantage (CA) in start-ups.	External knowledge (EK) from both research and support actors positively contributes to Business Model Innovation (BMI), and BMI, in turn, positively affects Competitive Advantage (CA). However, while EK from research actors has a direct positive relationship with CA, EK from support actors shows a negative direct effect on CA. The research concludes that not all external knowledge is equally beneficial for startups in building a competitive advantage and advises them to focus on gaining knowledge from research actors.

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34	Guldmann, E., Huulgaard, R.D., 2020. Barriers to circular business model innovation: A multiple-case study. <i>Journal of Cleaner Production</i> 243. https://doi.org/10.1016/j.jclepro.2019.118160	Longitudinal multiple-case study	Denmark	Circular startups	Identify barriers to the implementation of circular business model innovation for start-ups and incumbent	Shows that barriers to circular business model innovation (CBMI) experienced by circular startups exist from all four socio-technical levels except at the employee level. These barriers can be organized into external barriers at the market and institutional and value chain, and internal barriers at the organizational levels. Within circular startups, regulatory and funding difficulties, and unclear market demand are the main barriers at the market and institutional levels. Meanwhile, the constant flow of supply material, the complex value chain, the lack of knowledge in the value chain, and taking time to build new partnerships and mutual trust are the barriers at the value chain levels. At last, the barriers at the organizational level are the economic profitability of CBMI and the need for more resources, knowledge, or competencies in-house.
35	Guo, B., Pang, X., Li, W., 2018. The role of top management team diversity in shaping the performance of business model innovation: a threshold effect. <i>Technology Analysis and Strategic Management</i> 30, 241–253. https://doi.org/10.1080/09537325.2017.1300250	Correlational research using linear regression model	China	Multiple industry	Analyze the role of top management team diversity in shaping the performance of business model innovation	TMT plays an important role in shaping the performance effect of business model innovation. Furthermore, TMT diversity exhibits a significant threshold effect on the relationship between business model innovation and firm performance.
36	Guo, H., Guo, A., Ma, H., 2022. Inside the black box: How business model innovation contributes to digital start-up performance. <i>Journal of Innovation and Knowledge</i> 7. https://doi.org/10.1016/j.jik.2022.100188	Correlational research using Questionnaires	China	Digital technology	Examine how businesses can leverage business model innovation to remain competitive and relevant in a constantly changing environment.	Value proposition innovation, which is mediated by value creation and value capture, is the most important component of successful business model innovation by being open to new ideas and collaborations.
37	Guo, H., Yang, J., Han, J., 2021. The Fit between Value Proposition Innovation and Technological Innovation in the Digital Environment: Implications for the Performance of Startups. <i>IEEE Transactions on Engineering Management</i> 68, 797–809. https://doi.org/10.1109/TEM.2019.2918931	Correlational research using Questionnaires	China	Digital technology	Examine the fit between value proposition innovation and technological innovation (exploitative versus explorative) for the performance of startups in the digital environment	Discovered that explorative innovation, is highly effective when combined with value proposition innovation (as a form of external dynamic capability), which seeks to generate value for customers. The study recommend that startups invest in explorative innovation instead of exploitative innovation and actively engage with customers to continuously refine their value proposition.
38	Gupta, G., Bose, I., 2019. Strategic learning for digital market pioneering: Examining the transformation of Wishberry's crowdfunding model. <i>Technological Forecasting and Social Change</i> 146, 865–876. https://doi.org/10.1016/j.techfore.2018.06.020	Exploratory single case study	India	Crowdfunding	Investigate how digital market pioneers gain strategic knowledge to transform their business models.	Active scanning of the business environment (actively learning about their competitors and the market) led to strategic learnings that helped transform its BM which was at the core of its sustained market advantages. Establishing a digital infrastructure, being a pioneer in the market and adapting to environmental changes through proactive in seeking new opportunities and audit their digital capabilities can create and sustain a competitive advantage for businesses.
39	Gupta, V., Fernandez-Crehuet, J., Hanne, T., 2020. Fostering Continuous Value Proposition Innovation through Freelancer Involvement in Software Startups: Insights from Multiple Case Studies. <i>SUSTAINABILITY</i> 12. https://doi.org/10.3390/su12218922	Multiple case study	Italy, France, and India	Software	Explain the strategies and challenges adopted by the software startups to foster value proposition innovation through freelancers	Freelancer involvement during value proposition activities has positive impact on the business in terms of development cost reductions, shorten time to market, and high customer satisfaction.
40	Henry, C., Rushton, J., Baillie, S., 2016. Exploring the sustainability of small rural veterinary enterprise. <i>Journal of Small Business and Enterprise Development</i> 23, 259–273. https://doi.org/10.1108/JSBED-10-2014-0166	Exploratory single case study	United Kingdom	Veterinary	Explore the sustainability of small rural veterinary enterprise in light of recent changes in both the farming and veterinary sectors.	The future sustainability of rural veterinary SMEs is dependent on the veterinary business owners being prepared to change with their clients, develop supportive partnerships and create effective marketing strategies.
41	Henry, M., Bauwens, T., Hekkert, M., Kirchherr, J., 2020. A typology of circular start-ups: Analysis of 128 circular business models. <i>Journal of Cleaner Production</i> 245. https://doi.org/10.1016/j.jclepro.2019.118528	Interviews and secondary data	Europe: the Randstad region in the Netherlands, Berlin and London.	Agriculture	Examine the business models of circular start-ups and how they may differ from incumbent firms embracing CE.	The results show that circular start-ups tend to embrace strategies corresponding to higher levels of circularity than those of incumbents and circular start-ups can make major contributions to transitioning towards CE.

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42	Hou, D., Xiong, A., Lin, C., 2022. Executive cognitive ability and business model innovation in start-ups: The role of entrepreneurial bricolage and environmental dynamism. <i>Frontiers in Psychology</i> 13. https://doi.org/10.3389/fpsyg.2022.978543	Correlational research	China	Multiple industry	Examine the influence of executive cognitive ability on business model innovation through entrepreneurial bricolage and environmental dynamics.	The cognitive ability of new venture executives has a significant positive impact on BMI as mediated by entrepreneurial bricolage. The new venture executive should understand the importance of entrepreneurial bricolage to solve the problem of resource constraints through the creative use of existing resources. Concurrently, environmental dynamics can promote the relationship between executive cognitive ability, entrepreneurial bricolage, and business model innovation.
43	Huynh, P., 2022. Enabling circular business models in the fashion industry: the role of digital innovation. <i>INTERNATIONAL JOURNAL OF PRODUCTIVITY AND PERFORMANCE MANAGEMENT</i> 71, 870–895. https://doi.org/10.1108/IJPPM-12-2020-0683	Exploratory multiple-case study	Norway	Fashion	Examine digital circular business models in the context of the fashion industry among different sizes of firms.	Digital technologies enable digital based circular business models in fashion industry due to its capability to improve the predictability of the innovation process and market patterns, increase traceability and transparency of garment products to enhance consumer consciousness and recyclability, and changed the communication flow of CE. The lack of governmental awareness and supportive policies is one of the most influencing factors for the CE transition.
44	Iyiola, K., Alzubi, A., Dappa, K., 2023. The influence of learning orientation on entrepreneurial performance: The role of business model innovation and risk-taking propensity. <i>Journal of Open Innovation: Technology, Market, and Complexity</i> 9, 100133. https://doi.org/10.1016/j.joitmc.2023.100133	Quantitative approach using survey data	Turkey	Textiles, Food and Beverages, Computer and Software, Electrical/Electronics, Equipment, Mechanical and Engineering	Examine the impact of Learning Orientation on Entrepreneurial Performance, the mediating role of BMI, and the moderating role of the propensity to take risks	Learning Orientation (LO) positively impacts both Entrepreneurial Performance (EP) and Business Model Innovation (BMI), and that BMI also positively affects EP. BMI was found to mediate the relationship between LO and EP
45	Jabeen, F., Santoro, G., Ključnikov, A., Jose, S., 2025. Data-driven growth and business model transformation: how startups unlock resilience in turbulent times. <i>Rev Manag Sci.</i> https://doi.org/10.1007/s11846-025-00957-z	Qualitative, interpretivist paradigm, using a multiple-case study approach.	Not specified	Digital technology	Explore how organizations can enhance resilience through business model transformation, emphasizing the role of data-driven growth methodologies during crises.	Crises provide an opportunity for startups to transform their business models. Data-driven growth methodologies, encompassing practices from growth hacking, design thinking, and lean startup, are crucial for building resilience. These practices enable startups to sense market changes, experiment with new value propositions, and reconfigure their resources, thereby fostering both absorptive (incremental adjustments) and adaptive (strategic pivots) resilience.
46	Jain, R., 2014. Business model innovations for information and communications technology-based services for low-income segments in emerging economies. <i>Journal of Global Information Technology Management</i> 17, 74–90. https://doi.org/10.1080/1097198X.2014.928561	Case-based approach using In-depth interviews	India	Digital technology	Identify factors contribute to business model innovation and the role of the start-ups for low-income segments in emerging economies	Factors that contribute to the BMI for low-income segments in emerging economies are the dominant role in the construction and linking of an ecosystem, the balance between formal and informal governance mechanisms, exploiting institutional voids, and developing products and services specifically to LIS markets.
47	Jin, T., Chorda, I.M., 2025. The impact of green strategy hybrid orientation on startup performance in SMEs. <i>Journal of Business Research</i> 201, 115748. https://doi.org/10.1016/j.jbusres.2025.115748	Correlational research using Questionnaires	China	IT, High-tech, Energy, Manufacturing	Investigate the impact of green strategy hybrid orientation on startup performance, and to identify the mediating roles of entrepreneurial bricolage and business model innovation in this relationship.	Green Strategy Hybrid Orientation combines green entrepreneurial and learning orientations, positively affects both financial and environmental performance. This effect is primarily mediated by BMI, which systematically translates green strategies into tangible outcomes. The research also identified a crucial sequential mediation pathway where entrepreneurial bricolage acts as a catalyst for BMI, which in turn drives performance.
48	Jo, H., 2025. Internal capabilities and business confirmation: trajectories of emerging ventures. <i>Management Decision</i> 1–30. https://doi.org/10.1108/MD-07-2024-1709	Quantitative study using survey data	South Korea	Not specified	Investigate how internal capabilities including technology level, competitive capacity, and business model innovation, along with the external support of the Venture Business Confirmation program, collectively influence the financial performance and growth of startups.	A high technology level boosts long-term growth but can negatively affect short-term financial performance. Competitive capacity, however, positively contributes to both growth and financial metrics. BMI is a strong driver for long-term growth, but its immediate financial impact is negligible. Venture Business Confirmation program positively moderates the relationship between a venture's competitive capacity and its financial performance, amplifying its effect.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
49	Jones, O., Giordano, B., 2021. Family entrepreneurial teams: The role of learning in business model evolution. <i>Management Learning</i> 52, 267–293. https://doi.org/10.1177/1350507620934092	Longitudinal case study	United Kingdom	Online commerce	Examine the influence of entrepreneurial learning towards business model evolution in a family-based start-up	Emotional experiences as a key motivating factor in the early stages of family startups. A flexible BM is essential for trial-and-error learning, while team cognition plays a crucial role in learning.
50	Jorzik, P., Antonio, J.L., Kanbach, D.K., Kallmuenzer, A., Kraus, S., 2024. Sowing the seeds for sustainability: A business model innovation perspective on artificial intelligence in green technology startups. <i>Technological Forecasting and Social Change</i> 208, 123653. https://doi.org/10.1016/j.techfore.2024.123653	Qualitative, exploratory multiple-case study	Various countries within Europe	Environmental Initiatives	Understanding how green technology startups utilize AI-driven BMI to achieve environmental sustainability.	Identifies five key dimensions, called “predominant manifestations,” that describe how these startups use AI. It categorizes the startups into three distinct archetypes: “EcoTech Innovators,” “Green Societal Impact Catalysts,” and “Hardware-Software Integrators.” The findings indicate that AI is primarily used to innovate in the areas of value creation, delivery, and value proposition, with less emphasis on value capture mechanisms.
51	Konietzko, J., Baldassarre, B., Brown, P., Bocken, N., Hultink, E.J., 2020. Circular business model experimentation: Demystifying assumptions. <i>Journal of Cleaner Production</i> 277. https://doi.org/10.1016/j.jclepro.2020.122596	Design science framework	Various countries within Europe	Circular startups	Investigate how entrepreneurs, intrapreneurs, and innovation managers create and evaluate their assumptions during the experimentation process to generate more circular outcome.	Study found that assessing the startups founder predetermined means important to better understand how participants build and evaluate their assumptions during circular BM experimentation.
52	Kuckertz, A., Berger, E.S.C., Gaudig, A., 2019. Responding to the greatest challenges? Value creation in ecological startups. <i>Journal of Cleaner Production</i> 230, 1138–1147. https://doi.org/10.1016/j.jclepro.2019.05.149	Correlational research using regression	United States	Environmental Initiatives	Identify factors determine different forms of value creation in ecological startups	The majority of the ecological startups create sustainable value by employing value creation for sustainability meaning that most entrepreneurs exploit ecological opportunities not only to maximize profit, but also to create economic, ecological, and social value by integrating these values within their business model for sustainability. Ecology startups employ three different types of value creation for sustainability including technologically oriented, socially-oriented, and organizationally- oriented forms.
53	Kulkov, I., 2021. Next-generation business models for artificial intelligence start-ups in the healthcare industry. <i>International Journal of Entrepreneurial Behaviour and Research</i> . https://doi.org/10.1108/IJEBR-04-2021-0304	Multiple case study	Various countries within Europe	Healthcare	Study in depth the processes of forming business models for AI startups in the healthcare industry	AI startups are revolutionizing the healthcare industry by focusing on new technological capabilities and making the patient a source of value and also receiving benefits from value. AI startups in healthcare develop BMI by targeting specific problems based on founders' backgrounds and networking and accessing data for AI solution development.
54	Lamperti, S., Cavallo, A., Sassanelli, C., 2023. Digital Servitization and Business Model Innovation in SMEs: A Model to Escape From Market Disruption. <i>IEEE Transactions on Engineering Management</i> 1–15. https://doi.org/10.1109/TEM.2022.3233132	Exploratory using secondary data and interviews	Italy	Digital technology	Examine digital servitization as an opportunity to transform Business Model and escape from a disrupted market.	Emphasize on how enterprises operating in a disrupted market should be able to adopt an open BM configuration while embracing the transition to digital servitized solutions.
55	Li, Y., Li, B., Lu, T., 2022. Founders' Creativity, Business Model Innovation, and Business Growth. <i>Frontiers in Psychology</i> 13. https://doi.org/10.3389/fpsyg.2022.892716	Correlational research using Questionnaires	China	Digital technology	Assess the relationship between founders' creativity and business growth.	The cornerstone of enterprise growth is BMI, where founder creativity significantly contributes to firm growth. While work experience has a greater moderating effect on founder creativity and business model innovation since it provides managers with more information to make decisions, thus increasing the likelihood of successful innovation for founders.
56	Li, Y., Maxwell, D.W., Moehler, R., 2025. Facilitating platform-based business model innovation in construction start-ups: a dynamic capability perspective. <i>Construction Management and Economics</i> 43, 864–881. https://doi.org/10.1080/01446193.2025.2528795	Exploratory, qualitative multiple-case study design	Not specified	Digital technology	Understand the emerging platform-based business models for construction startups, the dynamic capabilities needed for this innovation, and how these startups can systematically innovate their business models.	Identifies three main platform-based business models: product platform, transaction platform, and product-as-a-service platform, and explains how they create value via scalability, connectivity, and generativity. There are four dynamic capabilities—resonance, ideation, integration, and reconfiguration—that are crucial for platformization. The study also finds a reinforcing relationship between these platforms and dynamic capabilities, showing how platform mechanisms enhance a startup's ability to adapt to market changes.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
57	Lichy, J., Zhai, Y., Ang'awa, W., 2025. Using business model tools in entrepreneurial start-ups: insights and inconsistencies. <i>Journal of Small Business & Entrepreneurship</i> 37, 381–413. https://doi.org/10.1080/08276331.2024.2380554	Exploratory multi-case study	Canada	Digital technology	Investigate how entrepreneurial startups utilize BM tools, given the recognized misalignment between academic literature and business practice.	Identified two main patterns in how startups use Business Model tools: Reactive Iteration, where tools are used selectively in response to specific needs rather than systematically, and Adaptive Training, which shows a preference for practical, mentor-led learning over theoretical frameworks. Startups often prioritize product development first, leading to inconsistencies in their use of BM tools.
58	Lit, F.C., Huijben, J.C., Cloodt, M.M., Paredis, E., 2024. Business model innovation in circular start-ups: Overcoming barriers in the circular plastics economy. <i>International Small Business Journal: Researching Entrepreneurship</i> 42, 506–550. https://doi.org/10.1177/02662426231217954	Explorative case study	Netherlands	Circular startups	Identify the barriers faced by Circular Startups in the plastics sector and determine the strategies they employ to overcome these barriers.	Five main barriers for Circular Startups in the plastics industry: technology dependence, poor credibility, limited resources, collaboration difficulties, lack of knowledge, and insufficient institutional support. To overcome these, circular startups utilize four key success factors: circular value proposition design, market sensitivity, networking prowess, and circular ambidexterity.
59	Long, T.B., Looijen, A., Blok, V., 2018. Critical success factors for the transition to business models for sustainability in the food and beverage industry in the Netherlands. <i>Journal of Cleaner Production</i> 175, 82–95. https://doi.org/10.1016/j.jclepro.2017.11.067	Exploratory using semi-structured interviews	Netherlands	Food and beverage	Explore and identify critical success factors and barriers for the transition from traditional business models to business models for sustainability.	Various internal and external factors influence the development of a BM for sustainability. Collaboration, a clear narrative and goal, continuous innovation, a sustainable foundation, profitability, and fortuitous external events are all critical success factors for the transition to business models for sustainability. Exogenous events include principal-agent conflicts and a lack of support from broader actors such as suppliers, customers, and government.
60	Marcon, A., Ribeiro, J.L.D., Olteanu, Y., Fichter, K., 2024. How the interplay between innovation ecosystems and market contingency factors impacts startup innovation. <i>Technology in Society</i> 76, 102424. https://doi.org/10.1016/j.techsoc.2023.102424	Quantitative approach using survey data	Germany	Not specified	Understanding how participation in an Innovation Ecosystem (IE) contributes to a startup's technological and business model innovation when faced with environmental contingencies like the pace of technological change, demand unpredictability, and market profitability.	Participating in an Innovation Ecosystem helps startups manage external challenges by enabling them to adapt to market contingencies using resources from IE actors. Specifically, IE participation is most beneficial for technological innovation in markets that are rapidly changing, less predictable, and have low profitability. For business model innovation, IE participation is most advantageous for startups in low-profit and more predictable markets.
61	Mormile, S., Piscopo, G., Adinolfi, P., 2025. Leveraging unique resources and capabilities to address ESG challenges: a qualitative study of high-growth Italian start-ups. <i>SAMPJ</i> . https://doi.org/10.1108/SAMPJ-10-2023-0770	Qualitative study with in-depth interviews	Italia	Not specified	Investigates if and how high-growth startups utilize their unique resources and capabilities to address key environmental, social, and governance (ESG) challenges.	Entrepreneurs are using their unique resources and organizational capabilities, such as adaptability, sustainability-focused innovation, and stakeholder engagement, to effectively address ESG issues. The findings show a strong focus on environmental sustainability through technological innovation, social responsibility, and robust governance through ethical decision-making and transparency. For new generation of entrepreneurs, sustainability is becoming a fundamental part of the organizational identity rather than just a strategic choice.
62	Nunes, A.K.S., Morioka, S.N., Bolis, I., 2022. Challenges of business models for sustainability in startups. <i>RAUSP Management Journal</i> 57, 382–400. https://doi.org/10.1108/RAUSP-10-2021-0216	Case study using the sustainable value exchange matrix (SVEM)	Brazil	Environmental Initiatives	Analyse the challenges startups face in implementing business models for sustainability.	The constraints and challenges of BMs for sustainability in startups were discovered in various categories, with the main barriers associated with the institutional category, the organizational category, the market, and sales culture. There is a need to reformulate public policies and increase the parties' involvement.
63	Oliveira-Dias, D., Kneipp, J.M., Bichueti, R.S., Gomes, C.M., 2022. Fostering business model innovation for sustainability: a dynamic capabilities perspective. <i>Management Decision</i> 60, 105–129. https://doi.org/10.1108/MD-05-2021-0590	Multiple case study using semi-structured interviews and secondary data analysis	Brazil	Logistics	Analyse the association between dynamic capabilities and sustainable business model innovation of startups	Introduce the diffusion of a model that jointly addresses the theory of dynamic capabilities and sustainable business model innovation where the dynamic capabilities of sensing, seizing, and transforming are associated with sustainable BMI. Dynamic capabilities can be considered internal drivers that stimulate sustainable BMI. The startups with the most disruptive business models are those with the greatest dynamic capabilities.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
64	Randhawa, K., Wilden, R., Gudergan, S., 2021. How to innovate toward an ambidextrous business model? The role of dynamic capabilities and market orientation. <i>Journal of Business Research</i> 130, 618–634. https://doi.org/10.1016/j.jbusres.2020.05.046	Longitudinal case study	Australia	Digital technology	Investigate businesses market orientation and its deployment of dynamic capabilities are related to business model innovation.	Reveals that market orientation and dynamic capabilities shape the BMI. As the businesses market orientation changes, it also deploys its dynamic capabilities to innovate its business model. The dynamic capabilities deployed to realize BMI led the SME to transition from a market-driving business model during the early phase, to a market-driven business model in the establishing phase, to an ambidextrous business model during the maturing. Enterprises align their deployment of dynamic capabilities with their market orientation to pursue innovations to their BM, highlighting the notion of fit.
65	Ranjbari, M., Kuděj, M., Kubálek, J., Ferraris, A., 2025. A Typology of Circular Economy Startups in Agri-Food Supply Chains: An Analysis of 79 Innovative Startups. <i>Bus Strat Env</i> 34, 9301–9320. https://doi.org/10.1002/bse.70062	Two-tiered method by combining qualitative analysis with hierarchical clustering	Various countries within Europe	Agriculture	Improve the understanding of circular startups in the agri-food industry by creating a comprehensive typology that identifies their key characteristics and contributions to the Circular Economy (CE) transition	identifies and categorizes circular agri-food startups into three distinct types: biotech-driven sustainable producers, digital CE enablers, and circular packaging pioneers. Startups show diversity in their adopted CE strategies, technologies, and BMI, indicating the need for tailored support to foster a more resilient and circular agri-food supply chain.
66	Rask, M., Günzel-Jensen, F., 2020. Business model design and performance in nascent markets. <i>Management Decision</i> 58, 927–947. https://doi.org/10.1108/MD-10-2017-0924	Comparative case study using interpretive methods	Denmark	Automotive	Investigate the impact of emerging technology on the business model design that influences firm performance in a nascent market setting	The BM typology of startups and incumbent in the nascent markets could be differentiated based on the innovation-imitation balance between BM archetype and value proposition. This business model will affect firm performance for startups and incumbents in nascent markets.
67	Reinecke, P.C., Küberling-Jost, J.A., Wrona, T., Zapf, A.K., 2023. Towards a dynamic value network perspective of sustainable business models: the example of RECUP. <i>Journal of Business Economics</i> 93, 635–665. https://doi.org/10.1007/s11573-023-01155-7	Longitudinal single case study	Germany	Food and beverage	Understanding of how value network activities shape SBM development	Identify three sets of value network activities that supported the firm's constant value proposition growth and led to mutual value creation among stakeholders from business, politics, and society: Collaboration between businesses, creating political agendas, and rallying end-users. Meanwhile, value network activities arise through experimentation and consolidate over time through iterative learning processes in SBM innovation and design.
68	Richter, C., Kraus, S., Brem, A., Durst, S., Giselsbrecht, C., 2017. Digital entrepreneurship: Innovative business models for the sharing economy. <i>Creativity and Innovation Management</i> 26, 300–310. https://doi.org/10.1111/caim.12227	Exploratory using semi-structured interviews	Germany, Austria and Switzerland	Circular startups	Explore circumstances affecting the business activities of entrepreneurs who are active in the sharing economy.	The sharing economy strives to monetise ideas and is a forward-looking business format enabled by modern ICT and Web 2.0 to develop successful business models based on sharing underutilised assets for monetary and nonmonetary benefits. The sharing economy's fundamental prerequisites are a trustworthy company model and customers acting as providers.
69	Rodrigues, C.D., Noronha, M.E.S., 2022. What companies can learn from unicorn startups to overcome the COVID-19 crisis. <i>Innovation and Management Review</i> . https://doi.org/10.1108/INMR-01-2021-0011	Multiple case study	Brazil	Multiple industry	Identify the unicorn startups reactions to overcome the Covid-19 crisis	The pandemic negatively affects unicorn businesses, yet a digital BMI affects them positively. The pandemic has fostered refinement, digital transformation, and innovation capacities. Some measures unicorn startups took include creating new partnership networks, including service outsourcing, payment flexibilization, the adaptation of logistics processes, the ability to attract external investment, and a robust digital improvement of internal operations. Three actions stand out to overcome the crisis, such as adopting new digital platforms, strategies to increase the network of partners, and adaptations in the provision of payment services.
70	Rok, B., Kulik, M., 2021. Circular start-up development: the case of positive impact entrepreneurship in Poland. <i>Corporate Governance (Bingley)</i> 21, 339–358. https://doi.org/10.1108/CG-01-2020-0043	Exploratory multiple case study	Poland	Circular startups	Investigate how circular start-ups create and integrate innovation into their business models to maximize their positive impact.	The purpose-led motivation of the founder, the aims to increase positive impact, and the purpose of innovation through CBMI are factors influencing the development of circular startup. The BM of circular startups is based on three types of transformation: from sustainable development to circular; from sustainable entrepreneurship to startups with positive impact; and from sustainable innovation to innovation in a circular BM.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
71	Roshan, R., Chandra Balodi, K., 2024. Sustainable business model innovation of an emerging country startup: An imprinting theory perspective. <i>Journal of Cleaner Production</i> 475, 143687. https://doi.org/10.1016/j.jclepro.2024.143687	Qualitative, in-depth single case study	India	Online commerce	Understanding how startup founders' sustainability values (FSVs) get imprinted in their venture's business model innovation and to identify the sources that imprint these values on the founders.	Founders' sustainability values (FSVs) are imprinted on the startup's business model through structural and cognitive imprinting, influencing four key components: sustainable value proposition, creation, network, and delivery innovation. These research also identified three primary sources for these values in the founder: family values, sustainability-focused education, and early career experience with a non-profit organization (NPO).
72	Ruggieri, R., Savastano, M., Scalingi, A., Bala, D., D'Ascenzo, F., 2018. The impact of Digital Platforms on Business Models: An empirical investigation on innovative start-ups. <i>Management and Marketing</i> 13, 1210–1225. https://doi.org/10.2478/mmcks-2018-0032	Multiple case study	Italy	Multiple industry	Investigate the evolution of business models brought by innovative and dynamic companies operating through online platforms.	Startups operating in several sectors showed great growth prospects and the possibility to create value for their customers through innovative products and services offered through digital platforms.
73	Ruggiero, S., Kangas, H.-L., Annala, S., Lazarevic, D., 2021. Business model innovation in demand response firms: Beyond the niche-regime dichotomy. <i>Environmental Innovation and Societal Transitions</i> 39, 1–17. https://doi.org/10.1016/j.eist.2021.02.002	Semi structured interviews	Finland	energy and information and communications technology	Identify the drivers of—and differences in—business model innovation (BMI) behaviours of firms operating in an industrial sector that spans multiple socio-technical regimes.	According to Finnish demand response firms, external drivers of BMI include legislation, competition, and the loss of the telecom industry following Nokia's bankruptcy. Market diversification strategies triggering BMI in companies from adjacent industries. This study proposes a morphological box model to show BMI behaviours beyond archetypal dichotomies that represents the extreme states of firm BMI while allowing for flexibility.
74	Saidi, S., Grama-Vigouroux, S., Sellami, M., Ghamgui, N., Rezaei, M., 2025. How Double-Loop Learning Powers Business Model Innovation in Digital Startups: Mapping Enablers Across Core Dimensions. <i>Strategic Change</i> jsc.2677. https://doi.org/10.1002/jsc.2677	Exploratory qualitative and deductive approach, utilizing case studies	France	Digital technology	Understanding how the enablers of BMI in digital startups affect its main dimensions: value creation, value delivery, and value capture.	BMI in digital startups is driven by double-loop learning, which integrates enablers: dynamic capabilities, paradoxical management strategies, and specific methodologies. Certain enablers have a more significant impact on specific dimensions of the business model. Notably, sensing capabilities, exploration/exploitation strategies, and the Lean Startup methodology are most crucial for value creation and value capture, but play a less prominent role in value delivery.
75	Sanasi, S., Ghezzi, A., 2022. Pivots as strategic responses to crises: Evidence from Italian companies navigating Covid-19. <i>Strategic Organization</i> . https://doi.org/10.1177/14761270221122933	Comparative multiple-case study	Italy	Digital technology	Investigate new ventures' processes of business model transformation (or pivoting) during a major crisis.	Develop a conceptual model of pivots-as-process that comprises three stages: reaction to shock, response, and retrospection, leading to longer-term strategic reorientation. Pivots play out across the three distinct layers of enactment, reflection, and awareness.
76	Sanasi, S., Ghezzi, A., Cavallo, A., Rangone, A., 2020. Making sense of the sharing economy: a business model innovation perspective. <i>Technology Analysis and Strategic Management</i> 32, 895–909. https://doi.org/10.1080/09537325.2020.1719058	Cluster analysis	Italy	Circular startups	Propose a framework, definition, and classification of Sharing Economy startups in sharing and leverage digital technologies to develop innovative BMs.	SE startups group into five clusters: (i) pseudo-sharing; (ii) gig economy; (iii) crowd-based economy; (iv) pooling economy; and (v) P2P rental
77	Saqib, N., Satar, M.S., 2021. Exploring business model innovation for competitive advantage: a lesson from an emerging market. <i>International Journal of Innovation Science</i> 13, 477–491. https://doi.org/10.1108/IJIS-05-2020-0072	Exploratory single case study	India	Logistics	Explore the practices of an online transport network company (OLA) creating a distinctive place for itself in Indian taxi service sector.	The innovative BM of online transport network company achieved through combining technology with the 'sharing economy'. This model features personalized customer service, asset sharing, usage-based pricing, a collaborative ecosystem, agile organization, and successful expansion strategies, gaining a competitive advantage and disrupting competition.
78	Saqib, N., Shah, G.B., 2022. Business Model Innovation through Digital Entrepreneurship: A Case of Online Food Delivery Start-Up in India. <i>International Journal of E-Entrepreneurship and Innovation</i> 13. https://doi.org/10.4018/IJEEL.315294	Exploratory of a single case study	India	Logistics	Identify factors contributing to the digital start-up in online food delivery in gaining competitive advantage.	Digital start-up in online food delivery has gained a competitive advantage by changing its BM by focusing on the nine BM canvas components. BMI is how food companies can expand into new markets based on a valuable and distinctive value proposition where Information and communication technologies (ICTs) present a unique opportunity to reorganize value-creation processes.
79	Sergeeva, A., Zott, C., 2025. How founders' values enable business model innovation in new ventures: The case of Magnum Photos. <i>Strategic Management Journal</i> 46, 2492–2534. https://doi.org/10.1002/smj.3727	Single case study using abductive analysis.	United States	Journalism	understand why and how founders' personal values influence their choices related to business model innovation (BMI) in new ventures	Personal values as a primary driver for BMI. Founders whose prioritized values, such as creative freedom and integrity, were difficult to practice within existing industry models were motivated to design a new business model.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
80	Silva, D.S., Ghezzi, A., Aguiar, R.B., Cortimiglia, M.N., ten Caten, C.S., 2021. Lean startup for opportunity exploitation: adoption constraints and strategies in technology new ventures. <i>International Journal of Entrepreneurial Behaviour and Research</i> 27, 944–969. https://doi.org/10.1108/IJEBR-01-2020-0030	Exploratory multiple-case study using semi-structured interviews and secondary data analysis	Brazil	biotechnology, engineering and software startups.	Explore Brazilian technology new ventures tentatively adopt LS to exploit opportunities	Technology new ventures tackle the activities of opportunity exploitation, such as developing a product or service, acquiring human resources, gathering financial resources, and setting up the organization through leveraging LS tools and practices for BM validation in the pre-seed, seed, and early stages of development. Technology new ventures capable of coping with these constraints in their early stages by integrating LS with complementary strategies and practices.
81	Singh, M., Jiao, J., Klobasa, M., Frietsch, R., 2022. Servitization of Energy Sector: Emerging Service Business Models and Startup's Participation. <i>Energies</i> 15. https://doi.org/10.3390/en15072705	Exploratory data analysis	Various countries within Europe	Energy	Examine the characteristics of startups offering service-oriented business models in the energy sector based on their value capture, Service motivation, and success factors .	As digital marketplaces evolve in the energy sector, startups associated with X-as-a-service (XaaS), platform-based business models, and marketplace activities are becoming the center of attention for investors and shareholders. Most startups are transitioning to adopt new service business models and digital platforms rather than offering conventional energy services. The policymakers should protect the startup's interests regarding their service BMs because they are easy to copy and loosely protected by patents and copyrights.
82	Sorescu, A., 2017. Data-Driven Business Model Innovation. <i>Journal of Product Innovation Management</i> 34, 691–696. https://doi.org/10.1111/jpim.12398	Perspective based on Multiple Case Study	N/A	N/A	Leverage internal and external data to generate new business models	Big data as source of competitive advantage and a catalyst for successful BMs.
83	Tang, X., Du, S., Deng, W., 2025. Business innovation in digital startups: A case study of an AI startup. <i>International Review of Economics & Finance</i> 98, 103898. https://doi.org/10.1016/j.iref.2025.103898	Longitudinal exploratory case study	China	Artificial Intelligence	Exploring how digital startups can use Lean Startup Approaches to improve the effectiveness of BMI	Lean Startup Approaches, through processes like MVDP development, stakeholder validation, and experimental learning, guide digital startups in their BMI. A key reason for startups to 'pivot' or change their business model is the lack of 'value compatibility' (alignment with internal resources and goals) and 'value legitimacy' (acceptance by external stakeholders). When both compatibility and legitimacy are achieved, the startup finds an effective minimum viable business model. LSA help startups reduce uncertainty and integrate experiences across different markets to foster novel BMI
84	Tanveer, A., Torres De Oliveira, R., Rizvi, S., 2024. How sector fluidity (knowledge-intensiveness and innovation) shapes startups' resilience during crises. <i>Journal of Business Venturing Insights</i> 22, e00500. https://doi.org/10.1016/j.jbvi.2024.e00500	Qualitative study based on inductive reasoning	India	Not specified	Understanding how sector fluidity, defined by knowledge-intensiveness and innovation, influences the resilience strategies of startups during the different phases of a crisis.	The resilience practices of startups significantly differ based on their sector's fluidity. Startups in high-fluidity sectors (e.g., AI, fintech) demonstrated resilience through resourcefulness, customer value creation, digital transformation, and strategic shifts. In contrast, startups in low-fluidity sectors (e.g., hospitality, retail) focused more on operational adjustments and coping mechanisms for survival. As the crisis progressed from response to recovery and growth, high-fluidity startups pursued growth and innovation, while low-fluidity startups concentrated on innovating their business models to sustain operations.
85	To, C.K.M., Au, J.S.C., Kan, C.W., 2019. Uncovering business model innovation contexts: A comparative analysis by fsQCA methods. <i>Journal of Business Research</i> 101, 783–796. https://doi.org/10.1016/j.jbusres.2018.12.042	Fuzzy-set qualitative comparative analysis	Hongkong	Multiple industry	Examine how business contexts can shape and impose urgency on business model innovation and their performance .	Identifies five contextual antecedents of BMI within current literature: business eco-networks, the business actors' behavioral orientation, mastery of technology, rules and governance, and business complexity. Mastery of technology and business complexity are two critical antecedents, leading to strong facilitating or hindering effects on all model innovations in science and service businesses.
86	Todeschini, B.V., Cortimiglia, M.N., Callegaro-de-Menezes, D., Ghezzi, A., 2017. Innovative and sustainable business models in the fashion industry: Entrepreneurial drivers, opportunities, and challenges. <i>Business Horizons</i> 60, 759–770. https://doi.org/10.1016/j.bushor.2017.07.003	Exploratory case study	Brazil and Italy	Fashion	Analyse the inner entrepreneurial dynamics of innovative sustainable business models.	Macro trends in sustainable innovation, the emergence of circular economy, corporate social responsibility, sharing economy and collaborative consumptions, the advancement in technological innovation, and consumer awareness are the drivers of implementing sustainability-oriented BMI. Entrepreneurial drivers also play important role in implementing sustainability-oriented BMI, especially in circular fashion startups.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
87	Urbaniec, M., Żur, A., 2021. Business model innovation in corporate entrepreneurship: exploratory insights from corporate accelerators. <i>International Entrepreneurship and Management Journal</i> 17, 865–888. https://doi.org/10.1007/s11365-020-00646-1	Exploratory cross case analysis study using in-depth interviews.	Various countries within Europe	Electronics, Tobacco, Energy	Explore the driving factors behind corporate start-up accelerators and identify the benefits and challenges associated with this business model innovation.	Suggests that corporate accelerators are driven by internal and external push and pull motives and act as a source of innovation that can be used to foster entrepreneurial-market logic and entrepreneurial learning. The greatest challenge accelerator companies' face is finding companies with great ideas as well as a funding supply chain (to fund the next level or early stage after seed level).
88	Van Den Heuvel, C., Kao, P.-J., Matyas, M., 2020. Factors driving and hindering business model innovations for mobility sector start-ups. <i>Research in Transportation Business and Management</i> 37. https://doi.org/10.1016/j.rtbm.2020.100568	Exploratory using in-depth interviews	United Kingdom	Logistics	Analyse the internal and external factors that influence business model innovation within mobility sector startups.	Client/customer influence, legislation, and business partners are perceived as external influencing factors of BMI, while the firm's societal impact vision, a dedicated employee responsible for BMI, decision-making structure, and internal use of technology are perceived as internal influencing factors of BMI. Depending on their influence on the firms, these factors could drive or hinder BMI.
89	von Kolpinski, C., Yazan, D.M., Fraccascia, L., 2022. The impact of internal company dynamics on sustainable circular business development: Insights from circular startups. <i>Business Strategy and the Environment</i> . https://doi.org/10.1002/bse.3228	Exploratory multiple case study	Germany	Multiple industry	Investigate the internal dynamics of young and small-scale companies in Germany adopting a sustainable circular business model	Internal dynamics plays major roles in the success of implementation of CBM including the importance of commitment from managers and founders as the decision maker, effective leadership and management of the organisation in developing circular BM, as well as values, culture and communication of the organizations. Human centeredness also plays important factor since circular startups rely on the mix competences of their employee for successfully setting up a business that is based on a CBM.
90	Wang, C., Chen, M., Wang, Q., Fang, Y., 2023. The study of value network reconstruction and business model innovation driven by entrepreneurial orientation. <i>International Entrepreneurship and Management Journal</i> . https://doi.org/10.1007/s11365-023-00869-y	Qualitative Comparative Analysis using single case study	China	Fashion	Investigate company's value network restructuring and utilize the Entrepreneurial Orientation theory to dissect the impact of entrepreneurs to business models	Based on the success of the startup case study, the BM is tested and iterated based on user feedback (LS approach), where entrepreneurial orientation encourages value network reconstruction and BMI.
91	Wang, S., Zhang, H., 2025. Leveraging generative artificial intelligence for sustainable business model innovation in production systems. <i>International Journal of Production Research</i> 63, 6732–6757. https://doi.org/10.1080/00207543.2025.2485318	Quantitative approach using survey data	China	Manufacturing	Develop an integrated framework to understand how manufacturing firms can utilize generative artificial intelligence (GAI) to achieve sustainable business model innovation (SBMI) in their production systems.	The adoption of generative artificial intelligence significantly boosts both exploitative and exploratory learning within manufacturing startups. These learning mechanisms, in turn, are key drivers for sustainable business model innovation. The research also highlights that the positive impact of GAI adoption on learning is strengthened by an international entrepreneurship orientation, and the effect of this learning on sustainable innovation is enhanced by GAI education.
92	Xiang, G., Peng, M., Tang, F., Liu, Y., 2024. Unpacking the impact of entrepreneurial learning on business model innovation in internet startups: Mediating roles of digital capabilities. <i>Technology in Society</i> 77, 102578. https://doi.org/10.1016/j.techsoc.2024.102578	Quantitative approach using hierarchical regression analysis based on survey data	China	Online commerce	Examine the influence of entrepreneurial learning (both exploratory and exploitative) on business model innovation (BMI) within internet startups, investigating the mediating roles of digital capabilities.	Both exploratory and exploitative learning have a significant positive impact on BMI, with exploitative learning being more influential. Digital capabilities partially mediate the relationship between entrepreneurial learning and BMI.
93	Xie, Y., Song, J., 2025. The value of cognitive bias: exploring the role of overconfidence and illusion of control in driving business model innovation. <i>Chinese Management Studies</i> 1–25. https://doi.org/10.1108/CMS-08-2023-0398	Two-wave questionnaire survey	China	Startups from multiple industries	investigate the positive influence of cognitive biases, specifically overconfidence (OC) and illusion of control (IC), on business model innovation (BMI), and to explore the mediating role of effectuation (EF) in this relationship.	Overconfidence and illusion of control have a positive effect on BMI. This relationship is mediated by effectuation which in turn drives BMI. Additionally, the study revealed that environmental hostility moderates these relationships, making the positive impacts of overconfidence, illusion of control, and effectuation on BMI stronger in more hostile and competitive environments.

No	Reference	Type of Study	Location of Study	Field of Industry	Research Objectives	Key findings
94	Xu, S., He, J., Morrison, A.M., de Domenici, M., Wang, Y., 2022. Entrepreneurial networks, effectuation and business model innovation of startups: The moderating role of environmental dynamism. <i>Creativity and Innovation Management</i> 31, 460–478. https://doi.org/10.1111/caim.12514	Correlational research using survey	China	Multiple industry	Explore the impacts of entrepreneurial networks (as external factor) on BMI through effectuation (as internal factor) in dynamic environments.	Entrepreneurial networks identified through network size and strength positively impact BMI, supporting the RBV perspective on entrepreneurial networks as the critical external resource for advancing BMI in startups. Simultaneously, effectuation plays a mediating role in the relationship between entrepreneurial networks and BMI, meaning that an effectuation is an effective approach for transforming network resources into BMI. Meanwhile, environmental dynamism strengthens the relationship between effectuation and BMI, showing that effectuation is more beneficial for firm performance in high levels of environmental uncertainty.
95	Xu, S., He, J., Morrison, A.M., Su, X., Zhu, R., 2023. The role of bricolage in countering resource constraints and uncertainty in start-up business model innovation. <i>European Journal of Innovation Management</i> . https://doi.org/10.1108/EJIM-11-2022-0632	Correlational research using linear regression model	China	Multiple industry	Investigate the influences of entrepreneurial networks and effectuation on BMI through bricolage in uncertain environments.	Entrepreneurial networks and effectuation positively related to BMI and combining these two factors improved BMI for startups. Furthermore, bricolage contributed to BMI and played mediating roles in translating entrepreneurial networks and effectuation into BMI. Meanwhile, environmental uncertainty weakened the linkage between bricolage and BMI.
96	Xu, S., Wu, X., He, J., Zhu, R., Morrison, A.M., Xie, C., 2024b. Turning entrepreneurial networks into business model innovation for start-ups. <i>MD</i> 62, 1395–1423. https://doi.org/10.1108/MD-04-2023-0558	Quantitative study uses hierarchical regression analyses using survey data	China	Manufacturing, service, High Tech	Explore how and when entrepreneurial networks affect business model innovation (BMI) in start-ups by examining the dual mediating effects of causation and effectuation and the moderating role of environmental dynamism	Entrepreneurial networks have a significant positive impact on startup BMI. This relationship is mediated by both causation and effectuation, meaning these decision-making logics are pathways through which network resources are transformed into BMI.
97	Zhang, H., Sun, X., Lyu, C., 2018. Exploratory orientation, business model innovation and new venture growth. <i>Sustainability (Switzerland)</i> 10. https://doi.org/10.3390/su10010056	Correlational research using Questionnaires	China	Multiple industry	Examine the exploratory orientation as the driver of BMI in promoting new ventures growth	Emphasize on BMI as an effective way to promote the growth of new enterprises. The innovation of BM depends on the exploratory orientation of the new venture, which requires the new enterprise to develop its own strategic plan to uphold the spirit and orientation of exploration. While Internet serves as the moderator between exploratory orientation and the growth of new ventures.
98	Zhang, K., Feng, L., Wang, J., Qin, G., Li, H., 2022. Start-Up's Road to Disruptive Innovation in the Digital Era: The Interplay Between Dynamic Capabilities and Business Model Innovation. <i>Frontiers in Psychology</i> 13. https://doi.org/10.3389/fpsyg.2022.925277	Longitudinal case study	China	Digital technology	Investigate the evolutionary mechanism and fulfilment path start-ups' disruptive innovation in the digital era	Identifies digital technologies, dynamic capabilities deployment, and BMI as key pillars for achieving disruptive innovation where digital technology provides conditions for innovation, while dynamic capabilities and business model innovation facilitate its progression.
99	Zhang, S.I., 2019. The Business Model of Journalism Start-Ups in China. <i>Digital Journalism</i> 7, 614–634. https://doi.org/10.1080/021670811.2018.1496025	Semi-structured interviews	China	Journalism	Investigate the new integrated business model in Chinese digital journalism start-ups.	Chinese journalism startups have explored BMI in China's political and social context, where the state media policy, market and technology are the three main driving forces for the innovative business model.

Appendix B. List of Journal and Publisher

Journal	2024 SJR quartile	2024 SJR IF	h-index	Publisher
<i>Strategic Management Journal</i>	Q1	10.176	351	John Wiley and Sons Ltd
<i>Strategic Organization</i>	Q1	5.210	80	SAGE Publications Ltd
<i>Business Strategy and the Environment</i>	Q1	3.609	173	John Wiley and Sons Ltd
<i>Journal of Product Innovation Management</i>	Q1	3.598	180	Wiley-Blackwell Publishing Ltd
<i>Journal of Business Research</i>	Q1	3.499	292	Elsevier Inc.
<i>Technological Forecasting and Social Change</i>	Q1	3.472	209	Elsevier Inc.
<i>Journal of Innovation and Knowledge</i>	Q1	3.341	70	Elsevier BV
<i>Contemporary Accounting Research</i>	Q1	3.069	133	John Wiley and Sons Ltd
<i>Digital Journalism</i>	Q1	3.037	84	Taylor and Francis Ltd.
<i>Technology in Society</i>	Q1	2.559	112	Elsevier Ltd.
<i>Review of Managerial Science</i>	Q1	2.316	63	Springer Verlag
<i>Business Horizons</i>	Q1	2.280	131	Elsevier Ltd.
<i>International Journal of Production Research</i>	Q1	2.242	201	Taylor and Francis Ltd.
<i>Journal of Cleaner Production</i>	Q1	2.174	354	Elsevier Ltd.
<i>Journal of Small Business Management</i>	Q1	2.149	141	Taylor and Francis Ltd.
<i>Environmental Innovation and Societal Transitions</i>	Q1	2.108	86	Elsevier BV
<i>Social Science and Medicine</i>	Q1	2.103	296	Elsevier Ltd.
<i>International Small Business Journal</i>	Q1	1.956	120	SAGE Publications Ltd
<i>Journal of Business Venturing Insights</i>	Q1	1.873	45	Elsevier Inc.
<i>Management Learning</i>	Q1	1.672	91	SAGE Publications Ltd
<i>Sustainability Accounting, Management and Policy Journal</i>	Q1	1.449	57	Emerald Group Publishing Ltd.
<i>Marine Pollution Bulletin</i>	Q1	1.402	245	Elsevier Ltd.
<i>European Journal of Innovation Management</i>	Q1	1.397	88	Emerald Group Publishing Ltd.
<i>International Review of Economics and Finance</i>	Q1	1.372	87	Elsevier Inc.
<i>International Journal of Entrepreneurial Behaviour and Research</i>	Q1	1.354	101	Emerald Group Publishing Ltd.
<i>International Entrepreneurship and Management Journal</i>	Q1	1.352	89	Springer New York
<i>Strategic Change</i>	Q1	1.253	45	John Wiley and Sons Ltd
<i>Journal of Open Innovation: Technology, Market, and Complexity</i>	Q1	1.215	63	Elsevier BV
<i>Research in Transportation Business and Management</i>	Q1	1.196	57	Elsevier BV
<i>Creativity and Innovation Management</i>	Q1	1.163	81	John Wiley and Sons Ltd
<i>IEEE Transactions on Engineering Management</i>	Q1	1.134	117	Institute of Electrical and Electronics Engineers Inc.
<i>Journal of Small Business and Entrepreneurship</i>	Q1	1.117	45	Taylor and Francis Ltd.
<i>Management Decision</i>	Q1	1.028	138	Emerald Group Publishing Ltd.
<i>International Journal of Productivity and Performance Management</i>	Q1	0.954	83	Emerald Group Publishing Ltd.
<i>Construction Management and Economics</i>	Q1	0.909	116	Taylor and Francis Ltd.
<i>Competitiveness Review</i>	Q1	0.898	44	Emerald Group Publishing Ltd.
<i>Corporate Governance (Bingley)</i>	Q1	0.874	64	Emerald Group Publishing Ltd.
<i>Knowledge Management Research and Practice</i>	Q1	0.822	56	Taylor and Francis Ltd.
<i>British Food Journal</i>	Q1	0.817	111	Emerald Group Publishing Ltd.
<i>Energies</i>	Q1	0.713	175	Multidisciplinary Digital Publishing Institute (MDPI)
<i>Journal of Accounting and Organizational Change</i>	Q1	0.699	40	Emerald Group Publishing Ltd.
<i>International Journal of Innovation Science</i>	Q1	0.691	34	Emerald Group Publishing Ltd.
<i>Sustainability (Switzerland)</i>	Q1	0.688	207	Multidisciplinary Digital Publishing Institute (MDPI)
<i>Frontiers in Psychology</i>	Q2	0.872	212	Frontiers Media S.A.
<i>Journal of Small Business and Enterprise Development</i>	Q2	0.809	92	Emerald Group Publishing Ltd.
<i>Technology Analysis and Strategic Management</i>	Q2	0.794	92	Routledge
<i>Innovation and Management Review</i>	Q2	0.772	21	Emerald Group Publishing Ltd.
<i>Journal of International Entrepreneurship</i>	Q2	0.719	60	Springer International Publishing AG
<i>Journal of Business Economics</i>	Q2	0.667	38	Springer International Publishing AG
<i>Chinese Management Studies</i>	Q2	0.643	40	Emerald Group Publishing Ltd.
<i>Journal of Research in Marketing and Entrepreneurship</i>	Q2	0.548	33	Emerald Group Publishing Ltd.
<i>Revista de Gestao</i>	Q2	0.540	20	Emerald Group Publishing Ltd.
<i>Research Technology Management</i>	Q2	0.534	83	Taylor and Francis Ltd.
<i>RAUSP Management Journal</i>	Q2	0.417	20	Emerald Group Publishing Ltd.
<i>Journal of Global Information Technology Management</i>	Q2	0.402	40	Taylor and Francis Ltd.

Note. IF = impact factor; SJR = SCImago Journal Rank. All journal metrics were retrieved on 20 January 2026.

