Entrepreneurial Finance Alternatives in the Digital Era: A Systematic Review and Future Agenda

Manpreet Kaur, Manjula Srinivas

Abstract

The role of entrepreneurship in economic growth of the country is indispensable especially in the context of developing economies. Start-ups are often at the forefront of technological innovation, developing new products, services, and solutions that can drive economic growth and improve efficiency in various sectors. Within the myriad challenges confronted by entrepreneurs, financing stands out as the paramount concern. By systemic review of 72 high-quality peer reviewed research papers, we try to explore the novel financing alternatives available to entrepreneurs in the digital era over the life cycle of start-ups. Secondly, we examined the opportunities and challenges associated with the use of these alternatives. The analysis reveals that among the novel sources, peer to peer lending and crowdfunding are the popular choices among entrepreneurs. Lastly, the future agenda for further research is proposed.

Keywords: Bootstrapping, Crowdfunding, Private Equity, Peer-2-Peer lending, Venture Capital, Business Angel Networks, Start-up finance

JEL Classification: L26, G21, G24, G32

Manpreet Kaur, SOIL School of Business Design, Gurugram, e-mail: manpreet3015@yahoo.com
Manjula Srinivas, Flame University, Pune, e-mail: manjulashrinivas@gmail.com

DOI: 10.32725/acta.2024.011

Introduction

Entrepreneurship contributes significantly to a country's development by driving innovation, creating employment opportunities, fostering economic growth, and addressing societal challenges. A supportive ecosystem that encourages entrepreneurship and provides resources for start-ups is crucial for maximizing their positive impact on national development. Entrepreneurs frequently face challenges in bringing their innovative business ideas to fruition or seizing growth opportunities due to limited financing options. In the ever-changing landscape of the global economy, the intersection of entrepreneurship and finance has undergone a profound transformation with the advent of the digital era. The convergence of technological advancements, innovative financial instruments, and a rapidly evolving entrepreneurial ecosystem has resulted in a new paradigm in business finance. The digital revolution continues to reshape industries and redefine traditional business models, presenting unprecedented opportunities and challenges in the financial domain for entrepreneurs. From crowdfunding platforms and decentralized finance (DeFi) to artificial intelligence-driven analytics and blockchain applications, the alternatives to raise, manage and optimize financial resources have grown exponentially. The swift progression of technological advancements necessitates a nuanced comprehension of the potential risks and rewards linked to entrepreneurial finance in the digital era. Blockchains have become central to conventional banking operations and hold significant promise for pioneering startups across various industries. They facilitate novel crowdfunding methods, exemplified by Initial Coin Offerings (ICOs), wherein blockchain currencies like Bitcoin, Ethereum, and tokens play a pivotal role.

There is abundant literature on entrepreneurial/start-up finance. However, there is a dearth of literature on novel financing options. This research paper delves into the realm of entrepreneurial finance in the digital world while exploring novel sources of financing. This paper aims to unravel the transition from traditional sources of entrepreneur finance to complexities of this digital finance landscape, shedding light on the innovative ways in which entrepreneurs navigate the financial terrain to fuel their ventures. In this regard, the choice of traditional and novel sources over the life cycle of start-ups is discussed. By systematic analysis of existing literature, this research endeavors to provide valuable insights for entrepreneurs, investors, policymakers, and academics seeking to comprehend and capitalize on the transformative power of digital finance. Specifically, the paper aims to achieve the following objectives:

1. The financing alternatives available to the entrepreneurs in the digital era.
2. The choice of these alternatives during the lifecycle of start-ups
3. The challenges and opportunities associated with each alternative.

Theoretical Framework

The traditional sources of entrepreneurial finance include own funds, borrowings from friends and family, bank loans, angel investments, venture capital, priority sector lending by government, trade financing, equipment financing and lines of credit. Once the business grows to large scale, start-ups raise money through issues of equity capital. The traditional sources can be further classified as internal (founder’s capital and borrowing from family and friends) and external. These sources have been the cornerstone of entrepreneurial finance for many years, providing stability and a proven track record. For the initial stages of the ventures, entrepreneurs often tap into their savings and may seek support from family and friends. This form of bootstrapping is aimed at using the existing resources frugally and eliminating the need for financing from external stakeholders. In the past two decades, there has been a transformation in the structure and participants of the entrepreneurial finance market (Harrison & Mason, 2019). Apart from structural changes, the entry of new actors has mobilized the new sources of capital focusing on providing funding at formative stages with wider geographic reach and democratizing venture capital. In some cases, the support for funding might come from stakeholders who are enthusiasts of the idea or simply consider themselves fans (Block et.al. 2018). However, the benefits may include providing infrastructure, legitimacy, and customers apart from funding the start-up.

Traditional forms encompass financing methods for start-ups that have been extensively documented in the literature over time. Pioneering articles, Rabbani et al. (2019), serve as foundational works, encompassing all forms falling under the traditional category. Conversely, novel forms of financing are defined as those whose prominence as potential financing options for young companies has gained attention within the last decade. Notably, Hoegen et al. (2018) article isolated factors that influence investor decision-making in crowdfunding campaigns without integrating the findings regarding those influences.

The novel sources of finance include innovative financing options, such as crowdfunding, peer-to-peer lending, fintech, marketplace lending, accelerators & incubators, university funds and digital token offerings. Beyond the conventional financing methods discussed earlier, innovative forms of financing have emerged in the new millennium, particularly in recent years, driven by advancements in technology.

Crowdfunding platforms such as Kickstarter and Indiegogo allow entrepreneurs to present their projects or products to a global audience, securing funding from individuals who are interested in supporting innovative ideas. This model not only provides capital but also creates a community of early adopters and brand ambassadors. The "SME Finance Virtual Marketplace" serves as an online platform for matchmaking, fostering partnerships and collaborations among development financial institutions, fintech companies, and investors.

P2P lending involves the direct exchange of capital between individuals or entities, facilitated by online platforms that match borrowers with lenders. This departure from conventional banking channels has democratized access to finance, enabling entrepreneurs to circumvent the often arduous and bureaucratic processes associated with traditional lending institutions. Online P2P lending platforms provide online marketplaces to lenders and borrowers to transact directly (Cummins et.al 2019). Unlike crowdfunding, Initial Coin Offerings (ICOs) are completely disintermediated, with higher magnitude in terms of participants and value, which are executed on blockchain based smart contracts. The main three types of tokens include payment tokens, utility tokens and asset tokens. Security Token Offerings (STOs) are the offerings like securities having same regulations as equity/debt with stricter compliance norms while retaining the advantages of cryptocurrencies (Lee et.al 2019).

Corporate/Government venture capital involves established companies investing in or acquiring innovative start-ups. This source of finance not only provides funding but also opens doors to strategic partnerships, mentorship, and access to the corporate's resources and networks. University grants/Incubators provide the funds that can be used in the ideation and seed funding stage of the start-up at local level. This type of funding helps in balanced regional development and collaboration between industry and academic institutions. Impact investing and social entrepreneurship funds provide capital to ventures that align with their mission to create positive change, offering a unique source of finance for socially conscious entrepreneurs.

Table 1: Papers considered for the analysis related to novel sources of entrepreneurial finance.

Source of Funding	Related Studies
Crowdfunding	Ackah et.al 2023, Alva et.al 2023, Amore et.al 2023, Capo et.al 2023, Lerner et.al 2023; Ayatakshi et.al. 2022; Bertello et.al. 2022; Blohm et.al. 2022; Camilleri and Bresciani 2022; Cicchiello et.al 2022; Hörisch, Tenner 2022; Rabbani et.al. 2022; Cumming et.al. 2021; Anglin et.al. 2020;Grassi and Fantoccini 2020; Bonini and Capizzi 2019; Messeni et.al 2019; Johnson et.al 2018
P2P Lending	Gornall, Strebulaev, 2020; Di et.al 2022; Fairlie et.al. 2020; Paoloni et.al. 2020; Hoegen et.al. 2018
Venture Capital	Khaw et.al 2023, Kośció̄łe et.al. 2023; Tan et.al. 2023; Yang et.al. 2023; Zhao et.al. 2023; Bruckner et.al. 2022; Giuggioli, and Pellegrini 2022; Falcão et.al. 2020;
Digital Platforms	Rao et.al 2023; Rejeb et.al 2023; Sharma et.al. 2023; Lyonnet and Stern 2022; Yu et.al. 2022
Angel Investing	Vaznyte et.al. 2023; Cicchiello et.al. 2021; Gomber et.al 2017
Cryptocurrencies	Wang et.al. 2023

Start-ups are using digital platforms and social media to signal quality and information to potential financers. This can help women and first-time entrepreneurs to get finances from venture capitalist (Wang, 2023, Tan et.al. 2023).

The study on Italian and Australian SMEs found that relationship lending is an important factor for innovative SMEs to overcome the denial rates (Beltrame et.al. 2022). The novel sources can fill this gap as do not require and relationship and connect with the lender for financing. Entrepreneurial orientation captured through proactiveness, autonomy and competitive aggressiveness are significant for bank lending. Experienced business angels who suppress their decision biases can produce best returns on their entrepreneurial funding if supported by AI and ML models (Blohm et.al. 2022).

The research on black and white entrepreneurs in the US concludes that the proportion of debt in the capital of start-ups founded by black founders is less due to higher level of denial as compared to white start-up (Fairlie, 2020). The digital sources can help in dealing with this gap by providing access to capital for the deserving borrowers by augmenting relevant information.

The use of bank loans for operational costs while concurrently raising money through crowdfunding, P2p lending, marketplace lending etc. serve as a tool of marketing and validation of products and services provided by the entrepreneur.

In French firms, apart from predictions about the operating performance, VCs decision to invest can be attributed to three founder demographics (gender, age, education). This representativeness induces VCs to neglect predictable good performers with different demographics (Lyonnet & Stern, 2022). Investors appear to be biased towards male entrepreneurs. (Raina, 2019; Balachandra et al., 2019; Hebert, 2020; Hu and Ma, 2020; Calder-Wang and Gompers, 2021). Crowdfunding is a handy financial resource for pre-existing as well as new female entrepreneurs (Alva et.al. 2023).

Banks use more of hard information (objective, easily codified and transmitted information like credit scores) than the soft information (potentially more precise, but subjective and difficult to verify information) while evaluating lending decisions. The digital platforms can complement the lending process by providing relevant soft information (Fairlie et.al., 2020). This will be useful for the start-up where the hard information is either not available or not authentic. Smart contracts can mitigate the information asymmetries and increase access of funds through enhanced entry and competition if used cautiously (Cong & He, 2018).

Digital platforms may result in vertical and horizontal disintegration of the traditional bank business models by interjecting themselves between bank and customers (Boot et..al, 2021). These platforms do not rely on deep balance sheets and facilitate quicker access to capital for retailers and SMEs.

The access of capital to the entrepreneur is constantly evolving and offering entrepreneurs a diversified toolkit for securing funding. Entrepreneurs adopt diversified funding strategies that combine traditional and novel sources of finance. In terms of theory, entrepreneurs follow pecking order theory when it comes to raising finances.

Methodology

Conducting a systematic literature analysis requires following a transparent and structured process that can be reproduced. Following the guidelines outlined by Tranfield et al. (2003), Bouncken et al. 2015; Mochkabadi & Volkmann 2018, the current systematic literature analysis primarily follows the following steps:

1. Defining the scope
2. Carrying the LR
3. Analysis of results

When defining the scope, the papers published from 2018 to 2023 have been considered. The papers are primarily pertaining to entrepreneurial financing options of finance available in the digital age. The contributions which met all the criteria are used for analysis. The other details are mentioned in Table 3. The systematic literature review is done for this research paper as it imperative to follow for a structured and transparent project. The systematic literature analysis is based on Klein et al. 2019.

When strategizing the analysis, the emphasis is on formulating a robust protocol to document the procedural steps. To ensure classification of articles that can credibly address the initially posed questions, admission and exclusion criteria extracted from Table 2 were established prior to conducting the search, following the approach outlined by Klein et al. in 2019. The literature analysis only encompasses contributions that satisfy all stipulated criteria.

Table 2: Admission and exclusion criteria for the analysis of literature

Language	English
Form of publication	Exclusively published article from Publication period 2018 – 2023
Content criteria	1. Focusses on various innovative/novel forms of financing and how they are in comparison to traditional forms of financing 1. Articles, which show what factors are their which influences an entrepreneur to adopt new form of financing. 2. Gender biasness affects the mode of financing adopted
Study Design	Theoretical/Empirical Contribution

The actual literature search was performed using various keywords. These keywords were related to the research objectives being chosen for the study which are contained in overall field i.e. any part of research papers being taken. Due to thematic nature of the work, the focus on Entrepreneurial finance and related domain, the following keywords were used Traditional sources OR start-up finance OR entrepreneur finance OR women entrepreneurship OR venture capital OR peer funding OR crowd funding OR Digital funding OR market-based lending OR fintech OR Artificial intelligence OR machine learning OR investment trends in digital era OR financial innovation.

Table 3: Results of initial keyword search and search procedure

Filter	Description	Google Scholar	SCOPUS	Total
Step-1	Article after entering the tag	25	573	598
Step-2	Article after reading title and eliminating other			325
Step-3	Article after reading the abstracts			145
Step-4	Articles after reading full article			85
Final Sample				**72**

This approach was implemented across two databases, as detailed in Table 3. The abundance of hits can be attributed to both the extensive array of keywords and the prevalence of duplicates during the initial search runs. Beyond the initial hits, the table reflects the remaining articles after successive steps aimed at evaluating content relevance. Exclusion criteria were applied based on pre-defined substantive criteria, with room for adjustments during the systematic literature analysis. The conclusive sample of 72 articles underwent thematic analysis, resulting in the categorization of articles into three main content areas:

1. Novel Forms of Financing: Benefits and Challenges
2. Entrepreneurial Finance in digital era
3. Crowdfunding and Women Entrepreneurship

The dichotomy between traditional and novel forms is accentuated by the aggregate number of publications per category. Publications focusing on "novel forms of financing" have exhibited a significant increase since 2013, while traditional forms continue to receive consistent attention in scientific discourse. Moreover, it is essential to note that financing options with less prominence but theoretically viable for start-ups, such as SME bonds or micro-bonds commonly associated with small businesses in developing countries, were not considered in this analysis.

Results and Discussion

In the ever-evolving landscape of start-up finance, Peer-to-Peer (P2P) lending and crowdfunding have emerged as a dynamic and disruptive financing tool, reshaping the traditional avenues through which entrepreneurs secure capital for their ventures. One of the primary advantages of P2P lending for start-ups lies in its accessibility. Entrepreneurs, especially those without a robust credit history or substantial collateral, can tap into a diverse pool of individual lenders who may be more willing to take calculated risks on innovative ideas.

The analysis of studies reveals that in the initial stages start-ups typically rely on traditional funding sources like bootstrapping, involving more internal and fewer external sources. During expansion, the popular sources of finance amongst entrepreneurs include Bank loans, angel funding, venture capital, factoring and private equity. However, in the maturity phase the entrepreneurs raise the money from the public through IPOs and bond issues (Maximillian et.al. 2019). This sequential approach highlights the continuum from early-stage traditional financing to more advanced novel funding models.

Table 4: Allocation of sources of finance based on the life cycle of the firm.

Stage in the life cycle	**Traditional Sources**	**Novel Sources**
Ideation	Own funds and funds from family and friends	Accelerators/Incubators/Patent-based investment funds, crowdfunding, Sustainable funds
Seed funding	Business Angels, factoring, Supplier credits, bank loans	ICOs, Patent based loan funding, Venture debt funding, Business Angel Network, ICOs, Sustainable start-up finance, University funding, Crowdfunding, Revenue-based funding
Expansion/growth phase	Private equity and Venture capital	ICOs, Government Venture capital, corporate venture capital, Business Angel Networks (BANs), Venture debt lending
Maturity	IPOs and Bonds	Patent-based loan funding, equity issue

With the advent of digital mode of funding, entrepreneurs can choose peer to peer lending which is comparatively less stringent and accessible. Similarly, the maturing firms may explore ICOs or token sales thereby providing an innovative layer to the capital structure. Regarding asset financing, tokenization of assets using blockchain attracts a wider base of investors and facilitates fractional ownership opportunities. AI can assist entrepreneurs in decision making, opportunity, research, and performance. Entrepreneurs try to navigate between the sources to balance potential gains with associated risks. The well-established traditional sources such as bank loans, angel investors and venture capital often involve interest rate risk, creditworthiness assessments and fluctuations in market conditions. Their returns are dependent on the success and growth of the business along with some stake in the company or regular interest payments.

On the contrary, the novel sources such as Cryptocurrencies, blockchain-based funding mechanisms, and decentralized finance (DeFi) are relatively nascent, volatile, and prone to regulatory uncertainties. Surprisingly, the returns associated can be substantial thereby attracting risk tolerant entrepreneurs and investors. Entrepreneurs can mitigate risks by diversifying funding sources combined with traditional and novel sources to capitalize on the innovative opportunities offered by digital finance.

When it comes to gender specific choice of financing, women entrepreneurs prefer traditional sources of financing such as IPOs due to inadequate access to business networks or peers or information of financing (Capo et.al. 2023). Digital financial solutions such as Innovation challenge fund support women entrepreneurs by co-funding and providing technical support to women led start-ups. Instead of traditional equity or debt structures, revenue-based financing allows entrepreneurs to repay investors based on a percentage of their revenue. This aligns the interests of entrepreneurs and investors, providing capital without the need for equity dilution.

Table 5: The opportunities and challenges with each source finance.

Source of finance and related studies	Opportunities/Benefits	Challenges
P2P (Ofir and Tzang(2022), Suryono et.al. (2019), Yeo and Jun (2020))	Streamlined lending process, less time consuming, easy access, transparency, Algo-based, higher interest on investments, reduce financial exclusion, Caters to low credit market	Risky for investors, Regulatory considerations, risk management, need for proper communication between borrower and lender, Riskier for banks stability
Crowdfunding (Hodeck et.al 2021, Tan and Reddy (2020), Wanxin et.al.(2019), Cicchiello, A.F. (2019), Wesemann and Wincent (2021), Chao et.al (2020)	Revolutionary, complements the traditional sources, idea development, connect between angel investors and crowd traders, regular feedback mechanism, can be leverged by women entrepreneurs,	Regulatory framework ensuring harmonization is required, ignorance of young entrepreneurs, Risky for investors, low level of internet access, trust issues
Initial Coin Offerings, Smart contracts, Blockchain (Andres et.al (2022), Toma and Cerchiello (2020), Gupta et.al. (2023), Belitski and Boreiko (2022))	Decentralized, democratized access to funding, wider reach, innovative models of ownership and participation, limited due diligence, respond to market demands with increased agility, community-driven approach to fundraising, automation, minimize human bias and errors,	Regulatory uncertainties, investor protection, prone to frauds, legal and ethical challenges, relies on blockchain, Governance Implications, illegal money raising, Know your customer (KYC) and due diligence required, drafting a well-structured white paper, token ranking

University funds/Government Grants (Brekke (2021), Hassan (2020))	non-dilutive funding for research and development, market expansion, Balanced Regional Development through local university funding, better industry university interaction, innovation-driven	Lot of compliances required, Limited resources, prone to bias
Business Angel Networks (Sabarinathan (2019), ANGIN report (2020))	Experienced pool of investors, mentorship, deal evaluation and documentation support, informal equity funding	Lack of legal framework, biases against local early-stage investing, lack of concrete succession plans, member retention and long- term buy-in

The analysis of opportunities and challenges reveal that the novel sources have increased access to entrepreneurs specially to women and other minority entrepreneurs. Business angel networks offer mentorship and informal equity funding but lack a concrete legal framework and may exhibit biases against local early-stage investing. However, despite experiencing rapid growth, regulatory framework pertaining to novel sources is still in the early stage with forthcoming policies and regulations likely to be influenced by the experience of stakeholders.

Conclusion

Entrepreneurial finance in the digital era presents a dynamic landscape where traditional funding sources intertwine with innovative approaches, necessitating a well-balanced financial strategy tailored to the specific needs and circumstances of startups at different stages of their life cycle. This study has aimed to explore the choice of novel sources based on the firm's life cycle and examine the challenges and opportunities associated with each novel source.

While these traditional sources of finance remain fundamental, entrepreneurs today also explore innovative financing options, such as crowdfunding, peer-to-peer lending, and digital token offerings. A well-balanced financial strategy often involves a mix of traditional and innovative sources, tailored to the specific needs and circumstances of the entrepreneurial venture. The adaptability and strategic acumen of entrepreneurs is reflected through the optimum use of traditional and novel sources of finance. This blended approach recognizes the strength of conventional financing approaches while leveraging the innovation and accessibility provided by the novel sources.

The analysis has revealed a continuum from early-stage traditional financing to more advanced novel funding models, with startups typically relying on internal sources and family funds in the ideation stage, gradually transitioning to angel funding, venture capital, and seed funding in the expansion phase, and ultimately raising funds from the public through IPOs and bonds in the maturity phase.

In this journey, entrepreneurs are increasingly exploring innovative financing options such as peer-to-peer lending, crowdfunding, initial coin offerings (ICOs), and blockchain-based funding mechanisms. Each of these novel sources presents unique opportunities and challenges. For instance, peer-to-peer lending offers streamlined processes and easy access to capital but entails regulatory considerations and risk management. Crowdfunding revolutionizes capital allocation and complements traditional sources but requires a robust regulatory framework and addresses trust issues.

Similarly, ICOs and blockchain-based funding mechanisms democratize access to funding and offer innovative models of ownership and participation. However, they are susceptible to regulatory uncertainties, investor protection concerns, and governance implications. Despite these challenges, ICOs and blockchain-based funding mechanisms respond to market demands with increased agility and minimize human bias and errors through automation.

Furthermore, government grants and university funds provide non-dilutive funding for research and development, fostering innovation-driven entrepreneurship. Yet, they entail compliance requirements and are limited by available resources. Corporate and government venture capital invest in sustainable businesses, driving innovation but may face challenges related to control by venture capitalists and information asymmetries.

Further exploration into the impact of blockchain technology on entrepreneurial finance can be undertaken, with a focus on tokenomics, smart contracts, and decentralized finance (DeFi). Understanding the nuances of token issuance, governance structures, and the long-term implications for various industries will be crucial.

Research could delve into the evolving regulatory landscape surrounding digital finance, including ICOs, blockchain-based assets, and decentralized financial systems. Examining the effectiveness of existing regulations and proposing frameworks that balance innovation with investor protection will be essential. Assessing the role of digital finance in promoting sustainability and environmentally conscious entrepreneurship is yet unexplored.

In conclusion, the integration of traditional and novel sources of finance is essential for startups to thrive in the digital era. A well-balanced financial strategy, informed by the firm's life cycle and tailored to its specific needs, can help entrepreneurs capitalize on innovative opportunities while mitigating associated risks.

References

Ackah, C., Görg, H., Hanley, A., & Hornok, C. (2023). Africa's businesswomen – Underfunded or underperforming? *Small Business Economics*, 62, 1051-1074.

Alva, E., Vivas, V., & Urcia, M. (2023). Entrepreneurial bricolage: Crowdfunding for female entrepreneurs during the COVID-19 pandemic. *Journal of Entrepreneurship in Emerging Economies*, 15(4), 677–697.

Amore, M. D., Conti, A., & Pelucco, V. (2023). Micro venture capital. *Strategic Entrepreneurship Journal*, 17(4), 886–924.

ANGIN Report. (2020). The emergence of angel investment networks in Southeast Asia. Retrieved from https://www.spf.org/en/global-data/user47/AINvone.pdf.

Anglin, A. H., Milanov, H., & Short, J. C. (2023). Religious expression and crowdfunded microfinance success: Insights from role congruity theory. *Journal of Business Ethics*, 185(2), 397–426.

Ayatakshi-Endow, S., Polkinghorne, M., & Okafor, U. (2022). It's not just physical: Gender and bias in equity crowdfunding. *Eurasian Studies in Business and Economics*, 23, 81–110.

Belitski, M., & Boreiko, D. (2022). Success factors of initial coin offerings. *Journal of Technology Transfer*, 47, 1690–1706. https://doi.org/10.1007/s10961-021-09894-x

Bertello, A., Battisti, E., De Bernardi, P., & Bresciani, S. (2022). An integrative framework of knowledge-intensive and sustainable entrepreneurship in entrepreneurial ecosystems. *Journal of Business Research*, 142, 683–693.

Block, J. H., Colombo, M. G., Cumming, D. J., & Vismara, S. (2018). New players in entrepreneurial finance and why they are there. *Small Business Economics*, 50(2), 239–250.

Blohm, I., Leimeister, J. M., & Krcmar, H. (2022). A crowd-based approach to preparing for extreme events: An empirical study on the role of social media in preparing for flashes of events. *Information Systems Journal*, 32(1), 100–120.

Bonini, S., & Capizzi, V. (2019). The role of venture capital in the emerging entrepreneurial finance ecosystem: Future threats and opportunities. *Venture Capital*, 21(2–3), 137–175.

Brekke, T. (2021). Challenges and opportunities of building an entrepreneurial discovery process through university–industry interaction: A Norwegian case study. *Industry and Higher Education*, 35(6), 667–678. https://doi.org/10.1177/0950422220978348

Camilleri, M. A., & Bresciani, S. (2022). Crowdfunding small businesses and startups: A systematic review, an appraisal of theoretical insights and future research directions. *European Journal of Innovation Management*. Available at: https://doi.org/10.1108/EJIM-02-2022-0060

Capo, F., & Pietro, F. Di. (2023). Entrepreneurial finance, crowdfunding, and language: From social to financial support. Routledge.

Cicchiello, A. F. (2019). Harmonizing the crowdfunding regulation in Europe: Need, challenges, and risks. *Journal of Small Business and Entrepreneurship*, 32(6), 585–606.

Cicchiello, A. F., & Kazemikhasragh, A. (2022). Tackling gender bias in equity crowdfunding: An exploratory study of investment behaviour of Latin American investors. *European Business Review*, 34(3), 370–395.

Cicchiello, A. F., Kazemikhasragh, A., & Monferra, S. (2021). In women, we trust! Exploring the sea change in investors' perceptions in equity crowdfunding. *Gender in Management*, 36(8), 930–951.

Cumming, D., Meoli, M., & Vismara, S. (2021). Does equity crowdfunding democratize entrepreneurial finance? *Small Business Economics*, 56(2), 533–552.

Giuggioli, G., & Pellegrini, M. M. (2023). Artificial intelligence as an enabler for entrepreneurs: A systematic literature review and an agenda for future research. *International Journal of Entrepreneurial Behavior & Research*, 29(4), 816–837.

Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and FinTech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537–580.

Gornall, W., & Strebulaev, I. A. (2020). Gender, race, and entrepreneurship: A randomized field experiment on venture capitalists and angels. *Management Science*. Available at SSRN: https://ssrn.com/abstract=3301982 or http://dx.doi.org/10.2139/ssrn.3301982

Grassi, L., & Fantaccini, S. (2022). An overview of Fintech applications to solve the puzzle of healthcare funding: State-of-the-art in medical crowdfunding. *Financial Innovation*, 8(1).

Hassan, N. A. (2020). University business incubators as a tool for accelerating entrepreneurship: Theoretical perspective. *Review of Economics and Political Science*. 9(5), 434-453. https://doi.org/10.1108/REPS-10-2019-0142

Hodeck, A., Tuchel, J., Hente, L., & Brunner, M. (2021). Crowdfunding as a financing instrument for sport in difficult times: Analysis of crowdfunding projects in Germany during the COVID-19 pandemic. *Journal of Physical Education and Sport*, 21, 1124–1130. https://doi.org/10.7752/jpes.2021.s2142

Kaplan, S. N., & Lerner, J. (2016). Venture capital data: Opportunities and challenges. Harvard Business School. Retrieved from https://www.hbs.edu/ris/Publication%20Files/17-012_10de1f93-30e4-4a98-858c-4137556ec037.pdf.

Singh, S. P., Sego, T. A., & Sarin, S. (2022). Overcoming bias against funding of female-led entrepreneurial initiatives: The democratizing influence of online crowdlending platforms. *Service Business*, 16(4), 907–933.

Tan, Y. H., & Reddy, S. K. (2023). Sustainable funding for small businesses: An investigation into the dynamics of the recurring crowdfunding model. *International Small Business Journal: Researching Entrepreneurship*, 42(5), 641-669. https://doi.org/10.1177/02662426231205758

Toma, A. M., & Cerchiello, P. (2020). Initial coin offerings: Risk or opportunity? Frontiers in Artificial Intelligence, 3. https://doi.org/10.3389/frai.2020.00018

Zhao, Y., Xie, X., & Yang, L. (2021). Female entrepreneurs and equity crowdfunding: The consequential roles of lead investors and venture stages. *International Entrepreneurship and Management Journal*, 17(3), 1183–1211.