

INNOVATION MANAGEMENT IN ROMANIAN STARTUPS: FROM IDEA TO SUSTAINABLE SCALING

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Abstract

This article explores the managerial role of innovation in sustainable development of startups from Romania, with a focus on the transition process from idea generation to business scaling. This research highlights the main challenges and critical factors of success which lead to startups' performances of innovation, in an economic context based on volatility and limited resources. The theoretical analysis is completed by a practical component, based on case studies and examples from Romanian entrepreneurship ecosystem. The results show that strategic management of innovation, the culture organization orientated to a continuous learning and sustainable partnerships represent essential factors for sustainable scaling. The conclusions offer practical recommendations for entrepreneurs, investors and decision-making factors, contributing to special literature regarding innovation and sustainability in the emerging economy of Eastern Europe.

Keywords: Innovation management, Startups, Sustainability, Entrepreneurship, Romania.

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1. INTRODUCTION

In the last years, Romania's startup ecosystem has experienced a significant development, sustained by technological growth, by easy access to international financial services, and by the growth of innovative entrepreneurship. In an economic environment characterized by volatility and a strong global competitiveness, innovation becomes not just only a competitive advantage, but an essential condition for long-term development of an organization (StartupBlink, 2025; Impact Hub Bucharest, 2025).

Innovation management is defined as a complex strategic process which integrates planning, organisation, implementation and monitoring of innovating activities, with its aim of creating a sustainable value. When talking about startups, this process is mostly influenced by limited financial resources, market uncertainty, and the pressure for rapid scaling. With all being said, some emerging companies from Romania have managed to transform innovation into an instrument of sustainable growth, becoming important examples at regional level (Tidd & Bessant, 2018; OECD, 2018).

The aim of this paper is to analyze the way in which innovation management contributes to sustainable development of Romanian startups, identifying the main challenges and key factors that influence the transition from idea to scaling. The research follows a qualitative empirical approach, based on comparative analyze of relevant case studies from local ecosystem, such us: UiPath, FlowX.AI, Kinderpedia, Finqware and Druid AI.

The study proposes a double perspective: a theoretical one, based on established innovation management models, and an applicable part, which follows the identification of strategies and managerial practices with a real impact on sustainable scaling. The contribution of this research lies in offering an integrated view of how innovation can be effectively managed within the specific context of emerging economies, with a focus on Romania.

2. LITERATURE REVIEW

2.1 The evolution of the innovation concept in economic theory

The innovation concept is one of the cornerstone of modern economic thought. Joseph A. Schumpeter (1934) was the one that introduced the theory of creative destruction, by which he described the way innovations can interact with the market equilibrium and it creates new markets, processes, supply chains, and organisational forms. In this situation, the entrepreneur is the one that knows how to transform this into economic value (Schumpeter, 2008).

Over the years, this approach was extended, and it has been admitted that innovation has an organisational and managerial dimension, according to Drucker (1985). (OECD, 2018) says that innovation is a systemic process, which involves generation, development, and implementation of new technologies, ideas, with the scope of creating economic, social and ecological value. This new modern definition puts accent on the importance of the innovation management, in all kind of organisations, including startups, where the speed of adapting to the market is crucial for surviving.

The innovation management has evolved from a linear vision, the product idea, all over to a dynamic and systematic vision, which treats organisations like open ways to knowledge and collaboration. Tidd & Bessant (2018) propose a model divided in four steps: identifying opportunities; selecting viable ideas; implementing innovative solutions; and learning and improving continuously.

They insist over the idea of an open cultural organisation, which encourages the experience and the willingness of failure. In the same time, the authors present the importance of leadership, of interfunctional collaboration and an organizational culture which tolerates failure as a part of learning.

Moreover, Oslo Manual gives a standard definition of innovation, defining the management role in innovative processes. According to the manual, an innovative organization is the one that develops and implements new ideas which generate economic, social and environment values (OECD, 2018).

2.2 The “Open Innovation” paradigm and entrepreneurial ecosystems

A turning point in innovation research was Henry Chesbrough’s (2003) theory of Open Innovation, which advocates the opening of innovation processes to external collaboration. Chesbrough argues that firms cannot innovate effectively in isolation. Instead, they should collaborate with universities, research institutions, suppliers, and startups to accelerate innovation and share risks (Chesbrough, 2003).

This model evolved to include concepts such as co-innovation and crowdsourcing, which leverage collective intelligence to drive creativity. In Romania, this perspective aligns with the emergence of a collaborative innovation ecosystem, fostered by accelerators, investors, and digital platforms that connect startups with resources and expertise (West & Bogers, 2014; Nambisan et al., 2019).

2.3 Sustainability-oriented innovation

In the last two decades, researches have started to connect innovation to the goals of sustainable development. According to Adams et al. (2016), sustainable innovation involves economic, social, and environmental objectives into organizational processes. This approach promotes long-term value creation rather than short-term profit maximization (Adams et al., 2016).

Boons and Lüdeke-Freund (2013) say that sustainable business models helps not only the company to get plus value, but also the environment and society. Moreover, Carayannis and Campbell (2021) propose the Quadruple Helix Innovation Model, which involves collaboration through academia, industry, government, and civil society to stimulate inclusive and responsible innovation. This multidimensional framework is particularly relevant for startups, which can leverage their agility to integrate sustainability principles early in their growth cycle (Boons & Lüdeke-Freund, 2013; Carayannis & Campbell, 2021).

2.4 Innovation and competitiveness in emerging economies

In emerging economies such as Romania, innovative ecosystems face specific structural challenges such as limited financial resources, underdeveloped infrastructure, and reduced access to venture capital. Nevertheless, the potential for innovation remains strong due to rapid digitalization, skilled human capital, and an increasing openness to international collaboration (Nambisan et al., 2019).

According to the StartupBlink (2024) report, the Romanian startup ecosystem is experiencing consistent growth, with Bucharest emerging as a regional innovation hub in Central and Eastern Europe. These

dynamics highlight the importance of understanding how innovation management models can be adapted to local contexts, enabling sustainable scaling in resource-constrained environments.

TABLE 1. THE EVOLUTION OF THE INNOVATION MANAGEMENT CONCEPT

Theoretical stage	Main authors	Core concepts	Main contribution
Classical stage (1930–1950)	Schumpeter (1934)	“Creative destruction”, entrepreneur as agent of change	Innovation as the engine of economic development
Process-based stage (1990–2010)	Tidd & Bessant (2018)	Four-stage model: identification, selection, implementation, learning	Innovation as a systematic process
Collaborative stage (2000–2020)	Chesbrough (2003), West & Bogers (2014)	“Open Innovation”, co-innovation	Collaboration as a source of accelerated innovation
Sustainability-oriented stage (2010–present)	Adams et al. (2016), Boons & Lüdeke-Freund (2013), Carayannis et al. (2021)	Sustainability-driven innovation, Quadruple Helix	Integration of economic, social, and environmental goals

Source: Adapted from Schumpeter (2008); Chesbrough (2003); Tidd & Bessant (2018); Adams et al. (2016); Carayannis et al. (2021).

3. RESEARCH METHODOLOGY

3.1 Research design

This paper employs a qualitative empirical research design, aiming to explore how innovation management contributes to the sustainable growth and scaling of Romanian startups. Choosing the qualitative approach is justified because of the exploration nature of this study, which follows the understanding of the processes, strategies, and success factors from a contextual perspective.

The research mixes the specific literature analysis with a complex case study, which facilitates the correlation of theoretical international models with current examples from Romanian startups. According to Yin (2018), case study is a relevant method for analyzing complex and current phenomena, especially when the boundaries between phenomena and context are not clearly delimited (Yin, 2018).

The general objective is to analyze how innovation management influences the success and sustainable scaling of Romanian startups. There are four specific objectives for this study:

1. To identify the key factors of innovation management in Romanian startups.
2. To analyze innovation strategies applied during the scaling phase.
3. To align international innovation management models with local ecosystem characteristics.
4. To provide managerial recommendations for sustainable innovation.

Furthermore, there are also four specific research questions:

- How is innovation managed within Romanian startups?
- What internal and external factors affect innovation success?

- To what extent does collaboration (open innovation) support sustainable scaling?
- How can sustainability principles be integrated into local business models?

3.2 Sample selection and case studies

The research uses a theoretical sampling approach, selecting five Romanian startups recognized for innovation performance and international scalability.

TABLE 2. SELECTION OF STARTUPS ANALYZED IN THE CASE STUDY

No.	Startup	Industry	Type of innovation	Rationale for selection
1	UiPath	Software automation (RPA)	Technological, organizational	Global leader; example of radical innovation
2	Kinderpedia	Digital education	Service, social	Scalable model with social impact
3	FlowX.AI	Fintech, digital banking	Technological, process	Rapid scaling through corporate collaboration
4	Druid AI	Conversational artificial intelligence	Technological, incremental	European expansion and continuous innovation
5	Finqware	Open banking & API fintech	Open, collaborative	Direct application of "open innovation" principles

Source: Adapted from StartupBlink (2025); Impact Hub Bucharest (2025); Techcelerator (2024); UiPath (2024); Kinderpedia (2024); FlowX.Ai (2024); Druidai (2024); Finqware (2024).

Selection criteria include relevance, demonstrated innovation, and availability of public data. Data sources comprise ecosystem reports (StartupBlink, Impact Hub, Techcelerator), media interviews, and company documents.

3.3 Data collection methods

The research relied on two main sources of information. First of it, secondary data were collected from academic articles, market reports, press releases, and publicly available interviews, which provided both theoretical grounding and practical insights into innovation management (Yin, 2018).

Second, a documentary analysis was conducted, focusing on materials published by the selected startups, including company reports, websites, and media statements, to understand how innovation is positioned within their strategic narratives.

To strengthen the reliability of the findings, data triangulation was applied. This approach integrated multiple types of evidence and perspectives, ensuring a comprehensive and balanced understanding of the innovation processes observed in the Romanian startup ecosystem.

The collected data was analyzed, which helped identify key areas such as leadership and organizational culture, collaboration and open innovation, scaling strategies, and sustainability orientation. The findings were then compared with established theoretical models (such as: Schumpeter, 2008; Tidd & Bessant,

2018; Adams et al., 2016) to highlight both the common patterns and the specific features of the Romanian startup context.

The results were validated through cross-case comparison to identify common patterns, theoretical triangulation by correlating findings with multiple frameworks, data consistency checks using independent public sources.

The main limitations of the study came from restricted access to internal company data, the limited number of analyzed cases, and the lack of statistical generalization. Nevertheless, external validity is strengthened by the diversity and representativeness of the selected startups, which reflect Romania's key innovation sectors.

4. RESULTS AND DISCUSSIONS

The qualitative analysis of the five Romanian startups: UiPath, Kinderpedia, FlowX.AI, Druid AI, and Finqware, revealed several common themes regarding how innovation is managed. These themes reflect a blend of visionary leadership, open collaboration, digital scaling, and sustainability orientation.

4.1 Leadership and organizational culture

In all startups that have been analyzed during this study, leadership plays an essential role in generating and sustaining innovation. The founders act like pillars of change, encouraging a culture based on autonomy, experimentation and continuing learning.

At UiPath, visionary leadership of the funding team has facilitated a quick transition from a local startup into a global leader of automation, illustrating Schumpeter's concept of the entrepreneur as an innovator (Schumpeter, 2008). Moreover, Druid AI has developed a cultural organization based on adaptability and learning, which made the company one of the most competitive in an area full of change.

As being said, the results confirm the idea of Tidd and Bessant (2018) according to which an open, learning-oriented organizational culture is essential for sustainable innovation.

4.2 Collaboration and open innovation

External collaboration and organizational openness are key factors of innovation success. This aspect is visible in start-ups such as FlowX.AI and Finqware, which applies directly the principles of open innovation by forming partnerships with banks, fintech and technology companies.

FlowX.AI develops digital personalized solutions in collaboration with financial institutions, growing the relevance of innovation. Finqware also built a business model based on collaborative integration of open banking, which confirms the utility model of co-innovation proposed by West and Bogers (2014).

The collaboration is not limited to corporate environment. In Kinderpedia case, the teachers and parents' involvement in the process of developing the platform reflects a form of innovation, with a social impact. Scaling represents a critical challenge for innovation-driven startups. UiPath and Kinderpedia illustrate how local innovation can be transformed into global competitiveness.

UiPath managed to achieve an accelerated expansion due to a complete digitalization of the business model and because of the international investments, which is in a perfect line of what Tidd and Bessant (2018) say about innovation as a systemic process.

Kinderpedia, through digital education solutions, integrated technology and international collaboration to scale a socially impactful business model.

These findings indicate that sustainable scaling depends on adaptability, early integration of sustainability principles, and strong global partnerships.

A key emerging trend among the analyzed startups is their focus on sustainability-oriented innovation. Kinderpedia transforms traditional education into a resource-efficient digital process. Finqware and FlowX.AI foster transparency and efficiency in financial ecosystems, aligning with the sustainability-oriented innovation model described by Adams et al. (2016) and Boons & Lüdeke-Freund (2013).

These examples suggest that Romanian startups are increasingly aligning with the Quadruple Helix model (Carayannis & Campbell, 2021), which promotes collaboration among academia, industry, government, and society to achieve inclusive, responsible innovation.

The thematic analysis identified four major dimensions of innovation management in Romanian startups.

TABLE 3. EXAMPLES OF THEMES AND CODES IDENTIFIED IN THE ANALYSIS OF ROMANIAN STARTUPS

Main theme	Sub-themes	Case examples	Interpretation
Leadership and organizational culture	- visionary leadership - team autonomy - learning orientation	UiPath: founders promote a culture of experimentation and freedom. Druid AI: emphasizes adaptability and continuous learning.	Open and trust-based leadership fosters innovation and employee engagement.
Collaboration and open innovation	- strategic partnerships - corporate collaboration - co-creation with clients	FlowX.AI collaborates with banks to develop digital services. Finqware co-develops open banking APIs with financial partners.	Open innovation enables access to resources, technology, and expertise, accelerating growth.
Scaling strategies	- international expansion - digitalization - external investment	UiPath and Kinderpedia expanded to over 30 countries through digital platforms and venture funding.	Scaling relies on early internationalization and strong digital infrastructure.
Sustainability and social impact	- green innovation - educational impact - resource efficiency	Kinderpedia: promotes digital education and resource efficiency. Finqware: supports financial transparency and sustainability.	Romanian startups increasingly align economic success with social and environmental responsibility.

Source: Author's adaptation based on public data (StartupBlink, 2025; Impact Hub Bucharest, 2025; UiPath, 2024; Kinderpedia, 2024; FlowX.AI, 2024; Druidai, 2024; Finqware, 2024).

The findings show that innovation in Romania is driven by visionary leadership, interorganizational collaboration, digital scaling, and sustainability orientation. Together, these elements form an emerging model of innovation management specific to developing economies one in which creativity, openness, and adaptability compensate for resource constraints.

5. CONCLUSIONS

The results of this study show that innovation management represents a central element of development and sustainability scaling of Romanian startups. Success of these startups depends less on financial resources, but more on quality of leadership, of the capacity of collaboration and the strategic vision over innovation.

The founders of the analyzed start-ups act like the promoters of learning and experimenting, confirming the theories of Schumpeter (2008) and Tidd & Bessant (2018) regarding the role of entrepreneur as a changing agent.

Second, interorganizational collaboration and open innovation proved essential for accelerating innovation. The cases of FlowX.AI and Finqware illustrate how strategic partnerships with corporate actors can create mutual benefits, reduce risks, and increase the speed of scaling.

Moreover, sustainable scaling depends on the early integration of social responsibility principles and resource efficiency within business models. Kinderpedia and UiPath demonstrate the fact that social impact and economic growth are not opposite objectives, but complementary ones, which sustains the speech of Adams et al. (2016) and Boons & Lüdeke-Freund (2013).

Based on these insights, can be drawn some managerial implications: startups should build a learning-oriented and collaborative culture that continuously supports innovation; strengthening public private partnerships and open innovation networks can accelerate development and internationalization; managers should integrate sustainability as a strategic goal from the early stages to ensure scalability and long-term resilience.

From a theoretical perspective, this study contributes to the literature on innovation management in emerging economies by offering a contextualized framework for the Romanian market. Furthermore, the research confirms the relevance of Quadruple Helix (Carayannis & Campbell, 2021), which promotes the collaboration between academic context, industry, governance and society.

To sum up, Romanian startups demonstrate that sustainable innovation can be the key of economic transformation, as long as it is managed strategic, collaborative and orientated through impact.

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