

ACCELERATORS AS CATALYSTS: HELPING ROMANIAN STARTUPS EXPAND THROUGH WESTERN VENTURE CAPITAL

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Abstract

In the evolving world of startup financing, the link between Romanian ventures and Western, especially Central and Eastern European (CEE), Venture Capital firms (VCs) starts taking center stage. Existing research papers light on the growth and aspirations of the Romanian startup community and their need of additional funding on top of the local one, especially when it comes to Series A stages and the international scaling, but also pinpoints challenges in securing foreign VC funding. Amidst this context, accelerators, entities designed to foster startup development, emerge as crucial bridges. Utilizing a mixed-methods research approach, this paper combines first-hand accounts from industry insiders with in-depth data analysis. The focus is to understand the significant influence of accelerators in guiding Romanian startups towards collaboration with Western and notably CEE VCs. Initial findings emphasize the transformative impact of accelerators, underlining their networking, and trust-building roles. These functions increase the international recognition and trustworthiness of associated startups. Furthermore, an in-depth look at Romanian public policies unveils their crucial role in supporting startup acceleration, indicating areas where alignment with prominent EU standards is beneficial. Highlighting the foreign investment as a starting point and key driver for international expansion, this research not only adds depth to the conversation but suggests practical strategies to ensure Romanian startups integrate smoothly on a global scale.

Keywords: Accelerators, Romanian Startups, Venture Capital, Public Policy, Networking, Foreign Investment.

JEL Classification: G24, M13.

1. Introduction

The Romanian startup ecosystem, a dynamic and rapidly evolving landscape, stands at the forefront of a significant transformation, fueled by a wave of entrepreneurial ventures ambitiously reaching out for capital to foster international growth. Central to this paper is an in-depth exploration into the indispensable role of accelerators in facilitating connections between Romanian startups and external funds and venture capitalists. This exploration ventures beyond mere statistics, encompassing a thorough research background, methodical analysis, and concludes with actionable strategies and policy recommendations.

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The role of accelerators in this context will be highlighted, using insights from similar European ecosystems (Duma & Zavtura, 2021).

1.1 Research background

Our research delves into the nuances of the Romanian startup investment landscape, marked by a discernible uptick in Series A transactions. It will provide a statistical overview of venture capital flows and startup growth, reflecting on the factors that influence the startup ecosystem (Serwatka, 2018).

The analysis draws upon my personal experiences as a venture capitalist and investor, highlighting the intricate process of securing first investments and establishing crucial connections, particularly with the Polish market, and the evolution of venture capital from 2018, marked by a notable increase in capitalization, to the present day, provides a rich context for understanding the investment dynamics.

1.2. Challenges in Securing Foreign Venture Capital Funding

A pivotal challenge confronting Romanian startups is securing foreign venture capital (VC) funding. Key performance indicators such as Monthly Recurring Revenue (MRR), and annual growth rate in terms of sales and revenue emerge as decisive factors in attracting foreign investments. The highlights of the 2020-2022 investments in startups are presented in Figure 1 below.

Fig 1. 2020-2022 startup investment highlights in Romania

2022:

- Total venture capital deal volume: €101.7M.
- Significant increase in Series A transactions: Volume tripled from €15.3M in 2021 to €63M in 2022.
- Pre-seed volume: Decreased by 13.2% to €2.8M.
- Seed transactions: Decreased by 4.3% to €45.3M.
- First-round transactions: Increased by 109% to €49.3M.
- Follow-on rounds: Volume of €60M, a 35.7% decrease from 2021.

2021:

- Total deal volume: €116.9M, including FintechOS's €51M Series B round.
- Average deal size for first rounds increased from €357K in 2020 to €647K.

2020:

- Romanian startups attracted 50% more local capital than in 2019.
- Total of 58 investments with a volume of €30.39M.
- Number of startups receiving first-time investment doubled from 2019, rising to 39 startups with a total amount of €13.92M.

Source: crunchbase.com data, author's own research.

The venture capital landscape in Romania has seen significant fluctuations over recent years, as evidenced by the data from 2017 to 2022. In 2022, the total venture capital deal volume reached €101.7M, with a notable increase in Series A transactions, where the volume tripled from €15.3M in 2021 to €63M. However, this growth was juxtaposed with a decrease in pre-seed volume by 13.2% to €2.8M and a 4.3% reduction in seed transactions to €45.3M. First-round transactions saw a remarkable 109% increase to €49.3M, while follow-on rounds experienced a decline in volume to €60M, marking a 35.7% decrease from the previous year.

The year 2021 showcased a total deal volume of €116.9M, significantly bolstered by FintechOS's €51M Series B round, with the average deal size for first rounds escalating from €357K in 2020 to €647K. The year 2020 was marked by a 50% increase in local capital attraction compared to 2019, with a total of 58 investments amounting to €30.39M. The number of startups receiving their first investment doubled from 2019, culminating in 39 startups with a combined amount of €13.92M.

Looking back at 2018, standout moments included UiPath's substantial funding of over USD 400 million (which will be however excluded from this study due to its massive disrupting size) and other significant investments in startups like hackajob, StatusToday, Proportunity, and Instant Factoring.

1.3 The Role of Accelerators

We're currently witnessing how accelerators in Romania, akin to their counterparts in other parts of Europe, support startups through mentorship, networking, and investment opportunities (Ulmer & Pape, 2022) and the importance of accelerators in enhancing startup visibility and investor trust.

Accelerators stand out as crucial conduits for startup development, connecting startups with venture capital, and providing trust required to attract foreign investors. Participation in renowned accelerators often serves as a badge of credibility and sustainability, signaling to venture capitalists that a startup is ready for the global stage.

2. Literature review

The burgeoning role of accelerators in the startup ecosystem has been a focal point of scholarly attention, with several studies highlighting their transformative impact. This literature review synthesizes key findings from recent research, aligning them with our thesis

Duma, O., & Zavtura, K. (2021), in their exploration of the startup ecosystem in Europe, underscore the role of accelerators in nurturing startups. Their study illuminates the diverse structural components within European startup ecosystems, emphasizing the importance of cultural, social, and material factors

in shaping startup success. The research delineates the function of accelerators in fostering a general business culture and facilitating connections with investment capital

Serwatka, A. (2018) analysis of European startup environments, particularly the functioning of accelerators and incubators, offers valuable insights into the mechanisms that support young companies. The study highlights that since 2007, the growth of innovative small enterprises in Europe has been significantly influenced by the presence of accelerators.

Ulmer, T., & Pape, U. (2022) delve into the unique mechanisms and value-adding aspects of accelerators. This aligns with the view of accelerators as critical in developing startups' capabilities to attract foreign investments and scale internationally.

Bergmann, T., & Utikal, H. (2021) highlight how accelerators are crucial in supporting startups in developing a sustainable business model, which is increasingly becoming a criterion for investment from socially conscious venture capitalists.

In their empirical study, **García-Ochoa, C. P., De-Pablos-Heredero, C., & Blanco Jiménez, F. B. (2020)** examine how business accelerators impact startup performance. This is particularly relevant in supporting our thesis that accelerators contribute significantly to startups' readiness for foreign capital acquisition and scaling beyond local markets.

These studies collectively highlight the significance of accelerators in building a network of trust, preparing startups for international scaling and attracting foreign investments.

3. Methodology

The methodology uses mixed-methods approach, including qualitative interviews with startups and VCs from Romania, Croatia or Poland, first-hand case studies, industry databases data analysis and quantitative data interpreting. This approach is suitable for understanding the impact of accelerators on Romanian startups, with references to similar research methodologies in EU studies (Bergmann & Utikal, 2021).

Regression Analysis Framework

For this research, I employed a logistic regression analysis to examine the relationship between startups' participation in acceleration programs, investment raised and their international scaling.

Variables Used in the Analysis

The analysis employs a binary logistic regression model, suited for the binary nature of the variables involved:

Dependent Variable: The dependent variable is the international scaling status of startups, encoded as a binary metric. A value of '1' denotes startups that have successfully scaled internationally, while a value of '0' signifies those that have not.

Independent Variable: The independent variable, also binary, is the participation of startups in acceleration programs.

The logistic regression model is formulated as:

$$\log \left(\frac{P(Y=1)}{1-P(Y=1)} \right) = \beta_0 + \beta_1 X$$

where $P(Y=1)$ represents the probability of a startup scaling internationally. β_0 is the model's intercept, and β_1 is the coefficient for the startup's participation in an acceleration program.

Control Variables

To enhance the robustness of the analysis, we introduced a control variable as the total investment raised by the startup.

Hypothesis Testing

The hypothesis tested is that participation in an accelerator increases the likelihood of a startup scaling internationally.

Data Collection and Model Specification

The dataset for this study comprises various Romanian startups, with data collated on their year of founding, participation in acceleration programs, total investment raised, and their international scaling status.

Software Utilization

For the statistical analysis, I utilized Excel Statistic Data Analyser Software Pack which offer sophisticated methods for logistic regression and hypothesis testing.

4. Econometric Analysis

This chapter delves into the empirical examination of our research question. Utilizing a dataset of 77 Romanian startups (excluding UIPATH) presented below in Table 1, we aim to empirically test the hypotheses formulated earlier regarding the impact of acceleration programs and investment on startups' likelihood of scaling internationally.

Table 1. Top Romanian startups data

Startup Name	Year Founded	Accelerator	Total Investment Raised	Scaled internationally Western VC Investment
Undelucram	2011	0	€ 1,800,000	1
Licenseware	2020	1	€ 570,000	0
Goodlegal	2022	0	€ 1,056,000	0
Bware Labs	2020	0	€ 772,800	0
Profluo	2021	1	€ 475,200	0
The Outfit	2021	0	€ 712,800	0
KFactory	2019	1	€ 600,000	0
Innoship	2019	1	€ 572,000	0
Hyperhuman	2020	0	€ 1,000,000	0
FLOWX.AI	2019	0	€ 7,480,000	1
YLOAD	2019	0	€ 700,000	1
Ogre AI	2021	0	€ 2,000,000	1
Framey	2019	0	€ 880,000	0
Aqurate	2019	0	€ 440,000	0
Bright Spaces	2019	0	€ 3,700,000	1
Veridion	2019	1	€ 6,600,000	1
Bunnysell	2018	0	€ 5,632,000	1
dotLumen	2020	1	€ 13,200,000	1
TOKHIT	2021	0	€ 93,000,000	1
Procesio	2020	0	€ 2,500,000	0
Footprints.ai	2017	1	€ 2,500,000	1
Questo	2017	1	€ 1,672,000	0
Bobnet	2018	0	€ 2,376,000	1
Frisbo	2014	1	€ 4,200,000	1
Omniconvert	2013	0	€ 1,000,000	1
Invisum AI	2024	0	€ 500,000	0
Yarooms	2016	0	€ 2,000,000	0
Stailer	2019	1	€ 2,000,000	0
ESX	2017	1	€ 2,000,000	0
EcoTree	2017	1	€ 750,000	0
RepsMate	2020	1	€ 640,000	0
Tekpon	2020	1	€ 2,112,000	1
FINQware	2018	1	€ 3,200,000	1

Instant Factoring	2018	0	€ 7,400,000	1
Flip	2019	1	€ 8,400,000	1
Xvision	2018	1	€ 1,400,000	1
Bob Concierge	2018	0	€ 6,512,000	1
Nooka Space	2020	1	€ 2,000,000	1
FintechOS	2017	1	€ 80,168,000	1
Druid AI	2018	0	€ 44,528,000	1
typingDNA	2016	1	€ 7,832,000	1
OutThink	2019	0	€ 12,144,000	1
Machinations	2018	1	€ 4,224,000	1
Deepstash	2019	1	€ 3,256,000	1
SmartDreamers	2014	0	€ 1,900,000	0
Cyscale	2019	1	€ 3,000,000	1
CartLoop	2020	0	€ 369,600	0
Aggero	2018	1	€ 3,700,000	1
Planable	2016	1	€ 880,000	1
MedicAI	2018	1	€ 1,200,000	1
laloc	2016	1	€ 860,000	0
Jobful	2018	1	€ 880,000	1
Eyelet	2021	1	€ 136,400	0
Agora Robotics	2020	1	€ 1,144,000	0
Mocapp	2019	1	€ 878,000	0
iziBAC	2017	1	€ 160,000	0
Beez	2018	1	€ 1,700,000	0
VoxiKids	2020	1	€ 484,000	1
HeyMedica	2019	1	€ 250,000	0
Softlead	2013	1	€ 220,000	0
Synaptiq	2019	1	€ 160,000	0
Prime Dash	2017	1	€ 650,000	0
Quarks interactiv	2020	1	€ 230,000	0
Charger.ro	2014	1	€ 250,000	0
Kinderpedia	2014	1	€ 1,700,000	0
Profluo	2016	1	€ 625,000	0
Digitail	2016	1	€ 12,936,000	1
EasySales	2019	1	€ 2,100,000	0
Nestor	2018	1	€ 1,760,000	1
Bloomcoding	2021	1	€ 1,100,000	1

Palmo	2022	1	€ 500,000	0
Oncochain	2020	1	€ 460,000	1
Comarket	2020	1	€ 300,000	0
Metabeta	2019	1	€ 500,000	0
Cyber Swarm	2017	1	€ 880,000	1
Nifty Learning	2017	1	€ 270,000	0
Adservio	2008	1	€ 2,000,000	0

Source: Author's own research based on startup financial data collected from Crunchbase.com or from first-hand interaction

The dataset includes variables such as the year each startup was founded, their participation in acceleration programs, the total investment raised, and whether they have scaled outside Romania or received Western VC investment. Further, a logistic regression analysis was conducted to explore the relationships and impacts of these variables, aligning with our formulated hypotheses.

Table 2. Regression Statistics

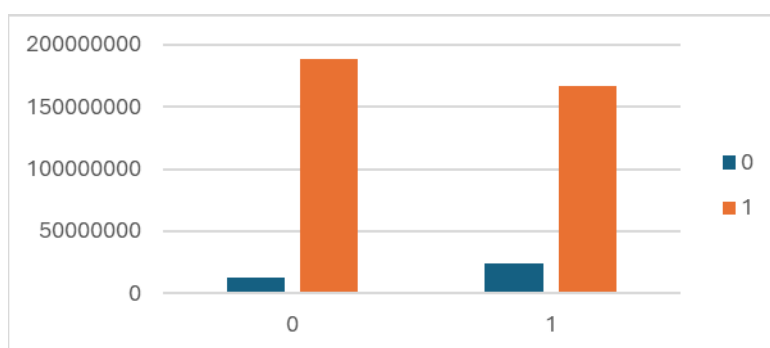
Multiple R	0.30954741
R Square	0.0958196
Adjusted R Square	0.0586615
Standard Error	0.48792336
Observations	77

Source: author's own research.

The regression yields a Multiple R value of 0.309547405, indicating a positive linear relationship between the independent variables and the likelihood of startups scaling internationally if they went through acceleration. The R Square value of 0.095819596 suggests that 9.58% of the variance in scaling success is accounted for by the model. The Standard Error 0.487923359 underscores the potential for improvement in the model's predictive accuracy.

The model with only 77 observations is somewhat limited, and additional unaccounted-for factors have significant influence over a startup's ability to scale internationally, like investment raised.

To investigate this, we analysed the investment data and prepared in Figure 2 below, a visual depiction of the distribution of total investment raised by Romanian startups in relation to their acceleration status and success in scaling internationally.

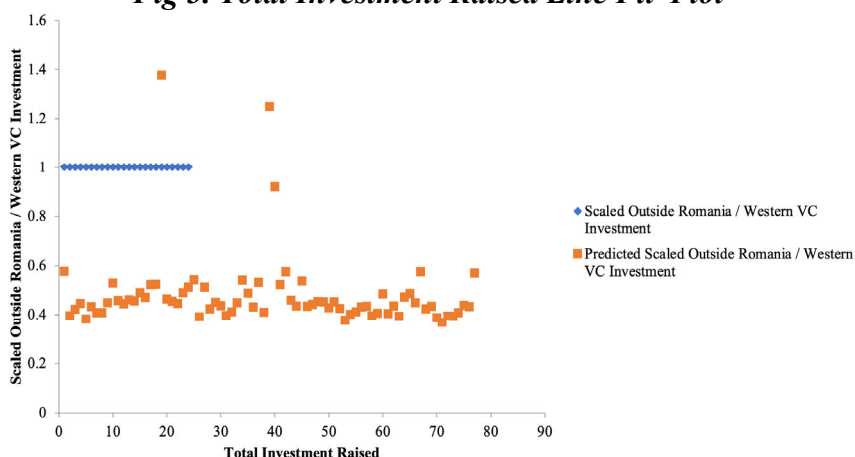
Fig 2. Distribution of total investment raised

Source: Author's own research based on startup financial data collected from Crunchbase.com or from first-hand interaction

It is evident that the bulk of investment funds have been channeled into startups that have participated in acceleration programs and/or succeeded in scaling outside of Romania. Out of the total 390 million Euro in investments poured in into the analysed startups 354 million were received by the ones who scaled internationally with 166 million raised by the ones who passed through an accelerator.

This graphical analysis supports the hypothesis that acceleration and successful scaling are closely interlinked with higher investment attraction, indicating a virtuous cycle of growth and funding within the startup ecosystem.

This is also revealed by Total Investment Raised Line Fit Plot in the Figure 3. below. This plot displays a meaningful relationship between the total investment raised and the likelihood of startups scaling internationally, as indicated by the model's predictions.

Fig 3. Total Investment Raised Line Fit Plot

Source: Author's own research based on startup financial data collected from Crunchbase.com or from first-hand interaction

This finding aligns with the hypothesis that increased financial backing plays a significant role in facilitating international scaling for startups.

The results of the ANOVA (Analysis of Variance) provide insight into the collective effect of the independent variables on the probability of startups scaling internationally.

Table 3. ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1.841727301	0.6139091	2.57870018	0.060112444
Residual	73	17.37905192	0.238069204		
Total	76	19.22077922			

Source: author's own research.

The ANOVA table reveals an F-statistic of 2.57870018 with a corresponding p-value of 0.06011244, above the threshold of 0.05, suggesting that there is some statistically significant combined effect of the included predictors on the dependent variable.

Table 4. Regression Table

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	27.3834 6187	44.850132 49	0.6105547 6	0.5433906 42	- 62.002723 28	116.76964 7	- 62.002723 28	116.76964 7
Year Founded	- 0.01333 9377	0.0222185 36	- 0.6003715 29	0.5501180 17	- 0.0576208 55	0.0309421 02	- 0.0576208 55	0.0309421 02
Accelerator	- 0.04874 222	0.1222487 13	- 0.3987135 65	0.6912681 62	- 0.2923835 54	0.1948991 13	- 0.2923835 54	0.1948991 13
Total Investment Raised	1.02278 E-08	3.89129E- 09	2.6283942 47	0.0104524 67	2.47251E- 09	1.79832E- 08	2.47251E- 09	1.79832E- 08

Source: author's own research.

The regression table reveals the individual predictor of 'Total Investment' as the most significant factor in determining a startup's success in scaling internationally. These findings suggest that financial backing plays a crucial role, more so than the mere fact of having gone through an accelerator program or the startup's age.

5. Findings

Impact on Startup Development: One of the most significant findings of this research is the role accelerators play in the developmental phase of startups, making them more attractive to both local and international investors.

Building a Network of Trust: Accelerators have been identified as key players in establishing a network of trust between startups and investors, both local and international.

Facilitating Foreign Capital Influx and International Scaling: The data and case studies analyzed indicate that startups that have gone through accelerator programs are more likely to attract foreign investment and scale internationally.

Trends in Venture Capital Funding: The analysis of venture capital funding trends in Romania reveals a positive correlation between accelerator participation and increased venture capital funding.

6. Practical Strategies and Public Policy suggestions

We analyzed Romanian public policies in relation to startup growth, and used comparative insights from EU strategies to identify potential areas for improvement (Priestley et al., 2021). Simultaneously, we outline practical strategies for Romanian startups to effectively leverage accelerator networks, informed by successful approaches observed in other European countries (Gutmann et al., 2019). This dual focus not only highlights the critical role of policy in nurturing startup ecosystems but also underscores the importance of strategic alignment and collaboration with accelerators to navigate the global market successfully.

Practical Strategies for Accelerators:

- Global networking initiatives like meetups and pitching events, or partnering external accelerators for cross-border collaborations.
- Mentorship Programs focused on international scaling strategies.
- Investment workshops adapted for international markets.
- Leverage successful alumni networks for international expansion.

Policy Recommendations:

- Startup Investment Incentives for VCs investing in early-stage startups, especially the ones that support international expansion.
- Government-Backed Co-Investment Funds
- Revising Business Angel Legislation
- Supporting International Market Access through government programs that facilitate international market access for startups
- Educational Initiatives: supporting programs focused on entrepreneurship and international business.

7. Limitations and Future Research

Despite our comprehensive analysis, this study has certain limitations, beyond the limited number of startups analysed, in the focus on Romanian startups which might not fully encapsulate the broader European startup landscape's dynamics. Future research directions include a deeper investigation into the interplay between accelerators, angel or VC investments, and government policies, that could provide a more holistic view of the startup growth trajectory.

8. Conclusion

Accelerators emerge as indispensable catalysts in the international success of Romanian startups. They significantly increase their attractiveness to international investors, particularly in CEE markets.

Public policies are instrumental in nurturing an environment conducive to innovation and entrepreneurship. Providing funding, simplifying bureaucratic processes can enhance the growth potential of startups.

International scaling and the influx of capital are influenced by the level of knowhow and investor confidence assigned for accelerated ventures

The findings of this research highlight the value of engaging with accelerators as startups, and also investors. For policymakers, the research underscores the need for supportive public policies that encourage startup growth and collaboration. The lessons drawn from the Romanian context, as well as parallels with other EU countries, provide valuable guidelines for these policies.

In conclusion, our research affirms the indispensable role of accelerators in the international success of Romanian startups. The intertwined support from accelerators, public policies, and foreign investment creates a fertile ground for startups to thrive and scale beyond local markets, marking a path for sustained growth and innovation in the Romanian startup landscape.

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