

EXPANDED ABSTRACT

Social and economic impact of the Seed Accelerators: significant factors and implications for the social innovation

Accelerators are still an emerging tool pointed to speed up the birth and growth of innovative start-ups.

The Seed Accelerator programs (SAPs) usually provide entrepreneurs with accommodation, mentoring and training during a short period of three to six months, and are believed to be useful for a more effective launch of start-ups. Due to their emergent nature, the impact and expectations of Seed Accelerators remains largely unknown. Most of them were established after 2010 and their track record is still insufficient to define trajectories and draw definitive conclusions. Notwithstanding, finding evidence on the accelerators impact and benefits at the economic, social and territorial levels, is a topic of undisputed attention.

The few studies conducted on the subject so far, suggest a straightforward and positive impact over the hosted firms but only in the elite accelerators.

The Seed Accelerator (SA) phenomenon is awaking interest amongst a broader number of social entrepreneurs and innovative start-ups developing projects with social impact, which can be hosted in social-driven accelerators, a format rapidly growing in Spain since the emergence in 2011 of SocialNest. The mounting range of innovations with social content is opening up new business opportunities for social technological start-ups, defined as new ventures that develop and deploy technology-driven solutions to address social needs in a financially sustainable manner.

The main purpose of this study is to approximately assess, for the first time, the Seed Accelerators capacity to make a social contribution in terms of employment generated by the new ventures participating in the acceleration programs. The originality lies in being pioneer in identifying the factors underlying a higher impact of these initiatives in terms of employment and other key performance indicators. This objective will be empirically fulfilled through a sample of Seed Accelerators, assembled from an online Global Seed Accelerator survey with data on SAs and the accelerated companies that have participated in Accelerator Programs. Three samples are finally built: the global sample with 116 SAs, a second sample including only the 63 SAs with at least one round of investment over 1million \$, and a third sample comprising only the 33 SAs having managed to “exit” one company for at least 1million \$.

The model of analysis is based on the Business Incubators literature due to the newness of the SAPs with practically no previous studies having assessed these initiatives yet. The dependent variable is the Average number of employees per company. The model contains 12 independent variables, most of them indicators of performance of the Seed Accelerator programs, leading to four hypotheses to be tested.

- Hypothesis 1 expects the SAs located in the USA to excel in the main performance indicators.
- Hypothesis 2 expects better prospects on the SAs hosting start-ups in a more advanced development stage and accounting for a larger number of employees per company.
- Hypothesis 3 expects the SAs with at least one company receiving investment above 1million \$ to be able to create more employment and reach better performance indicators.
- The bivariate statistical analysis is the method selected to test these three hypotheses.
- Hypothesis 4 will unveil the variables more significant for the creation of employment in the start-ups participating in SAs programs.

A GLM Gamma model has been built in order to test this last hypothesis, giving rise to two significant variables: the rounds of investment and the amount of investment per company. Consequently, and in accordance to our results, the SAs better positioned in these two investment-led variables, are the ones displaying a larger capacity to generate employment and attaining a broader social impact.

The study uncovers the key factors underlying the generation of employment by the start-ups hosted in SA programs, hence becoming helpful to those institutions and agents, public and private, promoting supportive programs to the emergence of innovative new ventures. As anticipated by Hypothesis 1, the SAs located in the USA effectively outperform the others in most indicators and their participated start-ups tend to create more employment. Moving to Hypothesis 2, the leading SAs in terms of employment per company are the ones hosting a larger number of companies and enjoying better performance ratios. However, the generation of employment in the SAs with at least one company receiving investment above 1million \$ is not bigger than in the rest, a finding leading to reject Hypothesis 3.

These findings raise several conclusions and implications for management. First, investors effectively play an outstanding role in the success of both the SAs programs and the accelerated start-ups. Therefore, in order to increase the impact of SAs in terms of generation of employment, the SAs promoters should be especially proactive in the attraction of investors, mainly Venture capitalists and invite them to close investment rounds in the hosted start-ups. Our study reveals the SAs with the highest social impact, measured in terms of new employment, are those having succeeded in closing rounds of investment and consequently, reaching a higher amount of investment per company.

As expected, the SAs located in the USA and those hosting a larger number of start-ups, also outperform the others in terms of employment. This advantageous position exhibited by the USA Accelerators most likely obeys to their longer experience and the broader support received from investors. In order to become attractive to entrepreneurs and increase their social impact, the promoters of Seed Accelerators in Spain should weave stronger ties with agents endowed with investment capacity, including family offices, ventures capitalists, large corporations or successful entrepreneurs. Otherwise, the advantages a SA can offer to the tenant firms and their potential impact over the territory get diluted.

The findings also open the door to new proposals for the policy makers.

- First, an effective selection system of projects and entrepreneurs is a first condition worth bearing in mind, not always met by the existing SAs in Spain.
- Second, it seems beneficial at the social level to promote SAs specialized in specific sectors and industries, sponsored and supported by large corporations from the region. This would result in new start-ups created more attached to the territory and ready to attain higher levels of employment generation and social impact.
- Third, in order to attract more start-ups and upgrade their chances to survive and grow, the high education offer should be flexible and rapidly adapt to the changing needs in skills and abilities by the top technological sectors.
- Finally, the ability to attract and retain in the territory a sufficient number of investors, mainly Business Angels and Venture capitalists, is essential to the emergence of new SAs and to maintain the existing ones.

Insofar limitations of the study, the relatively small size of the sample has prevented the application of more advanced statistical techniques.

Finally, a methodological limitation, difficult to overcome, lies in how to gauge the actual role played by the Accelerators in the success of participating firms. This role at the early stages is clearly crucial but the question of whether these start-ups would have been equally successful without SA intervention remains unresolved. Undoubtedly, further research is needed to address the following question: What proportion of start-ups might not have prospered without the aid of an accelerator?

For future research, we plan to build a broad sample of start-ups in Spain, making the distinction between those participating in SAs programs and the rest. The purpose would lie in finding out the specific advantages of SAs and their effectiveness in generating start-ups able to create new and highly qualified employment.

KEYWORDS: Seed-accelerator, business-incubator, performance measures, start-ups, profitability.