



**Sociological Examination of the Performance of Accelerators Centers under the Vice-Presidency for Science and Technology in Enhancing the Knowledge and Technology of the Country**

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**INTRODUCTION**

This study aims to sociologically examine the performance of accelerators under the Vice-Presidency for Science and Technology in enhancing the country's knowledge and technology. This research also intends to explore the impact of social and legal support, as well as financial backing provided by the Vice-Presidency for Science and Technology and other entrepreneurship ecosystem indicators, on the performance of these accelerator centers. The primary focus is on the impact of these factors on the performance of the acceleration centers and finally, improving the country's knowledge and technology.

Norton and Kaplan's theory (1992), which has been further developed, emphasizes the importance of using a balanced scorecard. They argue that modern conditions and the complexity of managing an organization require managers to simultaneously observe performance in several areas. According to them, the balanced scorecard allows managers to view business from four crucial perspectives and answer four fundamental questions:

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- How do customers see us? (Customer Perspective)
- In what areas must we excel? (Internal Perspective)
- Can we continue to improve and create value? (Innovation and Learning Perspective)
- How do we look to shareholders? (Financial Perspective)

These four perspectives are interconnected and collectively form the overall performance of an organization, which serves as the dependent variable in this research.

Additionally, one of the theories that can be used to determine the factors influencing the performance of accelerators is the entrepreneurship ecosystem. Eisenberg (2010), in his study "How to Start an Entrepreneurial Revolution?" examined the environment conducive to entrepreneurship in general. The entrepreneurship ecosystem refers to agents, organizations, or external institutions that influence an individual's decision to become an entrepreneur and their subsequent success or failure. In this research, indicators of support and backing, policy evaluation, financial resources, and capital have been used as independent variables based on this concept.

## **METHODOLOGY**

This research, which is a survey type, was conducted all over the country and in the form of a pre-test in the fall of 1400 and the final test in the spring of 1401. Considering the conditions of COVID-19 and the wide presence of accelerators throughout the country, an online questionnaire was designed and distributed virtually among the statistical community. The collected data were then analyzed and examined.

Given that this research seeks to sociologically examine the performance of acceleration centers under the Vice-Presidency for Science and Technology, it is necessary to consider these centers as a whole. On the other hand, evaluating the entrepreneurship ecosystem requires feedback from those employed at these centers. Therefore, the unit of analysis in this study for the performance variable is the centers. For the entrepreneurship ecosystem evaluation variable, it is one of the board members of the acceleration centers. The overall sampling method used in this survey was convenience sampling, with 110 statistical data points. Considering the lack of a similar example in the country, generalization is not necessary. It is noteworthy that the performance variable was collected based on existing information from the Vice-Presidency for Science and the entrepreneurship ecosystem evaluation variable based on the responses from the agents of the acceleration centers.

## **RESULT AND DISCUSSION**

The average age of the respondents in this study is 37.30 years, with a median of 36 years, meaning half of the agents are younger and the other half are older than 36 years. This suggests that the studied population is relatively young. The gender data



show that 11.8% of the respondents are women, and 88.2% are men, indicating a significant gender inequality among active agents in the accelerators, with less utilization of highly educated and elite women's capabilities in this sector. Additionally, a considerable majority of the active respondents in accelerators, about 70.6%, are based in Tehran province, followed by 4.4% in Qom province. This demonstrates an unequal and asymmetric distribution of accelerators across the provinces, which could pose numerous challenges for balanced development in the future. This shows that the policies of the Presidential Office of Science and Technology have not been able to promote more development in underdeveloped regions and, as a result, exacerbate inequality and heterogeneity in the country's development.

The distribution of the dependent variable shows that 11.8% of accelerators are at a very low level, 29.4% at a low level, 42.6% at a medium level, 14.7% at a high level, and 1.5% at a very high level. The mean and median of the data on a scale of zero to ten are 4.31 and 4.21, respectively, with a standard deviation of 1.88, indicating a moderate level of dispersion among accelerators.

To test the hypotheses, considering the significance level of the existing correlations, it can be said that among all these factors, only the "ambiguity" in the evaluation of support and backing in business has a somewhat weak inverse relationship ( $-0.260$ ) with performance. This means that increased ambiguity among agents regarding business processes leads to a decline in accelerator performance. Consequently, there is a relationship between the evaluation of support by the agents of acceleration centers and the performance of these centers.

## CONCLUSION

The results of this study show that the respondents have a rather pessimistic view of the current state regarding three dimensions of the entrepreneurship ecosystem: policy, financial resources, and support, based on the factor analysis. The relatively low variance in the dimensions of the entrepreneurship ecosystem evaluation variable and its factors indicates a shared perspective among the respondents. This common interpretation indicates a mismatch in the conditions faced by agents and accelerators. One important aspect to consider is the distinction between the real entrepreneurship ecosystem in the country and the agents' evaluation of it. Although these two aspects are not completely congruent, it is clear that a common understanding of factors is likely to arise from actual ecosystem conditions.

So the basic step in current policies seems to be inherently flawed. The main construct of these policies is to provide extensive, mainly financial, support and backing for new businesses, knowledge-based companies, or knowledge-based centers. This greenhouse nurturing has not led to better or stronger performance but rather encouraged the registration of numerous superficial accelerators. This study indicates

that the policies and laws applied to accelerators are overly rigid, continuous, and outdated, rarely reviewed or revised to meet the country's needs and the approach of creative destruction. However, new and unprecedented opportunities lie ahead for the country and the accelerators. Therefore, it is necessary to take full advantage of the many opportunities available.

**Keywords:** Accelerator; Entrepreneurship Ecosystem; Key Performance Indicator; Performance Indicator.

**JEL Classification:** O.

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