



Research Paper

**Investigating the Impact of Entrepreneurial
Orientation on the External Financing Method in Iranian
Start-up Companies¹**

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INTRODUCTION

To fund their operations and growth plans, companies can rely on internal resources or external sources such as debt or equity. Capital structure refers to the combination of debt and equity financing that a business uses to meet its financial needs. A company's capital structure plays a critical role in its financial health and operational effectiveness. Effective management of the capital structure and selecting the optimal mix not only minimizes financing costs but also enhances financial stability, risk management, ownership control, and overall strategy—key elements for

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the long-term success of a company. As a result, numerous studies have explored the factors influencing the capital structure of companies. However, two major gaps exist in this body of research. First, the role of a company's strategy as a variable has received little attention. Second, there has been limited focus on start-up companies. This study investigates the effect of the entrepreneurial orientation of start-up managers—a set of characteristics including innovation, risk-taking, and leadership—alongside other variables related to the company and its founders, on the methods of securing external financing.

MATERIALS AND METHODS

The research model utilized in this study is adapted from the work of Vaznyte and Andries (2019), with necessary modifications to align with the specific sample under investigation and address the limitations of the current research. The model is represented by equations (1) and (2):

$$\text{Share}_i = \beta_1 + \beta_2 \text{EO}_i + \beta_3 \text{PIU}_i + \beta_4 (\text{EO}_i * \text{PIU}_i) + \beta_5 \text{Prof}_i + \beta_6 (\text{EO}_i * \text{Prof}_i) + \beta_7 \text{LAge}_i + \beta_8 \text{LSize}_i + \beta_9 \text{LR\&D}_i + \beta_{10} \text{LSal}_i + \beta_{11} \text{LEx}_i + \beta_{12} \text{LEdu}_i + \beta_{13} \text{BP}_i + \beta_{14} \text{Own}_i + u_i \quad (1)$$

$$\text{Db} = \beta_1 + \beta_2 \text{EO}_i + \beta_3 \text{PIU}_i + \beta_4 (\text{EO}_i * \text{PIU}_i) + \beta_5 \text{Prof}_i + \beta_6 (\text{EO}_i * \text{Prof}_i) + \beta_7 \text{LAge}_i + \beta_8 \text{LSize}_i + \beta_9 \text{LR\&D}_i + \beta_{10} \text{LSal}_i + \beta_{11} \text{LEx}_i + \beta_{12} \text{LEdu}_i + \beta_{13} \text{BP}_i + \beta_{14} \text{Own}_i + u_i \quad (2)$$

Where:

Share: Proportion of equity financing as part of the company's total financing needs.

Db: Proportion of debt financing as part of the company's total financing needs.

EO: Entrepreneurial orientation of company managers.

PIU: Perceived industry uncertainty as evaluated by company managers.

Prof: Profitability status of the company.

LAge: Logarithm of the company's age.

LSize: Logarithm of the company's size.

LSal: Logarithm of the company's sales.

LRD: Logarithm of the company's research and development (R&D) expenses.

LEx: Logarithm of the experience of company managers.

LEdu: Logarithm of the educational level of company managers.

BP: Dummy variable indicating the presence of a business plan.

Own: Dummy variable indicating external ownership.



To estimate the research model, the Tobit regression model is employed due to the limited range of the dependent variable, which lies between 0 and 1. The Tobit regression is a linear regression model specifically designed for continuous censored dependent variables. Censoring occurs when the dependent variable is observed only within a restricted range of values, which may result from the study design or the measurement method used. Tobin (1958) introduced the Tobit model as a solution to the challenges faced when applying the ordinary least squares (OLS) method to censored data. The statistical population for this study consisted of start-up companies located in Tehran and Tabriz. Using the Cochran method, a random sample of 382 companies was selected, and an equal number of questionnaires were distributed among start-ups situated in growth centers and science and technology parks. Out of the distributed questionnaires, only 212 were returned. Due to non-responses and missing data regarding the required capital and its provision method, only 110 questionnaires were deemed suitable for analysis.

RESULTS AND DISCUSSION

Table 1 presents the results of the Tobit model for debt and equity financing. The initial column on both sides of the table shows regression estimates without including the entrepreneurial orientation (EO) variable. The subsequent columns incorporate EO as an explanatory variable. The results in the second and third columns indicate that EO negatively impacts the debt financing ratio, assuming other factors remain constant. Unexpectedly, EO also has a negative and significant effect on the equity financing ratio. Furthermore, the positive and significant moderating effect of perceived industry uncertainty on the relationship between EO and both debt and equity financing is evident. This suggests that as perceived risk increases, the adverse impact of EO on these financing types diminishes. In other words, greater risk awareness reduces the reluctance of managers, driven by their entrepreneurial orientation, to pursue debt and equity financing. In column 3, the profit status variable and its interaction with EO are added to the model. The profit status variable shows a negative but statistically insignificant effect on external financing, while its interaction with EO is positive but also lacks statistical significance.

The size variable, however, has a positive and statistically significant effect on debt financing and a positive but insignificant effect on equity financing. Larger companies tend to attract more external capital due to less centralized decision-making, increased market presence, competitive power, and greater project feasibility, which

appeal to banks and credit institutions. Conversely, the sales variable exhibits a negative and statistically significant effect on debt financing but no significant effect on equity financing. This aligns with expectations, as high sales and profitability often lead companies to rely on internal capital sources, reducing the need for external financing. The research and development (R&D) expenditure variable shows no significant effect on debt or equity financing when strategic and contingency variables are considered. This implies that R&D expenses reflect strategic priorities rather than directly influencing financing choices. The presence of a business plan does not significantly affect debt financing but has a positive effect on equity financing. Lastly, variables such as education, experience, and external ownership do not have significant effects on capital structure decisions.

Table 1. Model estimates results

Model	ratio financing debt :variable Dependent (Db)			ratio financing equity :variable Dependent (Share)		
	1	2	3	1	2	3
constant	0/0340 0/0635	0/3376* 0/0699	0/3153* 0/0705	0/1869 0/1192	0/2725* 0/1039	0/2723** 0/1065
LExp	-0/0042 0/0090	-0/0032 0/0067	-0/0041 0/0066	-0/0096 0/0169	-0/0094 0/0099	-0/0093 0/0100
LEdu	0/0160 0/0304	0/0082 0/0232	0/0019 0/0232	0/0081 0/0571	0/0344 0/0345	0/0310 0/0351
LRD	-0/0007 0/0008	0/0000 0/0008	0/0004 0/0008	0/0046* 0/0015	0/0009 0/0012	0/0011 0/0013
LSale	-0/0114* 0/0015	-0/0083* 0/0012	-0/0077* 0/0012	-0/0002 0/0029	0/0005 0/0019	0/0006 0/0019
LSize	0/3158* 0/0097	0/0292* 0/0072	0/0318* 0/0072	0/0144 0/0183	0/0074 0/0108	0/0079 0/0110
LAge	0/1708* 0/0104	0/1526* 0/0126	0/1541* 0/0124	-0/1357* 0/0197	-0/0522* 0/0187	-0/0524* 0/0188
Own	-0/0033 0/0151	-0/0000 0/0119	0/0031 0/0121	0/0291 0/0283	-0/0084 0/0178	-0/0087 0/0182
BP	-0/0037 0/0157	-0/0110 0/0119	-0/0078 0/0120	0/0479 0/0294	0/0561 0/0178	0/0580* 0/0181
EO	-	-0/0128* 0/0020	-0/0126* 0/0020	-	-0/0135* 0/0030	-0/0137* 0/0030



Model	ratio financing debt :variable Dependent (Db)			ratio financing equity :variable Dependent (Share)		
	1	2	3	1	2	3
PIU	-	-0/0210* 0/0027	-0/0200* 0/0027	-	-0/0223* 0/0040	-0/0221* 0/0041
EO*PIU	-	0/0007* 0/0000	0/0006* 0/0000	-	0/0010* 0/0001	0/0010* 0/0001
Prof	-	-	-0/0271 0/0167	-	-	-0/0130 0/0252
EO*Prof	-	-	0/0005 0/0005	-	-	0/0004 0/0008
N	110	110	110	110	110	110
Log pseudolike lihood	141/8419	174/2231	176/15	72/5200	130/7100	130/8472
F prob	205/02 0/0000	269/78 0/0000	273/63 0/0000	59/71 0/0000	176/09 0/0000	176/36 0/0000

CONCLUSION

The findings of this research provide valuable insights for managers and policymakers regarding the factors influencing companies' financing decisions. These insights can aid in formulating effective strategies to improve access to appropriate financial resources for businesses. For example, if the government aims to offer debt financing facilities to companies, it should design these facilities to address the unique needs and preferences of small and young enterprises. Similarly, when developing financing policies for startups—whether through debt or equity mechanisms—consideration should be given to the fact that companies with a higher entrepreneurial orientation may demonstrate less interest in these traditional forms of financing. The reluctance towards debt financing largely arises from the potential financial burden it places on founders in the event of bankruptcy. Meanwhile, aversion to equity financing stems from founders' reluctance to involve external stakeholders in decision-making processes. In this context, exploring alternative financing options that mitigate the limitations of debt and equity financing is crucial. Crowdfunding has emerged as a promising alternative for startups and small businesses, offering distinct advantages over traditional financing methods. Through crowdfunding platforms, businesses can raise capital without facing the stringent requirements commonly associated with bank loans or equity investments. This approach enables companies to access a broad pool

of investors, securing significant capital contributions from multiple sources while retaining ownership control. Moreover, crowdfunding offers flexibility through various models—such as reward-based, equity-based, and grant-based funding—allowing businesses to select the structure that best suits their specific needs and circumstances. By leveraging such innovative financing solutions, startups and small businesses can overcome financial constraints and pursue sustainable growth.

Keywords: External Financing, Entrepreneurial Orientation, Capital Structure, Start-Up, Tobit Model.

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