

## **Startups in Russia: ownership vs. performance**

Since 2006 Russian government allocated more than 500 billions rubles to different projects for innovation development, including establishment of development institutes, building of Technoparks, direct funding of innovative companies. Indeed, startups are proven to be significant for economic growth of the country: there exist a number of studies analysing the relationship between different aspects of entrepreneurship and economic growth (e.g. Wennekers and Thurik (1999), Wong, Ho, and Autio (2005), Stel, Carree, and Thurik (2005), Acs and Szerb (2007), Valliere and Peterson (2009), Aparicio, Urbano, and Audretsch (2016), Urbano and Aparicio (2016)).

However, recent studies such as Shane (2009), Guzman and Stern (2016) suggest to focus not just on the number of startups in the economy, but rather on the quality of entrepreneurship which can be measured on the basis of different startups characteristics in order to assess the real state of entrepreneurship and its contribution to economic growth.

While most of empirical literature on Russian entrepreneurship is focused on the analysis of institutional factors as the ones influencing new and innovative companies' performance, in this paper we focus on the ownership characteristics of startups as factors supporting the firm performance in Russia.

We assume that different sources of support such as government development institutes, government affiliated companies, private equity and venture capital funds, family members and managers, which are reflected in the ownership structure of a startup, can provide startups not only with financing, but also with necessary expertise, access to infrastructure, supply of the human resources, help in overcoming administrative barriers and diversification of ideas.

We focus on ownership characteristics of startups due to two main reasons. First, participation in the ownership structure allows a person or an organisation to participate in firm activities and development of a startup strategy. Second, a significant difference between small and privately owned firms and big public corporations concerns the level of information opacity. Therefore, the pecking order hypothesis for high-technology companies is different: the primary sources of startup financing is expected to be owners' resources; external equity is predicted to be a secondary choice; and external debt is used as the last option for startup financing (Mann and Sanyal (2010), Minola, Cassia, and Criaco (2013), Mac an Bhaird (2010)). Therefore, our interest concerns the analysis of equity financing of a startup rather than debt as a main source of its support.

Extensive academic literature on the factors influencing the quality of entrepreneurship lead us to the main hypothesis of our research: support of a startup provided by different kinds of institutional investors (such as government development institutes, government affiliated companies, PE and VC funds, family members and managers) has a positive contribution to the startup performance.

Our final sample contains information about 177 startups during the period 2010-2016, which are Skolkovo participants and are residents of Nuclear and Space clusters (due

to data availability we have an unbalanced panel with 449 observations).

As a measure of startup performance we use two proxies: Return on assets (ROA) and Profitability, as a robustness check we also use Revenue growth as a dependent variable.

We use random effects regression models with heteroskedasticity-consistent standard errors. To account for potential endogeneity of ownership structure characteristics, we lagged corresponding independent variables by 1 year. Moreover, all regression specifications were checked for multicollinearity in order to confirm their statistical power.

Our results did not confirm our hypothesis on the positive relationship between share of government-related organisations in ownership and firm performance proxied by ROA, profitability and revenue growth. This can be explained by orientation of such organisations towards investments in strategically important startups rather than in companies which provide high returns on investments. Additionally, we should take into considerations specific features inherent by government institutes and identified by research of Alperovych, Groh, and Quas (2016): focus on underdeveloped regions, exposure to political interference and lack of competences of managers. Such features can prevent government development institutes from competing with private venture capital.

In line with previous studies we found evidence of a positive contribution of venture capital to future firm profitability in Russia especially for startups in Space cluster. However, the family support did not prove to have influence on startup performance.

Moreover, we confirm a positive significant relationship between CEO share and startup ROA. Partially such result can be explained by the increase of private motivation of the manager in case he/she is also an owner. Moreover, higher share of ownership give CEO more control over a startup, which can be beneficial as it reduces time for decision-making.

We use the results from the study of Russian small and medium technological firms to discuss theoretic and practical implications for startups on emerging markets. In particular, the findings of this paper can provide strategic management insights for startup entrepreneurs for improving and adapting ownership structure of existing startups or choosing optimal ownership structure at the time of startup creation in order to enhance further performance of the firms.