



BACKGROUND NOTE

Determinants of Entrepreneurship: A Selective Literature Review

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To identify the driving factors of entrepreneurial activities, studies have looked into the wide and different sets of variables. Verheul et al. (2002) introduced the eclectic theory to frame the various determinants for entrepreneurship. Their framework distinguishes supply-side and demand-side determinants for entrepreneurship. The former elements are demographic composition, the resources and abilities of individuals and their attitudes towards entrepreneurship, while the latter elements are influenced by the new technologies and consumer demands. Wennekers et al. (2002) observed the influences of aggregate conditions, including technology and the level of development, economic, demographic, cultural, and institutional conditions. OECD (2009) defines six groups of factors, including regulatory framework, market conditions, access to finance, creation and diffusion of knowledge, entrepreneurial capabilities, and entrepreneurial culture. Roman, Bilan, and Ciumas (2018) categorize various factors into four: macroeconomic, demographic, and individual and business environments, which show that macroeconomic and demographic variables are most significant determinants.

Although many studies have been trying to identify the drivers for entrepreneurial activities and thus provide the insights for policy makers on how to stimulate them for economic growth, no consensus has been achieved on the positive and negative factors for entrepreneurial activities (Arin et al. 2015; Rusu and Roman 2017). Wennekers et al. (2002) inquired the conditions for entrepreneurship in a macro perspective by using case studies from the history, and found the aggregate conditions such as demography, culture, institutions, level of development, and technology. Shane (2008) also pointed out that the impact of gross domestic product (GDP) variation is different, depending on the degree of country development. Roman et al. (2018) showed that macroeconomic and demographic variables are the most significant determinants for entrepreneurship, using 18 European Union member countries panel data. On the other hand, Valdez et al. (2013) argued that normative and cultural-cognitive institutions have stronger explanatory power than the regulative institutions or per capita GDP, using wider and longer panel data expanding across Americas, Europe, Asia, and Oceania. Arin et al. (2015) concluded by comparing different choices of covariates that the general macroeconomic stability variables, such as GDP per capita, unemployment, the marginal tax rate, and the volatility of inflation rate, are more important than other elements.

Another variable of interest is institutional settings for entrepreneurship. Freytag et al. (2007) tested the relationship between institutional variables and cultural variations across countries by using the panel data from the European Union and the United States. Their result showed that cultural and institutional variables seem to explain the preference for entrepreneurship, but does not explain actual entrepreneurship activities. On the contrary, Bosma and Schutjens (2011) examined the impact of various national and regional conditions in the European regional level panel data. They found that institutional factors, along with economic and demographic factors, have a significant impact on the variations of entrepreneurial attitude and activity. Autio and Fu (2015) investigate the influence of economic and political institutions on both formal and informal entrepreneurship by exploiting the panel data for 18 countries in the Asia and Pacific region. Their study also showed that the quality of institutions has a

substantial influence on both types of the entrepreneurship. Nikolaev et al. (2018) also used a world sample of 73 different countries, and suggested that institutional variables associated with the principles of economic freedom are most robustly correlated with entrepreneurship.

Other strand of studies inquired the impact of psychological elements on the entrepreneurial activities. Vidal-Sune et al. (2013) aimed to identify the factors that affect entrepreneurship by influencing the perceptions of individuals. Their study used Spanish regional panel data and showed that the perception of abilities positively and significantly correlates with the perception of the opportunities of entrepreneurship, and thus the entrepreneurial intention. Grilo and Irigoyen (2006) showed that the perception of lack of available financial support does not have explanatory power over the latent entrepreneurship. However, concerning the impact of the ease of access to finance itself, Black et al. (2002) households' borrowing constraint does not deter the small business formation in the macro level in the United States, while Klapper et al. (2006) argued it has a significant influence on the business entry and business density rate along with other elements, such as the level of economic development, the quality of the legal and regulatory environment, and the importance of the informal sector. Rusu et al. (2017) also argued that access to finance is one of the main macroeconomic determinants for entrepreneurship.

By reviewing the literature, Bjornskov and Foss (2016) argued that the lack of consensus in the determinants of entrepreneurship can be explained by sample limitation, omitted variable biases, causality issues, and response heterogeneity. Arin et al. (2015) also pointed out that the model uncertainty of empirical studies could be the cause of the confronting results on the determinants of entrepreneurship. They used Bayesian method to evaluate and compare the different models to reduce the model uncertainty. Also, Schlaegel and Koenig (2014) meta-analytically tested 98 studies to examine the empirical fit of the competing theories to cope with the growing concern about the inconclusive empirical findings of the impacts of the determinants. Their study suggested that the integrated model provides additional explanatory power and a fuller understanding of the process through which entrepreneurial intent develops. With the same concern over the model uncertainty out of the researchers' variable selections, Graham and Bonner (2021) adopted machine learning algorithm in the model specification to reduce the uncertainty and provided the way to identify the most dominant variables.

To sum up, despite the increasing research interests in the drivers of entrepreneurial activities, little consensus is achieved over which social, economic, and individual factors to be examined. Behind the absence of common understanding over the elements in interest and their influence on entrepreneurship, earlier studies suffer from weak theoretical grounds for choice of variables, which left considerable uncertainty to their model. The recent studies tackle this issue by comparing the selections of variables using statistical techniques or by strengthening theoretical grounds by focusing on the individuals' choice to start entrepreneurial activities. And yet, further efforts are still being awaited on the same front.

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