How to analyse determinants of entrepreneurship and self-employment at the country level? A methodological contribution
Ondřej Dvouletý

Department of Entrepreneurship, Faculty of Business Administration, University of Economics in Prague, W. Churchill Sq. 1938/4, 130 67 Prague 3, Czech Republic

ARTICLE INFO

JEL codes:
M2
M1
L260

Keywords:
Measuring entrepreneurship
Comparability
Entrepreneurial activity
Self-employment rate
Established business ownership rate
Total early-stage entrepreneurial activity
Regression analysis

ABSTRACT

The aim of the article was to empirically support a hypothesis, that no matter what measure of entrepreneurship or self-employment we choose at the country level, the determinants indicate the same direction of impact. Methodologically, four measures of entrepreneurial and self-employment activity were utilized as dependent variables in regression models. Entrepreneurial activity in the article was operationalized by Eurostat and OECD self-employment rates, and by Global Entrepreneurship Monitor rates of established business ownership rate and total early-stage entrepreneurial activity (TEA). Based on the obtained results, the determinants of entrepreneurship and self-employment influence all four presented measures in the same direction.

1. Introduction

Increasing data availability allows us to conduct empirical studies in the field of entrepreneurship more frequently. As Koellinger and Roy Thurik (2012) together with Davidsson and Wiklund (2007) note, there is a large number of published studies with a focus on different levels of analysis, such as micro (firms or companies), meso (regions or industries) and macro (countries or cross-countries). Each of these above-mentioned analyses require, besides a theoretical background, a proper empirical and methodological strategy. Collected empirical evidence, allows us to seek the most suitable solutions, when it comes to the selection of data sources, variables and scientific methods. Such a debate might improve the quality of future studies in the fields of entrepreneurship and self-employment (e. g. Apergis and Payne, 2016; Stenholm et al., 2013; Iversen et al., 2007; Congregado, 2007 or Coviello and Jones, 2004).

Presented study aims to extend the empirical knowledge on the measurement of entrepreneurship at the country level and its determinants. The motivation for conducting this study lies in a large number of recently published studies focused on the cross-country determinants of entrepreneurial activity and self-employment (e. g. Nikolaev et al., 2018; Rusu and Roman, 2017; Roman et al., in press; Dempster and Isaacs, 2017; Dvouletý, 2017a; Niculăe et al., 2017; Canever and Menezes, 2017; Hall et al., 2016; Hoogendoorn et al., 2016; Carbonara et al., 2016, Calá et al., 2015 or Valdez and Richardson, 2013) which are often based on different measures. First, the question is whether the various studies, based on different operationalisations of entrepreneurial activity and self-employment indicate the same impact of the cross-country determinants or not. If the studies, aiming to explore drivers of entrepreneurship and self-employment, deliver contradictory conclusions on the impact of economic and institutional variables, then it is very difficult to form any policy recommendations, i. e. aiming to change the business environment (Szerb et al., 2013;
Second, from an empirical experience (e. g. Baptista and Thurik, 2007 or Grilo and Thurik, 2004) it is well known, that
determinants of entrepreneurship and self-employment might change over the time and across regions. Therefore if we want to
compare the different measures of entrepreneurship and self-employment methodologically, then we need to work with the same
group of countries and follow it for the exact same time period. This kind of empirical exercises, aiming for a harmonization are still
very rare in entrepreneurship research, despite the fact that these studies are very important for the whole community.

The debate on the measurement of entrepreneurship and self-employment at the country level is not novel (see e. g. Henrekson
and Sanandaji, 2014; Acs et al., 2014; Marcotte, 2013; Rogoff, 2012; Acs et al., 2008, Iversen et al., 2007 or Congregado, 2007)
however, this article aims to push this discussion further on, by an empirical assessment of the differences across various indicators on
an example of a harmonized sample. Particularly, the article exploits a dataset of eleven countries over the period 2001–2015.
Methodologically, four measures of entrepreneurial and self-employment activity are utilized as dependent variables, and for each of
the dependent variables, a comparative regression model is estimated with a set of country-level determinants. Entrepreneurial
Entrepreneurship Monitor (2017) rates of established business ownership rate and total early-stage entrepreneurial activity (TEA).
The main aim of the article is to empirically support a hypothesis, that no matter what measure of entrepreneurship or self-employment we
choose at the country level, the determinants indicate the same direction of impact, because the country-level determinants affect the most
of entrepreneurs and self-employed individuals in the economy.

The structure of the article is conventional. The following part is dedicated to the discussion on the measuring country level of
entrepreneurship and self-employment. Section three introduces the collected dataset and variables, and it presents the empirical
strategy and obtained econometric estimates. The final section concludes the article and it suggests avenues for future research.

2. Measuring entrepreneurship and self-employment rates at the country level

According to Marcotte (2013), Acs et al. (2008), Iversen et al. (2007) and Congregado (2007), the measurement of en-
trepreneurial and self-employment activity at the country and cross-country levels is still an under-represented area of research,
despite the need to have reliable data for conducting empirical studies. Empirical scholars operationalize entrepreneurship/self-
employment differently. According to Stenholm et al. (2013) there two approaches how to measure country level of entrepreneurial
activity. The first one relies on self-reports of randomly selected individuals (surveys) and the second one is based on the records
obtained from national business registries. Iversen et al. (2007) have tried to compare the historical perception of entrepreneur with
the particular measures of entrepreneurship and self-employment in the economy. A very comprehensive overview of existing
measures was recently written by Marcotte (2013).

One common approach is to express entrepreneurial and self-employment activity as a ratio of the population of registered
businesses/number of self-employed (e. g. Koellinger and Roy Thurik, 2012 or Dvouletý and Mareš, 2016a, 2016b). Frequently is also
used the variable, representing the rate of newly established/registered enterprises (e. g. Dempster and Isaacs, 2017; Dvouletý,
2017b; Nicolae et al., 2017; Carbonara et al., 2016 or Fritsch et al., 2015). Nevertheless, Congregado (2007) together with Van Stel
(2005) argue, that methodology of national statistical offices differ, and therefore it is better to use adjusted harmonized data for instance from Eurostat or OECD databases. Inspired by this idea, Van Stel (2005), with his colleagues created EIM Compendia
database, where they adjusted and harmonized American and European data obtained from OECD. Unfortunately, this dataset is
limited by available years and countries (e. g. Hoogendoorn et al., 2016). Other scholars (e. g. Lado-Sestayo et al., 2017; Ferreira
et al., 2017; Acs et al., 2008, Reynolds et al., 2005 or Sternberg and Wennekers, 2005) work with the data obtained from the Global
Entrepreneurship Monitor surveys, particularly with the rates of established business ownership rate, total early-stage
entrepreneurial activity (TEA), high-growth activity or TEA innovation activity. Additionally, Kaufman index of entrepreneurial activity
for the US should be mentioned (Hafer, 2013).

Another approach, how to solve, this measurement issue, is to work with more complex indices aiming to capture the whole
tenrepreneurial ecosystem, such as Global Entrepreneurship Index, former Global Entrepreneurship and Development Index1 (Acs
and Szerb, 2009; Acs et al., 2014).

At the same time, we need to mention the fact, that there are indicators measuring “general level of entrepreneurship and self-
employment” (overall rates) and those, aiming to monitor just the “specific rates” (e. g. high-growth enterprises, necessity/oppor-
tunity driven entrepreneurship). However, from the economic and institutionalist’s perspective, the macroeconomic environment
influence the most of the entities present in the economy (e. g. Davidsson and Wiklund, 2007, Van Metre and Hall, 2011 or Chuahand
and Das, 2017).

However, the variety of utilized indicators does not reflect their comparability in empirical practice. Generally, a little is known
about the differences in various measures of activity and correlations between them. Marcotte (2013) was one of the first scholars
who employed bivariate correlation analysis and compared different measures of entrepreneurial activity. She has found highly
positive and significant correlations between registered business activity (obtained from World Bank) and data from Global En-
trepreneurship Monitor. Her observation was later supported by Henrekson and Sanandaji (2014). Nevertheless, Marcotte (2013)
adopts, that robustness of her findings is limited by the sample size and she encourages other scholars to validate her results when
more observations are available. Presented studies were limited by period till 2010. Positive correlations between different “stock

1 Please note that the data from Global Entrepreneurship Index are available for period of years 2006–2018, for details see Acs et al. (2017) and for the most recent
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات