



Capturing Statistically the “Intermediate Zone” Between the Employee and Employer Firm Owner

Jerzy Cieřlik¹

Kozminski University, Warsaw, Poland

Abstract. The number of solo self-employed is increasing in many Western economies yet available government statistical data sources are not always well designed to assess the magnitude of this phenomenon and its modalities. This paper provides an overview of the most relevant public data sources, and discusses the pros and cons of each data source regarding the available data on solo self-employment and its various segments (e.g., freelancers, hybrid entrepreneurs, dependent entrepreneurs). We conclude that, at present, labour force surveys are superior to business establishments registers when it comes to researching solo self-employment. However, using data from the Polish statistical office, we also demonstrate the value added of combining both types of data sources.

Keywords: solo self-employed, freelancers, business ownership statistics, labour force surveys.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

1. Introduction

The significant and growing share of solo entrepreneurs, broadly defined as those conducting business activity without employees, among the economically active population attracts increasing attention from policy makers and the research community. According to Rapelli (2012), in the European Union in 2011, solo self-employed accounted for 71% of all self-employed (i.e. those with and without personnel). In such countries like the United States, Canada or Germany the latter share increased by 10% points between 1992 and 2008 (Van Stel et al., 2014). However, the lack of government statistical data makes it difficult to assess the magnitude of such phenomenon and its modalities.

To address this issue we have looked into publicly available statistical data compiled at the international level in the European Union and OECD countries. For more detailed analysis we have investigated Polish government statistics. The main objective was to assess whether it is possible to estimate the size of the

1. Contact Details: Professor Jerzy Cieřlik - Director, Center for Entrepreneurship, Jagiellonska 59, 03-301 Warsaw, Poland. E-mail: cieslik@kozminski.edu.pl Phone: +48502030030

“intermediate zone” between the employee and employer firm owner and to make a further breakdown into various sub-categories of such an “intermediate zone”. As a first step, we have looked into the possibility to distinguish between employers and those conducting business activity without employees (solo self-employed). Next, we have looked into whether it is possible to find data allowing to identify specific segments of the “intermediate zone”, like those in specific professional occupations (freelancers), hybrid and dependent entrepreneurs. We conclude with recommendations on further use of the official statistical data for research on solo self-employed.

2. Separating Solo Self-Employed from Other Forms of Economic Activity

For separating and assessing the size of the solo self-employed group one may look into two sources of official statistical data available in developed OECD countries: business statistics and labour force surveys. In the business statistics the unit of analysis is the business establishment. The second source of data is the labour force survey (LFS) where the unit of analysis is the household/individual. Although in both sources significant efforts have been made by OECD and European Commission (Eurostat) to ensure comparability, differences still exist among countries as to the methodologies used and the data collection process.

2.1. Business Statistics

Two approaches in capturing solo self-employed by government statistical authorities can be distinguished (Table 1). The U.S. tradition was to define as business owners only those who employ personnel. In addition, while counting the number of persons engaged only those with employment contracts were included and not the business owners. The concept of a ‘job’ in the classic question ‘Who creates jobs?’ raised by David Birch in the 1970s clearly related to those engaged on the basis of employment contracts. The incidences of non-employer firms were viewed as forms of contingent or flexible work arrangements (Polivka and Nardone, 1989).

Only recently, by merging various databases it was possible to include non-employer establishments in the U.S. statistics (Davis et al., 2009). This reflected a growing consensus among U.S. researchers that “.....*we need to understand why fewer and fewer American entrepreneurs are starting businesses with employees. Without knowing the answer to that question, just interpreting the data on small business will be difficult*” (Shane, 2012).

On the other hand, within the national statistical systems in European countries there was a tradition of covering both employer and non-employer entities and counting both employees and business owners defined jointly as

persons employed². There are significant differences among countries as to the coverage of company data in the business registers. Over the years Eurostat - the statistical arm of the European Union - introduced a set of uniform standards with the aim to ensure international comparability of statistics provided by the national authorities.

A significant step in the harmonization of business statistics in the European Union has been taken in 2008, reflected in the recast of existing legislation (European Parliament, 2008). Data coverage has been broadened as part of the Entrepreneurship Indicators Programme (EIP) - a joint initiative of OECD and Eurostat aimed at evaluation of entrepreneurial activity across nations with the use of a uniform range of indicators (OECD, 2009). This also resulted in the broader geographic coverage, by adding non-European developed countries and few developing ones (Mexico, Turkey).

Initially the SMEs statistics produced by Eurostat did not allow one to separate solo self-employed from employers as both were covered within the broader microenterprise category. Later on, a new statistical subsystem was added – the Business Demography Statistics, which facilitated breakdown of microenterprises into three sub-categories: so called zero class (solo), those with 1-4 employees, and 5-9 employees. The latter data became available for many EU countries since 2008.

However, the inclusion of solo self-employed was not possible in all EIP indicators. Intermediate solutions had to be adopted in relation to certain entrepreneurship indicators introduced by OECD/Eurostat. With respect to measuring the impact of high-growth firms (gazelles) the traditional American approach prevailed (only employer firms and employees covered) whereas in the case of indicators measuring the survival, creation and destruction of employment, only employer firms were taken into account. This was justified with the fact that the motives for registering a business without hiring employees did not necessarily reflect the desire to start a business, which could distort the observed trends.

Table 1 demonstrates that researching the solo self-employment phenomenon on the basis of business establishment statistics is often difficult, since only the data sources mentioned in the bottom right quadrant facilitate proper investigation of one-person businesses.

2. Although employees and persons employed are clearly two distinct statistical categories, in public debates, media and unfortunately also in scientific literature and official documents of government agencies, these terms are being used interchangeably which causes confusion and misinterpretation of data.

Table 1: Categories of business entities and forms of employment included in the statistics and research on employment in the enterprise sector

Categories of persons engaged	Categories of business establishments	
	Employer firms only	Employer and solo entities
Employees only	A.1. Statistics and research carried out in the U.S. A.2. Entrepreneurship Indicators Programme (EIP) – measuring impact of high-growth firms and gazelles (OECD/Eurostat)	
Employees and business owners	C.1. EIP – survival rates C.2. EIP – job creation and destruction	D.1. New U.S. data combining employer and non-employer entities D.2. Eurostat – SMEs statistics by size classes D.3. Business demography statistics. Microenterprises by size classes (OECD/Eurostat)

Source: Own presentation.

2.2. Labour Force Statistics

In the labour force surveys (LFS), regularly administered by the national statistical authorities, the unit of analysis is the household/individual. Here the work on uniform methods of compiling international statistics in developed OECD countries dates back to the 1960s with broader geographic coverage dated from 1995. It is worth mentioning that within the EU, new member states have started submitting relevant data since 2000, before formal EU accession in 2004. Data on self-employed subdivided into employers and so called own account workers (alternative term of solo self-employed) are available for some countries since 1983 with broader country coverage starting from the late 1990s.

Although great effort has been made by OECD and Eurostat to achieve uniformity of LFS data, there are still methodological differences among countries which make comparative analysis difficult. For instance, owner-managers of incorporated businesses (OMIBs) are counted as self-employed in some countries but as employees in others (OECD, 2000). This and other issues have been addressed by the EIM/Panteia research team while developing the so-called COMPENDIA database. Specific measures and techniques have been used to ensure comparability of LFS self-employment data (Van Stel, 2005). These experiences could be used as a basis for similar steps relating to the subset of solo entrepreneurs. In this respect, a first attempt has been made in Van Stel et al. (2014).

A clear advantage of using LFS data as compared to business sector statistics lies in the access to microdata, granted to researchers under specific conditions. The microdata offer much greater opportunities for carrying in-depth analysis as compared to aggregated figures. In LFS there are well defined procedures for assessing such data at the country but also at Eurostat levels (EU 2014). No such procedures exist so far for Eurostat business establishment statistics and only few countries introduced relevant procedures allowing access by researchers to such data.

3. Segmenting Solo Self-Employed

Existing research points to the diversified characteristics of the solo self-employed category. We have looked at the availability of data allowing further segmentation of (solo) self-employed by industry, occupation and other characteristics, like self-employment combined with employment (hybrid entrepreneurship), and dependent character of solo activity.

3.1. Industry (Sector of the Economy)

This is an important criterion, since the prevalence and characteristics of solo self-employed vary significantly across various sectors of the economy. Basically both Eurostat datasets on business establishments and LFS offer breakdowns by major sectors of the economy (NACE 1-digit classification).

3.2. Occupation

One important subset of solo self-employed, namely “freelancers” is typically defined on the basis of their specific occupations and skills (Kitching and Smallbone, 2012; Burke, 2012). Data on occupations is not available in business statistics whereas in LFS major categories of occupations are provided. In this case Eurostat relies on the ILO International Standard Classification of Occupations (ISCO-08) (ILO 2012). At the country level, statistical authorities use national classifications of occupations. Further investigation is needed for evaluating the conformity of the national systems with ISCO-08.³

3. The Polish Statistical Office claims such conformity.

3.3. Hybrid Self-Employed

Here we have in mind those individuals who combine employment positions with additional business activity. In principle, business establishment statistics do not allow separation of hybrid entrepreneurs from other self-employed. Such categorization is possible in LFS statistics. This is because LFS data is collected not only for primary but also for secondary activity (second job).

3.4. Dependent Entrepreneurship

Here we refer to the incidences of solo self-employed who work (provide services) with one client (contracting party) only. At present both LFS and business international statistics databases do not provide such information. We have established, however, that Polish statistical authorities do collect such information from entities participating in both (LFS and business statistics) surveys. This implies that at least in some countries relevant data, although not published, can be provided upon individual request.

One has to bear in mind that the population of dependent entrepreneurs is largely diversified. So far, the focus of researchers and policy makers is on involuntary cases introduced in order to evade labour protection legislation and lower tax and social security contributions (Kautonen, et al., 2010; Román et al., 2011). Limited attention is paid so far to the incidences of dependent self-employment which are demanded by the employees or reflect mutual interest of employee and employer. Referring to the data collection procedures by the Polish statistical office, the self-employed are requested to state if they provide services to one contracting party only. This implies limited use of national statistics for studying internal segmentation of the dependent self-employment category.

4. The Value of Combining Business Establishments Data and LFS Data

Our preliminary findings suggest superiority of LFS data for researching the “intermediate zone” phenomenon as compared to business establishment data. This is true for aggregated statistics but also taking into account easier access to LFS microdata. However substantial arguments can be raised for parallel and comparative use of both sources of data. From the methodological perspective, labour force data naturally drive the analysis towards labour economics and more specifically occupational choice theory. However, those labour force participants in the “intermediate zone” shall also be seen as entrepreneurs, which calls for a different methodological perspective.

Parallel use of both business establishments and labour force data also facilitates triangulation of research results. However researchers should be aware

of the essential differences in the way data is collected and aggregated. For example:

- Aggregated business establishment statistics typically exclude agriculture, whereas LFS includes agriculture;
- LFS data report incidences of solo self-employment irrespective of the legal form, whereas in business statistics only registered businesses are included;
- LFS aggregated data typically present own account work restricted to primary activity, while business statistics cover both and do not distinguish between primary and secondary activity.

As discussed earlier, the negative effect of said differences in comparative research can be mitigated by specific adjustments in the way data is aggregated. This is possible particularly once access to microdata is granted.

The parallel use of LFS and business statistical data, which is not popular within the academic community yet, is particularly relevant for policy-oriented research. To illustrate this argument we have broken down the Polish microenterprise sector (up to 9 persons employed) into microemployers and solo self-employed. The latter segment has been further sub-divided into “classic” solo, hybrid and dependent entrepreneurs. For that purpose we have requested additional, unpublished data from the Polish statistical authorities. The aggregated data on business establishments was used as a base, whereas LFS data helped to estimate the composition of solo self-employed. The results are given in Table 2. They clearly demonstrate that the microenterprise segment which includes over 90% of all business establishments in most EU countries and therefore is very important in the EU entrepreneurship policy, is in fact an obsolete category. This is because it artificially aggregates two sub-groups, i.e., micro-employers and solo self-employed, which are principally different in size, operational characteristics and macro-economic impact. Furthermore the research exercise demonstrates a diversified picture of solo self-employed, calling for subtle policies addressing specific sub-segments.

Table 2: Composition of microenterprises in Polish non-agricultural sector in 2012
(number of business establishments and persons employed, x 1000)

Categories of microenterprises	Number of establishments	Persons employed	of which:	
			Business owners	Employees
Total	1 773.4	3 522.2	2 023.5	1 498.7
Micro-employers	535.1	2 159.2	660.5	1 498.7
Solo self-employed	1 238.3*	1 363.0*	1 363.0	0.0
of which:				
Solo (excl. hybrid and dependent)	801.6	890.5	890.5	0.0
Hybrid	355.1	390.8	390.8	0.0
Dependent	81.6	81.6	81.6	0.0
*Some of solo business establishments are organized as partnerships which results in 10% higher number of solo business owners compared to the number of establishments. Source: Own calculation based on data provided by the Central Statistical Office of Poland.				

5. Concluding Comments

The present analysis of available statistical data pertaining to solo self-employed shall be seen as preliminary. Further investigation is needed, inter alia, on the scope of information on solo self-employed collected by national and international statistical authorities. Clearly, only part of the data is published or available in electronic format and hopefully more data can be made available for scientific research, upon individual inquiries to the statistical offices. There is also a need to analyse in greater depth the comparability of data provided by individual countries in order to assess the need for necessary adjustments and harmonization. We also demonstrated the value added by combining business establishments data and labour force survey data. Finally, our exercise called for a distinction in the former type of data between micro-employers and the solo self-employed (i.e., one-person businesses).

References:

- Burke, A. (2012), *The role of freelancers in the 21st Century British economy*, Report, London, UK: Professional Contractors Group (PCG).
- Davis, S., Haltiwanger, J., Krizan, C.J., Jarmin, R., Miranda, J., Nucci, A., Sandusky K. (2009) Measuring the Dynamics of Young and Small Businesses: Integrating the Employer and Non-Employer Businesses, In: *Producer Dynamics: New Evidence from Micro Data*, Dunne, T. J., Jensen, J.B., Roberts, M.J. (eds.), Chicago: University of Chicago Press, Chap. 9, 329-368.
- European Commission Eurostat (2014), *How to apply for microdata*, Brussels. http://ec.europa.eu/eurostat/documents/203647/203698/How_to_apply_for_microdata_access.pdf/82d98876-75e5-49f3-950a-d56cec15b896.
- European Parliament (2008) REGULATION (EC) No 295/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 March 2008 concerning structural business statistics (recast).
- Kautonen, T., Down, S., Welter, F., Vainio, P., Palmroos, J., Althoff, K., Kolb, S. (2010), "Involuntary self-employment as a public policy issue: a cross-country European review", *International Journal of Entrepreneurial Behaviour & Research*, 16: 112-129.
- Kitching J., Smallbone, D. (2012), "Are freelancers a neglected form of small business?", *Journal of Small Business and Enterprise Development*, 19 (1), 74 – 9.
- ILO (2012) *International Standard Classification of Occupations ISCO-08*, Geneva: ILO.
- OECD (2000), *Employment Outlook June 2000*, Paris: OECD.
- OECD (2009) *Measuring Entrepreneurship. A Collection of Indicators*, Paris: OECD.
- Polivka, A.E., Nardone, T. (1989), "On the definition of contingent work", *Monthly Labor Review*, December, 9-16.
- Rapelli, S. (2012), *European I-Pros: A Study*, London, UK: Professional Contractors Group Ltd.
- Román, C., Congregado, E., Millán, J.M. (2011), "Dependent self-employment as a way to evade employment protection legislation", *Small Business Economics* 37(3): 363-392.
- Shane, A.S. (2012) Should We Count Non-Employer Businesses? Small Business Trends, June 25, <http://smallbiztrends.com>.
- Van Stel, A. (2005), "COMPENDIA: Harmonizing Business Ownership Data Across Countries and Over Time", *International Entrepreneurship and Management Journal* 1(1): 105-123.
- Van Stel, A., Wennekers, S., Scholman, G. (2014), "Solo self-employed versus employer entrepreneurs: Determinants and macro-economic effects in OECD countries", *Eurasian Business Review* 4(1), 107-136.

