



Segmentation of the Population of the Solo Self-employed

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Abstract. The solo self-employed, i.e. those entrepreneurs operating without employees, are a very diverse group of individuals: from artisans, shopkeepers, independent contractors, artists, entertainers, to highly-skilled professionals. They are represented in all sectors of the economy and public life. Due to the observed heterogeneity, it is difficult to conduct meaningful research as well as implement effective government policies; there is a need to standardise the classification and typology of solo-self-employment. We undertake a comparative analysis of recent attempts of segmentation of solo self-employed and demonstrate that existing initiatives are diverse and not entirely conclusive. In this conceptually and methodologically oriented paper, we highlight the measures and characteristics found in recent research undertakings that are used to differentiate between various segments of self-employed. Based on that, we put forward some recommendations for future research on the diversity of solo self-employed, highlighting the need to arrive at a unified framework for distinguishing between different types of own-account workers.

Keywords: self-employment; labour market segmentation; types of entrepreneurs; solo self-employed; own-account workers; freelancers

JEL codes - L26; J21; J00

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1. Introduction

Until several decades ago, the structure of the working population was in principle dichotomous. On the one hand, there were employees; on the other hand, entrepreneurs who hired them. Nowadays, the structure of the workforce has

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become more complex, which is reflected in the presence of various types of economic activities performed by income-seeking individuals that do not fit into the binary employees – employers' dichotomy. Increasingly such economic engagements fall somewhat between standard employment and running a business establishment with employees on board.² The “intermediate” category of the workforce is typically labelled as (solo) self-employed, freelancers or own-account workers (Parker, 2018; Collings and Isichei, 2018; Semenza and Pichault, 2019).

Several important structural changes taking place in recent decades related to the solo self-employment segment of the workforce have challenged the traditional wisdom. First, it was widely believed that the large share of own-account workers including unpaid family members was characteristic for the low-income countries with a large percentage of informal employment in the agricultural sector (Gindling and Newhouse, 2014). While climbing up from low to intermediate development stages, countries typically experience a decrease in the share of agriculture in total employment. This is because the unpaid contributing family members and the low-skilled, necessity-driven self-employed operating mainly in the informal agricultural sector take advantage of the new wage-and-salary employment opportunities in trade, manufacturing, and construction, as well as in private and public services. However, in the last two decades, most developed countries have experienced an increase in the share of solo self-employed in the workforce, which contradicted the general development pattern discussed above (Kitching, 2015; Burke, 2015; Borghi et al., 2018; Beuker et al., 2019). In the European Union in 2017, according to Eurostat (2019c), solo self-employed accounted for 71.8% of all self-employed, while in some countries this share exceeded 80%: Czech Republic (81.4%), Cyprus (82.5%), United Kingdom (84.2%), and Romania (94.7%).

Second, even in developed countries, solo self-employed have been traditionally perceived as the largely homogenous lower-end segment of the workforce. Looking from the entrepreneurship perspective, they were typically labelled as quasi-entrepreneurs, with limited skills, resources and ambitions. They would give up the entrepreneurial route once attractive employment opportunities arise unless the need for autonomy motivates them to stay in self-employment. In such case, they would often accept lower incomes from own-account work as compared to available wage employment position considering it as a price worth paying for the benefit of not having a boss (Burke et al., 2002; Van Gelderen and Jansen, 2006). Looking from the labour market perspective, there was a similar perception of solo or own-account workers as a lower-end segment of the workforce, which was unable to secure permanent employment contracts due to insufficient skills or experience (Rosenberg and Lapidus, 1999).

2. The differences between self-employed who have employees and those staying solo have already been recently explored by empirical scholars (Cowling et al., 2004; Petrescu, 2016; Dvouletý, 2018).

Recent developments have demonstrated that neither low quality nor homogeneity of the solo self-employed holds true as the population of the solo self-employment is becoming increasingly diversified including artisans, shopkeepers, independent contractors, artists, entertainers, and highly-skilled professionals. Various categories of solo self-employed have different motivations and play different roles in the economy and society in general (Bögenhold, 2019; Burke, 2015; Burke and Cowling, 2019; Conen et al., 2016; Conen and Schippers, 2019; Semenza and Pichault, 2019; Williams and Horodnic, 2019).

Above developments present a serious challenge for policymakers as the uniform policy instruments addressed to the population of solo self-employed in general may not be effective and need to be replaced by more nuanced measures. The heterogeneity of the self-employed calls for greater scrutiny and investigation by the research community as an essential step in building a theoretical framework and offering meaningful recommendations for the self-employed and policymakers.

We address in this paper the issue of the heterogeneity of the solo self-employed population in the following steps. We begin our study by anchoring segmentation of self-employed theoretically in the light of selected concepts appearing in the entrepreneurship literature. After that, we conduct a comparative review of four recent segmentation initiatives of solo self-employed found in the literature and the methods used to quantify the size of the key segments. Finally, we highlight the measures and characteristics available in the official statistics (e.g. Eurostat) and research databases that may help us to differentiate between various segments of self-employed, and we encourage scholars to conduct more research on the diversity of solo self-employed.

2. Diversity of Solo Self-employment in the Literature

In this section, we address the key dimensions of heterogeneity of solo self-employed resulting from diverse roles and contributions of this segment of the workforce to the economy and the society in general. The purpose of this section is to indicate the diverse roles of solo self-employed, which were identified in the existing literature.

From the literature one may consider the following key roles of self-employment: the impact on the productivity and efficiency of existing business and non-business organizations; contributing to the wellbeing of the segment of the working population engaged in self-employment; broadening the income base of the active workforce; and bringing the non-active working-age population to the economically active status.

2.1. The Impact on the Productivity and Efficiency of Existing Business and Non-business Organisations

We might take the perspective of business owners and managers who, seeking the advantages of outsourcing, may hire freelancers, contractors and own-account workers to increase efficiency and productivity of their businesses. The distinction of the outsourcing of certain tasks between lower-level skilled own-account workers and the highly-skilled ones is crucial here. Lower-skilled freelancers usually help firms to outsource day-to-day operations which are not linked with the core of their business. A typical example might be a freelance worker who takes regularly care of facility management and cleaning. Firms might also hire lower-skilled freelancers to accommodate seasonal shocks and fluctuating demand (Chauradia and Galande, 2015; Popiel, 2017; Drahokoupil and Fabo, 2019).

On the other hand, higher-skilled independent professionals usually provide temporarily highly specialised services (e.g. recruitment, business development, R&D projects, IT services), for firms that cannot afford to hire them full-time or for firms that would not fully utilise their working capacity. Some interesting developments and structural changes are taking place in large corporations functioning in the modern sectors of the economy to take advantage of the availability of highly-skilled professionals and their “agile talent”. Major restructuring projects and those implementing new technologies are implemented by relatively small teams of in-house staff whereas the bulk of work is conducted by outside freelancers recruited for a given project. One of the important competences of the in-house project managers becomes the ability to recruit and manage the freelancers, ensuring smooth cooperation with permanent staff. Nevertheless, one must bear in mind additional costs of searching and bargaining and finally concluding the contract with the freelancer (Chauradia and Galande, 2015; Younger and Smallwood, 2016).

Researchers (Burke and Cowling, 2015; Jenkins, 2017; Burke and Vigne, 2018; Burke, 2019) document that highly-skilled professionals (freelancers) are usually highly suitable for young, innovative and growth-oriented firms because their owners might then focus primarily on the core business of the start-up.

2.2. Contributing to the Wellbeing of Self-employed

In a broader perspective, wellbeing is a multidimensional concept which captures an individual’s subjective enjoyment with life and is usually measured by an individual’s evaluation about his or her life (Veenhoven, 2012). The increasing interest of researchers in wellbeing included the comparisons of subjective wellbeing between employees and self-employed and within the latter category between solo self-employed and employers (for overviews of recent research see

Stephan, 2018; Binder, 2018; and Van der Zwan and Hessels, 2019). The results are not entirely conclusive but demonstrate that compared to employees, solo self-employed individuals often report higher levels of job satisfaction and satisfaction with their life because they enjoy being their own boss, and to do what they like (Annink et al., 2016; Guerra and Patuelli, 2016; El Shoubaki and Stephan, 2018), although it is conditioned on multiple factors (Stephan, 2018). For example, the results of a recent study by Warr (2018) show that solo self-employed individuals have higher subjective wellbeing, compared to business owners with employees. One shall not neglect, however, the material base of wellbeing and here solo self-employed are generally in a disadvantageous position. They are at much higher risk of income poverty compared to workers with a standard employment contract (lowest risk) and business owners with employees (intermediate risk). Similarly, they face the highest risk of material deprivation (inability to buy certain material items that are typically needed to participate in society). In this case, employees enjoy the lowest risk (European Commission, 2018, p. 120).

The strive for improved wellbeing as the primary motive of engaging in solo self-employment is well demonstrated among so-called lifestyle entrepreneurs who are primarily driven not by the willingness to maximize financial gains, but by the desire to pursue one's own interests and passions, and to maintain a certain lifestyle (e.g. freedom in terms of being able to decide about one's working time and place) (Cieřlik, 2017, pp. 58-60). The examples include sports fans offering training services, owners of small restaurants and bed and breakfast facilities but also experienced knowledge workers who give up their well-paid executive positions in large corporations to become freelance consultants, thus allowing themselves more time to pursue their passions. A common feature of lifestyle entrepreneurs is that they deliberately limit the scale of their operations and typically operate solo, even if attractive growth opportunities emerge. They fear that running a larger business with employees might adversely affect other priorities, such as a flexible work schedule and pursuing one's own passions (Marcketti et al., 2006; Cieřlik, 2017; Kerr et al., 2017).

2.3. Broadening the Income Base and Activities of the Active Workforce

Self-employment is also an option for individuals who like to pursue more activities at the same time. Those who combine permanent employment with self-employment as an additional business activity are labelled in the literature as hybrid entrepreneurs (Folta et al., 2010). Motives to engage in entrepreneurial activity parallel to the paid job are quite diverse. One of the prevailing motivations for engaging in part-time self-employment is to increase personal income. Another group of individuals might stay in employment with a secured income until their growing business becomes more stable and survives on the

market. They want to “test the entrepreneurial waters”, and once they gain experience and improve their entrepreneurial confidence, they might switch to full-time entrepreneurship. Included in the category of hybrid entrepreneurs are also employees who engage in helping in the family business and who like to do something different than they do in their regular work. It is also worth mentioning that some individuals choose hybrid self-employment because they seek for more security. They just like to mitigate risk of job loss and financial insecurity, so they diversify their activities and pursue more activities at the same time to avoid being at one moment without any job (Folta et al., 2010; Bögenhold and Klinglmair, 2016; Nordström et al., 2016; Thorgren et al., 2016; Schulz et al., 2017; Luc et al., 2018).

2.4. Bringing the Non-active Working-age Population to the Economically Active Status

One of the existing market failures is unemployment, which is rising during times of economic downturn. Policymakers strive for reducing unemployment, and one existing form of active labour market policies also includes self-employment programmes. The incentive package usually includes training, access to professional advisors and financial support in the start-up phase. The unemployed who launch their own business out of unemployment no longer rely on unemployment benefits. They also begin paying health and social insurance and, in some cases, even taxes, which makes this kind of intervention more cost-efficient, compared to other instruments of active labour market policies. They start generating income and providing their families with subsistence. Although this form of support is not restricted to solo self-employed, in practical terms, it is as the incidents that formerly unemployed become employers themselves are quite rare. Most of the supported unemployed individuals secure jobs for themselves, and if they survive, they usually remain solo-self-employed. The evaluations of existing active labour market programmes demonstrate that for some individuals, self-employment can be an effective way out of unemployment (Caliendo and Künn, 2011; Dvouletý and Lukeš, 2016; Dvouletý, 2017; Cueto et al., 2017; Justo et al., 2019). Dvouletý and Lukeš (2016) have recently reviewed 18 empirical studies that focused on self-employment out of unemployment. They concluded that the studies mostly find positive effects of public interventions on employment status, income and survival rates of subsidised businesses.

There are also groups of people who are not registered as unemployed but remain economically inactive due to particular social and health conditions which prohibit or make it very difficult to engage in standard wage-employment. For these groups own-account work can be a viable alternative to become economically active. Women taking care of small children who need flexible working hours and the ability to work from home might also benefit from self-

employment helping them to maintain a family-work balance (Hughes, 2006; Foley et al., 2018). Another group facing serious barriers in engaging in regular wage employment are people with disabilities. The low percentage of disabled who participate in any form of economic activity is a pressing economic and social problem. To remedy this unfavourable situation, a variety of incentives were introduced to encourage employers to hire people with disabilities. Empirical research shows, however, that in many countries, the ratio between self-employed and employees is higher among people with disabilities than among the general population (Jones and Latreille, 2011). Furthermore, the level of satisfaction among disabled self-employed was significantly higher than among disabled employees (Pagan, 2009). One possible explanation is that certain types of disabilities prevent from working full-time, e.g. when it is required taking breaks during working hours. In such cases, being self-employed allows more flexibility than full-time employment.

3. Overview of the Four Segmentation Initiatives

The growing recognition of the importance and the heterogeneity of the solo self-employment component of the workforce is not only reflected in the academic literature, but it is also a topic pushed forward by policymakers and professional associations. Such increase of interest resulted in several segmentation attempts we review in this article. They include the US annual study *Freelancing in America* (Freelancers Union, 2018) commissioned by Freelancers Union and Upwork since 2014, the Eurofound study based on the Sixth Edition of the European Working Condition Survey (EWCS) (Eurofound, 2017), the UK study conducted in 2017 by the Centre for Research on Self-Employment (CRSE) and the Institute for Employment Studies - IES (Centre for Research on Self-Employment, 2017), and the segmentation framework developed within the research project on self-employment conducted at the Kozminski University in Poland during 2015-2019. Table 1 provides a brief overview of the four segmentation studies as they are further described in the text. However, as these initiatives are driven mainly by other than academic researchers, we need to bear in our minds that their overall focus, scope, methodology, point of view and interpretation of the findings are quite diverse.

Table 1: Overview of four segmentation studies

Segmentation study	Description
Freelancing in America (2018)	Initiated in 2014 by Upwork freelancing platform and the Freelancers Union representing the independent workforce (2014-2018).
Eurofound (2017)	Policy-oriented research using 2015 European Working Conditions Survey data covering 28 European Union and several other countries.
UK study by the Centre for Research on Self-Employment - CRSE (2017)	Policy-oriented research using three UK public datasets: Labour Force Survey, Family Resource Survey, and Understanding Society Survey (2014- 2015).
Kozminski University research project in Poland (2019)	Research project on solo self-employment in Poland using Labour Force Survey data and a questionnaire survey performed in the city of Warsaw (2015-2018).

Source: Freelancers Union (2018), Eurofound (2017), Centre for Research on Self-Employment (2017), Kozminski University research project (2019).

3.1. U.S. Study Freelancing in America

The study Freelancing in America (Freelancers Union, 2018) was initiated in 2014 by Upwork - the world's leading freelancing website -, and the Freelancers Union - an organisation representing the independent workforce (labelled as freelancers). The study is conducted annually and based on a large-scale survey of U.S. adults who have done paid work in the past 12 months. Since 2014 five annual surveys have been executed which allowed identification of some general patterns and trends.³

This study works with a broad definition of freelancers. It includes individuals who have engaged in supplemental, temporary, project-or contract-based work, within the past 12 months. These engagements may take place as an exclusive form of economic activity or in parallel with a standard employment contract (Freelancers Union, 2018). It is worth mentioning that this definition of freelancers is much broader to those used in other studies. The categorisation of the freelance workforce into five key segments has not been made with the use of detailed criteria but rather reflected the perception and knowledge of the freelancing population by the research firm and both organisations commissioning the study. The description of 5 key segments of freelancers (*diversified workers, independent contractors, moonlighters, freelance business owners, and temporary workers*), the size in 2018 and trends during 2014-2018 are presented in Table 2.

3. The description of the methodology of the study and the annual results can be found at the Upwork website <https://www.upwork.com/i/freelancing-in-america/2018/>.

Table 2: Segments of freelancers identified in Freelancing in America 2018 study

No.	Description	Size (in mil. individuals)	Percentage share in 2018	The trend in the share 2014-2018
1.	Diversified Workers. People with multiple sources of income from a mix of traditional employers and freelance work.	19.8	35%	+13%-points
2.	Independent Contractors. They don't have an employer and instead do freelance, temporary, or supplemental work on a project-to-project basis.	17.7	31%	-9%-points
3.	Moonlighters (Hybrid). Professionals with a primary, traditional job who also moonlight doing freelance work.	13.0	23%	-1%-points
4.	Freelance Business Owners. They have one or more employees and consider themselves both a freelancer and a business owner.	3.4	6%	+1%-points
5.	Temporary Workers. Individuals with a single employer, client, job, or contract project where their employment status is temporary.	3.4	6%	-4%-points
	Total	56.7	100%	

Source: Freelancers Union (2018).

An interesting pattern is a shift in weight between independent contractors, who take on only freelance assignments, and *diversified workers* who take on both employment and freelance assignments at an equal level. The latter segment experienced the highest increase during 2014-2018, whereas the *independent contractor* segment experienced the strongest decline. This pattern may indicate that more workers are seeking to increase income security by diversifying their work activity portfolio, as discussed in Section 2.3. The categorisation of freelancers used in the U.S. study identifies a new “blurred” segment, namely *freelance business owners*. It rests on the premise that even while taking a few employees people onboard, a business owner can still identify himself/herself as a freelancer.

The surveys conducted for the Freelancing in America study adhere to the professional standards followed in business research. Nevertheless, the way the results are presented reflects the conviction of both organisations commissioning the study as to the increasing role of freelancers in the U.S. economy.⁴

4. This was strongly reflected in the 2017 Report presenting the projection according to which by 2027 the population of freelancers will surpass the number of “traditional” employees (Freelancers Union, 2017, p. 18). In 2018 the number of freelancers has declined thus reversing the upward trend demonstrated in previous years. This reversed trend was not properly reflected in the 2018 Report which raised criticism (Corfield, 2018).

3.2. Eurofound Study in Europe

In response to the growing policy interest in further exploration of self-employment in Europe, Eurofound, the European Union Agency for the improvement of living and working conditions, has published a detailed study on this subject in 2017. It was based on accumulated experiences from the six editions of the European Working Condition Survey (EWCS) initiated in 1990. Due to its comprehensive scope, it has become a valuable source of information about the quality and conditions of work in Europe, as well as trends in employment and self-employment. The data collected during the survey carried out in 2015 and covering 28 European Union member countries, Albania, Northern Macedonia, Montenegro, Serbia, Turkey, Norway and Switzerland, have been used to explore the diversity of self-employed workers (Eurofound, 2017; De Moortel and Vanroelen, 2017).

The issue of the diversity of self-employed has been addressed within the context of recent policy debates and concerns emerging from these debates. First, although engaging in self-employment has been viewed as an expression of entrepreneurial drive, which was crucial for job creation, the accumulated experiences suggest that only a minority of (solo) self-employed truly represent entrepreneurial orientation. To ensure the effectiveness of policies promoting “true” entrepreneurship, it is essential to identify segments of self-employed most responsive to respective policy instruments. Second, a vividly debated issue present in the policy debates relates to those forms of self-employment which lack independence and share features with dependent employment. While functioning as “quasi-employees” such self-employed are subject to lower social protection and are not eligible for certain rights granted to “regular” employees. The third concern relates to the economic sustainability of some segments of self-employment with lower incomes, particularly those engaged in precarious work. They often lack financial stability in day-to-day life, but due to limited social protection, such financial instability may have a long-term character.

While recognising the heterogeneity of the population of self-employed, the Eurofound (2017) study pointed to significant difficulties in arriving at a functional categorisation. First, one cannot rely on self-classification by the self-employed. This is due to the lack of agreed definitions of the various types of self-employment and differences in the conventional use of specific terms and concepts in various countries. The most profound example of such confusion is the parallel usage of the term “self-employed” as encompassing both employers and solo self-employed versus only solo self-employed. Second, the key concerns which are present in the current policy debates discussed above, namely entrepreneurialism, economic dependence and sustainability are quite abstract and cannot be directly measured. Thus, specific characteristics should be viewed as mere indicators rather than direct measures. Third, the Eurofound (2017) segmentation attempt reflected the growing recognition that nowadays, the

division between employment and self-employment is blurred and many workers find themselves on a continuum between these two categories.

Table 3 presents 15 characteristics used in the Eurofound (2017) categorisation as indicators (proxies) of key dimensions: entrepreneurialism, economic dependence vs independence and financial stability of self-employed. Unfortunately, none of these can be used as an adequate measure of a specific dimension, while some apply to two or even three dimensions.

Table 3: Variables used in the Eurofound segmentation study

No.	Variables/ Indicators	Entrepreneurial drive	Economic dependency	Economic sustainability/ precariousness
1	Opportunity vs necessity motive	x	x	
2	Motive to become boss decision-maker	x	x	
3	Taking responsibility of the business	x		x
4	Having one or more clients		x	x
5	Ease of finding new customers		x	x
6	Right to hire/dismiss employees	x	x	x
7	Paid on agreed fee or weekly/monthly		x	x
8	Ease of taking time off	x	x	x
9	Working on one or multiple sites	x		x
10	Having employees (number) or not	x		x
11	Restructuring of the workplace			x
12	Level of income	x		x
13	Financial security in sickness		x	x
14	Number of days worked per week	x		x
15	Received paid training	x	x	x

Source: Eurofound (2017, pp. 16-17).

To overcome these shortcomings, the statistical technique “Latent Class Analysis (LCA)” has been used to identify the groups or “clusters” of self-employed which are significantly distinct from each other while sharing similarities within each cluster. An LCA method using 2015 data from the sixth European Working Conditions Survey has identified five distinct clusters of self-employed with an estimated size of each cluster in the EU member countries (Table 4). The names given to each cluster were meant to capture the essential aspect of the nature of each cluster. Based on the results of LCA, the authors classify the workforce of self-employed into *employers*, *small traders and farmers*, *stable own-account workers*, *vulnerable* and *concealed*. Unfortunately, this segmentation does not help in addressing structural measurement of the diversity of self-employment (and especially solo self-employment), because the

segments are not defined by any specific criteria (and variables), but rather by the results obtained from LCA.

Table 4: Eurofound segmentation of the self-employed

Identified clusters	Size (in mil. individuals)	Percentage share
Total self-employed	32.0	100%
Employers	7.4	23%
Small traders and farmers	8.0	25%
Stable own-account workers	8.3	26%
Vulnerable	5.4	17%
Concealed	2.6	8%

Source: Eurofound (2017, p. 16).

3.3. Study by the Centre for Research on Self-Employment in the UK

The study *The True Diversity of Self-Employment* was conducted by the Centre for Research on Self-Employment (2017) in conjunction with the Institute for Employment Studies (IES), and it was motivated by the recent increase in the number of self-employed in the United Kingdom, the solo self-employed being overwhelmingly responsible for such growth. The study is based on a rigorous methodology, and it is combining data from existing UK official statistics, namely the Labour Force Survey (LFS), the Family Resource Survey and the Understanding Society Survey. It is also worth mentioning that this study is focusing only on the solo self-employed, and thus, it is by its nature closest to the scope of this paper.

To identify specific segments of solo self-employed, the authors of the study select three groups of indicators which could be obtained from the statistical datasets mentioned above:

- *Economic well-being*, measured by earnings (three levels: low-pay, mid-pay, high-pay);
- *Being independent vs dependent*, measured by the degree of autonomy (control), number of clients, perception of own work as job or business, and by having or not separate bank accounts for business and personal finance;
- *Secure vs insecure status* measured by two indicators: (i) whether an individual has arranged private pension plan and (ii) whether the individual is looking for alternative work.

Based on these indicators, the authors identified nine segments of solo self-employed with a varying contribution to total solo self-employment, also indicating types of occupations prevailing in individual segments. Table 5 shows the four largest segments identified in the CRSE study.

Table 5: Centre for Research on Self-employment segmentation of the solo self-employed

No.	The percentage share of all solo self-employed	Characteristics	Types of occupations
A	22.7%	Low pay, independent, secure	Farm workers, builders, traders, and tutors
B	19.5%	Mid pay, independent, secure	Trainers and coaches, IT and related professionals, financial advisers, business associate professionals, manufacturing managers, hair and beauty workers, skilled makers, gardeners, and restaurant and B&B owners
C	8.9%	Low pay, dependent, insecure	Drivers and cleaners
D	8.2%	Low pay, independent, insecure	Shopkeepers, artistic occupations, and car mechanics

Source: Centre for Research on Self-employment (2017, p. 26).

3.4. Study by Kozminski University in Poland

The Kozminski University research project⁵ aimed to explore the diversity of self-employment. It was based on a general premise that solo self-employment represents an “intermediate zone” between a standard employment contract and running one’s own business with employees (Cieřlik, 2015). Using Polish Labor Force Survey⁶ data and an own questionnaire survey conducted during 2015-2018 in the Targówek district of Warsaw (N=2,267), the authors have quantified the size of the solo self-employment segment as compared to employees and employer establishments. The LFS data allowed to include an important sub-segment, namely hybrid self-employed who combine employment with running one’s own business as an auxiliary activity. Self-employment in agriculture has been excluded from the analysis due to specific conditions and characteristics of self-employment in this sector.

5. Kozminski University research project “*Self-employment from a Polish and an international perspective*”.

6. Polish Labor Force Survey data included the results of the regular quarterly survey, results of the Ad-hoc survey 2017 on self-employment published by Statistics Poland (2018) and additional data provided by Statistics Poland to the research team of Kozminski Project.

The segments of solo self-employed identified in the Polish study are presented in Table 6. These include *solo self-employed transitioning to employer status*, *dependent (involuntary) self-employment*, *unskilled and skilled workers with one and with more clients*, *highly-skilled professionals with one and with more clients*, and *hybrid entrepreneurs*.

A specific segment which has not been dealt with in the three segmentation initiatives discussed above are solo self-employed who operate without employees only temporarily on their way to reach the employer status. Particularly for policymaking, it is essential to assess the size and ambitions of this category. As to other segments, the Polish study takes a closer look at the vividly debated subject of the dependent character of solo self-employment. There are many circumstances where a self-employed person is in a weak position vis-à-vis his/her contracting party. This occurs, e.g. when the self-employed has only one client or one client provides most of the revenues. Such a situation is often combined with the client deciding on the working hours and the organisation of work. The extreme case is an involuntary or “forced” situation where the self-employed is being pushed by the employer to switch from employment to a formally independent sub-contracting arrangement hiding the employment relationship (Kautonen et al., 2010, p. 113; Williams and Horodnic, 2018).

The results of the empirical studies elucidate the complex nature of the dependent relationship. The situation of working just for one client does not necessarily result in the inferior position of the self-employed. Very much depends on the situation on the market – whether it is easy to find new clients for the self-employed and to find alternative service providers by the client. The questionnaire survey conducted in the Targówek district of Warsaw indicated that in some cases shifting from a standard employment contract to a subcontracting arrangement takes place with mutual consent as such shift results in lower taxes and social security contributions, benefitting both parties.

On the other hand, there is a growing recognition of the significance, but also distinct characteristics of highly-skilled professionals engaged in self-employment. Here the occupational status has been used in the Polish study to distinguish highly-skilled professionals (freelancers), selected on the basis of their occupational description, i.e. working as managers, professionals, associate professionals or in technical occupations. The findings indicated that highly-skilled professionals are in a much stronger position vis-à-vis their contracting parties as compared to low-skill workers and the incidences of involuntary dependent solo self-employment within the high-skill category are negligible.

Table 6: Detailed segmentation of solo self-employed in Poland 2017

Employees	Solo Self-employed (main activity)	
A. Hybrid entrepreneurs (secondary activity) (24%)	B. Solo self-employed transitioning to employer status (5%)	Employers
	C. Dependent – involuntary (4%)	
	D. Unskilled and skilled workers with one client – mutual consent (6%)	
	E. Unskilled and skilled workers with many clients (34%)	
	F. Highly-skilled professionals with one client (4%)	
	G. Highly-skilled professionals with many clients (23%)	

Notes: Solo self-employed in agriculture, forestry and fishery are excluded. The percentages reflect the share of each segment in the population of solo self-employed, including hybrid entrepreneurs. Source: Kozminski University research project based on Polish Labour Force Survey 2017 data (Statistics Poland, 2018) and the questionnaire survey conducted in Targówek district of Warsaw during 2015–2018 (N=2,267).

4. Segmentation of Solo Self-employed – A Comparative Analysis

As a first step in the comparative analysis, we have identified key segmentation criteria used in the segmentation studies under investigation. Next, we explored how consistent these individual criteria were used in the four segmentation attempts (we assign yes/no for each criterion). The results of this comparison can be found in Table 7. The analysis conducted in the preceding section has already demonstrated how complex and heterogeneous these attempts were concerning the motivation, methodology, data and segmentation criteria used. However, no matter how diverse these studies are, they share a common need to standardize the classification and typology of solo-self-employment as it has also been highlighted by scholars and researchers (Burke and Vigne, 2018; Baitenizov et al., 2019; Bögenhold, 2019; Skrzek-Lubasińska and Szaban, 2019; Woronkiewicz and Noonan, 2019).

Several segmentation criteria were found in the majority (three out of four) of studies namely the *occupational status*, *dependent vs independent self-employment* and related to that, *number of customers*, i.e. working for a single versus more customers. As expected, there are significant differences in criteria used in the US study and those considered relevant by the European researchers. Eurofound and CRSE studies further highlight the importance of *income level* and *secure vs insecure* criteria, and further, US and Kozminski studies agree on the importance of *hybrid self-employment* as an additional segmentation criterion.

The remaining criteria have been mentioned only in one of the studies, but it does not mean they are not relevant for segmentation.

Table 7: Comparison of criteria used for the segmentation of self-employed

Segmentation criterion	U.S. study	Eurofound study	CRSE UK study	Kozminski Poland study
1. Permanent vs transitional	No	No	No	Yes
2. Entrepreneurial drive	No	Yes	No	Yes
3. Combined with employment (hybrid)	Yes	No	No	Yes
4. Dependent vs independent	No	Yes	Yes	Yes
5. Single vs many customers	No	Yes	Yes	Yes
6. Occupation classification	No	Yes	Yes	Yes
7. Temporary employment	Yes	No	No	No
8. Freelance business owners	Yes	No	No	No
9. Income level	No	Yes	Yes	No
10. Secure vs. insecure	No	Yes	Yes	No

Source: own analysis based on Freelancers Union (2018), Eurofound (2017), Centre for Research on Self-Employment (2017) and Kozminski University research project.

5. Conclusions, Conceptual and Terminological Recommendations

The present article highlights the increasing need to distinguish between different types of self-employed that are present in the contemporary economy. The demand for a meaningful segmentation of self-employed driven by researchers, policymakers and other stakeholders goes beyond the fundamental distinction between own-account workers and employers but requires to identify individual segments of solo self-employed. This task is not easy as demonstrated by the four segmentation attempts presented in this study (Freelancers Union in America, 2018; Eurofound in Europe, 2019; Centre for Research on Self-Employment in the United Kingdom, 2017; Kozminski University research project in Poland, 2019). One of the key obstacles is that the borderlines between various segments are often blurred. At the same time, different methods and sources of data have been used by the researchers and statisticians to measure the size of individual segments. To advance further research and facilitate effective policymaking, there is a need to arrive at a meaningful classification and typology of solo-self-employment, which in turn would allow building reliable statistical data systems.

Below, we have picked four segmentation criteria we would like to highlight, and that may help us to differentiate between segments. Given the acknowledged differences between the U.S. and Europe, we discuss the availability of the

measures in the available European surveys. We focus especially on the following four criteria: 1. Skill and job classifications (criterion 6 in Table 7); 2. Hybrid self-employment (criterion 3); 3. Tracking transition from solo to job creator (criterion 1) and 4. Economic dependency (criterion 4).

5.1. Skill and Job Classifications

Existing research has demonstrated significant differences between low-skilled and high-skilled own-account workers. Kitching and Smallbone (2012), Kitching (2015), and Jenkins (2017) highlight the importance of the upper segment of solo self-employed (e.g. mainly independent professionals and liberal professions) who are called freelancers and they suggest to use occupational classifications⁷ to differentiate between lower and upper segments of own-account workers with the help of International Standard Classification of Occupations 2008 (ISCO-08), for details see International Labour Organization (2008). Following this classification, the upper (or higher) skill segment is represented by managers, professionals, technicians and associate professionals whereas the lower skill segment is represented by clerical support workers, service and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, assemblers, and elementary occupations.

Differences between upper and lower skill segments might also be approximated by differences between levels of educational attainment (tertiary education vs educational levels below tertiary), see Van Stel and Van der Zwan (2019) for a recent study. Both occupation and education characteristics have been included in the major European surveys, including *European Working Condition Survey* (EWCS), *Labour Force Survey* (LFS) and *European Union Statistics on Income and Living Conditions* (EU-SILC), see Eurostat (2019a; 2019b) and Eurofound (2019) for details about variables included in these surveys.

5.2. Hybrid Self-employment

Building on the previous discussion, part-time self-employment as a side activity to full-time employment and on the other hand, full-time self-employed who also have another job (side activity) represent an important segment of solo self-employment. In the most recent round of the *European Working Condition Survey* (EWCS) a specific question has been added: “Besides your main paid job,

7. Other scholars, e.g. Rapelli (2012) suggested defining independent professionals based on sectoral classification (i.e. NACE codes), in addition to occupational status. However, in our opinion this is not accurate as independent professionals may operate in all sectors of the economy.

do you have any other paid job(s)”. Similar questions (or their modifications) are available in LFS, EWCS and EU-SILC surveys.

5.3. Tracking Transition from Solo to Job Creator

Many policies supporting the creation of new ventures have been implemented with an implicit assumption that a significant part of those surviving the initial most difficult period will embark on an accelerated growth path reflected in hiring personnel. As demonstrated by the Kozminski study presented in sub-section 3.4 above and the study of Dutch business-owners by Kraaij and Elbers (2016) such incidences are rare, and nowadays the overwhelming majority of startups are intended to operate without employees. The research on conditions, determinants and motivations of own-account workers to hire employees is at the infant stage (Millán et al., 2015; Cieřlik, 2015). Measuring the size of the “transition” segment represents a significant challenge. For example, in the *Global Entrepreneurship Monitor Project* (2019), entrepreneurs are being asked to declare their hiring plans within the next five years. However, the responses must be corrected for overconfidence which is widespread among entrepreneurs, and which is dependent on both individual but also country-level determinants (Cieřlik et al., 2018). A more promising avenue is to trace the transition of individual self-employed over time from solo to employer status by means of longitudinal research undertakings, e.g. using the EU-SILC survey.

5.4. Economic Dependency of Solo Self-employed

The study of the dependent character of solo self-employment is particularly relevant due to its potentially harmful effects leading to economic unsustainability, precariousness and lack of social protection. To implement policy instruments easing adverse effects, it became necessary to empirically assess the size of the dependent segment of solo self-employed with a focus on manifestations of dependency (lack of autonomy of self-employed). Two research initiatives by Williams and Lapeyre (2017) using European Working Condition Survey (EWCS) 2015 data and by Eurostat (2019c) within an ad-hoc module of Labour Force Survey 2017 empirically explored this phenomenon.

Regarding the conducive conditions, the risks of falling into a dependent relationship are particularly high when a self-employed person that provides services just for one client, or with two or more dominating clients (generating 75% or more income). The expressions of dependency (lack of autonomy) used in the measuring attempts are situations where self-employed individuals do not have the authority to decide on strategic issues but also on operational aspects like

deciding on working hours, content and order of performed tasks and hiring employees.

Unfortunately, due to the lack of agreed methodology, there are striking differences in the assessment of the size of the dependent segment of solo self-employed in the European Union: 47% based on EWCS 2015⁸ and only 5% (3.5% of self-employed) in the ad-hoc module 2017 Labour Force Survey data.⁹ Such dramatic discrepancy was not only the result of different measures of conditions conducive to dependence and manifestations of dependence but also different ways of interpretation of situations where conditions and manifestations measures did not match (e.g. a self-employed person worked for one client only but enjoyed a high degree of autonomy). Such incidences have been recognised in the Williams and Lapeyre (2017) study as an exemplification of dependence, whereas in the Eurostat methodology, they have fallen into an independent category.¹⁰ Particularly questionable is the criterion used in the 2015 EWCS study – the right to employ staff. For the overwhelming majority of solo self-employed functioning without personnel is their *modus operandi*, so that such condition is not considered by them as a meaningful restriction.

Nevertheless, if one wants to set a simple basic measure of dependency, the most useful seems to be the criteria implemented in the 2017 LFS ad hoc module: working for one client only (or one is dominating, i.e. generating 75% or more income) and a (dominating) client decides his/her working hours. If self-employed have autonomy and they work for more than one client or if they work for one client and enjoy a high level of independence, they should not be considered as dependent. The 2015 EWCS survey also allows to identify self-employed with only one client although Williams and Lapeyre (2017) involved two other criteria as well, thereby arriving at very high estimates of dependent self-employment (47% of all solo self-employed, as mentioned earlier).

Finally, the apparent terminological confusion needs to be resolved to stimulate research on solo self-employment in general and its key segments in particular. It will not be an easy task as some terms are being used in public debates and media, among researchers but also in the official statistics. The basic concept of “self-employment” is a good example here. In the official Eurostat and OECD statistics, it denotes self-employed both with and without employees whereas in media and often in academic research it is restricted to *solo*

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8. Williams and Lapeyre (2017, pp. 15-17) considered self-employed to be dependent if they met at least two of the three following conditions: they work only for one client; they do not have authority to hire staff; and they do not have authority to make important strategic decisions to run the business.
 9. The LFS 2017 study considered as a dependent self-employment, individuals who work for one or one dominant client only and this client decides his/her working hours (Eurostat, 2019c, p. 97).
 10. If the non-matching situations in the EWCS 2015 study would be treated in the same way as in the Eurostat LFS study the percentage share of dependent solo self-employed would fall to 15%. Still the difference between both estimates remains very high.

entrepreneurs without employees. The increasingly frequent use of the term *solo self-employed* helps to avoid potential misunderstandings in this respect. Similarly, the research community needs to reach a consensus on the meaning of the term “freelancer”: either being a general concept covering all types of solo self-employed or denoting those belonging to the “upper (or higher) echelon” only. The latter approach is prevailing in the growing number of research undertakings in Europe using the occupational status for distinguishing the upper segment of solo self-employed (e.g. Kitching, 2015) and is becoming more often utilised by the research community.

In conclusion, we believe that the research on solo self-employment has reached the level where certain standardization of segmentation criteria and terminology used is necessary for facilitating the accumulation of knowledge on this segment of the workforce. We believe that the comparative analysis of recent segmentation approaches presented in this paper contributes to addressing this issue and serves as an important step towards a unified framework for segmenting the population of solo self-employed.

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