Self-employment on the way in a digital economy: A variety of shades of grey

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28 February 2018

Fakultät für Wirtschaftswissenschaften
Faculty of Management and Economics

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IfS Discussion Paper 01/2018

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IfS Discussion Paper
ISSN 2306-7373 (Internet)

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1. Historiography of Self-employment: Change as the only Constant

The aim of this introduction is to discuss self-employment in a historical perspective. A historiography of self-employment has to embed the observation into a broader framework of international relations and of economic and social developments. Related changes affect diverse institutions like labour markets, systems of education and further education, political organizations, the system of labour relations and, of course, the whole "social system of production" (Hollingsworth, 1998). Vice versa, these changes are also affected by different developments in the sphere of the social, technological and political organization of economy and society. Contemporary discourse about the nature of self-employment falls far too short, if it is not linked to an historical framework of thought, which gives contours to ideas and changing interpretations. Especially, the current type of "naive" admiration of self-employment, often in combination with normative upgrading in terms of entrepreneurship, must be advised to analyse and to think historically. At the same time, many present day self-employed "jobs" would have been standard employment contracts some ten years ago. In this respects current debates on precarization are also linked with debates on self-employment.

Analysing the division of labour within societies, many contemporaries look too much at short-term cycles. However, it is much more challenging to acknowledge long-term cycles in order to analyse and decipher modes and directions of change. The establishment of rationality within such a contractual society is portrayed in Max Weber's reflections on sociology of law (Weber, 1978). The 'iron cage' (Weber, 2003) is based upon technological efficiency, control and rational calculation and has become the feature of the 20th and 21st century.

In one sense of historiography the investigation of history appears to search for changing faces, which different times show: "Nobody can hope to understand economic phenomena of any, including the present, epoch without an adequate command of historical facts and an adequate amount of historical sense, or of what may be described as historical experience. The historical report cannot be purely economic but must try to evaluate how economic and non-economic facts are related to one another" (Schumpeter, 1954). On the other hand, Schumpeter discusses four different arguments detailing why academics shall study the history of specific scientific branches. Primarily, scientific progress must be regarded as a permanent over-writing of errors and an investigation into the history of scientific change serves to be a tool of inspiration and this is true for all sciences (Bögenhold, 2014).

The double-sided understanding of historiography as data collecting and furnishing of economies and societies on the one hand and of a methodological tool to arrive at a deeper understanding of processes inherent to sciences and their change, on the other hand, are not always clearly separated in practice. It was Charles Tilly (1984) who claimed the need for inter-temporal comparisons in order to understand the present (and the future) and to put forward the thesis that only those who have at least an adequate command of historical processes and their inherent changes can really separate the bigger from the smaller lines of development. In his work "Big Structures, Little Processes, Huge Comparisons" (Tilly, 1984) Tilly explains that first, "those shifts formed the context in which our current standard ideas for the analysis of big structures, large social processes, and huge comparisons among

social experiences crystallized. Second, they marked critical moments in changes that are continuing on a world scale today. Understanding those changes and their consequences is our most pressing reason for undertaking the systematic study of big structures and large processes. We must look at them comparatively over substantial blocks of space and time, in order to see whence we have come, where we are going, and what real alternatives to our present condition exist. Systematic comparisons of structures and processes will not only place our own situation in perspective, but also help in the identification of causes and effects" (Tilly, 1984, 10-11).

Whoever looks back over the last few hundred years must look at the peculiar balance of continuities and discontinuities to inform a discussion about work and the division of labour. Only those people who "look back" in such a way gain the necessary groundwork to come up with contemporary policy-related questions regarding appropriate ways of economic and social change.

Solow (1985) put the plea for historical observations in his wordings : „All narrowly economic activity is embedded in a web of social institutions, customs, beliefs, and attitudes…. Few things should be more interesting to a civilized economic theorist than the opportunity to observe the interplay between social institutions and economic behavior over time and place" (Solow, 1985, 328–329). A few years later Douglas G. North (1997) argued in the same direction by sharpening the awareness for historical research: "Improving our understanding of the nature of economic change entails that we draw on the only laboratory that we have--the past. But "understanding" the past entails imposing order on the myriad facts that have survived to explain what has happened--that is theory. The theories we develop to understand where we have been come from the social sciences. Therefore, there is a constant give and take between the theories we develop, and their application to explain the past" (North, 1997, 1).

Changes in self-employment patterns are influenced by a bundle of different components of influence. Not only the different institutional settings belong to these components but, of course, also the space, historical time and space and related dimensions as stage of very specific technological developments. Discussing different self-employment levels and their changes as ratios of self-employment within the total employment of a society must distinguish between absolute numbers and changes behind those numbers, which are inflow- and outflow-mobility. We measure self-employment in absolute or relative figure but forget mostly that behind those aggregate data numerous processes of in- and outflow occur. A vast part of research on social mobility deals positively or negatively with the early conclusion by Lipset and Zetterberg that "the overall pattern of social mobility appears to be much the same in the industrial societies of various Western countries" (Lipset & Zetterberg, 1959, 12). Looking exclusively at patterns of self-employment, we must consider convergent as well as divergent developments within individual countries and in an international comparison

The philosopher Heraclitus of Ephesus was right. Centuries before the start of our modern Christian computation of time, he claimed that everything is changing and nothing stands still. Speaking of capitalistic societies, Joseph Alois Schumpeter (1942) stated back in 1942 that capitalism must be seen as an evolutionary process, which, by its nature, never can be stationary. Societies are in a flow. They are constantly changed by the time due to the

'products' of the society in a given period of time. Nowadays, of course, things are also changing. A technological revolution centred on information and communication technologies has reshaped and still is reshaping the fundamental basis of our society.

So, as time marches on, the institutional settings of societies are in a transitioning process altering the foundations of the very same societies. Nowadays, this transitioning is accelerating from period to period due to major achievements in modern information and communication technologies. As labour markets are closely linked to the settings of societies, they are also facing massive structural changes, which affect the composition of labour markets and, in particular, the self-employed part thereof. One section of the paper will take a closer look at the changing contextual factors with a focus on implications for the labour market, in particular for the (solo-)self-employed. This paper deals with a special group within the sector of self-employment, which is receiving increasing interest from scholars in that field: the hybrid (solo-)self-employed. Within this group, we are facing a great heterogeneity with respect to different aspects and we can see a rise of blurred boundaries between dependent work and self-employment. The majority of the self-employed are working as a one-man- or one-woman-firm, which raises the need for challenging established views on self-employment and entrepreneurship. Why it is fruitful to engage in a discussion about stereotypical views of the self-employed or of entrepreneurs will be an important concern the paper deals with.

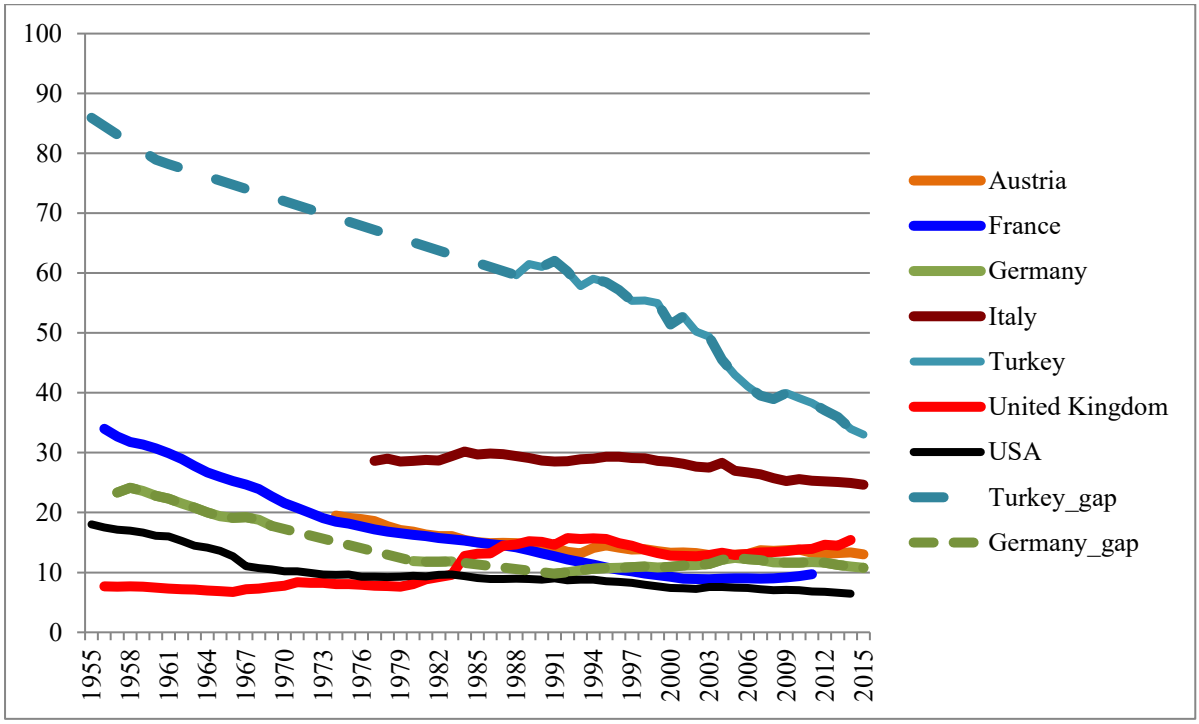
The overall aim of this paper is to examine differences within the special group of solo-self-employed persons belonging to the hybrid category. A special focus in this paper lies on differences with regard to their educational background. Based on an own empirical study, findings reveal that there are differences with respect to the different educational level. The empirical part of the paper takes up several of these findings and tries to discuss them within a framework of great heterogeneity that underlies this group. As starting point for our discussion, the first part of the paper gives attention to the development of self-employment in the 20th century.

2. Decline, Stabilization and Rise of Self-employment

Much of the decline of self-employment during the 20th century goes back to the decline of employment in agriculture due to the enormous productivity increase achieved in the agricultural sector. Research on institutional factors (Acs et al., 1992; Staber and Bögenhold, 1993) has indicated a variety of components, which influenced the ratios of self-employment. Especially, the relative ratios of unemployment stay in direct connection with self-employment ratios. Cross-national research for a series of different OECD countries showed that an upsurge in unemployment was always responsible for an upswing in self-employment ratios for a time span of several decades (Bögenhold and Staber, 1991).

The historical decline of self-employment has come to a relative standstill or even a slight revival since the 1980s, although different countries show different patterns of concrete development. For a series of selected OECD countries within an observation period of 1955-2015, Figure 1 indicates that the direction of development coincided between most of the countries, although the relative levels of departure and of change differ:

Figure 1: Ratios of Self-employment in OECD Countries from 1955-2015



Source: OECD (2017); own calculations

Looking at self-employment, ratios show a specific level of self-employment within a specific time, but this view hides the fact of inter- and intragenerational social mobility behind the figures. Figure may remain the same, while at the same time multiple inflow and outflow dynamics are taking place. Sociological stratification and mobility research shows the high dynamics between wage dependent work and unemployment on the one side and self-employment on the other. In other words, self-employment as a category continuously receives fresh blood and loses old blood through 'underground mobility'. The labour market dynamics and social mobility patterns are of great interest to researchers focusing on the division of occupations and related dynamics in the economy (Arum and Müller, 2004).

Empirically divergent paths and logics of people moving towards self-employment must be taken into account so that not only one typical manner of recruitment is visible, but *several* different types, each with competing social logics. In contrast to stereotypical assumptions, the phenomenon of self-employment may look entirely different when it is studied as a phenomenon embedded in the labour markets and specific occupational contexts, applications and sectors. Some types of small businesspersons and independent professionals belong to a category, which does not fit with an image of entrepreneurship (Burke, 2011; Burke and Cowling, 2015). They do not show ambitions for growth and they operate in routines, which are sometimes very close to low income ranges, occasionally to poverty (Shane and Venkataraman, 2000). Empirical studies on diverse groups of self-employed individuals in larger societal and labour market contexts may produce alternative pictures, challenging stereotypical assumptions and types of rhetoric related to self-employment and independent business (Blackburn and Kovalainen, 2008; Kautonen et al., 2010; Bögenhold and Fachinger, 2013; Cieslik, 2015; van Stel and de Vries, 2015).

3. Self-employment and Digitalization: Changing Contextual Factors

Behind the regular development of ups and downs of self-employment, one has to acknowledge secular trends towards a shrinking of employment in agriculture and a deindustrialization of economies and societies, which leads to an increasing weight of employment in the tertiary sector. According to OECD data on labour force statistics (OECD, 2015), nowadays between 75 % and 85 % of the total labour force is engaged in labour in the tertiary sector, whereas in the middle of the 20th century only between 30 % and 45 % of the labour force was located here. According to this, the vast majority of people in the employment system is no longer engaged in manufacturing or primary production, but is associated with some kind of post-industrial production (Bell, 1973). Of course, even the tertiary sector is very widespread and Bell (1973, chapter 1) added a quaternary (trade, finance, insurance, real estate) and quinary sector (health, education, research, government, recreation) in order to highlight different segments of the so-called post-industrial society.

In a historical time span looking at the last century, if not centuries, we can see a decisive change of the social landscape of human life. Among other historical significant developments, are especially those of peculiar interest that are centred around innovations regarding information technologies and have constituted a new technological paradigm. This innovations have reshaped and still are reshaping our society and everything which is interconnected with it. (Mokyr, 2002; Jin, 2016). Due to the fact that we are living in a capitalistic society, which is characterized by nature as never stationary (Schumpeter, 1942), we are always facing transitions. However, the remarkable point nowadays is the pace at which this overhauling process of the capitalistic system itself can be observed. One of the earliest and most central insights of economic science was that continuous development involves structural change (McCloskey, 2010). Besides many other important implications caused by this general overhauling, the changing structure of the labour market is of particular interest (Castells, 2010).

The digitalization of economic activities and the emergence of newly networked enterprise units resulted in shortening time per operation and accelerating the turnover of resources. New management techniques have changed and increased the speed of financial transactions to hours, minutes and seconds due to the availability of new information technology, with which well-defined software and programs can generate losses or gains by quasi-instantaneous decisions (Jin, 2016). What truly matters for every social process and form is the actual interaction between modes of development and modes of production (‘living flesh of societies’) enacted by social actors in often unpredictable ways within a framework of past history and current conditions of technological and economic development, surrounded by great uncertainty (Mokyr, 2002; McCloskey, 2010).

The most decisive factor (historically) accelerating, channelling and shaping the information technology paradigm was/is the process of capitalist restructuring undertaken since the 1980s. This process led, in a nutshell, to a series of reforms (deregulation, privatization and dismantling of the social contract between labour and capital). Four goals were pursued: *(1)* deepening the capitalist logic of profit seeking in capital-labour relationships, *(2)* enhancing the productivity of labour and capital, *(3)* globalizing production, seizing the opportunity of the most advantageous conditions for production and *(4)* marshalling the state’s support for productivity gains and competitiveness of economies. Without the new information technology, the capitalist restructuring would have been much slower, with much

less flexibility (Castells, 2010). When we speak of the 'informational society' and the new semantic of a 'gig economy', we have to acknowledge that these societies are capitalist societies and that they always experience some degree of cultural and institutional diversity.

The shift to a tertiary, quaternary and quinary economy went hand in hand with the transformation of the structure of occupations, education profiles and the division of firms. The fourth logistical revolution brought new competitive factors (Andersson and Andersson, 2017) including new communication networks, cognitive skills, creativity in scientific research and R&D, complexity of goods/services, and new forms of education, further education and work contents. Deming (2015) shows for the U.S. the change of required job skills in a period from 1980 to 2012, when the component of social and mathematical skills has increased in different compositions but steadily.

When we discuss level, quantity and quality of recent work profiles we must also take into account that new phenomena are appearing due to new technological possibilities in the gig-economy, first of all crowdwork and 'work on demand via apps'. Crowdwork is work that is "executed through online platforms that put in contact an indefinite number of organisations, businesses and individuals through the internet, potentially allowing connecting clients and workers on a global basis" … while 'work-on-demand' via apps refers to "jobs related to traditional working activities such as transport, cleaning and running errands, but also forms of clerical work, are offered and assigned through mobile apps" (de Stefano, 2015). Of course, the last group is not homogeneous and the most relevant distinction can be drawn between apps that match demand and supply of different activities such as cleaning, running errands, home-repairs and other apps that offer more specialised service such as driving, or even some forms of clerical work such as legal services or consultancy (de Stefano, 2015, 2-3; also Aloisi, 2015).

4. Problems of Statistical Classifications and Heterogeneity

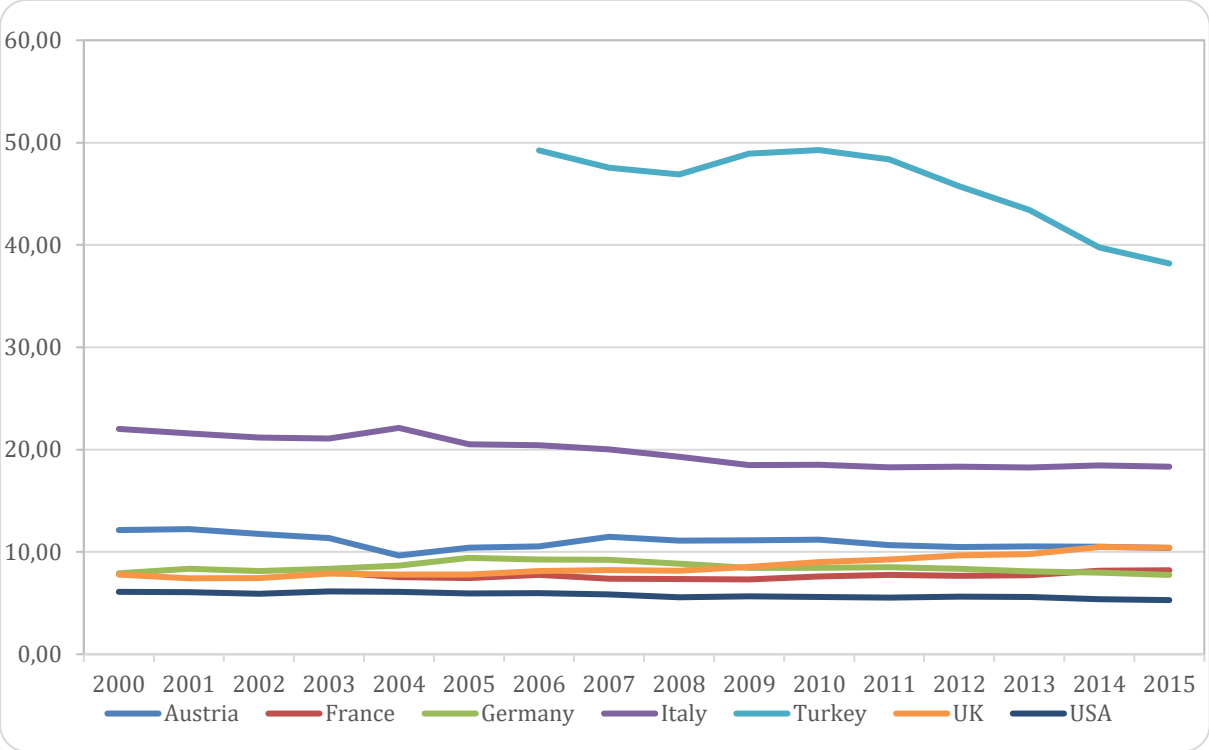
Discussing self-employment patterns is challenging, since the heterogeneity of this category is remarkable, accordingly also the own perception and the classification by others. The scale of self-employment runs from part-time self-employment with very small income on the one side up to societal top zones of income level, the entrepreneurial billionaires. All these economic and social existences belong to this category. The borderline between self-employment and dependent labour is blurred as could be shown empirically for the groups of artists, translators, and journalists (see Bögenhold, Heinonen, Akola, 2014) since (i.) the demarcation line is not very clear and (ii.) agents are always moving back and forth, depending on individual job opportunities, and (iii.) mixed identities or multiple jobs mostly do not exist within statistical categories (see Bögenhold and Fachinger, 2013 for the case of journalists). For example, the ILO standard definition has the group of employers and the group of own-account workers. The latter is defined as following: "Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of job defined as a 'self-employment job' …, and have not engaged on a continuous basis any 'employees' …. to work for them during the reference period. It should be noted that during the reference period the members of this group may have engaged 'employees', provided that this is on a non-continuous basis" (ILO, 1993).

Own-account workers are a group belonging to the category of self-employed workers who are defined as follows: “Self-employment jobs are those jobs where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. (In this context ’enterprise‘ includes one-person operations.)” (ILO, 1993). In contrast to this, dependent workers are described as the following: “Paid employment jobs are those jobs where the incumbents hold explicit (written or oral) or implicit employment contracts, which give them a basic remuneration, which is not directly dependent upon the revenue of the unit for which they work (this unit can be a corporation, a non-profit institution, a government unit or a household). Some or all of the tools, capital equipment, information systems and/or premises used by the incumbents may be owned by others, and the incumbents may work under direct supervision of, or according to strict guidelines set by the owner(s) or persons in the owners' employment. (Persons in ‘paid employment jobs' are typically remunerated by wages and salaries, but may be paid by commission from sales, by piece-rates, bonuses or in-kind payments such as food, housing or training).”(ILO, 1993).

When analysing social structures and patterns of inequality, gender is one of the items which highlights social disparities. Disparities are sometimes interpreted as indicators of discrimination practices and literature reports four puzzles of sex segregation (Charles and Grusky, 2004). This refers to the discussion (a) why there is resistance to egalitarian pressures, (b) whether men dominate the best occupations, (c) if a worldwide segregation regime exists, and (d) why segregation in more gender-egalitarian countries is in some part extreme. Regarding the fact that divisions of social structure show significant differences in gender participation and in gender distribution, discussion has to evaluate carefully the reasons which are responsible for those gender gaps (Verheul *et al.*, 2012; Charles and Bradley, 2009).

Different explanations can be found why gender imbalances exist and which factors can be held responsible (for life values versus work values see Terrell and Troilo, 2010). A more fundamental feminist explanation interprets female over- or underrepresentation as a mirror of male power strategies in society and as proof of the limited power of women to obtain the same positions in the same percentages as held by men. While this position is close to a model of gender domination, a competing position argues more moderately by claiming that the gender division of different social classes and labour market categories is itself a reflection of more complex factors, to which different patterns of gender decisions in education and further education also belong (England *et al.*, 2007; Casarico *et al.*, 2011). In particular, we see that gender decisions for different university study subjects are obvious, which initialize the result that engineers and many natural sciences are overwhelmingly male, while the teaching profession is dominated by women (Leoni and Falk, 2010). Gender based discussion is very rich in divergent sets of academic argumentation in that respect (Minniti, 2010).

Figure 2: Women's Self-employment rate as, % of employment, 2000-2015



Source: OECD (2017); own calculations

Figure (2) shows the course of female self-employment representation as percentages of labour market activity for the time period from 2000 to 2005 for selected countries. We see that a bundle of the observed countries (Austria, France, Germany, UK and US) show nearly no or just small changes in their level of self-employment ratios which oscillate between 10 percent, some slightly higher where others are slightly lower. Italy has a female self-employment ration which is double as high as the other analysed countries and Turkey has female self-employment which has slightly decreased but is still around 40 percent.

How can we make an adequate understanding of this ? Is turkey the country which should serve as a positive example for the other countries in respect to female labour market participation and self-employment ? Or does such a high ratio indicate a lack of jobs in dependent employment, or do we have here forms of employment which are classified as regular dependent work in other countries ? We still need several further investigation and related answers.

Furthermore, one can interpret the landscape of social and occupational (asymmetrical) distribution not only as a result of societal discrimination practices or divergent individual decisions by genders, but as a mirror of complex *household* decisions rather than individual actors' decisions. When following that line of thought, households gain the status of acting subjects, which appear to have their own distinguished rationality for making occupational decisions and organizing the structure and philosophy of life-courses. When employing this perspective, patterns of explanation become more diverse (Ahl and Nelson, 2010) and causes and effects become difficult to separate.

However, not only do household decisions have to be taken into account as a factor of influence, but so do labour market influences and global contextual changes in economy and society, commonly referred to as the trend of tertiarization (Wölfl, 2005)

5. Solo-Self-employment as a Case of Self-employment

Contextualizing the object of investigation (Welter, 2011) implies to acknowledge that the change to the service sector in general and to digitalization in particular fosters the relative trend to smallest units of self-employment (Cieslik, 2017). Especially when talking about the organization of firms, many contemporaries forget that the vast majority of firms consists of small and medium-sized units. Additionally, among these, most belong to the category of smallest firms, where the owner operates as one-man- or one-women-firm, where the owner is identical with the firm and vice versa (Wynn, 2016). Furthermore, many freelancers are located in this group, where they are statistically not always counted as firms, but belong to the group of self-employed occupations.

As Table 1 indicates, the share of solo-self-employed people is remarkably high in regard to the total amount of self-employed persons. In this table, only few member states were picked to show the relevance of solo-self-employed, but it should be stated here that no country within the EU has a share below the 50 % mark, while the average for the European Union is even higher than 70 %.

Table 1: Share of solo-self-employed persons in selected EU member states

EU member state	*share of self-employed in %*
EU average	**71.44**
Romania	93.45
United Kingdom	83.40
Lithuania	79.33
Czech Republic	78.95
Netherlands	75.32
Italy	71.77
Spain	70.72
France	61.38
Austria	59.88
Germany	54.75

Source: Eurostat-Database (2016a); own calculations

Interpreting new markets as a complex result of occupational changes at a macro level and social mobility within the biographies of individual agents, gives an idea of how changes serve as sources of newness. The existence of new and – at least initially – small firms is nurtured above all else by the shift in the economy towards the service sector (Castells,

2010). First of all, new occupations and job profiles are emerging; these are then in turn associated with the emergence of a multiplicity of new self-employed occupations and job profiles. The significance of the growth in professional services for the future of self-employed activity is revealed by a glance at the trend in those occupations, which belong primarily to the segments of business services and education, health and culture. Principle changes in society provide a basic ground for new areas of independent liberal professions as well as for new firms in the service sector, especially when the so-called creative industries (Florida, 2002; Flew, 2012) also become a domain of professional expertise and when trends of globalization and company strategies of outsourcing interact (Oshri et al., 2008; Bharat, 2012).

Due to increased recent trends of dynamics and related flexibility and uncertainties, people show up in the cloak of self-employment who are sometimes just de facto labourers without social security benefits (Kalleberg, 2011). On the other hand, due to secular changes in lifestyles and values an increasing number of freelancers is emerging, who just want to work on their own without being involved in hierarchies (Hytti, 2005), not only but often in the growing IT sector (Shevchuk and Strebkov, 2015). Independent liberal professions are definitely not regarded as 'core entrepreneurs'. Bögenhold et al. (2014) have shown that even between different sections of freelancers in Finland sometimes huge differences in labour market behaviour and life-attitudes exist (for the context of the UK see Burke, 2011, and Kitching and Smallbone, 2012). Some types of small businesspersons and independent professionals belong to a category, which does not fit with the traditional image of entrepreneurs as risk-takers and innovators. They do not show ambition for growth and they are sometimes very close to low income ranges, occasionally even to poverty (Bögenhold and Fachinger, 2016). Empirical studies on diverse groups of self-employed individuals in larger societal and labour market contexts produce alternative pictures, challenging stereotypical assumptions and rhetoric related to entrepreneurship. They highlight the heterogeneity of the occupational category of self-employment.

Findings reveal that the life and work situation of self-employed and liberal professions cannot be interpreted in simple black and white schemes, such as 'close to poverty' and pushed by missing employment chances into the sector of waged work on the one side versus working without hierarchies and being independent and self-realized on the other side. Instead, many different socioeconomic situations can be found 'in between', which are driven by different social logics. However, looking at the margins of the economy contributes to challenging some stereotypes of self-employment or entrepreneurship (Friedman, 2014). McKeown (2016) has shown that the actors are often not entirely certain about their own classification. Their self-definition oscillates between entrepreneur, self-employed person, consultant, independent professional (I-pro) or just contractor. It is not always clear, if we have to speak about a professional contractor or an independent professional (Johal and Anastasi, 2015). Self-employment is very often a biographical period and takes the form of being a social process within a life-course (Mayer, 2009; Kohli, 2007).

Especially being in a so-called entrepreneurial society (Audretsch, 2007) must be furnished sociologically: In doing so, we also have to acknowledge a variety of 'non-standard' forms of self-employment, including part-time self-employment, self-employment just for brief periods, freelancers and other different sectoral activities (such as, e.g., farmers). Full-

time working freelancers, farmers, micro-entrepreneurs without employees, and 'big' entrepreneurs employing a larger share of wage- or salary-dependent employees are difficult to summarize in one single box. The black and white dichotomy of being dependent or self-employed seems to neglect the multiplicity of inflow and outflow processes, which take place constantly behind the aggregate figure and which are very often related to complex processes of individual attempts to increase the social status. Therefore, those new forms of self-employment are difficult to define, since parts are pushed out of necessity while others are pulled and a sign of choice; parts belong to the new gig economy, while others work in comparatively traditional sectors (McKinsey, 2016). Last, but not least, we are experiencing the phenomenon that people fall into more than one box, they are self-employed and wage- or salary-dependent employees simultaneously.

When dependent workers and independent actors sometimes have overlapping identities, we may call them hybrid entrepreneurs (Folta, 2007; Folta et al., 2010; Raffiee and Feng, 2014; Schulz et al., 2016). While 'die-hard entrepreneurs' (Burke et al., 2008) are those actors, who are primarily portrayed in public discourse and in economic literature, namely those actors who are dynamic, willing to expand and to take risks, hybrid (self-)labourers seem to be of a different nature. The empirical study to discuss further is concerned with those hybrid forms of self-employment. Especially, following previous own empirical findings, we will explore if qualification matters when dealing with positive or negative aspects of hybrid self-employment.

6. Empirical Findings on Hybrid Self-Employment: Does Human Capital matter?

In Austria, the category of solo-entrepreneurs accounts for 59.9 % of all self-employed according to Eurostat-Database (2016a, 2016b). The share of solo-entrepreneurs within total self-employment in the EU-28, by contrast, accounts for 71.5 % (Eurostat-Database, 2016). Even though Austria is below the EU-28 average, we can see the importance of micro enterprises without further employees accounting for far more than the half of all self-employed people. Moreover, Austrian statistics indicates the significant relevance of enterprises led by one man or woman. The Austrian public census of company units shows that 322,889 firms are led by a solo entrepreneur, representing 61.8 % of all firms located in Austria (Statistik Austria, 2015). A lower level of solo-self-employed is presented by the Austrian Chamber of Commerce ('Wirtschaftskammer Österreich'; WKO). This is caused by the exclusion of a variety of types of freelancers, which do not have to be registered in the chamber. WKO data show a share of one-person-enterprises, compared with the total number of enterprises registered, which amounts to 58.9 %. In absolute figures, the WKO counts 290,061 units of solo-self-employed persons in the whole of Austria. Compared with the previous year, the figure of solo-self-employed people has risen by 4.2 %. If we look at the federal state of Carinthia, which is of interest in our empirical section, 18,097 one-person-enterprises are listed in the register of the Austrian Chamber of Commerce. The share of microenterprises without further employees amounts to 57.3 % for Carinthia, which is a little below the Austrian average. More than 60 % among all solo-firms have their domains in the business and craft sector, as well as in the information and consulting sector. Also, the trade sector, with a share of 48.5 %, has a high ratio of solo-firms (Wirtschaftskammer Österreich, 2015).

After the evaluation of data from official European and Austrian statistics, we can see that one-person-enterprises play a very important role in the European and Austrian business sector, since they make up the majority of enterprises. However, there is a lack of information about the group of hybrid-entrepreneurs. The group of hybrids are those firms where the owner has more than one activity. The question we raise is how the education of those hybrid-entrepreneurs accounts for differences emerging. Are there serious differences within this group, if we look at the educational background and if yes, where do they emerge? In order to answer the questions, a broad online survey was implemented in cooperation with the Carinthian Chamber of Commerce. The survey is based on a questionnaire containing 52 questions in total. The questionnaire was developed and tested in a long process lasting several months. It was finally adapted with the help of LimeSurvey. The questionnaire contains questions about motives of self-employment, client relations, success and satisfaction with self-employment, future prospects of the solo-self-employed, and socio-economic characteristics.

A total of 9,002 one-person-enterprises were contacted by the Carinthian Chamber of Commerce in February 2014 and invited to participate in the online survey. The response rate of 7.0 % resulted in a sample size of 626 one-person-enterprises, which is representative with respect to the legal form (over 90 % individual entrepreneurs), age (mean age in the sample and in the total population: 47 years), and gender, with males being slightly overrepresented in the sample compared with the total population. Several findings of the study are published in more details elsewhere (Bögenhold and Klingl-mair, 2016a; 2016b; 2016c; 2015a; 2015b; 2014; Klinglmair and Bögenhold, 2014).

The complex interaction of technological development, globalisation and socio-demographic change has accelerated a structural change in the economy, resulting in a changing working environment and new forms of employment. Concerning the field of self-employment, in many countries an emerging trend can be observed towards one-person enterprises, which – for example – already represent more than 50 % of all Austrian companies as described above. One clearly has to keep in mind that these microenterprises are by far not homogeneous in a variety of aspects like motives for self-employment (Bögenhold and Klinglmair, 2015) or by gender on the one hand, and by the extent of additional economic activities (Bögenhold and Klinglmair, 2016a; 2016b; 2016c) on the other hand. For instance, Bögenhold and Klinglmair (2015) found evidence that one-person entrepreneurs are mainly driven by motives like self-realization or working without hierarchies. However, there is also a large group self-employed (25.2 %) that has been crowded out from the (dependent) labour market. These one-person entrepreneurs decided to start their business due to labour market reasons and are therefore driven by economic reasons; thus, self-employment primarily represents an alternative to unemployment. Moreover, this economically driven group of one-person enterprises is comparatively dissatisfied with their professional situation, is less optimistic regarding their entrepreneurial future and generates lower incomes (Bögen-hold and Klinglmair, 2015a: 107). Blurred boundaries between dependent work and self-employment exist. These boundaries are fluent and dynamic in their nature and they do not fit with ideas of a clean division, which separates the sphere of dependent work strictly from that of independent work. These overlapping phenomena, when people combine both categories and dependent workers as well as independent actors have overlapping identities (Bögenhold and Klinglmair, 2016a; 2016b; 2016c), are very often neglected in research and are addressed in this paper.

In the collected (and described) data sample – beside 398 one-person enterprises (63.6 %) that are solely self-employed and that perform no additional activities – also 18.5 % (or 116 one-person enterprises) that have an additional dependent employment beside their business have been identified; this group can be described as a 'hybrid' form of entrepreneurs. Bögenhold and Klinglmair (2016a) investigated whether this additional dependent employment represents a necessity-driven secondary job to survive economically, or whether the one-person enterprise, namely the self-employed activity, represents only a secondary source of income. Based on five indicators (e.g. the volume or the monthly net income from dependent employment; for details see Bögenhold and Klinglmair, 2016a: 133) they identified that more than half of the hybrid one-person enterprises (53.3 %) only operates as a sideline business; self-employment activity indeed represents only a secondary source of income (Bögenhold and Klinglmair, 2016a: 136). Additionally, Bögenhold and Klinglmair (2016c) showed that hybrid self-employment significantly differs from non-hybrid 'regular' entrepreneurs with respect to socio-demographic characteristics as well as professional and company-specific factors. For example, the group of regular entrepreneurs primarily works at an own office compared to hybrid forms of entrepreneurship, which are operated as a sideline business mainly at home; in addition, hybrid entrepreneurs significantly focus more often on regional customers and markets. Furthermore, hybrid entrepreneurs are significantly younger (43.6 vs. 48.0 years on average), their businesses exist for shorter periods than regular one-person enterprises (6.9 vs. 9.5 years on average) and they have a lower yearly turnover respectively lower monthly income from self-employment due to the fact that they spend less working time on their business and conversely earn more from the – primarily full-time – dependent employment; for more details see Bögenhold and Klinglmair (2016c: 8-10).

Using a logistic regression model, Bögenhold and Klinglmair (2016b) additionally investigated several factors that determine the probability for the occurrence of hybrid entrepreneurship. Beside age, the situation in which the one-person enterprise was founded, the duration of the enterprise as well as the motives for being self-employed, two important determinants were identified. First, the family background does not play a significant role for explaining hybrid self-employment. The existence of a working partner did not show up to be a statistically significant influencing factor. This result may be caused by the fact that the additional dependent employment is in most cases not necessity-driven (Bögenhold and Klinglmair, 2016b: 15). Second, one-person enterprises where the person has a tertiary education are more likely to be additionally (dependent) employed compared to their less educated counterparts. This result may also be motivated by the preferable situation of academics on the (regular) labour market. In figures, one-person enterprises with a tertiary education are – ceteris paribus – about twice as likely to be employed alongside their business activities than less educated hybrid entrepreneurs (Bögenhold and Klinglmair, 2016b: 16).

This can, on the other hand, also be reflected by the fact that hybrid one-person enterprises are significantly better educated in the collected data sample, as more than one-third (36.2 %, 42 persons) has completed a tertiary education, while this applies to only 24.7 % (126 persons) of non-hybrid entrepreneurs. Conversely, the share of solo-entrepreneurs with an educational level below high school is significantly lower within the group of the hybrid

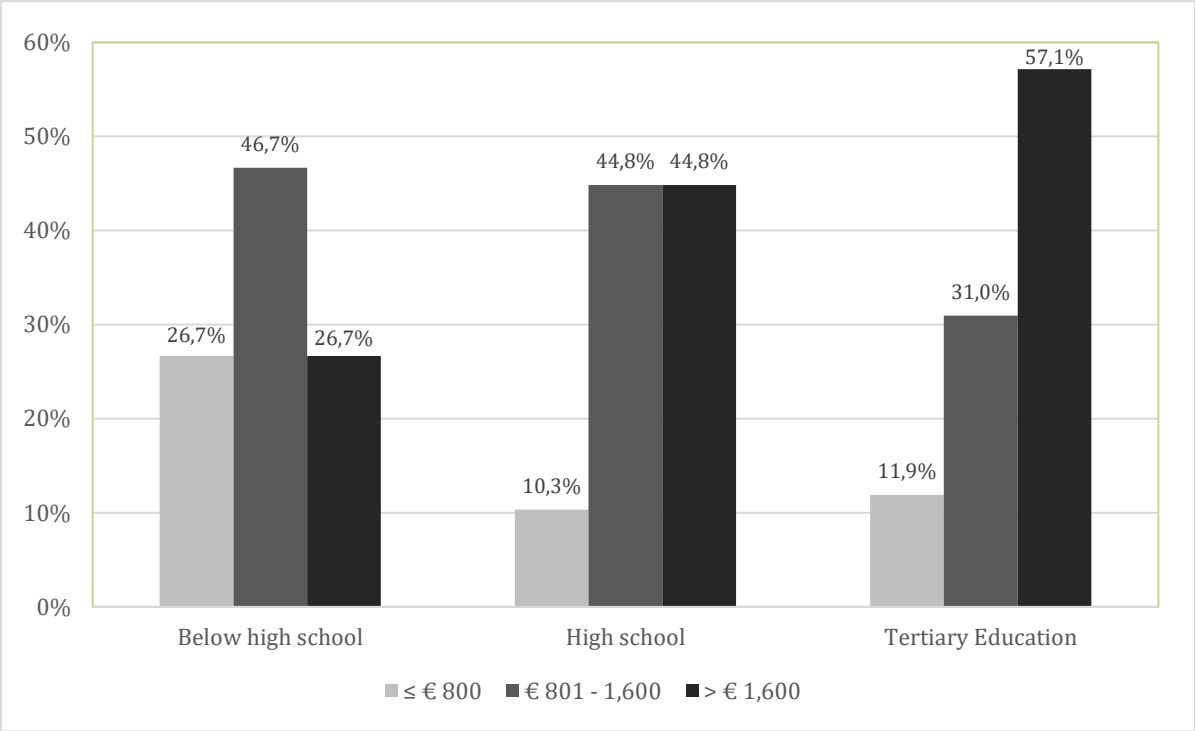
self-employed (38.8 % or45 persons vs. 49.6 % or 253 persons).[1] In summary, it has been analysed in detail so far, that *(1)* a large proportion of one-person enterprises in Carinthia are forms of hybrid entrepreneurs that operate their business as sideline business and *(2)* that these hybrid forms differ enormously from regular entrepreneurs that represent their self-employment as main business. What remains open is whether hybrid entrepreneurs can be treated as a homogenous group or if they also differ by selected characteristics, where we especially focus on the educational level in the sense of 'whether human capital matters?'. Are there differences in the amount of the self-employed and/or dependent sources of incomes by educational level and do more highly educated groups achieve higher individual returns on education? What about the satisfaction with the professional career and can the hybrid solo-self-employed be divided into two groups, namely opportunity- and necessity-driven entrepreneurs based on their human capital? These and more questions will be addressed in the following empirical analysis of our data sample in more detail.

With respect to the **monthly net income from additional dependent employment** it can be shown that more highly educated hybrid entrepreneurs (tertiary education level) receive 'returns to education' on the dependent labour market as expected by the human capital theory: the higher the educational level, the higher the dependent income (see Figure 2); this effect is statistically significant based on a contingency table analysis (*Pearson-x2=10.15; p=0.038*).[2] In detail, a share of 57.1 % of hybrid entrepreneurs with tertiary education has a monthly net income above € 1,600; in contrast, only about one-eighth (11.9 %) realizes a dependent net income below € 800. For solo-self-employed persons with educational levels below high school vice versa results can be obtained: a share of only 26.7 % ranges in the highest income category, while more than one fourth earns less than € 800 per month; the majority (46.7 %) earns between € 800 and € 1,600 monthly. A similar relationship is observed for medium qualified solo-self-employed (with high school degree): a share of only 10.3 % realizes a monthly net income below € 800; the remaining 89.7 % are allocated equally to the two higher income categories.

[1] The share of persons with a high school degree amounts to 25.0 % (29 persons) among hybrid entrepreneurs respectively 25.7 % (131 persons) for non-hybrid self-employed.

[2] This result is independent from weekly working hours based on a contingency table analysis; there are no statistically significant differences in working hours by educational level (*Pearson-χ2=6.83; p=0.337*), higher income levels **do therefore not** result from higher weekly working hours.

Figure 2: Monthly net income from additional dependent employment



Source: Own Calculations

Before the analysis is expanded additionally also on the relationship between **monthly net-income from self-employment** and the acquired human capital, two facts concerning the general low income levels from hybrid solo-self-employed – compared to non-hybrid entrepreneurs (€ 608 monthly net income on average vs. € 1,347 for non-hybrid entrepreneurs) – should be emphasized: *First,* hybrid entrepreneurs mainly operate their business as sideline business, as already elaborated by Bögenhold and Klinglmair (2016a: 136); self-employment activity therefore often only represents an additional source of income. *Second, t*he professional fields in which the respondents operate their business – primarily – do not represent the vocational background of the particular entrepreneur as a Kruskal-Wallis-Test, an extension of the Mann-Whitney-U-Test for more two groups, shows (*x2(2)=8.89; p=0.012*). Learned skills based on the formal educational background and/or professional experience respectively tenure from dependent employment cannot – one-on-one – be assigned to self-employment activities.

Moreover, a similar effect between self-employment salaries and the educational level – as has been identified for dependent income– cannot directly be observed. For this purpose, the monthly net income was aggregated to two categories; income category 1 with salaries below € 1,000 per month and category 2 with income levels above € 1,000. While hybrid entrepreneurs with a high school degree are allocated between the two categories as expected, it can be shown that higher qualified hybrid entrepreneurs (tertiary education) are slightly overrepresented in category 2 compared to those solo-self-employed with an educational achievement below high school. However, these differences are too small and statistically insignificant; the income from self-employment is therefore independent from the educational level in the collected data sample based on a contingency table analysis (*Pearson-x2=3.46; p=0.177*). Nevertheless, what immediately stands out is that – although no significant education-dependent differences in salaries can be identified – **weekly working hours** differ by educational background on a 10%-significance-level (*Pearson-x2=20.83;*

p=0.053). While entrepreneurs with tertiary education are overrepresented in categories with low(er) working hours (less than 30 hours/weekly), this group is underrepresented in the category with more than 60 hours per week. These findings are vice versa for hybrid entrepreneurs with an education level below high school; for instance, this group is overrepresented in the category with 60 hours and above. Hence, if we consider self-employment income per hour (instead of monthly salary) the relationship between income and educational achievement can – at least –be observed indirectly for self-employment sources of income as well.

Furthermore, concerning the **branch structure** of one-person enterprises Bögenhold and Klinglmair (2016c: 851) already elaborated that differences with respect to business sectors between hybrid and non-hybrid solo-self-employed are statistically not significant. Conversely, if we consider only hybrid solo-self-employed and differentiate the business sectors where the hybrid entrepreneurs operate by educational status, significant results – based on a contingency table analysis – arise: tertiary educated solo-self-employed (as well as the group of hybrids with a high school degree) operate to a significant higher amount in prosperous branches like the industry sector or the information and consulting (ICT) branch, while the opposite is true for persons with educational levels below high school. The group of lowest qualified solo-self-employed perform their business to a comparatively higher extent in the trade sector or in the tourism branch and are – conversely – underrepresented in the industry sector respectively the ICT branch (*Pearson-x2=26.06; p=0.011*).

Focusing further on the **regional distribution** of enterprises the data show that medium and high qualified solo-self-employed operate their business primarily in the Carinthian central area (Klagenfurt-Villach), while entrepreneurs with an educational achievement below high school perform their business to a higher extent in Carinthia's rural regions; these differences are significant on a 10%-significance level based on a contingency table analysis (*Pearson-x2=28.21; p=0.059*). Additionally, significant differences concerning the **main workplace** – again on a 10%-significance-level – arise by qualification status (*Pearson-x2=13.99; p=0.082*). While, for example, 82.2 % of solo-self-employed firms without high school degree operate their business at home ('home office') or directly at the customers' premises, this is true for a comparatively lower share of 69.0 % for tertiary educated hybrid entrepreneurs. In contrast, the lowest qualified group is underrepresented in the category 'own office' or 'co-working-spaces (13.3 % low vs. 23.8 % high qualified solo-self-employed). For the lowest qualified solo-firms with significant lower dependent income levels and lower entrepreneurial salaries, operating an own office or co-working-space seems to be unprofitable. Combined with the fact that this group performs their business in rural regions, long(er) distances directly to the customers and thus (transport) costs arise for this already disadvantaged group. Nonetheless, the identified lower (dependent as well as self-employed) incomes and the higher amount of weekly working hours for low qualified compared to medium and higher qualified solo-self-entrepreneurs have no significant influence either on **job satisfaction** or on the **satisfaction with the 'work-life-balance'** based on two separate Kruskal-Wallis-Tests (*x2(2)=0.15; p=0.928* for job satisfaction and *x2(2)=1.02; p=0.600* for satisfaction with the work-life-balance).

With respect to the empirical findings above it can be concluded that there are two major groups within the examined hybrid solo-self-employed. On the one hand, we have those (highly qualified) actors who pursue an additional job because they see an opportunity to maximize their income, on the other hand there are actors who have to pursue an additional job to compensate for the lower income they receive from their dependent employment

relationship ('necessity driven'). In other words, we can summarize that we find opportunity-entrepreneurs as well as necessity-entrepreneurs within the specific group of hybrid solo-firms. Although the hybrid solo-self-employed belong to either the first or the latter category, no difference with respect to their job satisfaction can be found. This reflects that fact that necessity-entrepreneurs know, at the end of the day, that they have to engage in an additional profession – beside their low paid dependent employment – to make ends meet, but they accept these circumstances. Similar studies (and results) on the educational background differentiating between opportunity-based and necessity-based self-employed have already been conducted (e.g. Baptista et al., 2013), but there is much space for further research, in particular with a focus on the hybrid solo-self-employed.

7. Conclusions and Outlook

As the 'rules of the game' (Baumol, 1990) are changing, we have to pay attention to the changing character of self-employment. Different countries have different specific institutional *settings*, making it almost impossible to generalize self-employment. Contextual views are necessary to grasp the diversity in self-employment, therefore an acknowledgment of the historical, temporal, institutional and social context is inalienable (Welter, 2011). The implication is that we have to respect different forms of self-employment when talking abstractly about the category of self-employment in the labour market, too diverse are the social, economic and cultural conditions and related biographies. Among the heterogeneity of actors under the umbrella of self-employment the empirical focus of the paper concentrated on the *one-(wo)men firms,* which are in other words self-employed people without further employees. Here, more specifically, we asked about those one-person-self-employed who have further sources of income as dependent labourers. This group is – most commonly – called *hybrid self-employment*.

Hybrid self-employed actors are difficult to locate exactly between the boundaries of the employee and the self-employed. Two forms of hybrid self-employed have been classified by Bögenhold and Klinglmair (2016c): *(1)* self-employed having an additional dependent employment relationship to maximize their income and vice versa *(2)* people having a dependent employment relationship who pursue a form of self-employment to ensure an additional income.

Our findings suggest that analysing the categories of hybrid entrepreneurs shows strong differences according to their human capital. The higher the amount of human capital the higher is – on average – their income, especially income as employees. On the other hand, the lower the level of human capital, the more likely economic actors are just working part-time. Comparing the income of low and high human capital people through self-employment shows first hand that there are no clear differences regarding education, but those with better education work shorter hours, thus they can realize a human capital return. Neither segments differ regarding work satisfaction and intentions to grow.

We have to rethink the often used dichotomous perspective when we look at self-employment. 'Black' and 'white' considerations are not sufficient to capture the richness of actors under the self-employed banner and their specific forms of 'happiness' (Meager, 2015). In a discussion full of synonyms, some of the affected persons do not even know to which category they belong (McKeown, 2015). Probably one of the most promising tasks in research is the necessity to deliver generalizable theoretical contributions which differ from those

established or are even in conflict with them (Di Gregorio, 2004). The great heterogeneity and the very modest amount of ‘classic’ self-employed persons constitute a difficult challenge for research (Davidsson et al., 2010).

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