

Independent Contractors, IPros, and Freelancers: New Puzzle Pieces in a Conceptual Jungle

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Abstract. Highly skilled and qualified workers represent a growing group among the solo selfemployed across numerous countries. They provide knowledge-intensive services in different occupational, organisational, spatial and temporal contexts and often in hybrid forms of work and employment. Understanding the heterogeneity within this labour market group requires more knowledge and awareness of its characteristics and peculiarities, laying the foundation for the development of clearer definitions and distinctions. The terms used to describe this labour market group are manifold and often not clearly defined and delimited. A better understanding of the actors helps to develop more efficient analytical but also policy-aimed implications to support this group with directly targeted actions. In this paper, we compare the terms used most commonly and often synonymously in the literature—Independent Contractor, Independent Professional (IPro), and Freelancer—and try to point out the differences and similarities between them. It becomes apparent that these terms are not identical, but rather refer to different concepts, namely the business side, the occupational dimension and the work relationship.

Keywords: independent contractor, independent professional, freelancer, Ipros, solo selfemployment, knowledge work, professional services.

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1. Introduction

Digitalization is progressing rapidly and we are facing major upheavals in the economy and in society due to new technologies, lean organisations and changing work- and lifestyles. Alternative or new work arrangements challenge the prevailing employment relationships in several respects (Kalleberg & Marsden, 2015) and are on the rise in different jobs, occupations and industries (Cappelli & Keller, 2013; Spreitzer et al., 2017). Highly qualified and professional workers are no exception, but are part of this process that has already transformed the ways in which knowledge-intensive services are being provided (Susskind & Susskind, 2015). The free and liberal professions have their origins already before the

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beginning of the digital age, however, the creation of digital technologies and resulting opportunities, have opened up a new field for free and liberal professions, revealing a changed status within today's labour market. These roots of the free and liberal professions can still be found at present in specific regulations, legal rules and the tax system, thus highlighting the lack of consideration of the digital development and new work arrangements from the governmental and legal side. As a result, many professions from the knowledgeintensive service sector may evolve into large, internationally operating companies, losing their unique identity.

Nevertheless, the increase in the number of solo-self-employed people working in knowledge-intensive (business) services (KIBS) (Van Stel et al., 2020) is a sign of this development and indicates that traditional modes of practising professional work in organisations, firms and societies are changing (Ruiner et al., 2013). KIBS are characterized by high knowledge intensity in terms of labour qualifications, service relationships, and dominant human intellectual capital (Muller & Doloreux, 2009).

While the digital transformation is leading to a restructuring of work and associated forms of (self-)employment (Barley et al., 2017), the terms with which these new forms can be grasped have not yet really established themselves. At present, neither in the scientific nor in the public discussion does an exact understanding of the phenomena, that these terms are intended to describe, exist. However, if progress is to be made in this field of research, clear terms are needed with which to operate. Thus, to foster academic research and public debate on these new work arrangements, it is important to know and to be clear about the use of different terms. Only by defining the object of investigation – by means of clearly used terms and concepts – does it become possible to make statements about the nature of certain groups in the labour market and their associated work arrangements (Hodgson, 2019).

The most often found terms used to describe solo self-employed workers in KI(B)S sectors are Independent Contractor, Independent Professional (IPro) and Freelancer. But these are by far not the only terms that can be found in the scientific literature and there are many more used to name these types of workers (McKeown, 2015). This plethora of terms makes it difficult to determine whether they actually mean the same thing or refer to different aspects of this phenomenon. Most of these terms are used interchangeably in the existing literature, but as we argue here, there are at least three aspects that are inherent in these three terms mentioned above, which are the business-side, the occupational dimension and the work relationship. Therefore, these terms are not identical, but point to different aspects of this complex phenomenon and should therefore be used in a non-arbitrary way.

In this paper we give an overview of different terms, concepts and topics inherent and related to solo self-employed workers in KI(B)S sectors. We begin our discussion by looking at broader societal and economic developments and

elaborate the relevance and importance of highly skilled workers for a digital economy and society. Furthermore, we discuss different terms used to denote solo self-employed workers in KI(B)S sectors and their related businesses and work relationships and therefore lay the ground for the conceptual clarification of these terms.

2. Societal and Economic Developments

2.1. New Landscape of Labour, Work Arrangements and Occupations

Discussing self-employment and its changes in recent decades implies to acknowledge the framework of societal and economic developments which are linked with specific institutional constraints of legal, economic, cultural and historical factors: When we discuss form, level, quality and size of recent work profiles we must especially take into account that new phenomena appear continuously due to new technological possibilities. Speaking of capitalistic societies, Joseph Alois Schumpeter stated back in 1942 that capitalism must be seen as an evolutionary process, which is always in a flow. The composition of products and services and the population of firms, individual actors and occupations is in a state of permanent change. Schumpeter's term of creative destruction (Collins, 2013; Schumpeter, 1950) refers to economic processes by which old systems, technology and thinking are destroyed by the new ones. Deaths and births - both of economic sectors, business enterprises, occupations and individual actors - are two sides of the same coin, and Schumpeter, when describing the principal crescendo of economic and social change, dubbed creative destruction as an essential fact of capitalism. Taking this view, a technological revolution centred on information and communication technologies, commonly called digitalization, has reshaped and is still reshaping the fundamental basis of our society.

These times of rapid change are connected to dynamic changes in technology and organisation of recent societies and they are connected to immense turbulences where economic and social winners and losers are part of the same game simultaneously. The ambivalent face of the ongoing development points to increased complexities in several domains of the economic working sphere. We know also that digitalization goes along with sustainable changes of occupations and their contents where new competencies will be fostered (Yoo et al., 2012), especially with mathematical skills and thought in cross-disciplinary thought, creativity and languages (Deming, 2017). Research investigating the positive and negative impacts of the digitalization process on (new) work arrangements within the landscape of labour are manifold, focusing also on links between work and organisation (Orlikowski & Scott, 2008), new processes of learning (Noe et al., 2014) as well as changing structures of leadership (Sheninger, 2019). Lastly, the whole system of the societal configuration of employment relations and work is in a state of constant change and reconfiguration (Kalleberg & Marsden, 2015).

Scanning recent discussions about the nature of labour, too often the general changing contours of work are overlooked (Sweet & Meiksins, 2017). A great heterogeneity and variety within wage and salary dependent work must be acknowledged, according to qualification, salary, working profiles and working times. Also, blurred boundaries between dependent work and self-employment can be found. Consequently, a variety of different forms of work behaviour and of social security can be found due to different economic and social status groups (European Commission, 2018).

The landscape of labour and occupations has become much more complex than ever before. On a biographical level of individual actors we find that the classic idea of one job or occupation which lasts a lifetime has increasingly become obsolete. People speak about the need for life-long learning; very often people pursue non-linear careers and end up in quite different job contents than those where they started in young years when entering their professional career. Sometimes people don't find jobs according to their training or education and do completely different tasks, other times people enter new challenges, they combine different jobs with each other simultaneously or sequentially, one after the other, and contents of occupations and their categories are characterized by fuzziness. Cappelli & Keller (2013) demonstrate that about 20 percent of activities in the system of employment in the US and even more in other countries differ from classic textbook knowledge, which sorts the world of labour into tidy and neat boxes.

The digitalization of economic activities and the emergence of newly networked enterprises lead to a shortening time per operation and accelerate 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. Without the new information technology, the capitalist restructuring would have been much slower, with much less flexibility (Castells, 2010). When we speak of the 'in-formational society' and the new semantic of a 'gig economy' (Vallas & Schor, 2020), we are addressing exactly those zones of uncertainty and fuzziness where entirely different actors always come in anew, so that we have a permanent mix of new forms of innovation and creativity (Burke et al., 2020; Florida, 2002) and also of precarity (Conen & Schippers, 2019) of short or long duration. The term 'gig

economy' includes an understanding of modern day labourism as well as established forms of activities in the new media sector.

2.2. Solo Self-Employment in Knowledge-Intensive Business Services (KIBS)

The term self-employment refers to a category of the labour market in which very different types of working people are grouped together (Skrzek-Lubasiska & Szaban, 2019). It includes people who are employers of other people, workers who work for themselves (own-account workers), members of producers' cooperatives, and unpaid family workers. The OECD defines self-employed workers as "individuals who are the sole owners, or joint owners, of the unincorporated enterprises in which they work, excluding those unincorporated enterprises that are classified as quasi-corporations". This definition focuses on ownership of the assets which implies the possibility of profits and losses in relation to the work provided by self-employed individuals (Foss & Grandori, 2020).

An analytical segmentation that has gained traction in the discussion of selfemployment is that between the self-employed with employees (employers) and the self-employed without employees (solo self-employed) (Dvouletý, 2018). This distinction is based on the criterion of operation with or without having own employees. There is some evidence that solo self-employment and selfemployment with workers are two distinguishable labor market statuses that are quite different in terms of their way to self-employment, their utilization of personal work capacities and earnings (Boeri et al., 2020). While this distinction is often used in international comparisons of self-employment rates, it does not address the heterogeneity within these two broad categories. Solo selfemployment in particular is so diverse in terms of work and living realities that additional criteria are necessary to make segmentations more accurate and meaningful.

The solo self-employed workers in the knowledge-intensive business service sectors (KIBS) constitute a segment that is distinctive from other solo self-employed workers in the industry, construction or other service-based sectors (Leighton & Brown, 2013). KIBS can be defined as services "that provide knowledge-intensive inputs to business processes of other organisations such as Computer services, R&D services, Legal, Accountancy and Management services, Architecture, Engineering and Technical Services, Advertising and Market Research" (Miles et al., 2018). People working in these sectors as solo self-employed workers are often highly skilled, productive and also more satisfied in relation to their work than their employed counterparts (Van der Zwan et al., 2020). They work mainly on a project-basis and provide their skills and expertise in different organisational and business contexts (Burke, 2019) and therein help organisations to become more innovative and profitable (Burke &

Cowling, 2020). As "skilled independent workers" they are part of a growing segment in the global workforce and include both traditional professional occupations and new expert occupations (Knapp, 2020).

3. Approach and Methodology

The multitude of different terms used in academic research as well as in public discourses to describe (new) forms of work arrangements and the associated types of workers in a digital economy and society (McKeown, 2015) reflects the complexity and diversity of the phenomenon under investigation. Terms like, for example, "independent contractors", "sole traders", "own-account workers", "freelancers", "independent professionals", "agency workers", "on-call workers", "moonlighters", "crowdworker" or "coworker" refer to new types of workers and their work arrangements, which, however, mostly elude traditional (self-) employment distinctions. In this "jungle" of legal terminology, statistical categories and self-description or third party labels, it is difficult to keep track of the terms used to characterize these types of self-employed workers and their work arrangements.

Nevertheless, the most frequently used terms in academic and public discourses are "Independent Contractor", "Independent Professional" and "Freelancer". We have taken these three terms as a point of reference in order to examine and compare them in relation to certain criteria of definition found in the existing literature. The systematic literature review conducted by Skrzek-Lubasiska and Szaban (2019) served as a starting point, which is why we conducted a literature review for further additions to this research and the ongoing debate. This recent literature review identified at least five subgroups within the self-employment category that have been researched and discussed in the scientific literature over the last few decades. Specifically, Skrzek-Lubasiska and Szaban (2019) distinguish between: (1) traditional small business owners and farmers, (2) innovators (e.g. start-up owners), (3) freelancers (independent contractors, IPros), (4) dependent (bogus, false) self-employed, and (5) hybrid self-employed.

In terms of the five subcategories above, the present paper focuses on the third one. We focused on peer-reviewed articles and research reports published in the past twenty years. We used the electronic databases Google Scholar and Web of Science for literature search. Our search strategy did not include a specific search formula, but we searched for the above-mentioned relevant terms: Independent Contractor, Independent Professional, and Freelancer. In order to not neglect important contributions from research fields outside the entrepreneurship literature (Linnenluecke et al., 2020), we focused on management, business, human resources and organizational research in addition to entrepreneurship literature. Similarly, we validated our literature search through backwords search strategies and by drawing on key articles in the field. Moreover, we consciously included research from different legal and cultural backgrounds, as the phenomenon of the rise of solo self-employment is a global one and we therefore wanted to include and consider different perspectives.

This is the starting point from which we endeavoured to systematize and discuss the individual terms and concepts related to solo self-employment in knowledge-intensive service sectors and occupations. It makes it possible to differentiate between these terms and distinguish certain concepts, which are currently not sufficiently separated. The three terms mentioned are often used synonymously, but as we argue here, indicate different concepts, which have to be delimited accordingly. Although there is considerable overlap, these terms are not identical, but cover either the business side, the occupational aspect or the work relationship and arrangement of this group of solo self-employed people. Furthermore, these terms are often associated with implicit meanings that arise from more historical contexts and thus also reflect the cultural and historical underpinning of the phenomenon.

As has already been mentioned, there are many more terms that can be found in the academic literature or in public discourse that are related to these concepts and terms. In order to facilitate future work in this area, we have tried to find and collect different words used in research databases pointing to relevant research as far as possible. Like in a controlled vocabulary that lists different words to indicate the same concepts (Abbott, 2014), we have identified relevant keywords, which have also been used in existing research, and added them to our definitions. This will help future research efforts to more easily find the relevant literature using these keywords. Here we focus on the three most important concepts, which we will specify using the terms mentioned above, adding further terms where possible.

4. Definitions and Operationalizations: Independent Contractors, IPros and Freelancers

In this part, we discuss the conceptualizations and operationalizations of three subgroups of solo self-employed persons that specifically relate to new work arrangements in the digital age (Wood et al., 2018). It should be noted that the following discussion uses an Eurocentric perspective.

As the terms listed under Skrzek-Lubasiska and Szaban's (2019) third subcategory "freelancers (independent contractors, IPros)" make clear, there are different terms used to denote these **solo self-employed people** who work mainly for themselves ("own-account") in different sectors and occupations and in a range of legal, organisational, temporal and spatial work arrangements (Bögenhold & Klinglmair, 2016; Burke, 2015; Cieślik & Dvouletý, 2019; Kitching & Smallbone, 2012; McKeown, 2016; Süß & Becker, 2013). **Freelancers (independent contractors, IPros),** as this group is called here, are referred to as "highly educated and skilled individuals with special qualifications, particularly desired by employers in today's global labour market. They are working independently, at their own risk, investing mainly their intellectual capital. They are free to choose for which and how many clients they will work." (Skrzek-Lubasiska & Szaban, 2019, p. 382). Recent research has shown that this group of solo self-employed workers plays a major role in today's innovation-driven economies, where it can promote entrepreneurial activities (Burke et al., 2020).

Table 1 gives an overview of most of the terms commonly used in academic research, starting with the term self-employment and then focussing on the terms relevant for knowledge-intensive or highly skilled service occupations and their associated organisational and work-related arrangements. The following sections discuss the terms independent contractor, independent professional, and freelancer according to the categories in Table 1.

Characteristic	Self-Employed	Independent Contractor	Independent Professional	Freelancer
Definition	Those people who are working for themselves ("own-account") with or without employees in diverse economic sectors and occupations and in different work and legal arrangements. (Skrzek- Lubasiska & Szaban, 2019, p. 378)	Those who operate their own business and who contract to perform services for others without having the legal status of an employee, that is, they are engaged by a client under a commercial contract, rather than as an employee under an employment contract. (McKeown, 2016, p. 791)	A distinct category of the solo self-employed who are highly skilled knowledge workers and who are active in a wide range of knowledge- intensive sectors, except farming, craft or retail sectors. (Leighton & Brown, 2013, p. 8; Leighton & McKeown, 2015, p. 119)	A person who provides skilled creative, professional, scientific or technical work on a temporary basis under a contract for services for organizational or personal clients either in a primary or secondary work role on either a full-time or part- time basis (Kitching & Smallbone, 2012, p. 77).
Term usage	Mostly used as a statistical classification to categorize persons in national and international surveys (e.g. Eurostat, OECD).	Primarily a legal term used to define both natural persons and business entities that have business relationships with clients.	A customary term used to describe a subcategory of contractors who work in "professional" or knowledge-based services.	A customary term used by actors in creative and/or professional sectors to refer to contractors and "semi-dependent" workers in particular work relationships.
Employee/Non- employee Distinction	People who do not sell their labour power for salary or wages on the labour market and are thus not considered employees.	Performing "discrete" work rather than "relational" work for possibly different clients and are thus "non-employees".	Performing "discrete" work rather than "relational" work for possibly different clients and are thus "non- employees".	Can include employee-like status, when performed under PAYE umbrella companies.
Economic Sectors	All economic sectors including Agriculture & Forestry, Industry & Commerce, and Services	All economic sectors including Agriculture & Forestry, Industry & Commerce, and Services	Knowledge-based service sectors "KBS"	Knowledge-intensive (business) service sectors "KI(B)S"
Occupations	Different Occupations with all skill levels (high- medium-low)	Different Occupations with all skill levels (high-medium-low)	Service occupations that are knowledge-based with skill levels high and medium	Service occupations that are knowledge-intensive with only high skill level
Nature of Client	Personal and Organizational Clients	Personal and Organizational Clients	Personal and Organizational Clients	Primarily Organizational Clients but can also include Personal clients

Table 1. Characteristics of three types of self-employed

Statistical Operational-ization	Own-account worker in all Eurostat's NACE classification	Own-account worker in all Eurostat's NACE classification	Own-account worker in Eurostat's NACE tertiary (service) sector excluding retail, transportation, accommodation & food	
Synonyms	Own-account worker Sole or joint owner Self-employed individuals including/ excluding family members Employer	Micro/Nano Business Sole Proprietorship Sole Trader Nonemployees	IPros Contract Professionals Itinerant Experts New Experts Solo Practitioner	Freelance (small) Business Owner Freelance Worker

4.1. Independent Contractor

4.1.1. Conceptuality: Definition and Term Usage

An **independent contractor** is generally speaking a person or company that supplies goods or services to clients. More precisely they are defined as those people who "operate their own business and who contract to perform services for others without having the legal status of an employee, that is, they are engaged by a client under a commercial contract, rather than as an employee under an employment contract." (McKeown, 2016, p. 791).

Although the people who work as independent contractors are of course selfemployed, they are not necessarily solo self-employed (without employees). As an independent contractor it is possible to employ other people and thus provide services with one's own employees. This implies that independent contractors do not necessarily work alone without employing other people, but they can and do act as employers (Hillstrom, 2011). Since solo self-employed people by definition have no employees, independent contractors can therefore not be regarded as identical. In reality there is of course a large overlap between independent contractors and solo self-employed, but according to the definition provided here, independent contractors are conceptually different.

The definition specifies that independent contractors are not employees who sell their labour in an employment relationship, but are engaged in their own special kind of micro business that is nonetheless different from other small or medium-sized businesses (McKeown, 2016, p. 784).

4.1.2. Labour Form Distinction and Occupations

The term independent contractor is primarily a legal term that differs from an employee and is thus associated with a classification in different legal frameworks (contract or corporate law versus labour law and social security law).

There is an ongoing debate in the legal literature about what distinguishes an independent contractor from an employee and what criteria can be used to make this distinction (Harris & Krueger, 2015; Perulli, 2020). Since there are different legal and economic consequences associated with this classification, such as for example whether or not certain work regulations and protections apply, this is significant for workers as well as for companies who hire independent contractors (Brameshuber, 2019).

A key difference between an employee and an independent contractor is the nature of the work performed for third parties. Work can be either "discrete" or "relational", depending on the particular interaction between the worker, the control over assets used to perform work, as well as the relative value a buyer of work derives from it (Posner, 2020). Work is "discrete" if its value is mainly independent of the relationship to the specific buyer of work, which means that the services could be offered to numerous different actors. On the other hand, "relational" work is dependent on the particular relationship with the buyer of work. This implies that the value of the services provided by workers are dependent on the specific circumstances of the client, the organisation, assets and the interactions with other workers. It requires a relationship-specific investment by the worker, which creates a situation where they have fewer options to use their skills elsewhere should the wage situation deteriorate.

Independent contractors are basically workers who provide "discrete" or "transactional" work, which means that they sell their work as more or less concretely defined and delimitable (or "commodified") work products that can essentially be sold to different market participants without decrease in value (Posner, 2020). Unlike employees, who make relationship-specific investments in a single employer and are therefore at risk of being underpaid due to the specialization in one buyer of work, the situation of independent contractors is different (Pearce, 1993). The markets for discrete work are (relatively) competitive and thus provide opportunities to switch clients more easily than in "relational" work situations. The value of discrete services is theoretically independent of the relationship with a particular client, which makes contractors more or less independent from one particular employer.

Accordingly, independent contractors differ from salaried employees primarily in the nature of their work, which is also reflected in the application of different legal frameworks. As such, independent contractors are both workers and entrepreneurs who own and operate their own business and who earn a living through selling goods or services in different kinds of markets (Bidwell & Briscoe, 2009). The business, which is operated in the form of an independent contractor, is often a pure "sole proprietorship" (also known as "sole trader"). Independent contractors are the simplest form of a firm as a productive unit in the economy: self-owned, self-employed, self-financed and self-directed (Orts, 2013, p. 180). Besides sole proprietorship there are also other legal statuses that an independent contractor can have to run his or her business. For example, it can include directors of limited companies, as they are also owners of these companies.

4.1.3. Operationalization and Synonyms

Independent contractors can be statistically operationalized using the Eurostat's NACE classification, which is a classification system of different economic activities (Rapelli, 2012): defining independent contractors as own-account worker in all economic sectors. Other terms frequently used to describe independent contractors include 'micro/nano business' or 'sole proprietorship' or 'nonemployees'.

4.2. Independent Professional (IPro)

4.2.1. Conceptuality: Definition and Term Usage

Independent Professionals (IPros) are a distinct sub-category of independent contractors and thus of the self-employment phenomena. A very broad definition, based on the classification of economic activities, defines them as "independent workers without employees engaging in a service activity and/or intellectual service not farming, craft or retail sectors" (Rapelli, 2012, p. 11). This definition proposed by Rapelli (2012), who conducted one of the first studies of this labour market group in Europe, discerns IPros from other self-employed workers by classifying them according to the economic sectors in which they operate. In that sense, IPros are independent contractors who work on their own account in the service sectors (tertiary sector) excluding the retail, transportation, accommodation & food service as well as the public administration sectors.

IPros as they are often called can be found in new expert occupations and traditional liberal or free professions and often provide these services jointly with other people, but do not employ their own staff (Leighton & McKeown, 2015). They are hired by companies for special tasks and work in close collaboration with employees of these companies, but are not part of the organisation they temporarily work for. They are external workers who are not members of the client organisation. Consequently, many of the organisational incentives, benefits and sanctions do not apply to these workers, thus creating new opportunities and challenges for organisational design and HR management (McKeown & Cochrane, 2017).

4.2.2. Labour Form Distinction and Occupations

In most cases, this group is further narrowed down by referring mainly to highly skilled and qualified workers (Leighton & McKeown, 2015) who provide their services in the form of independent contracting.

Independent contractors in "liberal" or "free" professions are "a category of workers whose work entails the application of theoretical and scientific knowledge to individual cases. The terms and conditions of work traditionally command considerable autonomy from external oversight, except by peer representatives" (Muzio et al., 2020, p. 7). In this sense, these liberal or free professions share overlapping similarities, which distinguish them from other occupational groups and which include that "1) they have specialist knowledge; 2) their admission depends on credentials; 3) their activities are regulated; and 4) they are bound by a common set of values" (Susskind & Susskind, 2015, p. 15).

These "traits" attempt to capture the main elements of traditional "professionalism" understood as a way of institutionalizing knowledge-intensive work in society and the economy. Professionalism in this sense represents a prototype of knowledge-intensive work associated with the liberal professions, which allowed the granting of a monopoly on certain areas of knowledge through which expertise could be developed and passed on, and thereby provided also long-term economic security (European Centre for Liberal Professions, 2014). However, with the emergence and rise of modern information technologies and other societal factors, new jobs and occupations have emerged that are related to a new form of professional practice, which can be called "itinerant professionalism" (Barley & Kunda, 2006). The so called "new expert occupations", while similar to the liberal professions, have thus developed a different mode of professional work that is practiced often in the form of independent contracting (Muzio et al., 2008). Their approach can be seen as an alternative to the traditional way of professionalism in that their legitimacy depends much more on the demand on markets for their services than on external institutions like the state, professions or employing organisations (Cross & Swart, 2020). Accordingly, independent professionals can be regarded as a subgroup of independent contractors. They can be found in traditional "liberal" professions as well as in new "professional" or "expert" occupations and can thus be practiced in traditional or non-traditional ways. They provide different kinds of knowledgebased services in diverse economic sectors and occupational fields, ranging from medical services to internet blogging.

These "professional" workers are active in a wide range of knowledgeintensive or knowledge-based sectors (Miles et al., 2018) including information and technology (ICT) services, advertising and marketing, research and development, legal and medical services, accountancy and journalism. People generally working in these sectors are often referred to as "knowledge workers" (Alvesson, 2001). However, the term "knowledge worker" does not indicate a specific occupational category in a narrow sense, but rather is used as a collective label for knowledge-based or professional workers in various jobs, occupations and industries (Mason, 2018). Although one usually has an idea of which occupational groups are covered by these terms, a second look shows that what falls under this category is not always so clear and unambiguous (Leighton & Brown, 2013). Would bloggers, project managers or marketing consultants count as IPros, or would only doctors, lawyers and architects who work in solo self-employment be seen as independent professionals?

While some of the occupations in which IPros provide their services have a long tradition and are covered by the category of "liberal" or "free" professions (such as for example doctors, lawyers, tax consultants or architects), there are many more "new expert(s)" occupations (such as for example software developer, project managers or consultants), which are quite different from these traditional liberal professions in terms of regulation and delivery of expertise (Muzio et al., 2008).

4.2.3. Operationalization and Synonyms

Following Rapelli (2012) independent professionals can be statistically operationalized using the Eurostat's NACE classification, which is a classification system of different economic activities. In that regard, IPros can be defined as independent contractors working on their own account in knowledge-based service sectors. This excludes certain service sectors such as for example "retail", "transportation" and "accommodation & food services". In comparison to Rapelli's definition of "IPros sectors", the scope of service sectors can be further narrowed to the ones proposed by Mason (2018), which would exclude also "real estate activities","administrative and support service activities" and "other service activities". In the literature, terms such as 'contract professionals', 'new experts' or 'solo practitioner' are also used to describe independent professionals.

4.3. Freelancer

4.3.1. Conceptuality: Definition and Term Usage

Freelancer is a term that is also often used to refer to independent workers who provide their services in creative, managerial, professional, scientific or technical occupations and jobs on a temporary contract for service basis to their clients (Kitching & Smallbone, 2012, p. 77). Historically, the terminology goes back to two words 'free' and 'lance', as the term refers to offering labour in war and for

kings and first appeared around 1800 (Scott & Hewitt, 1995). In more recent times used only for independent workers in the creative industries sector, the term is now more widely understood in the scientific literature and covers self-employed people in a wide range of professional and managerial occupations (for an overview see Dent et al., 2016). Comparative research on different groups of freelancers could show that the labour market behavior between those groups may differ significantly (Bögenhold, Heinonen & Akola, 2014).

It is obvious that there is a considerable overlap between IPros on the one hand and freelancers on the other as they are both defined by knowledge-based or (intensive) service activities in the economy. The main difference in the current literature is the operationalization: whereas IPros are primarily defined according to economic sectors, freelancers are mainly delimited according to occupational groups, which is associated with creative industry occupations such as journalism, media, acting, writing, sports, or music (Kitching & Smallbone, 2012). The economic sector approach is broader as it covers also lower skill levels, while the occupational approach allows distinguishing between high and low skill levels and thus is more specific. Nevertheless, this raises the question whether the two terms are identical, despite operationalization, or whether they should be defined differently.

4.3.2. Labour Form Distinction and Occupations

Just like independent professionals, freelancers are not employees but are selfemployed people who sell their knowledge-intensive services to their clients on a temporary and often short-term basis (Osnowitz, 2010). In contrast to employees, freelancers are not paid in the form of a salary, but according to certain tasks or assignments (Rodgers et al., 2014). These tasks can vary in duration and may involve varying degrees of organisational integration in the company hiring a freelancer.

At first sight, there seems to be no real difference between the term freelancer and the term independent professional because both refer to solo self-employed people working in and providing their services in professional or managerial jobs and occupations and thus can be understood as a subset of own-account workers based on skill or qualification level. Upon a second glance, however, differences of the two terms become apparent, which point to the aspect of the relationships and arrangements in which these self-employed workers deliver their knowledgeintensive services.

A freelancer is someone who is in a particular work arrangement with an employer who pays for work activities undertaken by the person who does "freelancing" (Süß & Kleiner, 2010). The term freelancer concerns the *relationship* in which these types of professional work are carried out. Freelancing used as a verb refers to the *way a person works*, which is different

from a traditional employment relationship in which the worker sells his labour exclusively to one employer for a longer period of time (Kalleberg & Marsden, 2015). The unclear – and sometimes contradictory – contents of the nomenclature becomes visible again which is being addressed in the article and which mirrors the research task (Bögenhold, 2019; Skrzek-Lubasiska & Szaban, 2019). Freelancing is a particular kind of work relationship which involves performing particular kinds of work (short term contract work) in particular end-user relationships (hired by an employer for a particular task) in creative, professional or managerial occupations (Kitching & Smallbone, 2012, p. 76). This means that the term freelancer points to the aspect of the work relationship in which the professional worker offers his knowledge-intensive services to clients. This implies that a professional worker might freelance for one employer while he is employed in another work relationship.

A central question here is whether all services provided by independent professionals to clients fall under the category of a freelance work arrangement or whether they can be considered as a sourcing arrangement in which the services provided by the professional take the form of a supplier relationship? According to Cappelli and Keller (2013), two aspects in particular are decisive here in distinguishing between a work and a supplier arrangement. Depending on where most of the work is done and how much contact the contractor has with employees of the customer organisation during the provision of services, it would be either a work or a sourcing arrangement (Cappelli & Keller, 2013, p. 589).

4.3.3. Operationalization and Synonyms

Freelancers can be defined as independent workers (including employees in PAYE umbrella companies) who are providing their services in knowledgeintensive (business) service sectors ("KI(B)S") in particular work relationships (primarily with organizational clients). According to Kitching & Smallbone (2012), freelancers can be statistically operationalized by using the ISCO (International Standard Classification of Occupations) system, which provides a standardized way to group occupations according to skill level and specializations. The ISCO major groups 1 to 3 refer to "Managers", "Professionals" and "Technicians and associated professionals" which are classified as highly skilled and educated people and thus cover knowledge-intensive service occupations. These three groups correspond to skilled non-manual occupations and can therefore be used to demarcate "freelance workers" from other types of own-account-working (Kitching & Smallbone, 2012).

5. Conclusion and Discussion

Knowledge-based services (KBS) in general or knowledge-intensive business services (KIBS) in particular are central drivers of innovative activities in a digital economy and society. While knowledge-intensive work has gained relevance since the beginning of the 20th and 21st Century and is associated with the rapid growth of managerial, technical and other professional jobs and occupations (Wyatt & Hecker, 2006), its importance for digital economies seems to be increasing even further (Brynjolfsson & McAfee, 2014). The tensions between skill levels and digital change are of course an immensely broad and ongoing field of research (Acemoglu & Restrepo, 2020; Autor & Dorn, 2013). For example, workers with specific skills in computer services, R&D services, legal, accountancy and management services or technical services, advertising and market research are becoming the central resource for success in digital markets. The "war for talents" with skills in high demand seems to be intensifying and is accompanied by various efforts of companies to gain access to these types of workers.

With regard to the meaning of being a professional, two different approaches emerge: on the one hand, the historically regulated liberal professions can be identified, which were regulated accordingly on the basis of the activity they performed. On the other hand, in addition to this classification, from today's perspective there is another definition of professionalism, in the form of higher education through university education and degrees and through professional status such as manager or technician (OECD & European Union, 2019).

Today the majority of knowledge-intensive work is being provided either internally by so-called corporate or organisational professionals (Muzio et al., 2008) or externally by Professional Service Firms (Von Nordenflycht, 2010). With the advent of the digital economy we are seeing the emergence of a third way of doing professional work, which occurs in the form of solo self-employment and which differs from the two other modes of professional practice in many ways (Barley & Kunda, 2006). Although the work provided by these independent professionals is often the same as that of their employed colleagues, the provision is distinct and diverse. These workers offer specific intellectual services in different K(I)BS sectors and sell these services in non-traditional ways through their own individual businesses, in flexible organisational, digital, spatial and temporal work arrangements and often hybrid forms of work and employment.

From what has been said so far, it becomes clear that the terms "Independent Contractor", "Independent Professional" and "Freelancer" are not identical but refer to different concepts that should be kept in mind when using these terms in research. It shows that we are dealing with a mixture of different aspects that are inherent to this complex phenomenon, which often eludes established categorizations. As we have tried to show in this study, solo self-employed people run a business that is different from other small or micro-sized business. They operate their businesses in sole proprietorship and build their companies mainly through their own work. In that sense these solo self-employed people are also workers in knowledge-intensive or professional occupations through which they operate their business and generate their personal income. There are various ways to run a business as a sole proprietor. One can, for example, produce or sell products or services to customers, or one can offer one's own skills and knowhow on the labour market for contract work. Here the client mainly determines the work outcome, but the professional controls the work process.

We built our paper on several foundational works that have addressed the question of how to conceptualize and empirically grasp solo self-employed workers in KI(B)S sectors (Kitching & Smallbone, 2012; Leighton & McKeown, 2015; McKeown, 2016; Osnowitz, 2010; Posner, 2020). We focused on the three terms that are most often used interchangeably in the current literature to refer to this segment of the labour market: Independent Contractor, IPro, and Freelancer. Based on the definitions of the terms and a discussion of related aspects, we pointed out the overlaps and differences between these terms. We show that they are not identical, but rather indicate different aspects that have not received sufficient attention. Thus, by relating these terms to each other and highlighting differences, we help to ensure that they can be better used in future research on this segment of the labour market.

For future research in this direction clear terms and concepts are needed. As our discussion has shown, there are various aspects related to solo selfemployment and associated work arrangements that are currently often not distinguished and differentiated properly. However, a clear terminology is necessary to clarify different conceptual aspects and thus advance our knowledge of these new experts in a digital economy. In this regard, all sterile pros and cons regarding the rise of self-employment that are often brought forward in popular and academic discussions, are not reaching far enough, because they remain empty as long as scholars do not differentiate between the many inherent specifications and terms.

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