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When less time is preferred: An analysis of the conceptualization and measurement of overemployment

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journals.sagepub.com/home/tas**Julia Hiemer and Maike Andresen**

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Abstract

Socioeconomic panel data indicate that numerous employees would prefer to work less, i.e. that they are overemployed. However, due to inconsistent definitions and divergent operationalizations of overemployment, integrating existing research results is challenging and implications for research and practice are difficult to draw. To advance research in this field, we present an analysis of the concept and measurement of overemployment. To analyze the concept, we proceed in two steps. In step 1, we present the range of overemployment definitions in the literature and systematize the similarities and differences in these previous conceptualizations with the aim of arriving at an adequate definition of “overemployment.” In step 2, in view of the partial overlap between existing definitions of overemployment and other concepts used in past research, we demarcate overemployment from related concepts, identify conceptual distinctions between overemployment and other concepts and explore connections between concepts. To analyze the measurement of overemployment, we look at the bandwidth of content, measurement levels and question wording in overemployment measures and discuss the consequences of the

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different measures used for the overemployment rates found. We then present a consistent approach towards conceptualizing and measuring overemployment which aids future research on overemployment and similar concepts.

Keywords

Over-employment, over-work, work hours mismatch, work status incongruence, working time, conceptual analysis

“My favourite things in life don’t cost any money. It’s really clear that the most precious resource we all have is time” (Steve Jobs, as cited in Sable, 2015).

Introduction

Time is probably our most precious resource, because it is limited by its very nature. Yet, many people in the western world complain about a shortage of time (Szollos, 2009) and are dissatisfied with their work time. Especially in industrialized and comparatively rich countries, employees’ desire for fewer work hours is usually more pronounced than any desire for more work hours (Golden, 2006a, 2006b; Reynolds and Aletraris, 2010). According to Eurofound (2017) data based on 35 member states in Europe, 30% of all employees would prefer to work fewer hours. This (mis)fit between actual and preferred work hours in the sense of a preference for lower work hours can be described as overemployment (e.g. Golden, 2014; Merz, 2002).¹

Overemployment is a challenge for employers and employees alike: working more than employees desire is related to lower job satisfaction (Angrave and Charlwood, 2015; Wooden et al., 2009; Wunder and Heineck, 2013), poorer health (Bell et al., 2011) and lower life satisfaction (Angrave and Charlwood, 2015; Wooden et al., 2009). Long work hours, which correlate with overemployment (Golden and Gebreselassie, 2007), are related to more mistakes at work (Dembe et al., 2005) and lower cognitive performance (Virtanen et al., 2009). Moreover, reducing overemployment is an important political and societal challenge if more people are to enjoy a better work–life balance (e.g. Holst and Seifert, 2012) and unemployment is to be reduced (e.g. Knight et al., 2013).

Notwithstanding all of this, some major trends suggest that overemployment will persist or even increase and that it will continue to be a major challenge in the future. First, leisure is becoming the most valued use of time among Generation Y, and the preference for achieving better

trade-offs between time and money is rising (Cogin, 2012). Therefore, we can expect a rise in overemployment in the future, at least for more highly educated people (years of education are associated with the tendency to prefer shorter hours over higher incomes; Kalleberg and Masden, 2013). The phenomenon of acceleration and its impact on the world of work (Rosa, 2005; Ulferts et al., 2013) is another relevant trend which manifests in increasing work intensity and feelings of being under time pressure (Rosa, 2005). Technological and organizational changes placing high time and flexibility demands on employees (Ulferts et al., 2013) may ultimately lead to an increase in feelings of being overemployed.

While the importance of investigating overemployment is well recognized, its definitions and measurements are extremely heterogeneous (Golden and Gebreselasie, 2007; Holst and Bringmann, 2016) as are, indeed, measures of work hours and work hour preferences more generally (Campbell and Van Wanrooy, 2013; Tijdens and Dragstra, 2007). Divergent definitions of the concept of overemployment are currently hampering both theory development and sound empirical research on overemployment. This article therefore aims to systematically review and critically assess existing literature on overemployment conceptualizations and measures and to derive implications for the consistent conceptualization and measurement of overemployment.

Conceptual and measurement problems related to overemployment

Existing conceptualizations and measures of overemployment have been criticized for being inconsistent and fuzzy in terms of both their content and question wording (Campbell and van Wanrooy, 2013; Golden and Gebreselassie, 2007; Holst and Bringmann, 2016). As a result, estimations of how many people are overemployed vary widely, e.g. from as little as 6% up to 60% for employees in the US (Golden, 2006b, 2009; Golden and Gebreselassie, 2007; Reynolds, 2004; Reynolds and Johnson, 2012; Stier and Lewin-Epstein, 2003) and from 2.5% to 50.1% for employees in Germany (Holst and Bringmann, 2017). Much of this variation is, Holst and Bringmann (2016) argue, simply a product of the divergent wording and formats of the questions used. In addition, Campbell and Van Wanrooy (2013) found in their interview study that it is difficult for employees to indicate exact work hour preferences as employees often hold conflicting ideas about reducing their working hours. Both findings are consistent with survey response theory, which suggests that most people “do not possess preformed attitudes at the level of specificity demanded in

surveys. Rather they carry around a mix of only partially consistent ideas and considerations” (Zaller and Feldman, 1992: 579f). Thus, survey questions shape answers “by the manner in which they frame issues, order the alternatives, and otherwise set the context of the question” (Zaller and Feldman, 1992: 582f).

Zaller and Feldman (1992) show that also slight differences in measurement can lead to inconsistent answers, and this finding can surely also be applied to the study of overemployment. Inconsistencies in measurement are problematic, as they may lead not only to incoherent results on overemployment rates but also on the correlates of overemployment. Previous studies, for instance, have not always agreed on the consequences of overemployment. For example, Wunder and Heineck (2013) and Friedland and Price (2003) found no relationship between overemployment and life satisfaction, but Wooden et al. (2009) and Angrave and Charlwood (2015) did. Additionally, practical implications on how to reduce overemployment are difficult to draw without knowing how it should best be measured.

With a view to explaining inconsistencies in overemployment research and avoiding them in future research, we systematically analyze the concept of overemployment and its measurement(s). We conduct a conceptual analysis (Olsthoorn, 2017) building on Golden’s (2006a, 2006b, 2014) prior conceptual work and on Golden and Gebreselassie’s (2007) list of some previously used overemployment measures. We expect this conceptual analysis on overemployment to yield a more refined understanding of what constitutes overemployment and what separates it from and connects it to other concepts. To our knowledge, no previous article provides a comprehensive and systematic collection of definitions of overemployment, as compared to similar concepts, and its measurements. However, reaching a consistent understanding of concepts—including what delineates them from other concepts—and some agreement on their uses is a prerequisite for the development of useful knowledge and theory (Furner, 2004).

This paper is organized around the following two research questions, the first theoretical and the second methodological:

1. How is overemployment defined (question 1a) and how can it be demarcated from other concepts related to a (mis)fit between actual and preferred work hours (question 1b)?
2. How is overemployment measured and how do differences in its measurement potentially impact the estimation of overemployment rates?

The overarching aim is to present a coherent approach to conceptualizing and measuring overemployment in future studies.

Method

To answer our research questions, we conduct a conceptual analysis that is based on a systematic literature review. A conceptual analysis serves to find a proper definition for a term (Olsthoorn, 2017), here overemployment. To answer research question 1a, we therefore deal with the definition of overemployment by analyzing similarities and differences in its previous conceptualizations. A conceptual analysis also assists with the search for theoretically relevant conceptual distinctions (Olsthoorn, 2017), in this case the distinctions between overemployment and other work time discrepancy concepts and is useful for exploring connections between concepts, here between overemployment and similar mismatch concepts (research question 1b). To gain a better insight into the concept of overemployment, we then also analyze its measurement (research question 2).

To choose an adequate method for the literature review informing the conceptual analysis, we refer to Edmondson and McManus (2007), who describe a continuum of management theory between nascent and mature. Whereas mature theory presents well-developed constructs, nascent theory proposes tentative answers to rather open-ended questions in areas where only a small body of theory exists (Edmondson and McManus, 2007). As described above, no consistent definition and measurement of overemployment exists, and hence we can locate overemployment at the “nascent” end of the continuum. We chose the grounded theory following Wolfswinkel et al. (2013) and Webster and Watson (2002), as it is a typical strategy for researching nascent topics (Edmondson and McManus, 2007). In addition, it “enables the key concepts to surface, instead of being deductively derived beforehand” (Wolfswinkel et al., 2013: 2).

We followed the five-step process of a grounded theory literature review (Wolfswinkel et al., 2013). In the first *define* stage, we determined inclusion and exclusion criteria and identified adequate research fields, databases and search terms. In the second *search* stage, we searched the databases identified. In the third *select* stage, we selected appropriate articles matching our research questions. In the *analysis* stage, we applied grounded theory principles to extract value from the studies, and in the final stage, we present the data. We will now describe these steps in detail.

Define stage

To identify relevant articles, we first demarcated overemployment from adjacent, but distinct concepts that were excluded from the analysis. Overemployment (Golden, 2014) refers to employees who have a preference to work fewer hours. It can, as such, be clearly differentiated from

“workaholism.” Workaholics have no preference for fewer hours, since they are chronically addicted to work in a compulsive and uncontrollable manner (Schaufeli et al., 2008). Overemployment can also be differentiated from “long work hours” per se, as the latter refers to regular work hours more than the standard full-time workweek (usually 40 hours; Beckers, 2008), but without implying a preference to work fewer hours (Beckers, 2008). This means that overemployment—unlike long hours—refers to a *perceived* state. Whether people are overemployed cannot be measured simply by looking at the number of hours they work, since some people can feel overemployed even when working a low number of hours (e.g. Reynolds, 2003) and others may not perceive themselves as overemployed even when working a high number of hours. Similarly, overemployment can be differentiated from “overtime,” which is defined as work in excess of contractual hours (Duran and Corral, 2012). Not all people working overtime desire to work fewer hours (Beckers, 2008).

Against this background, we identified keywords from prior research on overemployment (e.g. Golden and Gebreselassie, 2007; Reynolds, 2014; see Table 1).

Overemployment has been a relevant topic for multiple disciplines, primarily for business administration, economics, psychology and sociology. The keywords were entered in full-text searches in the following databases representing the knowledge stores of these disciplines: PsychInfo, Business

Table 1. Search terms used in Steps 2 and 3 of the literature analysis.

Simple search terms:

- Over(-)employment
- Work hour mismatch/discrepancy
- Work(ing) hour congruence
- Work status congruence
- Fewer work hours
- Work hours fit
- Work(ing) hour/time preference

Combined search terms:

- Work(ing) hours + discrepancy OR mismatch OR overwork OR constrain* OR restrict* OR desir* OR prefer*
 - Work(ing) time + discrepancy OR mismatch OR overwork OR constrain* OR restrict* OR desir* OR prefer*
 - Actual-desired discrepancy + time OR hours OR work
 - Actual work time/hours + ideal work time/hours OR preferred work time/hours
 - Long work hours + preference
 - Overtime + preference
-

Note. *truncated search term.

Source Complete, EconLit, Psychology and Behavioral Sciences Collection, SCOPUS, IBSS, Sociological Abstracts, Ingenta Connect, Emerald, SOWIPORT and WISO. We searched for literature from 1968 on, i.e. from the point in time when the longest running social attitudes survey began (PSID, Institute for Social Research, 2017), up to January 2018, when this article was written.

Search stage and select stage

Our search led to the identification of 475 relevant research contributions. Subsequently, we selected articles in a step-by-step approach. (1) To ensure our research was based on high-quality publications, we excluded grey literature and book contributions, and only included peer-reviewed journals, which left us with 338 contributions. (2) We looked for the occurrence of relevant keywords, e.g. overemployment or work hour preferences in the abstracts or titles. This step reduced the number of relevant articles to 184. (3) We then analyzed the main text of each article and selected those publications that either included a definition and/or a measurement of overemployment or a definition/measurement of a similar concept with a different designation such as overwork. After this phase, 113 articles remained.

Analysis stage

As suggested by Wolfswinkel et al. (2013), we began by arranging the selected papers in two stacks. Stack 1 consisted of 39 articles that contain an explicit definition or measure of overemployment (relevant for research questions 1a and 2), and Stack 2 consisted of 82 articles referencing to concepts similar to overemployment, e.g. work hours mismatch (relevant for research questions 1b).

For each step of the analysis, we first—following the approach proposed by Wolfswinkel et al. (2013)—picked a random paper and read and highlighted all the passages that seemed relevant to our research questions. The same procedure was applied to all the articles. Every word, sentence or paragraph that we highlighted in each paper represented a relevant “excerpt” that was subsequently entered into an MS Excel table. This yielded three Excel sheets (one sheet for overemployment concept, one sheet for similar concepts, one for measurement).

In parallel to (re)reading all articles, we engaged in open coding. This means that we noted down all aspects that appeared to be meaningful parts of the texts regarding our research questions and formed first categories. When new aspects emerged, we went back to the data and previous categories to check whether categories were exclusive. For example, when in

answering research question 1a, the *preference to work less* category appeared and later the *preference to work less, earn less* category appeared, we reread papers we dealt with earlier to make sure that all categories make sense and are mutually exclusive. Similarly, when in answering research question 1b, a new concept arose, we checked whether and how it was different from other identified concepts (see Table 3).

Next, we applied axial coding, i.e. we identified relationships between categories and subcategories. For example, in answering research question 2 *categorical* and *continuous*, measurement levels were identified as subcategories describing the category *measurement level* (see Table 2). Finally, we engaged in selective coding, i.e. we further integrated our categories. Tables 4 and 5 resulted from this axial and selective coding. They display differences and similarities between concepts and describe possible relations between measurement categories and overemployment estimates. Most importantly, a new definition of overemployment resulted from this selective coding, i.e. the further abstraction of the knowledge we gained from the literature review. As is typical for literature reviews following a grounded theory approach, we engaged in constant comparative analysis by switching back and forth between the analytical steps until we reached theoretical saturation, i.e. when no more new categories or links between categories arose in the articles selected (Webster and Watson, 2002). Wolfswinkel et al. (2013: 3) state that “a good review must be a richly competent coverage of a well-carved out niche in the literature.” For this reason, we covered all of the peer-reviewed papers that appeared over a generous timeframe.

Results

Research Question 1: Definition of overemployment (question 1a) and delineation from other concepts (question 1b)

The overall goal of our conceptual analysis is to present a coherent conceptualization of overemployment in order to facilitate the integration of existing and future study results and enhance theory development. To reach that goal, it is crucial first to understand how overemployment has been conceptualized in the literature (research question 1a). Based on our coding of the definitions of overemployment contained in the subgroup of 39 articles, we differentiated between three types of conceptualizations of overemployment. These are our categories (see Table 2). The first category is the *preference to work less* (25% of articles) where overemployment is defined as a state in which employees work longer than preferred or wish to

Table 2. Frequencies of definition and measurement types for the term “overemployment.”

Categories and corresponding subcategories	Number of articles, N=39 (overemployment)	Sources
Conceptualization of overemployment^a:		
1. <i>Preference to work less</i>	9	Abrahamsen (2010), Allan et al. (2016), Brown and Sessions (2001), Bryan (2007), Campbell and van Wanrooy (2013), Euwals (2001), Merz (2002), van Echtelt et al. (2006), Wooden et al. (2009)
2. <i>Preference to work less/learn less</i>	24	Angrave and Charlwood (2015), Bender and Skatun (2009), Böheim and Taylor (2003), Böheim and Taylor (2004), Devoe et al. (2010), Fagan (2001), Feather and Shaw (2000), Golden (1996), Golden (2009), Golden (2016), Golden and Gebreselassie (2007), Golden and Figart (2000), Kuroda and Yamamoto (2013), Matta (2015), Osomo and Acosta (2007), Pagan (2017), Ramirez (1998), Sousa-Poza and Henneberger (2002), Sousa-Poza and Ziegler (2003), Tam (2010), Wang and Reid (2015), Werner et al. (2014), Wielers et al. (2014), Wunder and Heineck (2013)
3. <i>Impossibility of working less</i>	3	Altonji and Paxson (1988), Hajivassiliou and Ioannides (2007), Usui et al. (2016)
Measurement of overemployment:		
<i>Reference to income^b</i>		
1. <i>Income not mentioned</i>	6	Abrahamsen (2010), Allan et al. (2016), Brown and Sessions (2001), Campbell and van Wanrooy (2013), Euwals (2001), Hajivassiliou and Ioannides (2007)
2. <i>General reference to income</i>	3	Altonji and Paxson (1988), Golden (2016), Wooden et al. (2009)

(continued)

Table 2. Continued

Categories and corresponding subcategories	Number of articles, N=39 (overemployment)	Sources
3. <i>Proportional reduction in income</i>	26	Angrave and Charwood (2015), Bell (1998), Bender and Skatun (2009), Böheim and Taylor (2003), Böheim and Taylor (2004), Bryan (2007), Devoe et al. (2010), Fagan (2001), Feather and Shaw (2000), Golden (2016), Groezinger et al. (2010), Kahn and Lang (1995), Kuroda and Yamamoto (2013), Matta (2015), Merz (2002), Pagan (2017), Ramirez (1998), Sousa-Poza and Henneberger (2002), Sousa-Poza and Ziegler (2003), Tam (2010), Usui et al. (2016), van Echtelt et al. (2006), Wang J and Reid (2015), Werner et al. (2014), WIELERS et al. (2014), Wunder and Heineck (2013)
Measurement level ^b		
1. <i>Categorical</i>	18	Abrahamsen (2010), Altonij and Paxson (1988), Angrave and Charwood (2015), Bell (1998), Böheim and Taylor (2003), Böheim and Taylor (2004), Brown and Sessions (2001), Bryan (2007), Devoe et al. (2010), Fagan (2001), Feather and Shaw (2000), Golden (2016), Hajivassiliou and Ioannides (2007), Ramirez (1998), Sousa-Poza and Henneberger (2002), Tam (2010), Usui et al. (2016)
2. <i>Continuous</i>	17	Allan et al. (2016), Bender and Skatun (2009), Campbell and van Wanrooy (2013), Euwals (2001), Groezinger et al. (2010), Kahn and Lang (1995), Kuroda and Yamamoto (2013), Matta (2015), Merz (2002), Pagan (2017), Sousa-Poza and Ziegler (2003), van Echtelt et al. (2006), Wang and Reid (2015), Werner et al. (2014), WIELERS et al. (2014), Wooden et al. (2009), Wunder and Heineck (2013)

^aThree articles were not coded, as no clear definition of overemployment was given (Bell, 1998; Groezinger et al., 2010; Kahn and Lang, 1995).

^bFive articles (Golden, 1996; Golden, 2009; Golden and Gebreselassie, 2007; Golden and Figart, 2000; Osorno and Acosta, 2007) did not include or describe a measure of overemployment; Golden (2016) contained two measures.

reduce their work hours. The second category is the *preference to work less/earn less* (66% of articles), a definition of overemployment as a state in which an employee wants to work less while accepting reduced earnings in consequence (e.g. Fagan, 2001; Golden and Gebreselassie, 2007). In contrast to the first conceptualization, the question of income loss when working less is considered here (e.g. Euwals, 2001; Wooden et al., 2009). Third, in some cases (9% of articles), the *impossibility of working less*—with or without reference to the dimension of reduced earnings—is core to the definition of overemployment (e.g. Hajivassiliou and Ioannides, 2007). For a future conceptualization of overemployment, discussion of the extent to which each of these three aspects should be considered is important. In all three definitions, overemployment refers to *perceived* overemployment—whether employees are overemployed or not can, in other words, only be determined by the employees themselves.

When analyzing the meaning of concepts, it is important to check whether one “concept is reducible to the other” (Olsthoorn, 2017: 158). In our research question 1b, we therefore searched for the characteristic features that delineate overemployment from other concepts to find out whether and how overemployment is separable from similar concepts. To achieve this, we looked at the 82 articles that measured or defined concepts similar to overemployment and included concepts that overlapped with our categories defining overemployment, i.e. a preference to work less. Articles referring to more than one concept were coded multiply. Table 3 gives an overview of the definitions of these concepts.

To identify the defining conditions of overemployment and those separating it from other similar concepts, we looked at all codes created during the analysis stage and also considered Seifert’s (2004) work time facets. From these, we identified six work time dimensions that we considered sufficient to describe all of the related concepts. Table 4 shows how overemployment differs on these dimensions from other concepts and provides a good overall picture of how well overemployment is separable from or overlaps with other concepts. The first dimension refers to *facets of work time mismatch*, which are, according to Seifert (2004), length (number of hours), position in time (the “when” of work) and distribution (how work is distributed in portions along a timeline). Whereas overemployment only refers to length, the terms “schedule fit/schedule mismatch” and in some articles also “work status congruence” encompass (mis)matches in the distribution or position (e.g. Holtom et al., 2002). The second dimension, *direction of mismatch*, refers to whether concepts describe mismatches between preferred and actual states regarding the direction of mismatches, i.e. preferring more or fewer hours or not. Overemployment refers to a specific

Table 3. Definitions of concepts similar to overemployment.

Concept name (used most)	Definitions and examples
Schedule fit vs. schedule mismatch	Degree to which one's number, distribution and flexibility of work hours meets one's own, spouse's and family's needs (e.g. Gareis and Barnett, 2002)
Work status congruence	Degree to which full-time or part time status meets employees' preferences (e.g. Armstrong-Stassen et al., 1999; Loughlin and Murray, 2013) and schedule, shift, and number of hours are met (e.g. Holtom et al., 2002)
Work hour mismatch/fit/ congruence, work hour discrepancy	Discrepancies between actual and preferred work hours (e.g. Campbell and van Wanrooy, 2013; Lee et al., 2014; Odle-Dusseau et al., 2012; Reynolds, 2003; Reynolds, 2004; Reynolds, 2014; Reynolds and Aletraris, 2010; Reynolds and Johnson, 2012; Stier and Lewin-Epstein, 2003; Tam, 2010; van Emmerik and Sanders, 2005; Wunder and Heineck, 2013)
Hours constraints	Not being able to adjust working hours because of employer side constraining factors (e.g. Böheim and Taylor, 2003; Dunn, 1990; Kuroda and Yamamoto, 2013; Sousa-Poza and Henneberger, 2002)
Overearning	Tendency to forgo leisure to work and earn beyond one's needs (e.g. Hsee et al., 2013)
Overwork	Working more than preferred OR working harder than preferred in a fixed number of hours (e.g. Bloch and Taylor, 2012; Clarkberg and Moen, 2001; Jacobs and Gerson, 1998; Kalleberg, 2008; Reynolds, 2003; Reynolds, 2004; Sousa-Poza and Ziegler, 2003)
Control/ autonomy over work time/schedule control	Employee's control over duration, position, and distribution of worktime (e.g. Beckers et al., 2008; Krausz et al., 2000)

mismatch where actual hours exceed preferred hours. The third dimension, *work intensity*, describes whether working harder in a fixed amount of time is referred to. Work intensity is not part of the overemployment concept as defined in the literature. The fourth dimension differentiates between concepts factoring in the *negative consequences* of long work hours and concepts that do not examine consequences. For example, negative consequences of

Table 4. Comparison of overemployment with similar concepts.

Dimensions of work time:		Overemployment	Over-work	Overearning	Work status congruence	Schedule fit	Work hour mismatch	Hours constraints	Control over work time
1. Facets of work time mismatch									
Length	X								
Position in time		X		X	X	X	X	X	X
Distribution				(X)	(X)				X
2. Direction of mismatch (too much vs. too less)									
General mismatch between preferred and actual hours									
Specific mismatch (actual exceeding preferred hours)	X								
3. High work intensity		X		(X)					
4. Negative consequences of long work hours		(X)		X					
5. Relating time to income	(X)								
6. Impossibility of changing hours/impossibility of reducing hours	(X)	(X)		X	(X)	(X)	(X)	(X)	(X)

Note: (X) means the feature is sometimes, but not always included in the definition.

working long hours were considered in the concept of overwork, but not in the concept of overemployment (Golden, 2014). The fifth dimension describes the relation of *time to income*. As described, overemployment may sometimes include an income aspect, and this applies to almost all other concepts as well. Overearning and overemployment have in common that both refer to individuals who have not found a balance between time and income. Overearning, however, need not encompass a desire to work fewer hours (Hsee et al., 2013). Finally, the sixth dimension refers to an *impossibility of changing hours* or an *impossibility of reducing hours* which, as described, is only sometimes part of the definition of overemployment, although it is core to the definition of hours constraints (see also Table 3).

To sum up, overemployment shows a unique pattern of characteristics compared to other similar concepts and is therefore clearly distinguishable from them (see Table 4). Following conceptual analysis, we identified the defining (question 1a) and demarcating (question 1b) conditions of overemployment (Olsthoorn, 2017). Our analysis of the concept shows that there are two necessary and sufficient characteristics for the definition of overemployment.

Overemployment always refers

1. to work time length and
2. to a specific mismatch where actual hours exceed preferred hours.

Relating time to income and the impossibility of reducing work hours, however, does not seem to be a necessary defining criterion of overemployment, as it has not been included in all definitions.

The incoherent conceptualization of overemployment very likely impacts on the determination of who is considered overemployed in both research and practice. For our aim to generate a coherent understanding of overemployment, a preference for working less—the one component that practically all the definitions have in common—represents a convenient departure point.

Research Question 2: Different measurements of overemployment and overemployment rates

A coherent measurement of overemployment is crucial for the comparability of study results and, thus, for the advancement of research. We therefore look at the similarities and differences between measurements used in previous studies and derive implications for the measurement of overemployment from these. We find that the three definitions (our categories regarding the definition) are reflected—however not always

systematically—in the kind of measures that are used in empirical studies (our categories regarding the measurement). Thirty-five measures were used in the 39 articles. They differed with respect to (a) their reference to income, (b) measurement levels (categorical or continuous) and (c) the wording of questions measuring actual and preferred work time (see Table 2).

In terms of the relevance accorded to income, we identified three different types of measures (the first set of subcategories). In the first type the issue of income is not mentioned at all (17% of the articles, e.g. Abrahamsen, 2010). The second type of measure makes general reference to income (9% of the articles), i.e. the issue of income reduction is broached, but not quantified (e.g. Wooden et al., 2009). Third, in 74% of the articles, respondents are asked about their preference to reduce work hours under the condition that their income would decrease proportionally (e.g. Pagan, 2017).

Two different measurement levels (the second set of subcategories) are used to measure overemployment: in 51% of the articles, a categorical measure is used, i.e. individuals are asked whether they desire to reduce their work hours or not (e.g. Altonji and Paxson, 1988; Bryan, 2007), allowing a qualitative estimation of the occurrence of overemployment. In 49% of the articles, a continuous measure is used to quantify the extent of overemployment. Individuals are asked for the number of actual and preferred work hours, and the difference is calculated (e.g. Matta, 2015) or they are directly asked by how many hours they would like to reduce their current work time (Wang and Reid, 2015). The studies using a continuous measure also differ in another respect: two studies introduce a minimum work hour range. Bender and Skatun (2009) regard only those persons as overemployed who indicate a minimum discrepancy of 4 hours between desired and actual hours, whereas Matta (2015) introduces a minimum hour discrepancy of 10 hours.

In addition to the classifications described above, the question wording used to measure actual and preferred hours also diverges: where actual hours are asked for (in 24 of the 35 cases), measures diverge regarding (1) the timeframe, (2) the measurement steps and (3) special instructions. Regarding the timeframe, mostly “usual,” “average” or “normal” work hours (16 times) are asked for (e.g. Allan et al., 2016). In two cases, however, the hours worked in the week preceding the survey are explicitly referred to (Brown and Sessions, 2001; Kahn and Lang, 1995). Regarding measurement steps, a one-step measure is used in 12 articles, e.g. in Abrahamsen (2010, Stud A: Norwegian Survey): “How many hours do you usually work per week?” and a multi-step measure in seven articles, e.g. in Böheim and Taylor (2004, British Household Panel Survey/BHPS):

“Thinking about your (main) job, how many hours, excluding overtime and meal breaks, are you expected to work in a normal week?” and “And how many hours overtime do you usually work in a normal week?” In addition, special instructions are provided in some cases, e.g. to exclude mealtimes in the BHPS (Böheim and Taylor, 2004) or to exclude travelling time and include overtime only if it is paid (Euwals, 2001, DSEP, Dutch Survey).

Similarly, questions on preferred work hours diverge regarding measurement steps and special instructions. In 26 articles, a one-step measure is used, asking for the number of preferred hours (e.g. Merz, 2002, GSOEP) or whether the respondent wishes to reduce work hours (e.g. Abrahamsen, 2010, Stud A). In eight articles, a two-step measure is used, mostly asking first whether someone wants to work more, fewer or the same hours and then asking for his/her preferred hours (e.g. Euwals, 2001, DSEP). Moreover, special instructions are given in the Dutch Time Competition Survey (van Echtelt, 2006), which explicitly asks participants to think about their partner’s income when indicating preferred hours. The PSID (Altonij and Paxson, 1988; Hajivassiliou and Ioannides, 2007) also deviates somewhat from other studies in asking about the feasibility of working less, i.e. if it is possible to reduce work hours.

As with the definitions of overemployment, the measurements described above reveal a very heterogeneous picture of overemployment, which may, as described in the following, impact estimations of overemployment rates. Figure 1 provides an overview of the different definitions and measurement categories. Also, Figure 1 shows that the used measures do not always

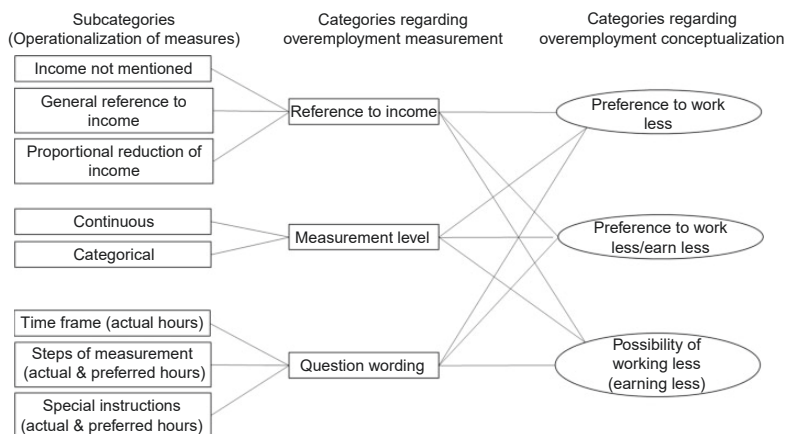


Figure 1. Category system “overemployment.”

systematically reflect the definitions, i.e. that papers using similar definitions may use different measurements.

For our analysis of whether different measures impact the estimation of overemployment rates, we looked only at those articles appraising overemployment rates from the same countries at around the same time. We identified seven relevant articles, of which two contained US data, three contained data from Great Britain and two related to Germany (see Table 5).

Estimated rates are not directly comparable, as samples and the exact points in time when surveys were conducted diverge, but tendencies can be observed. Using US data, Altonij and Paxson (1988) reported a much lower overemployment rate than Bender and Skatun (2009). The most striking difference between the measures used is that Altonij and Paxson (1988) included the possibility of reducing hours in their measure, whereas Bender and Skatun (2009) only asked for preferences in this regard. Including the possibility of reducing work hours may, it appears, lead to comparably lower rates of overemployment being found.

The two data sets from the UK (Brown and Sessions, 2001; Bryan, 2007) show a similar rate of overemployment, although only one mentions a reduction of income. A possible reason for this might be that people tend to automatically assume their income would be reduced if their hours were reduced even when this is not explicitly formulated in the question asked.

In comparing the data from the three German studies, Pagan (2017) reports a comparably high rate of overemployment as measured by the German Socioeconomic Panel (GSOEP); this is in line with the results of other surveys using the GSOEP (e.g. Holst and Bringmann, 2017). However, Matta (2015), who also uses data from GSOEP, regards only those people as overemployed who work more than 10 hours over their preferred hours. This naturally leads to a lower estimation of overemployment rates. Kuroda and Yamamoto's (2013) measurement differed especially by taking two steps to ask for the preferred hours of the 875 German respondents. Compared to the one-step question in GSOEP (Pagan, 2017), this led to a much lower overemployment rate. Using a two-step question may lead to lower overemployment rates in general, which may be connected with the complexity involved in answering a question in one step rather than two (Holst and Bringmann, 2017).

Discussion

The following conclusions can be drawn: (a) The feature common to almost all definitions of overemployment is, that it is a state of hours mismatch characterized by an employee's preference to work less. (b)

Table 5. Different overemployment measures and estimation of overemployment rates.

Study	Data year	Sample	Definition of overemployment	Income reference	Measurement level	Wording: actual hours	Wording: preferred hours	Estimation of overemployment
<i>Data from USA</i> Altonij and Paxson (1988), PSID	1968–1983	13,118 Men (18–60 years)	Possibility of working less	General reference to income	Categorical	Not asked	Two steps: "Could you have worked less if you had wanted to?"; "Would you have preferred to work less even if you earned less money?"	5.5%
Bender and Skatun (2009)	1984	3341 Men, 2998 women	Preference to work less/earn less	Proportional reduction in income	Continuous (work hour range >4 hours)	See preferred hours measure	Two steps: "How many days a week (do/would) you like to work?"; "How many hours per day (do/would) you like to work?" (it was made clear that the different hours are at the same wage)	Women: 52.6%; Men: 29.0%
<i>Data from GB</i> Brown and Sessions (2001), BSA	1985–1994	2906 Employees (>18 years)	Preference to work less	Income not mentioned	Categorical	Number of hours in the week preceding the survey	One step: Participants were asked whether the number of hours indicated, exceeded, fell short, or coincided with their desired weekly work hours.	35.4%
Bryan (2007), BHPS	1991–1999	1700 Male manual employees (21–64 years)	Preference to work less	Proportional reduction in income	Categorical	Expected work hours, excluding overtime and meal breaks in a normal week + usual hours of overtime per week	One step: "Thinking about the hours you work, assuming that you would be paid the same amount per hour, would you prefer to work fewer hours, work more hours or continue the same hours?"	37.23%

(continued)

Table 5. Continued

Study	Data year	Sample	Definition of overemployment	Income reference	Measurement level	Wording: actual hours	Wording: preferred hours	Estimation of overemployment
<i>Data from Germany</i> Pagan (2017), GSOEP	1985–2011	Employees (16–64 years), 13,928 men; 12,369 women	Preference to work less/earn less	Proportional reduction in income	Continuous	Average in working week with possible overtime	One step: "If you could choose the extent of your hours at work, taking into account that your earnings would change corresponding to the time: How many hours per week would you like to work?"	60.9/55.9 % (for workers without/with work-limiting health)
Matta (2015), GSOEP	2011	4922 Men; 5106 Women	Preference to work less/earn less	Proportional reduction in income	Continuous (range >10 hours)	See Pagan (2017)	One step: see Pagan (2017)	14.8%–40.8%, depending on work time model
Kuroda and Yamamoto (2013)	2010	462 Men; 413 women (white-collar employees, >20 years)	Preference to work less/earn less	Proportional reduction in income	Continuous	Question not further specified	Two steps: "If you could choose your working hours at your current hourly rate of pay, would you choose to increase or decrease the number of hours you work? If yes, by how much?"	7% (among men and women)

GSOEP: German Socioeconomic Panel.

Overemployment is distinct from other concepts with some remaining overlaps. (c) Overemployment measures vary regarding their treatment of income, measurement levels and question wording. (d) Differences in measures probably induce differences in the estimation of overemployment rates. The inconsistency and fuzziness of the overemployment concept and its measurement hamper research geared, for example, to theory development on overemployment or to estimating the extent of overemployment. This is the background against which we will present some suggestions for the future conceptualization and measurement of overemployment below.

Implications for the conceptualization of overemployment

As the aspects of income and possible reductions in income are treated inconsistently, researchers up to now have dealt with different overemployment concepts (see Table 2). When income is considered, overemployment appears to be a “luxury problem,” since only those with high incomes tend to be able to forgo money and still make a comfortable living. If the issue of income is disregarded, overemployment describes a more general problem of dissatisfaction due to too much work that also affects people on lower incomes. However, as our analysis for research question 2 showed, it is likely that (some) people consider income even when not explicitly asked to. Including aspects such as income and/or the (im)possibility of reducing hours in the measurement of overemployment raises another issue: is overemployment more a question of what employees desire or what is feasible for employees (Campbell and Van Wanrooy, 2013)? From our analysis, however, desirability was clearly at the core of almost all definitions. In the articles analyzed here, desirability was viewed in primarily economic terms, with the focus chiefly on the trade-off between money and leisure (e.g. Altonji and Paxson, 1988; Böheim and Taylor, 2003). Psychological literature dealing with the desirability of work (time) (e.g. Dik and Duffy, 2009; Jahoda, 1981) may add further valuable dimensions to the concept of overemployment. For one thing, work has more functions than bringing in money. It also provides individuals with structure in their daily lives, social contacts, a sense of collective purpose, status, and activity (Jahoda, 1981). In this light, any reduction in working hours is fraught with risk: employees could, for example, lose status or interesting tasks or find their career progression impeded. These additional aspects could usefully be integrated into the analysis of overemployment, as it is likely that people take them into account, along with financial aspects, when thinking about their preferred work time. Second, when work is seen as more than just a trade-off between time and money, but also as intrinsically rewarding (e.g. Dik and

Duffy, 2009), neither the quantity nor the quality of work can be regarded in isolation. Some individuals may wish to reduce the length of time they spend on certain tasks in order to free up time for intrinsically more satisfying work activities. In consequence, these people might also feel overemployed. In addition, the ways people wish to spend their time outside of work should also be looked at. If someone needs more time for recreation or rather for enhancing human capital, may have different consequences.

To finally arrive at a new working definition of overemployment, we take all the different conceptualization and measurement aspects described above into consideration. The core defining aspects of overemployment distinguishing it from other concepts are the references to work hours length and to a specific mismatch where actual hours exceed preferred hours. In addition, we consider our discussion points centering around the gaps in the definition of overemployment, that is we try to include those aspects in the definition that have previously been missing. As a result, we think a new definition of overemployment should take into account, to a greater degree than previously, that overemployment is linked to what a person values most, such as money but also career prospects, time for interesting tasks at work or outside work or time for recreation. We refer to these multiple aspects as “reference points” that are important to a person.

Overemployment is working beyond one's preferred time engagement at work with regard to one's reference points, i.e. the time and job facets that are important to the individual.

Implications for the measurement of overemployment

The measures described above differed in various aspects that may influence the estimation of overemployment. As discussed above, the decision to look at or disregard income needs to be made at the conceptual level. Deciding on a measurement level, in contrast, is more of a methodological issue: continuous measures ask people to indicate exact weekly work hours preferences. This has been shown to be difficult for respondents (Campbell and Van Wanrooy, 2013). As such, it is likely that continuous measurements may seem to be more precise than is actually the case. A categorical measurement, however, does not differentiate between people who are slightly or heavily overemployed. In addition, it is difficult to word an overemployment question with a high degree of precision in a single (one-step or two-step) item. Hence, the measures discussed here can be used as indicators of general (dis)satisfaction with work hours and may be adequate to gain an initial impression of the extent of overemployment. When it comes to measurement at an individual level, however, e.g. in

exploring causes or consequences of overemployment, single-item (one-step or two-step) measurements are insufficient, because they do not measure individual overemployment in sufficient detail.

In this light, we strongly suggest developing a scale that includes different aspects of overemployment, and that makes it possible to understand the aspects making a person overemployed (e.g. does s/he need more time for recreation, for family life or for more interesting work tasks?). If we place people's perceptions in the foreground, low-earning employees who would prefer to work fewer hours but cannot afford to reduce their hours should also be considered "overemployed"; employees with different financial backgrounds may well have similar motives and feelings about the desirability of reducing work hours. When earnings are taken into account, people who cannot afford to reduce their hours, but have a preference to do so, might erroneously be classified as "matched" and overemployment underestimated as a result.

Overemployment needs to be measured with adequate complexity. A more complex scale-based measure needs to be developed as an alternative measure that allows for more detailed insights into individual overemployment.

Limitations and directions for future research

Like every study, this one has some limitations. Our analysis did not cover the antecedents or the consequences of overemployment. However, a clear concept and measurement of overemployment is a prerequisite for reviewing its consequences and causes systematically. We strongly suggest exploring individual and organizational causes and consequences in the future using a sophisticated measure.

Based on our systematic review, no ideal existing overemployment measure could be identified, as the ideal measure strongly depends on what researchers specifically intend to investigate. If single-item measures are used in future surveys, we suggest comparing the effects of specific question wordings in experimental studies before using the items in panel studies (Holst and Bringmann, 2016). The classification of definitions and measures presented here can guide such experiments and assist with the discovery of the right measure for specific purposes.

A central task for future research will be to further tease out a consistent and sufficiently complex understanding of overemployment. Consistency is important to enhance comparability. Adequate complexity is important, as different motives may underlie overemployment and their identification may provide clues as to how satisfaction with work time might be improved. If, for example, the distribution of time on work tasks rather

than the number of work hours per se transpires to be problematic, this could have consequences for the success of particular solutions.

Starting from our working definition of overemployment as given above, qualitative research (see Campbell and Van Wanrooy, 2013) is needed to identify the aspects employees perceive as the most important in relation to overemployment (reference points). These reference points can form the starting point for the development of a new scale for measuring overemployment. In developing a new overemployment scale, quantitative research should also investigate whether and to what extent different types or patterns of overemployed employees exist. Another important task for future research is to further study the influence of context and sample variables on the prevalence of overemployment. A limitation that becomes obvious in Table 5 is that the samples differ, for example, regarding gender composition and time-based economic circumstances. We think it is important to consider these variables when interpreting overemployment results. However, identifying influences resulting from the context and sample of studies and separating them from measurement effects will only be possible with a coherent measurement of overemployment.

Conclusion

Our analysis revealed similarities and differences in previous conceptualizations and measurements of overemployment and demarcated the concept of overemployment from related ones. We found that the one aspect common to all definitions was a preference for less work time. Comparison of measures highlighted differences in the measurement levels, the treatment of income aspects and the exact wordings used. Differences in the estimations of overemployment rates between studies may be due, at least in part, to the unclear and inconsistent conceptualization of overemployment.

Based on our analyses, we suggest defining overemployment more broadly as working beyond one's preferred time engagement at work with regard to one's reference points, i.e. time and job facets that are important to the individual. We suggest a universally accepted scale-based measurement that takes the complexity of overemployment into account.

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Note

1. We here refer to individual overemployment, i.e. overemployment with regard to an individual's preference. Note that in the English language in general overemployment is also used in the meaning of "excessive use of a person, thing, strategy, etc." or an economic "situation in which the number of vacancies for jobs exceeds the number of people unemployed, producing a labour shortage" (Oxford Dictionary, 2018).

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