

# Reflecting the changing world of work? A critique of existing survey measures and a proposal for capturing new ways of working

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## Summary

In recent decades we have seen significant and varied changes in the world of work. Most prominent among these is the diminishing prevalence of the standard employment relationship. These changes challenge traditional notions of what constitute ‘employment’, ‘employers’, ‘employees’, the ‘workplace’ and the ‘working day’. Many current survey instruments are still based on the concept of the standard employment relationship, however. This article illustrates some limitations of existing conceptualisations and definitions of flexible work arrangements and of the instruments used to measure them in major surveys. It also suggests ways of tackling these limitations. The aim of highlighting potential limitations of existing survey instruments is to enable data users to be more reflective about what the results actually do and do not report, and to encourage survey designers to modify existing instruments and develop new instruments to better capture contemporary realities, including multiple jobholding and internet and platform work.

## Résumé

Ces dernières décennies, le monde du travail a connu des changements divers et importants. Le plus remarquable d'entre eux est la diminution de la prévalence de la relation d'emploi classique. Ces mutations remettent en question les notions traditionnelles d'«emploi», d'«employeurs», de

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"salariés", de "lieu de travail" et de "journée de travail". Pourtant, de nombreux instruments d'enquête encore utilisés aujourd'hui reposent sur le concept de cette relation de travail classique. Cet article met en évidence certaines limites des conceptualisations et des définitions existantes des dispositifs de travail flexibles et des instruments utilisés pour les mesurer dans les principales enquêtes. Il suggère également des pistes pour remédier à ces limites. La mise en évidence des limites potentielles des instruments d'enquête existants a pour objectif d'inciter les utilisateurs de données à réfléchir davantage à ce que les résultats révèlent et ne révèlent pas, et d'encourager les concepteurs d'enquêtes à modifier les instruments existants et à en développer de nouveaux afin de mieux saisir les réalités contemporaines, telles que le cumul d'emplois, le travail sur Internet et le travail sur les plateformes.

### **Zusammenfassung**

In den vergangenen Jahrzehnten haben wir signifikante und ganz unterschiedliche Veränderungen in der Arbeitswelt gesehen. Als bedeutendster Wandel ist hier die Erosion des Normalarbeitsverhältnisses zu nennen. Diese Veränderungen stellen die traditionelle Bedeutung von „Beschäftigung“, „Arbeitgeber:innen“, „Arbeitnehmer:innen“, „Arbeitsplatz“ und „Arbeitstag“ in Frage. Viele der aktuell verwendeten Befragungsinstrumente basieren aber nach wie vor auf dem Konzept des Normalarbeitsverhältnisses. Der vorliegende Artikel beschreibt einige der Einschränkungen bestehender Konzeptualisierungen und Definitionen flexibler Arbeitsarrangements und der zu ihrer Erfassung in großen Befragungen verwendeten Instrumente. Der Artikel zeigt ebenfalls Wege auf, wie diese Einschränkungen zu überwinden sind. Der Hinweis auf die potenziellen Grenzen bestehender Befragungsinstrumente soll die Nutzer:innen dieser Daten dazu veranlassen, genauer darüber nachzudenken, welche Erkenntnisse diese Ergebnisse wirklich vermitteln und welche nicht. Darüber hinaus sollen die Designer:innen dieser Umfragen dazu motiviert werden, die bisher verwendeten Instrumente zu modifizieren und neue Instrumente zu entwickeln, um moderne Realitäten wie Mehrfachbeschäftigung sowie Internet- und Plattformarbeit besser zu erfassen.

### **Keywords**

Conceptualisation, definition and measurement of flexible work arrangements, standard employment relationship, 'normal' work biography, multiple jobholding, internet and platform work, flexitime, working from home

### **Introduction**

The world of work has changed significantly in recent decades, notably through the decline of the 'standard employment relationship'. This is characterised by continuous, full-time employment over the life course, with a single employer, at a designated workplace at prescribed, fixed working times (Bosch, 2004). Historically, it has been based on the concept of the 'normal' (male) biography (Kohli, 1985). The decline of the standard employment relationship has been brought about by a range of factors, including greater global integration, increased market pressures and competition, decline in worker power, technological developments, demographic changes and increased female participation in the labour market (Chung, 2022; Kelliher and Richardson, 2019).

At the same time, new types of employment relationships, such as internet and platform work, have emerged, and multiple jobholders, who often combine these forms of self-employment with regular employment, are becoming more prevalent (Kelliher et al., 2019; Rubery et al., 2016). According to European Union Labour Force Survey (EU-LFS) data (Eurofound, 2020), an average

of 14 per cent of the workforce (approximately 32.6 million people) were self-employed in 2018; 4 per cent (approximately 9 million people) held multiple jobs, an increase of 3.5 per cent compared with 2013 (Eurofound, 2020). The results of the second European Trade Union Institute Internet and Platform Work Survey (ETUI IPWS) conducted in 14 EU Member States in spring 2021 suggest that 17 per cent of the working-age population have done some internet work, and that 4.3 per cent have done platform work, in both cases, mainly in combination with precarious forms of offline employment (Piasna et al., 2022: 4). Initial evidence from an online panel survey conducted in nine EU Member States in 2021 suggests that the COVID-19 pandemic has led to a considerable increase in platform and internet work (Barcevičius et al., 2021). There is also evidence that the growth in the online labour market persisted even after social distancing measures were relaxed (Cedefop, 2020; Piasna et al., 2022). These developments present challenges for traditional notions of what constitutes ‘employment’ and who can be deemed to be an ‘employer’ and an ‘employee’.

Furthermore, these new types of employment relationships are also increasingly combined with flexible work arrangements, adding even more complexity to the way we understand work and working in contemporary contexts. For example, internet and platform work may not be linked to a designated ‘workplace’ (Gandini, 2019), but rather undertaken from a variety of locations and at varied times, sometimes of the worker’s choosing, but also, for example, to a schedule specified by an algorithm (Wood, 2020). Even where the standard employment relationship prevails, changes to the location, timing and amount of work challenge traditional notions of what constitutes ‘the workplace’, ‘the working day’ and the amount of time a job involves. For example, before the COVID-19 pandemic, approximately a quarter of workers in the European Union had some control regarding when to work, and about one in eight worked outside their normal work premises/‘the office’ on a regular basis (Chung and van der Lippe, 2020). One consequence of the pandemic has been a significant increase in remote working (Abendroth et al., 2022), in many cases mandated by government, and in work being conducted at different times (Anderson and Kelliher, 2020). It is anticipated that these practices will persist, at least to some extent, post-pandemic (Alexander et al., 2021), with hybrid working (combining on- and offsite working) becoming a new norm at many workplaces (Chung, 2022).

Faced with this prospect, it is important that survey research and the instruments used for data collection reflect contemporary realities and capture the full range of work experiences. Charting this current and emerging landscape is crucial for our understanding of the contemporary world of work (Warhurst and Knox, 2022) and for the development of evidence-based policies. It is important that policy-makers, employers’ associations and trade unions understand and know how to respond to these developments. To do so, they need reliable and accurate data on the prevalence, antecedents and consequences of different work arrangements and employment relationships.

Capturing this information presents real challenges for researchers, however (Piasna et al., 2022), and raises questions about the adequacy and scope of existing survey instruments. This article aims to shed light on these problems and to explore some potential solutions. First, we provide some key theoretical framing for the changing world of work. This is done by exploring how contemporary biographies deviate from the standard employment relationship as non-standard employment relationships and new types of work arrangements emerge. As extensive research has been conducted on flexible work arrangements, we use work arrangements that provide flexibility over time and space as examples to illustrate and assess the adequacy of how surveys deal with these different work arrangements. We provide a critique of existing surveys, illustrating some limitations of their conceptualisations and measurements of contemporary flexible working in relation to time and space.

As exemplars, we use seven population-representative (panel) surveys whose data are frequently used by researchers and policy-makers. First, two cross-national surveys that focus specifically on measuring employment and working conditions, namely the European Working Conditions Survey (EWCS) and the European Union Labour Force Survey (EU-LFS). Second, four national household panel surveys, Understanding Society – The UK Household Longitudinal Study (UKHLS), the Australian Household, Income and Labour Dynamics Survey (HILDA), the German Socio-Economic Panel (GSOEP) and the US National Longitudinal Survey of Youth (NLSY). Although the aforementioned national panel surveys do not focus specifically on the world of work, they are frequently used to study flexible work arrangements (for example, Chandola et al., 2019; Chung and van der Horst, 2018, 2020; Glass and Noonan, 2016; Lott, 2020a; Lott and Chung, 2016), and are therefore included in the present study. Finally, we focus on a survey that is used to study the outcomes of flexible work arrangements, the US General Social Survey (GSS).

Given the increasing importance of and limited research on multiple jobholding, internet/platform work and precarious hours (Eurofound, 2020), and given that instruments for measuring these phenomena have only recently been implemented in some of the above-mentioned surveys, we present an initial critique of these measures. Specifically, we compare them with those used in the ETUI Internet and Platform Work Survey (IPWS), which is explicitly designed to assess work in the online labour market.

This study contributes to the existing literature in two ways. First, it presents problems of conceptualisation and definition of flexible work arrangements that have been highlighted in previous research (for example, Casper et al., 2018). It extends this critique to surveys, illustrating how current instruments can lead to misleading or inaccurate results and consequently to ill-founded conclusions by those who use these results as a basis for policy development and advice. Second, based on this critique, some proposals are made about what can be done to address these limitations. This requires more than simply revising existing survey measures. As we note, researchers often use different instruments to measure the same concept, or the same instrument to measure different concepts. Therefore, we invite discussion among researchers to determine how best to generate research findings that accurately reflect current and newly emerging realities in the world of work and that are thus meaningful for policy and practice. Our intent is twofold: (i) to enable data users to reflect on the limitations of existing survey data and to better understand work outcomes when using them; and (ii) to encourage survey designers to modify their existing measures and develop new ones in order to capture current and future realities.

## **Theoretical background**

### *The normal biography and the standard employment relationship*

In line with life-course theory (for example, Kohli, 1985), policies in modern welfare states (education, pension provision) have been used to structure people's life courses on the basis of chronological age. This institutionalised the life course in the form of the so-called 'normal biography', which is characterised by three successive phases: preparation for work (education), work and retirement.

At the heart of the normal biography is the standard employment relationship, which is framed by a range of social and employment protections (Bosch, 2004) that define 'rights and responsibilities associated with employment' (Stanford, 2017: 389), designed to maintain a stable workforce. As a result of this reinforcement of the standard employment relationship by labour market institutions it became 'the normative benchmark' (Warhurst and Knox, 2022: 306). The standard employment relationship is characterised as a relationship with a single employer, based on an employment

contract that sets out the duration and timing of working hours and prescribes the workplace. It thus implies a specific conception of ‘employment’, ‘employer’ and ‘employee’, as well as ‘workplace’, ‘working day’ and the amount of time a job involves.

In essence, the standard employment relationship is based on the male-breadwinner model of employment; that is, a full-time job with fixed working hours at a specific workplace and without career breaks (Bosch, 2004). The standard employment relationship, and thus the normal biography, represents a male way of working, as female employment trajectories are typically characterised by interruptions and part-time employment (Aisenbrey and Fasang, 2017) because of childbirth, and the unequal division of unpaid work between women and men (Craig and Mullan, 2011).

### *Standard employment relationship: change and continuity*

Individualisation processes, which have led to an erosion of the normal biography (Kohli, 1985), and various economic constraints have resulted in increasing deviations from the standard employment relationship in recent decades. For example, employment has become increasingly irregular and is frequently interrupted (Rubery et al., 2016), and types of non-standard employment relationships and work arrangements have emerged that have ‘altered jobs, occupations, industries and economies’ (Tomlinson et al., 2018: 5). These include precarious/contingent work, agency work and independent contracting, as well as reduced-hours, zero-hours and annual-hours contracts. To protect themselves from economic insecurity, many workers take on more than one job, often combining regular paid employment with self-employment (Chartered Institute for Personnel Development, 2021) for example in the digital labour market in the form of internet and platform work (Piasna et al., 2022). As a result, multiple jobholding is on the rise (Eurofound, 2020).

Despite these changes in the standard employment relationship, there is also evidence of continuity. This is because the social and economic institutions, such as education, employment, social protection and pension systems, that created the normal (male) biography have largely continued to be based on it. Thus, the standard employment relationship still structures individuals’ working lives accordingly. This is especially the case for life-course transitions, such as the transition from school to work and transitions out of the world of work as a result of unemployment or retirement, all of which differ depending on socioeconomic circumstances (Mayer, 2004). Similarly, statutory provisions often presuppose the existence of the standard employment relationship, and hence do not fit well with non-standard employment relationships and work arrangements.

The concept of *flexible careers* (Tomlinson et al., 2018) also emphasises the role of institutions, institutional regulations, the welfare state and organisations in influencing individuals’ careers and what Heinz (2000: 4) refers to as ‘individual strategies of action’ that result in work trajectories characterised by ‘patterns of change and continuity’ (Tomlinson et al., 2018: 5). Similarly, the emergence of non-standard employment relationships, such as internet and platform work, and the increase in multiple jobholding (Tomlinson et al., 2018) mean that the labour market is characterised by simultaneous continuity and change, challenging established notions of ‘employment’, ‘employer’ and ‘employee’. Moreover, as new types of employment relationships and work arrangements emerge, biographies deviate from the ‘normal work biography’, which is based on the standard employment relationship.

### *Flexible work arrangements*

One key change to patterns of employment is that work has become increasingly flexible in terms of time and place, with the proliferation of arrangements such as flexitime and home-based/

remote-working (Chung, 2022; Chung and van der Lippe, 2020). Because of the ubiquity of digital communication devices and the COVID-19 pandemic, forms of hybrid working that combine in-office and remote working have emerged and rapidly increased (Abendroth et al., 2022). These changes to work arrangements raise questions as to what constitutes the ‘workplace’, the ‘working day’ and the length of working time. Several facets of flexible work arrangements must be taken into account when considering how best to measure them and their implications for work–life balance, well-being and wider social inequalities.

## Problems of conceptualisation and definition

There is a lack of consensus as to what is meant by flexible working, how it should be measured and what questions should be asked about it. We first examine the different ways in which confusion can arise in the conceptualisation and definition of flexible working.

### *Imprecise terminology*

The terms used to refer to employee-driven flexible work arrangements and the meanings attributed to them (Chung and Tjeldens, 2013; De Menezes and Kelliher, 2011) are often inconsistent across different surveys and studies (Casper et al., 2018). For example, the term *schedule control* is used as a label for different measures (see Table S1 in the Supplemental Material). This of course leads to problems of comparability for researchers and policy-makers.<sup>1</sup> These problems are exacerbated in cross-national studies. In addition, as shown in Table S1 in the Supplemental Material, some studies examining flexible work arrangements focus on one type (such as flexitime) (for example, Lott, 2020a), whereas others examine a number of different arrangements bundled together, sometimes conceived of as being part of more general ‘family-friendly’ or ‘work–life’ policies (for example, Den Dulk et al., 2013). This creates difficulties in comparing results from different studies, and even more so in applying results from one study to others, thereby impeding analysis and making it difficult to draw valid, meaningful conclusions.

### *Employer- versus employee-driven flexible working arrangements and degree of control*

There is a lack of consensus on terms that distinguish flexible work arrangements imposed by employers from those requested by workers (Kelliher and De Menezes, 2019), that is, ‘flexibility *of*’ as opposed to ‘flexibility *for* employees’ (Alis et al., 2006: 91, emphasis in original; Chung and Tjeldens, 2013). For example, some flexible work schedules, such as shift work, are employer-focused: hours are set by managers, or increasingly by algorithms (Wood, 2020). Even flexible work schedules that are employee-driven, such as flexitime or schedule control, may not only be used to enhance workers’ work–life balance, but may also be driven by employers’ high performance strategies (Davis and Kalleberg, 2006) where workers are given more autonomy over their work in order to enhance performance outcomes. This distinction is further complicated by the fact that employee-driven flexibility may benefit the employer, especially in the longer term, and employer-driven flexibility may improve workers’ work–life balance (Rapoport et al., 2002).

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1. Reference is sometimes made to the so-called ‘jingle fallacy’, which refers to ‘attributing different meanings to a single construct label’, and the ‘jangle fallacy’, which refers to ‘using different labels for a single construct’ (Casper et al., 2018: 182).

Similarly, there have been few attempts to distinguish between the levels of discretion available to employees (Chung, 2014) – for example (i) whether workers have full control over their working hours or more limited discretion to vary them within set times (for example, the requirement to work ‘core’ hours); and (ii) whether teleworkers can choose to work remotely all of the time, on a regular basis for a designated proportion of working time, or only on an ad hoc basis, with employees being required to request permission each time. Finally, few studies have identified whether managerial or supervisor approval is needed – that is, whether the flexible work arrangements are formalised (through an organisational policy or a legal right) or informal (for example, agreed between the employee and their line manager), which may have implications for outcomes such as performance (De Menezes and Kelliher, 2017).

### *Availability and uptake*

A distinction is not always made between (perceived) availability and the uptake of flexible work arrangements (Eaton, 2003). This distinction is crucial, however, as work outcomes can vary between these two dimensions (Chung and van der Horst, 2018; Lott and Klenner, 2018).

## **Conceptualisation and measurement problems in surveys**

The lack of consensus on what is meant by flexible working can also be demonstrated with reference to the survey questions used to measure it. To illustrate some of the major problems, we focus on measurements of flexibility of time – especially flexitime – and flexibility of place – especially working from home. In doing so, we refer to recent studies in the field of flexible work arrangements, and problematise traditional notions of the ‘workplace’ and the ‘working day’. Table S2 in the Supplemental Material provides an overview of the survey instruments used to measure flexitime and working from home.

### *Comparison hampered by lack of a standard terminology on flexible work arrangements*

Across surveys, different instruments are used to measure the same concept, such as flexitime (see Table S2 in the Supplemental Material). For example, flexitime is measured by asking participants whether they are able to change or vary the starting and ending times of their working day within certain limits (the EU-LFS ad hoc module Work Organisation and Working Time Arrangements [WTA] fielded in 2019 and the GSS) or by providing ‘flexitime’ as an example of this ability (the EWCS). The UKHLS asks only about ‘flexitime’, and HILDA and the NLSY use the term ‘flexible’ without specifying what it means. The GSOEP’s ‘flexitime’ response option is more detailed: ‘Flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account.’ It should be noted that in the EU-LFS core questionnaire there are no questions about workers’ access to or use of flexitime.

As can be seen from Table S2 in the Supplemental Material, only the EWCS, the GSOEP, the GSS and the EU-LFS ad hoc module WTA make efforts to measure different forms of flexibility over working time, such as flexitime (where employees can determine their working time within certain limits) and working time autonomy (where employees have full control over their working time), although work outcomes such as working hours, work-to-home spill-over and time adequacy differ between these two forms (for example, Chung, 2022; Chung and van der Horst, 2020; Lott, 2015, 2020b; Lott and Chung, 2016). In other surveys (HILDA, and to some extent the

UKHLS), workers who can adapt their working hours within specified limits may be conflated with workers for whom such limits do not exist, thereby leading to misleading results.

Regarding working from home, as can be seen from Table S2 in the Supplemental Material, the UKHLS asks respondents whether they work from home on a ‘regular’ basis, without differentiating by frequency. By contrast, the EWCS, the EU-LFS, the GSS Quality of Work Life (QWL) module, and the GSOEP measures include frequency categories. That said, post-lockdown, these categories in the EU-LFS can be regarded as ambiguous, as most hybrid workers fall between ‘usually’ and ‘sometimes’, namely between two to four days a week (Morton, 2022). Similar problems arise in the EWCS, where most hybrid workers fall within the ‘several times a week’ category, whilst there may be large differences between those who work, for example, two days a week in the office and those who work four days. As the quality or nature of home-based working, and thus of work outcomes, depends on the frequency of its use (for a review, see Allen et al., 2015), these measures may be misleading or inaccurate. The most detailed measure is the one used by HILDA, which asks for the approximate number of hours usually worked at home each week and the number of hours worked at home on average over a usual four-week period.

### *Employer- versus employee-driven flexible work arrangements and degree of control*

Survey instruments do not always make it clear whether the flexible work arrangements measured are a matter of choice for employees; that is, whether their intent is ‘flexibility *of*’ or ‘flexibility *for* employees’ (Alis et al., 2006: 91, emphasis in original; Chung and Tjeldens, 2013). Table S2 in the Supplementary Material provides an overview of instruments used to measure flexibility of time and space in the surveys that are the focus of the present study. When measuring flexitime, the GSOEP asks about ‘a certain degree of self-determination of daily working hours’, leaving it up to the respondents to interpret what is meant by ‘a certain degree’. In the GSS and in the EU-LFS ad hoc module WTA, respondents are asked whether they ‘can decide’ when they start and finish work, thereby blending actual work arrangements and degree of control. A distinction between ‘flexitime’ and ‘worker control’ is made only in the UKHLS, where, besides questions about control over task, order and speed of work, respondents are asked, ‘In general, how much influence do you have over [. . .] the time you start or finish your working day?’ Notably, the correlation between those with access to flexitime and those with control over ‘start and finish’ times is not very high (Chung and van der Horst, 2020), suggesting that schedule control may have a different meaning from access to flexitime. Also, with regard to overall worker discretion, the aforementioned surveys do not ask whether the use of flexible working is at the worker’s discretion or is subject to managerial/supervisor approval. Another crucial aspect that is not measured is whether working from home is regulated by the employment contract or is an informal arrangement (Lott, 2020c).

Similarly, although outcomes of working from home may depend on it being a matter of choice for employees (Bathini and Kandathil, 2019), survey instruments for the measurement of this arrangement seldom capture employees’ control over the location of work, and it is often unclear whether they are allowed, ‘encouraged’ or required to work from home. This distinction is especially important, as the COVID-19 pandemic has led many employers to encourage or require working from home, not only for the employees’ benefit, but also to reduce running costs, enhance performance, or to address corporate social responsibility issues such as the climate crisis (Chung, 2022). The EU-LFS asks respondents whether they work at home (response options: usually, sometimes, never); the EU-LFS ad hoc module WTA asks about the *main* place of work, with ‘at home’ being one option. The EWCS presents respondents with a list of locations and asks them to indicate how often they have worked in each location in their main paid job in the past 12 months



(response options: daily, several times a week, several times a month, less often, never). Notably, the GSS is the only survey that asks respondents why they work at home: ‘Is it usually because you want to, you have to in order to keep up with your job, or for some other reason?’ The response categories are ‘worker wants to work at home’, ‘worker has to work at home to keep up’, ‘worker is operating a home-based business’ and ‘other combinations and other reasons’. However, even this instrument does not capture whether the worker chooses, is required or is encouraged to work remotely. As different motivations and reasons for working from home lead to different work outcomes (Lott, 2020c), this information is crucial.

### *Availability and uptake*

Some surveys do not differentiate between (perceived) availability and actual uptake of flexible work arrangements. As shown in Table S2 in the Supplemental Material, the EU-LFS ad hoc module WTA, HILDA, the EWCS and the GSS ask whether respondents ‘can’ or ‘are able to’ work flexible hours, and the EU-LFS ad hoc module Reconciliation between Work and Family Life (WFR) fielded in 2010 and 2018 asks whether it is possible for respondents to vary the start or end of their working day for care reasons. Whereas the UKHLS distinguishes between the availability and use of flexible work arrangements, the GSOEP asks about their use but not their availability, and the GSS QWL module asks respondents how often they are ‘allowed’ to change their ‘starting and quitting time on a daily basis’.

Turning to flexibility over workplace, as can be seen from Table S2 in the Supplemental Material, most of the surveys (EU-LFS WTA module, EU-LFS WFR module, HILDA, EWCS, GSOEP, NLSY, GSS) ask employees whether they work from home, but only two (HILDA, UKHLS) ask about the availability of a company policy (an entitlement) in this regard (HILDA, UKHLS). This is problematic insofar as instruments that measure perceived access to flexible work arrangements produce different results from instruments that measure their actual use (Chung and van der Horst, 2018, 2020). On the one hand, studies show that even where a policy is available, employees may not be aware of it and/or feel able to use it (Eaton, 2003; Lott and Klenner, 2018). On the other hand, even when workers do not use the policy, the knowledge that such options are available should they need them may enhance their perceived work–family integration. Thus, it would be preferable if an instrument measured both the (perceived) availability and the uptake of this arrangement.

### **Potential ways forward**

This section provides some suggestions and ideas on how to address the limitations described above. Addressing this challenge requires more than just revising existing survey instruments. It is also important that the research community arrive at a consensus on definitions and appropriate measures, and that researchers make it clear what the instruments they use actually measure and how they relate to other measures – especially when interpreting results for policy-makers and the public.

#### *Standardised terminology and measurement*

There is a need for (i) greater commonality in the ways in which flexible work arrangements are conceptualised and measured, and (ii) greater transparency on the part of researchers with regard to the concepts and instruments used to measure these arrangements and to the comparability of their findings.

Surveys should use specific, differentiated measurements for the various forms of flexible work arrangements (for example, flexitime and working time autonomy) and describe the arrangement in question, rather than just naming it. For example, ‘flexitime’ can encompass a wide range of arrangements, and respondents might have different ideas about what ‘flexitime’ means (for the different operational definitions used by different studies, see Table S1 in the Supplemental Material).

Linked to this, it is crucial to train interviewers who ask survey questions in face-to-face or telephone interviews to explain what the survey question means if respondents are unsure how to answer it. Einola and Alvesson (2021: 111) also suggest that researchers should build in ambiguity sensitising devices in questionnaires that highlight rather than deny uncertainties and unanswerable questions, for example by requesting respondents to ‘please answer only the questions that you understand, find relevant and capture your experience’, or to ‘please put an “X” here if you find the question vague, irrelevant, or for other reasons difficult to answer’. Respondents could then be offered ‘space to elaborate further in their own words’ (Einola and Alvesson 2021: 111).

At least initially, the use of mixed-method designs incorporating qualitative approaches (such as cognitive pre- and post-tests) may be useful for developing and refining measures of changing work arrangements. In related work, new measures for work–non-work balance (Wayne et al., 2021) and inter-role conflict (Wilson and Baumann, 2015) have been developed that incorporate into the work–life relationship a conception of non-work roles that goes beyond family roles.

Until such time as universally accepted definitions and measurements have been established, researchers should ensure that they specify what they mean by the terms used and what measurement instruments they employ. They should acknowledge the different approaches adopted and should critically discuss the comparability of their findings with those of other studies.

### *Employer- versus employee-driven flexible work arrangements and degree of control*

It would be helpful if future surveys followed the example of the GSS QWL module (see Table S2 in the Supplemental Material) and established the reasons why flexible work arrangements are used. This would allow distinctions to be made, for example, between those who work from home (or elsewhere) in order to keep up with – or catch up on – their work, those who work from home for personal reasons and those who work in ‘virtual organisations’ with no, or limited, office space. Also, in light of the COVID-19 crisis, there is a need to be able to distinguish between voluntary and employer- or government-mandated working from home, as the pandemic is likely to persist for some time to come, and voluntary and non-voluntary working from home probably yields very different outcomes (Anderson and Kelliher, 2020). In addition, as is the case in the UKHLS (see Table S2 in the Supplemental Material), surveys could use separate instruments to measure the availability and use of flexible work arrangements and the degree of control. More refined questions that ask about personal work–life needs and family demands in addition to work demands would also be useful in helping to understand the reasons why employees work flexibly and whether or not they have control over their flexibility. Finally, instruments that measure the need to obtain managerial or supervisor approval to work flexibly, and regulations regarding flexible working could be implemented in surveys in order to better understand employees’ level of discretion.

### *Availability and uptake*

Measures should differentiate between the (perceived) availability and the uptake of flexible work arrangements. To assist with this, reasons for non-use should be examined in future research, as has

been done by Lott and Abendroth (2020), thereby allowing the identification of constraints on choice at individual, household, workplace, organisation and national level (Hobson, 2013). At the workplace or organisational level, high work intensity (for example, long work hours, high workload and responsibilities) and increasing insecurity of work, even for those in standard employment relationships (Kelliher et al., 2019; Rubery et al., 2016), could constrain the use of flexible work arrangements, especially in cases when such arrangements are stigmatised (Chung, 2020, 2022) and cultural barriers to their use exist (Lott and Abendroth, 2020; Abendroth et al., 2022). In this regard, more information about the formal and informal organisational norms that influence who uses flexible work arrangements and for what purposes, and how their use is perceived can complement the data and help us to better understand the lived experiences of flexible working practices.

## **Outlook: capturing new types of employment relationships in surveys**

As already discussed, flexible work arrangements are one example of more general changes to work arrangements and relationships that have taken place in the world of work in recent times. Having examined flexible work arrangements in some detail, we now turn to the need for surveys to capture changes to both existing and emerging employment relationships. Despite the simultaneity of change and continuity in the world of work, and the diminishing prevalence of the ‘normal biography’, existing instruments have largely tended to conceptualise employment based on the standard employment relationship. Although this approach may be suitable for examining forms of employment that adhere to this model, it will fail to capture those that do not. Furthermore, it does not take account of multiple jobholding and internet and platform work. Thus, findings may represent, at best, a partial understanding of the realities of work and its outcomes, and may potentially present a distorted picture.

To illustrate this problem, we use two vignettes to show the shortcomings of existing approaches for capturing the realities of multiple jobholders and those who do internet and platform work. ‘Worker A’ has three jobs: two are paid jobs and one is remote ‘clickwork’. One of the paid jobs and the self-employed job contribute equally to the monthly income. ‘Worker B’ sells self-made products online and does on-location work found through an online platform, both generating irregular income and working hours. These two cases, which represent only two examples of the potential multitude of circumstances that may exist, illustrate the limitations of traditional notions of ‘employment’, ‘employer’ and ‘employee’, as well as other measures used in existing surveys.

### ***Main job and additional jobs***

Definitions of the ‘main job’ vary across surveys and, as a result, comparability of data is problematic. For example, in the EU-LFS the respondents can decide what they consider their ‘main job’, but otherwise that survey and the EWCS define ‘main job’ as the one in which the respondent works most hours. In HILDA and the UKHLS, by contrast, the main job is the job that pays the most. In the UKHLS, respondents with equal-paying jobs are asked to choose the job with most hours as their main job. In all cases, it would be difficult for Worker A and Worker B to decide which of their jobs is their main job. Also, most surveys ask about additional jobs, but definitions vary. The EWCS asks about ‘any other paid job(s)’, the UKHLS asks about ‘a second job, odd jobs, or from work that you might do from time to time’, and the GSOEP asks about ‘side jobs’, paid and unpaid. HILDA asks about ‘more than one job’ with the specification ‘more than one employer’. These discrepancies in how ‘main job’ and additional jobs are defined makes comparisons across

surveys difficult and might lead to different results. Differences in how respondents identify their main job are likely to produce unreliable data.

Moreover, data on multiple jobholders and the characteristics of their various jobs are often limited or sometimes non-existent. In the UKHLS, GSOEP, HILDA and EWCS, respondents indicate whether they are in paid employment *or* self-employment, which does not capture circumstances in which paid employment (possibly in more than one job) is combined with some form of self-employment. This poses a problem for Worker A above, who is in paid employment *and* in self-employment. Moreover, the EWCS, UKHLS and HILDA do not ask about the number of jobs. Only in the EU-LFS and GSOEP are respondents asked about additional jobs – the EU-LFS asks about one additional job, the GSOEP asks about up to three. Thus, Worker A's three employment relationships would be measured only by the GSOEP. None of the surveys ask respondents whether they pursue other activities from which they earn money. Asking about any other paid activity is important because respondents might not consider all paid work to be a 'proper' (side) job, for example if the pay and their work commitment is low or the activity irregular (Hudson et al., 2021). Worker B might not consider selling self-made products to be 'proper work', perhaps simply perceiving it as an irregular activity with which to earn money. Only the EWCS differentiates between occasional and regular additional job(s), and none of the surveys ask about how multiple jobs are combined, or about motivations for having multiple jobs. Moreover, asking for information on jobs besides the main job is rare. The EWCS just asks for the total number of hours worked in the other job(s), and in the EU-LFS, GSOEP and UKHLS, information is collected only about working hours, status and wages. HILDA does not ask follow-up questions about having 'more than one job (or business)'.

Finally, most surveys ask about paid work, but the boundary between paid and unpaid activities is not always clear-cut (Pulignano and Morgan, 2020). Workers A and B above might also pursue unpaid activities, such as tender preparation, as part of internet and platform work, and might therefore have difficulties assessing how many hours they work in self-employment.

### *Internet or platform work*

Internet and platform work is measured in the UKHLS and EU-LFS, and instruments for its measurement were recently included in HILDA and the GSOEP. In the UKHLS, internet and platform work is measured with the question: 'Thinking about the past month, which, if any, of the following have you done in order to make money using a website, platform or app?' The EU-LFS asks: 'Thinking about the past three months, have you done any of the following to earn money using third-party websites, apps, or online platforms [ . . . ]?' An interviewer's note is provided with information on what third-party websites, apps and online platforms mean. These measures are comparable with the ETUI IPWS measure: 'Some people earn money by using online platforms, websites or mobile applications. [ . . . ] Please tell me if you have ever tried to earn money by finding work or connecting with clients through online platforms, apps or websites in any of the following ways [ . . . ]' As in the ETUI IPWS, categories of internet and platform work in the UKHLS and EU-LFS comprise transportation, food and drink delivery, courier services, manual tasks (such as cleaning), and non-manual tasks (for example, web and software development). The EU-LFS also asks about selling products online and renting out property. The ETUI IPWS also asks, for example, whether the respondent has ever tried to earn money as an 'influencer (generating income through your blogs or social media accounts, for instance a youtube channel, instagram, tiktok [*sic*])' or by doing 'remote clickwork (doing short tasks on your computer or other online device on a freelance basis, for instance 'clickwork', data entry or sorting, transcriptions, paid online surveys)' or 'remote professional work (creative, IT or professional work on a freelance basis through an online platform, app or website' (Piasna et al., 2022: 12). Worker A's clickwork and Worker B's on-location work

via an online platform would be captured by the UKHLS and EU-LFS, but Worker B's selling of self-made products online would be captured only by the ETUI IPWS.

Whereas the UKHLS and EU-LFS explicitly ask about platforms besides websites and apps, HILDA and the GSOEP do not mention platforms and do not ask about specific types of internet work. In HILDA, respondents are asked: 'I now want you to think about the past four weeks. During this time did you do any work that involved finding customers and receiving a payment for each task through a mobile app or website? Examples include Uber, Deliveroo, Airtasker and Freelancer, but there are many others.' Details of specific digital platforms are given in the interviewer note. In the 2020 wave of the GSOEP, the following question was included: 'Since January 1, 2019, have you used a website or app to obtain paid work assignments through it (e.g., handyman services, errands, or programming)?' No further explanation of what was meant by websites or apps was provided. This measure – and also the rather imprecise HILDA measure – may be problematic because they conflate different ways of accessing work via digital technologies or websites that might not be platform or internet work in the strict sense. Worker A's and Worker B's internet and platform work may not be captured adequately by these measurements. To our knowledge, none of the other surveys considered in this article measure internet or platform work.

These ambiguities and blind spots in the surveys do not allow for measuring the nature and prevalence of the various and sometimes newly emerging types of employment relationships. This in turn also makes it hard to examine the consequences of these employment relationships and to identify groups of workers who are vulnerable and might need social support and protection.

## Concluding remarks

The overarching goal of this article was to draw attention to the implicit assumptions of the standard employment relationship and – using flexible work arrangements as an example – to point out the problems of conceptualisation, definition and measurement in many surveys that prevent us from fully grasping the complexity of work and work realities in the contemporary world of work.

Failing to capture this information adequately has implications for the basis on which social and employment policies may be adjusted in response to these developments. Rubery et al. (2018) argue that the framework of the standard employment relationship needs to be extended and flexibilised to incorporate more precarious forms of work. In order to do this appropriately, it is essential that the data collected reflect the diversity and true nature of contemporary work. This is of particular importance for policy-makers and trade unions who are faced with the challenges of a digital labour market and confronted with the question of whether and how employment relationships and work arrangements should be regulated, and which groups of workers may need social support and protection. Particularly for trade unions, the diverging nature of the employment contracts and ways of working may be seen as a threat to collective action. Moreover, it may further increase workers' need for better protection against discrimination, unfair treatment and exploitation. Only unions and collective action/agreements can achieve that protection (Chung, 2022).

To this end, better information must be collected on the prevalence, evolution and consequences of emerging employment relationships and flexible work arrangements that reflect the realities of workers' lives, and greater consensus and awareness must be created among researchers using survey instruments. The present study makes several suggestions for potential ways forward.

As we have been able to examine only a limited range of the problems and challenges, we have addressed what we see as the most salient issues. Accordingly, we have proposed a limited number of potential solutions and ways of implementing them. Further challenges to existing terms and instruments, such as those presented by the newly emerging types of employment relationships, the wider context of individuals' linked lives, as well as changes in life-course trajectories outside the

work sphere, must be overcome. Preferences have become more diverse, and individuals may place greater value on non-work activities beyond family roles, for example leisure activities, voluntary work or political engagement. Moreover, individual lives are linked, and their patterns are influenced by the dynamics of social group membership (Mayer, 2004), such as workplaces, organisations, families, extended families, neighbourhoods and communities (Courtright et al., 2016; Wilson et al., 2018).

We therefore present this article as an invitation to researchers in the areas of work, well-being and work–life balance to examine the identified issues further, explore possible solutions and apply them to future empirical research. Our intention is to make data users aware of the limitations of existing survey data and to encourage survey designers to modify existing instruments and develop new ones in order to capture contemporary realities. We note that some survey designers are already aware of and are actively trying to address some of the issues raised in this article (for example, Eurofound in the new wave of the EWCS). We hope to further raise awareness of the problems and challenges, however, to try to build an evidence base for research, policy and consultancy advice that adequately reflects current and emerging work realities.

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### Supplemental material

Supplemental material for this article is available online.

### References

- Abendroth AK, Lott Y, Hipp L et al. (2022) Has the COVID-19 pandemic changed gender- and parental-status-specific differences in working from home? Panel evidence from Germany. *Gender, Work and Organization*. Epub ahead of print 5 April 2022. DOI: 10.1111/gwao.12836.
- Aisenbrey S and Fasang A (2017) The interplay of work and family trajectories over the life course: Germany and the United States in comparison. *American Journal of Sociology* 122(5): 1448–1484.
- Alexander A, De Smet A, Langstaff M et al. (2021) *What Employees are Saying About the Future of Remote Work*. Atlanta, GA: McKinsey & Company. Available at: <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/what-employees-are-saying-about-the-future-of-remote-work> (accessed 11 July 2022).
- Alis D, Karsten L and Leopold J (2006) From gods to goddesses. *Time and Society* 15(1): 81–104.
- Allen TD, Golden TD and Shockley KM (2015) How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest* 16(2): 40–68.
- Anderson D and Kelliher C (2020) Enforced remote working and the work-life interface during lockdown. *Gender in Management* 35(7/8): 677–683.
- Barcevičius E et al. (2021) *Study to Support the Impact Assessment of an EU Initiative to Improve Working Conditions in Platform Work*. Luxembourg: Publications Office of the European Union.
- Bathini DR and Kandathil GM (2019) An orchestrated negotiated exchange: Trading home-based telework for intensified work. *Journal of Business Ethics* 154(2): 411–423.

- Bosch G (2004) Towards a new standard employment relationship in Western Europe. *British Journal of Industrial Relations* 42(4): 617–636.
- Casper WJ, Vaziri H, Wayne JH et al. (2018) The jingle-jangle of work–nonwork balance: A comprehensive and meta-analytic review of its meaning and measurement. *Journal of Applied Psychology* 103(2): 182–214.
- Cedefop (2020) Online working and learning in the coronavirus era: Cedefop evidence reveals opportunities and threats for crowdworkers in the online gig economy. *Briefing Report*. Thessaloniki: Publications Office of the European Centre for the Development of Vocational Training.
- Chandola T, Booker C, Kumari M et al. (2019) Are flexible work arrangements associated with lower levels of chronic stress-related biomarkers? A study of 6025 employees in the UK household longitudinal study. *Sociology* 53(4): 779–799.
- Chartered Institute for Personnel Development (CIPD) (2021) *Flexible Working: Lessons from the Pandemic*. Report, April 2021. London: CIPD. Available at: <https://www.cipd.co.uk/knowledge/fundamentals/relations/flexible-working/flexible-working-lessons-pandemic> (accessed 11 July 2022).
- Chung H (2014) *Explaining the Provision of Flexitime in Companies Across Europe (in the Pre- and Post-Crisis Europe): Role of National Contexts*. Report for the project ‘Work Autonomy, Flexibility and Work-life Balance’. Canterbury, University of Kent. Available at: <https://wafproject.org/wp-content/uploads/sites/16/2020/10/2014-11-04-WAF-1-provision-of-flexitime-working-paper.pdf> (accessed 10 June 2022).
- Chung H (2019) ‘Women’s work penalty’ in the access to flexible working arrangements across Europe. *European Journal of Industrial Relations* 25(1): 23–40.
- Chung H (2020) Gender, flexibility stigma, and the perceived negative consequences of flexible working in the UK. *Social Indicators Research* 151(2): 521–545.
- Chung H (2022) *The Flexibility Paradox: Why Flexible Working Leads to (Self-)Exploitation*. Bristol, UK: Policy Press.
- Chung H and Tijdens K (2013) Working time flexibility components and working time regimes in Europe: Using company level data across 21 countries. *International Journal of Human Resource Management* 24(7): 1418–1434.
- Chung H and Van der Horst M (2018) Women’s employment patterns after childbirth and the perceived access to and use of flexitime and teleworking. *Human Relations* 71(1): 47–72.
- Chung H and Van der Horst M (2020) Flexible working and unpaid overtime in the UK: The role of gender, parental and occupational status. *Social Indicators Research* 151(2): 495–520.
- Chung H and Van der Lippe T (2020) Flexible working work life balance and gender equality: Introduction. *Social Indicators Research* 151(2): 365–381.
- Courtright SH, Gardner RG, Smith TA et al. (2016) My family made me do it: A cross-domain, self-regulatory perspective on antecedents to abusive supervision. *Academy of Management Journal* 59(5): 1630–1652.
- Craig L and Mullan K (2011) How mothers and fathers share childcare: A cross-national time-use comparison. *American Sociological Review* 76(6): 834–861.
- Davis AE and Kalleberg AL (2006) Family-friendly organizations? Work and family programs in the 1990s. *Work and Occupations* 33(2): 191–223.
- De Menezes L and Kelliher C (2011) Reviewing the evidence – flexible working and performance: Towards a model of the potential business case. *International Journal of Management Reviews* 13(4): 452–474.
- De Menezes L and Kelliher C (2017) Flexible working, individual performance and employee attitudes: Comparing formal and informal arrangements. *Human Resource Management* 56(6): 1051–1070.
- Den Dulk L, Groeneveld S, Ollier-Malaterre A et al. (2013) National context in work-life research: A multi-level cross-national analysis of the adoption of workplace work-life arrangements in Europe. *European Management Journal* 31(5): 478–494.
- Eaton SC (2003) If you can use them: Flexibility policies, organizational commitment, and perceived performance. *Industrial Relations: A Journal of Economy and Society* 42(2): 145–167.
- Einola K and Alvesson M (2021) Behind the numbers: Questioning questionnaires. *Journal of Management Inquiry* 30(1): 102–114.
- Eurofound (2020) *Privilege or Necessity? The Working Lives of People with Multiple Jobs*. European Working Conditions Survey 2015 series. Luxembourg: Publications Office of the European Union. Available at:

- <https://www.eurofound.europa.eu/publications/policy-brief/2020/privilege-or-necessity-the-working-lives-of-people-with-multiple-jobs> (accessed 12 July 2022).
- Gandini A (2019) Labour process theory and the gig economy. *Human Relations* 72(6): 1039–1056.
- Glass JL and Noonan MC (2016) Telecommuting and earnings trajectories among American women and men 1989–2008. *Social Forces* 95(1): 217–250.
- Heinz W (2000) Strukturbezogene Biographie- und Lebenslaufforschung. Der Sfb 186 ‘Statuspassagen und Risikolagen im Lebensverlauf’. *Zeitschrift für Soziologie der Erziehung und Sozialisation* 3: 4–8.
- Hobson B (2013) *Worklife Balance: The Agency and Capabilities Gap*. Oxford: Oxford University Press.
- Hudson S, Nahrgang JD, Vaughton MJ et al. (2021) Do the hustle! Empowerment from side-hustles and its effects on full-time work performance. *Academy of Management Journal* 64(1): 235–264.
- Kelliher C and De Menezes L (2019) *Flexible Working in Organisations: A Research Overview*. London: Routledge.
- Kelliher C and Richardson J (2019) Work, working and work relationships in a changing world. In: Kelliher C and Richardson J (eds) *Work, Working and Work Relationships in a Changing World*. London: Routledge, pp. 1–14.
- Kelliher C, Richardson J and Boiarintseva G (2019) All of work, all of life: Reconceptualising work-life balance for the 21st century. *Human Resource Management Journal* 29(2): 97–112.
- Kohli M (1985) Die Institutionalisierung des Lebenslaufs. Historische Befunde und theoretische Argumente. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 37(1): 1–29.
- Lott Y (2015) Working-time flexibility and autonomy: A European perspective on time adequacy. *European Journal of Industrial Relations* 21(3): 259–274.
- Lott Y (2020a) Is maternal labor market re-entry after childbirth facilitated by mothers’ and partners’ flex-time? *Human Relations* 73(8): 1106–1128.
- Lott Y (2020b) Does flexibility help employees switch off from work? Flexible working-time arrangements and cognitive work-to-home spillover for women and men in Germany. *Social Indicators Research* 151(2): 471–494.
- Lott Y (2020c) *Work-Life Balance im Homeoffice: Was kann der Betrieb tun?* [Work-life balance when working from home: What can the company do?]. WSI Report 54. Düsseldorf: Hans-Böckler-Foundation.
- Lott Y and Abendroth AK (2020) The non-use of telework in an ideal worker culture: why women perceive more cultural barriers. *Community, Work & Family* 23(5): 593–611.
- Lott Y and Chung H (2016) Gender discrepancies in the outcomes of schedule control on overtime hours and income in Germany. *European Sociological Review* 32(6): 752–765.
- Lott Y and Klenner C (2018) Are the ideal worker and ideal parent norms about to change? The acceptance of part-time and parental leave at German workplaces. *Community, Work & Family* 21(5): 564–580.
- Mayer KU (2004) Whose lives? How history, societies, and institutions define and shape life courses. *Research in Human Development* 1(3): 161–187.
- Morton B (2022). Workers going into office 1.5 days a week, survey suggests. *BBC*. Available at: <https://www.bbc.co.uk/news/business-62542537> (accessed 6 September 2022).
- Piasna A, Zwysen W and Drahoukoupil J (2022) *The Platform Economy in Europe. Results From the Second ETUI Internet and Platform Work Survey*. Brussels: ETUI. Available at: [https://www.etui.org/sites/default/files/2022-02/The%20platform%20economy%20in%20Europe\\_2022.pdf](https://www.etui.org/sites/default/files/2022-02/The%20platform%20economy%20in%20Europe_2022.pdf) (accessed 11 July 2022).
- Pulignano V and Morgan G (2020) Advancing research and theory of precariousness at the continuum of paid and unpaid work. Paper presented at the 32nd SASE Annual Meeting, held online, 18–21 July 2020.
- Rapoport R, Bailyn L, Fletcher JK et al. (2002) *Beyond Work-Family Balance: Advancing Gender Equity and Work Performance*. San Francisco, CA: John Wiley & Sons.
- Rubery J, Grimshaw D, Keizer A et al. (2018) Challenges and contradictions in the ‘normalising’ of precarious work. *Work, Employment and Society* 32(3): 509–527.
- Rubery J, Keizer A and Grimshaw D (2016) Flexibility bites back: The multiple and hidden costs of flexible employment policies. *Human Resource Management Journal* 26(3): 235–251.
- Stanford J (2017) The resurgence of gig work: Historical and theoretical perspectives. *Economic and Labour Relations Review* 28(3): 382–401.



- Tomlinson J, Baird M, Berg P et al. (2018) Flexible careers across the life course: Advancing theory, research and practice. *Human Relations* 71(1): 4–22.
- Warhurst C and Knox A (2022) Manifesto for a new quality of life. *Human Relations* 75(2): 304–321.
- Wayne JH, Vaziri H and Casper W (2021) Work–nonwork balance: Development and validation of a global and multidimensional measure. *Journal of Vocational Behavior* 127. Epub 26 March. DOI: 0.1016/j.jvb.2021.103565. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0001879121000373> (accessed 29 August 2022).
- Wilson KS and Baumann HM (2015) Capturing a more complete view of employees’ lives outside of work: The introduction and development of new inter-role conflict constructs. *Personnel Psychology* 68(2): 235–282.
- Wilson KS, Baumann HM, Matta FK et al. (2018) Misery loves company: An investigation of couples’ inter-role conflict congruence. *Academy of Management Journal* 61(2): 715–737.
- Wood AJ (2020) *Despotism on Demand: How Power Operates in the Flexible Workplace*. Ithaca NY: Cornell University Press.

## Supplemental File

Table S1: Examples of studies on flexible working time arrangements

Author(s)	Concept	Data	Measurement
Schieman and Young (2010)	Schedule control	Data derive from telephone interviews with working adults in the US	Survey question: "Who usually decides when you start and finish work each day at your main job? Is it someone else, or can you decide within certain limits, or are you entirely free to decide when you start and finish work?"; Responses were: No schedule control, limited control and full control
Moen et al. (2011)	Schedule control	Data derive from employees of a Fortune 500 retail company in the US	Participants degree of schedule control is measured by her/his ability to decide about the time and timing of the work
Kelly et al. (2014)	Schedule control	Data derive from white-collar employees of a Fortune 500 organization in the US; data derive from employees of the information technology (IT) division of a U.S. Fortune 500 organization	Schedule control was measured using a seven-point scale with questions on the participant's control over working time
Biron und van Veldhofen (2016)	Worktime control	Diary data of professionals and managers working at various organizations in different branches of industry across the Netherlands	Respondents were asked whether they had very low control, little control, neutral, high control or very high control over starting and finishing times of their work days
Lott and Chung (2016)	Schedule control	German Socio-Economic Panel (SOEP)	Survey question: "Nowadays, there are a number of different types of working hours available. Which of the following possibilities is most applicable to your work?"; Responses were: (1) Fixed daily working hours, (2) working hours fixed by employer, which may vary from day to day, (3) flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account, (4) No formally fixed working hours, decide my own working

			hours; Schedule control was measured with (3) and (4); these were used as separate measures for schedule control; (3) was referred to as flexitime and (4) as working time autonomy
Chung and Horst (2020)	Flexitime	Understanding Society	Survey question: "If you personally needed any, which of the arrangements listed on the card are available at your workplace? Responses were: Part-time working, working term-time only, job-sharing, flexitime, working a compressed week, working annualized hours, working from home on a regular basis, other flexible working arrangements, or none of these. "Do you currently work in any of these ways?"; Category flexitime was used as measure for "flexitime"
Gasser (2017)	Flexitime	Swiss Labour Force Survey	Survey questions: "Do have core time hours, in which they have to be present at work?" - Can you bank time over a certain period of time?" "Flexitime" was measured with no core hours and the option to bank time
Lott (2020)	Flexitime	German Socio-Economic Panel (SOEP)	Survey question: "Nowadays, there are a number of different types of working hours available. Which of the following possibilities is most applicable to your work?"; Responses were: (1) Fixed daily working hours, (2) working hours fixed by employer, which may vary from day to day, (3) flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account, (4) No formally fixed working hours, decide my own working hours; (3) was used as measure for "flexitime"

Wheatley (2017)	Flexible working arrangements	British Household Panel Survey (BHPS) and Understanding Society	Availability and use of "flexible working arrangements" including flexitime, compressed hours, annualized hours, part-time, term-time, job-share and homeworking
Chung and Horst (2018)	Family-friendly flexible working arrangements (flexitime) versus high-performance strategy flexible working arrangements (schedule control)	Understanding Society	<p>Survey question: "If you personally needed any, which of the arrangements listed on the card are available at your workplace?"</p> <p>Responses were: Part-time working, working term-time only, job-sharing, flexitime, working a compressed week, working annualized hours, working from home on a regular basis, other flexible working arrangements, or none of these. "Do you currently work in any of these ways?";</p> <p>Categories flexitime, compressed hours, and annualised hours were combined to flexitime; flexitime and teleworking were considered "family-friendly flexible working arrangements"</p> <p>Survey question: "In general, how much influence do you have over the time you start or finish your working day?";</p> <p>Responses were: A lot, some, a little, and none;</p> <p>Measure used for schedule control which was considered a "high performance flexible working arrangement"</p>
Langner (2018)	Work hour flexibility	German Socio-Economic Panel (SOEP)	<p>Survey question: "Nowadays, there are a number of different types of working hours available. Which of the following possibilities is most applicable to your work?";</p> <p>Responses were: (1) Fixed daily working hours, (2) working hours fixed by employer, which may vary from day to day, (3) flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account, (4) No formally fixed working hours, decide my own working hours;</p> <p>(3) and (4) were combined to "work hour flexibility"</p>

Fuller and Hirsh (2019)	Flexible work arrangements	Workplace and Employee Survey (WES)	Survey question: "Do you work flexible hours? (meaning a certain number of core hours, but you can vary your start and stop times as long as you work the equivalent of a full week)"
Kaduk et al. (2019)	Schedule variability	Survey data from information technology employees a large US firm; data were collected as a part of the Work, Family, and Health Network study	<p>Survey questions: "Which of the following best describes your work schedule at this job? Responses were: Variable schedule (one that changes from day to day), regular daytime schedule, regular evening shift, regular night shift, rotating shift (one that changes regularly from days to evenings or nights), split shift (consisting of two distinct periods each day)?";</p> <p>Categories variable schedule, rotating shift, and split shift were used for "schedule variability"</p> <p>Survey questions: "How much choice do you have over when you begin and end each work day?";</p> <p>Schedule variability was considered voluntary when answer was 'very much' or 'much' and involuntary when answer was 'little' or 'very little'</p>

**Table S2.** Overview of survey instruments for the measurement of employees' flexibility over time and space

Survey	Employees' flexibility over time	Employees' flexibility over space
EWCS	<p><i>How are your working time arrangements set?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• You can adapt your working hours within certain limits (e.g. flextime)</li> <li>• Your working hours are entirely determined by yourself</li> </ul>	<p><i>Please take a look at these locations. In a moment, I will ask you how often you have worked in each location [during the last 12 months in your main paid job?]</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• Your own home               <ul style="list-style-type: none"> <li>• Daily</li> <li>• Several times a week</li> <li>• Several times a month</li> <li>• Less often</li> <li>• Never</li> </ul> </li> </ul>
EU-LFS	<p>EU-LFS ad hoc module Reconciliation between Work and Family Life (WFR): <i>Is it possible for you to vary start or end of your working day for care reasons?</i></p> <ul style="list-style-type: none"> <li>• It is generally possible</li> <li>• It is rarely possible</li> <li>• It is not possible</li> <li>• I do not know</li> </ul> <p>EU-LFS ad hoc module Work Organisation and Working Time Arrangements (WTA): <i>Can you decide on the start and end of your working time or does your employer decide them?</i></p> <ul style="list-style-type: none"> <li>• You can fully decide them yourself</li> <li>• You can decide them with certain restrictions</li> <li>• ...</li> </ul>	<p>Main module variable HOMEWK:</p> <ul style="list-style-type: none"> <li>• Person usually works at home</li> <li>• Person sometimes works at home</li> <li>• Person never works at home</li> </ul> <p>EU-LFS–WTA (work organisation and working time arrangements) module: <i>In your main job: what is the place where you mainly work?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• At home</li> </ul>
HILDA	<p><i>The following statements are about your current(main) job. Please indicate... how strongly you agree or disagree with each.</i></p> <ul style="list-style-type: none"> <li>• My working times can be flexible</li> <li>• I can decide when to take a break</li> </ul> <p><i>Following is a list of conditions and entitlements that employers sometimes provide their employees. For each, please indicate whether you, or other employees working at similar level to you at your workplace, would be able to</i></p>	<p><i>(In your main job), are any of your usual working hours worked at your home (that is, the address of your usual place of residence)?</i></p> <p>Follow up: <i>Approximately how many hours each week do you usually work at home (for your main job only)?</i></p> <p>Follow up: <i>How many hours per week do you work at home on average over a usual 4-week period (for your main job only)?</i></p>

	<p><i>use this if needed. – answer categories yes/no.</i></p> <ul style="list-style-type: none"> <li>• Home-based work</li> <li>• Flexible start and finish times</li> </ul>	
UKHLS	<p><i>I would like to ask about working arrangements at the place where you work. Which of the following arrangements are available at your workplace?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• Flexitime</li> </ul> <p><i>Do you currently work in any of these ways?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• Flexitime</li> </ul> <p><i>In your current job, how much influence do you have over...The time you start or finish your working day</i></p> <ul style="list-style-type: none"> <li>• A lot</li> <li>• Some</li> <li>• A little</li> <li>• None</li> </ul>	<p><i>I would like to ask about working arrangements at the place where you work. Which of the following arrangements are available at your workplace?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• To work from home on a regular basis</li> </ul> <p><i>Do you currently work in any of these ways?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• To work from home on a regular basis</li> </ul>
GSOEP	<p><i>After all, there are very different working time arrangements today. Which of the following is most likely to apply to your work?</i></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• No formal working time regulations, set working hours myself.</li> <li>• Flexitime with working time account and a certain degree of self-determination over the daily working time within this framework.</li> </ul>	<p><i>Does it happen that you do your employment at home?</i></p> <ul style="list-style-type: none"> <li>• Yes/no</li> </ul> <p>Follow up: <i>How often?</i></p> <ul style="list-style-type: none"> <li>• Daily</li> <li>• Several times a week</li> <li>• Every 2 to 4 weeks</li> <li>• Less frequently, only when needed.</li> </ul>
NLSY	<p><i>Please look at the following list of benefits that employers sometimes make available to their employees. At this time which of the benefits on this list would it be possible for you to receive as part of your job?</i></p> <ul style="list-style-type: none"> <li>• A flexible work schedule</li> </ul>	<p><i>Do you work primarily at home or from your home, but you otherwise a regular employee of the company or organization that pays you?</i></p> <ul style="list-style-type: none"> <li>• Yes/no</li> </ul> <p>Follow up: <i>How many hours per week do you usually work at this job at home?</i></p>
GSS	<p><i>Which of the following statements best describes how your working hours are decided? (By working hours we mean here the times you start and finish work,</i></p>	<p><i>Which of the following statements best describes where you work?</i></p> <ul style="list-style-type: none"> <li>• I usually work at home.</li> </ul>

	<p><i>and not the total hours you work per week or month.)</i></p> <ul style="list-style-type: none"> <li>• I can decide the time I start and finish work, within certain limits.</li> <li>• I am entirely free to decide when I start and finish work.</li> </ul> <p>GSS-QWL (quality of work life) module:  <i>How often are you allowed to change your starting and quitting time on a daily basis?</i></p> <ul style="list-style-type: none"> <li>• Never</li> <li>• Rarely</li> <li>• Sometimes</li> <li>• Often</li> </ul>	<ul style="list-style-type: none"> <li>• I usually work part of the week at home and part at once place away from home.</li> </ul> <p>GSS- QWL (quality of work life) module:  <i>How often do you work at home as part of your job?</i></p> <ul style="list-style-type: none"> <li>• Never</li> <li>• A few times a year</li> <li>• About once a month</li> <li>• About once a week</li> <li>• More than once a week</li> <li>• Worker work mainly at home</li> </ul> <p>Follow up: <i>Is it usually because you want to, you have to in order to keep up with your job, or for some other reason?</i></p> <ul style="list-style-type: none"> <li>• Worker wants to work at home</li> <li>• Worker has to work from home to keep up with the job</li> <li>• Worker is operating home-based business</li> <li>• Other combinations and other reasons</li> </ul>
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Note: EWCS = European Working Conditions Survey; EU-LFS = European Union Labour Force Survey; HILDA = Household, Income and Labour Dynamics in Australia; UKHLS = Understanding Society – The UK Household Longitudinal Study; GSOEP = the German Socio-Economic Panel; NLSY = the US National Longitudinal Survey of Youth; GSS = the US General Social Survey.



## References

- Biron, Michal /van Veldhoven, Marc (2016) When control becomes a liability rather than an asset: Comparing home and office days among part-time teleworkers. *Journal of Organizational Behavior* 37(8): 1317–1337.
- Chung H and Horst, Mariska (2020) Flexible working and unpaid overtime in the UK: The role of gender, parental and occupational status. *Social Indicators Research* 151(2): 495–520.
- Chung H and Van der Horst, Mariska (2018) Flexible working and unpaid overtime in the UK: the role of gender, parental and occupational status. *Social Indicators Research*.
- Fuller S and Hirsh CE (2019) "Family-Friendly" Jobs and Motherhood Pay Penalties: The impact of Flexible Work Arrangements Across the Educational Spectrum. *Work and Occupations* 46(1): 3–44.
- Gasser M (2017) Time Spent on Child Care by Fathers in Leadership Positions: The Role of Work Hours and Flextime. *Journal of Family Issues* 38(8): 1066–1088.
- Kaduk A, Genadek K, Kelly EL, et al. (2019) Involuntary vs. voluntary flexible work: insights for scholars and stakeholders. *Community, Work & Family* 22(4): 412–442.
- Kelly EL, Moen P, Oakes JM, et al. (2014) Changing Work and Work-Family Conflict: Evidence from the Work, Family, and Health Network. *American Sociological Review* 79(3): 485–516.
- Langner LA (2018) Flexible Men and Successful Women: The Effects of Flexible Working Hours on German Couples' Wages. *Work, Employment & Society* 32(4): 687–706.
- Lott Y (2020) Is maternal labor market re-entry after childbirth facilitated by mothers' and partners' flextime? *Human Relations* 73(8): 1106–1128.
- Lott Y and Chung H (2016) Gender discrepancies in the outcomes of schedule control on overtime hours and income in Germany. *European Sociological Review* 32(6): 752–765.
- Moen P, Kelly EL, Tranby E, et al. (2011) Changing Work, Changing Health: Can Real Work-Time Flexibility Promote Health Behaviors and Well-Being? *Journal of Health and Social Behavior* 52(4): 404–429.
- Schieman S and Young M (2010) Is There a Downside to Schedule Control for the Work-Family Interface? *Journal of Family Issues* 31(10): 1391–1414.
- Wheatley D (2017) Employee satisfaction and use of flexible working arrangements. *Work, Employment & Society* 31(4): 567–585.