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Does employment status matter for job quality? A cross-national perspective.

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Abstract

Background: Dual labour market theory raises questions about the relationship between non-standard employment and job quality. While scattered empirical evidence exists, there is a paucity of systematic evidence on the relationship between workers' employment status and job quality.

Objective: The authors investigated the relation between workers' employment status (e.g., open-ended, long- and short-term fixed contracts, economically dependent and independent solo self-employment, and self-employment with employees) and important dimensions of job quality (JQ) (e.g., employment prospects, physical work environment, skills and discretion, and working times quality). Cross-national variation in that relation and causes of that variation (e.g., country-level unemployment rate and labour market efficiency) were also investigated.

Methods: Hierarchical regression modelling was applied using a sample of 34,094 workers from the European Working Conditions Survey 2015.

Results: The study highlighted a negative association between fixed-term contracts and JQ. For self-employed workers (except economically dependent self-employed workers) a generally positive association was observed. In this study, also positive associations were found between labour market efficiency at the country-level and some JQ indicators. National unemployment rates were negatively associated to most JQ indicators.

Conclusions: Non-standard employment contracts exhibited poorer job quality than open-ended contracts. Stronger labour market organization centred around indicators of both flexibility and equity related to more beneficial job quality for all employment statuses, thereby promoting more labour market inclusivity.

Keywords: multilevel analyses; EWCS; EU28; labour market efficiency; unemployment rate

1. Introduction

People, on average, spend a lot of time at work. Not only to earn a living, but also because of its importance for self-realization and social integration (Muñoz de Bustillo et al., 2011). The study of job quality for employees (Francis Green et al., 2013) – and more recently for the self-employed (Gevaert et al., 2021) – is therefore a central theme in the sociology of work (Olsen et al., 2010). Job quality can be defined as the extent to which a set of job attributes fosters beneficial outcomes with regard to psychological, physical well-being and positive job attitudes (Holman, 2013; Muñoz de Bustillo et al., 2011; Wright et al., 2018). The political importance of job quality was first mentioned under the EU’s Lisbon Strategy for ‘more and better jobs’ (European Commission, 2010) and remains a crucial part of the European Pillar of Social Rights (European Commission, 2017).

While various operationalizations of the constituting dimensions of job quality exist, there is consensus that a comprehensive account should cover both the ‘intrinsic characteristics of work tasks’ (e.g., skills, autonomy, social support, physical work environment, work effort) and the ‘terms and conditions of (self-)employment’ (e.g., contractual stability, opportunities for training, job security) (F Green & Mostafa, 2012; Wright et al., 2018). This basic distinction makes apparent that a certain job content – say: the tasks of a shop assistant (e.g., lifting goods, controlling stock, informing clients) – can be performed under different terms and conditions of employment (e.g., type of contract, work schedule, package of pay and benefits). The relationship between these two constituting factors of job quality, however, has rarely been investigated (Arne L. Kalleberg, 2016). In this paper, the concept of ‘employment status’ is used as a proxy for these so-called ‘terms and conditions of employment’. The relations between workers’ employment status and a number of important job quality dimensions (e.g., employment prospects, physical work environment, skills & discretion, and working time quality) are then investigated. Based on the insights coming from dual labour market theory

(Peck, 1989), it is assumed that non-standard and insecure employment statuses are more prone to poor (intrinsic) job quality (Arne L. Kalleberg, 2016). Moreover, also cross-national variation in the relationships between workers' employment status and job quality, as well as possible causes of that variation are studied. Regarding these causes, it is argued that labour market efficiency and labour market performance can not only affect job quality, but also the relationship between workers' employment status and job quality (Ellonen & Nätti, 2015; Passaretta & Wolbers, 2019). Regardless of previous, scattered, empirical evidence, the originality of this study lies within the systematic and large-scale nature of our investigation.

2. Theoretical background

2.1. Dual labour market theory: explaining clusters of good and bad job quality

While during the last decades scholarly and policy interest for 'job quality' increased (Arne L. Kalleberg, 2016; Muñoz de Bustillo et al., 2011), in the same period also employment conditions got gradually more de-standardised (Adams & Deakin, 2014; Arum & Müller, 2004; Puig-Barrachina et al., 2014). This process of de-standardisation mainly occurs alongside the lines predicted by dual labour market theory. It contrasts a primary segment – reserved for well-paid, secure, and stable jobs, against a secondary segment – associated with non-standard jobs (e.g., temporary employment) entailing poor wages, employment instability and negative health-affecting consequences (Arne L. Kalleberg, 2016; Peck, 1989; P. Virtanen et al., 2003). Furthermore, specific socio-demographic profiles are usually associated to these labour market niches. While primary segment jobs often involve skilled, mid-career, white males, secondary segment jobs are more likely to be occupied by lower skilled, women, young people and ethnic minorities (Peck, 1989). According to dual labour market theory, less-favourable labour market positions and rather disadvantaged socio-economic profiles thus tend to collide.

Trends towards labour market segmentation are not just limited to employees, but also involve self-employed workers (Khan et al., 2021). The internal composition of the self-employed as a social category has changed (Arum & Müller, 2004; Conen & Schippers, 2019). The traditional craftworkers, artisans and company owners that made up the self-employed population before, were supplemented with new groups of self-employed like freelancers, subcontractors, or own account workers (Arum & Müller, 2004; Conen & Schippers, 2019). A large portion of them is solo self-employed (i.e., operates without employees) and at-risk of poor employment conditions like economic dependence or subordination to one or a few dominant clients (Böheim & Mühlberger, 2009; Moisander et al., 2017).

In line with dual labour market theory there are good reasons to assume that workers in a non-standard (self-)employment status (e.g., fixed-term employment, economically dependent solo self-employment) are also more exposed to work tasks of low intrinsic quality. A reason for that could be the stronger power disequilibrium between the worker and the employer or client. In jobs resembling the standard employment status (i.e., stable, long-term waged employment), institutional protection mechanisms with relevance to wage-setting, employment and working conditions, occupational health and safety, etc. were put in place and actively safeguarded by mandatory control mechanisms, procedures and labour representatives (Bosmans et al., 2016). Non-standard employment arrangements are often not or less strongly covered by such institutional protections, and are often characterized by more unbalanced power dynamics between the actors (e.g., clients, employees, employers) (A. L. Kalleberg et al., 2000). This lower bargaining power for those in non-standard jobs might consequently result in less favourable job quality including higher risks and reduced prospects (McGovern et al., 2004). Previous studies, for example, found economically dependent self-employed workers to have poorer physical work environments, lower working time quality, less skills and discretion, and poorer social environments than all other workers in employment (C. Williams & Lapeyre,

2017). Similarly, previous studies revealed negative associations between several aspects of job quality (e.g., physical environment, working time quality, earnings and employment prospects) and temporary employment (Aleksynska, 2018).

To date, however, there is a paucity of systematic evidence on the relation between workers' employment status and job quality. Therefore, a first objective of this research is to investigate whether non-standard employment contracts (e.g., temporary employment, economically dependent solo self-employment) have worse job quality when compared to workers with a standard employment contract (**Hypothesis 1**). In this study, this will be done by comparing workers in short- and long-term fixed contracts, economically dependent and independent solo self-employment and self-employment with employees to workers holding an open-ended contract.

2.2. The mediating role of wider labour market characteristics

The national labour market context (i.e., institutional characteristics of labour markets and labour market performance) might have an impact on the association between workers' employment status and job quality. Indeed, institutional structures and policy changes play an important part in creating work environments and setting up job quality (Holman, 2013; Olsen et al., 2010). It is therefore hypothesized that countries within the EU28 differ regarding the prevalence of advantageous job quality characteristics (**Hypothesis 2**). For example, it is known that high flexibility contexts seem to buffer against negative effects of flexibility in terms of human capital accumulation, future career upgrading etc. (Passaretta & Wolbers, 2019). However, characteristics of the labour market environment are rarely investigated in terms of their direct influence on job quality. Most often, country-typologies based on a variety of indicators are used to indirectly assess the impact of contextual factors (Esser & Olsen, 2012; Holman, 2013). In this paper, the influence of two specific defining characteristics of the labour

market environment is investigated: labour market performance and labour market efficiency (Erhel & Guergoat-Larivière, 2010). The rationale behind selecting these two macro-indicators is outlined below.

2.2.1. Labour market performance

Probably the crudest way to assess labour market performance is through considering national rates of employment and unemployment. Low rates of unemployment and high employment rates then point to strong labour market performance. Low unemployment rates are also expected to boost workers' individual and collective capacity to bargain for better working conditions (due to high competition for workers) and should thus reduce the likelihood of workers accepting poor-quality jobs (Parker et al., 2017). When unemployment rates are high however, job-seekers are assumably more willing to accept lower quality jobs because of a lack of alternatives (Abraham et al., 2013; Burgess & De Ruyter, 2000). Studies found that high unemployment can lead to inequalities in income, loss of productive jobs, increased poverty and a slowdown of economic growth (Kaur et al., 2020). Furthermore, high unemployment rates can lead to low involvement in social services and a loss of desire to participate in social welfare systems (Kaur et al., 2020). It can also increase feelings of socio-economic insecurity among those holding a job (Frey & Stutzer, 2002). As such, it is hypothesized that high national unemployment rates will be negatively associated to good job quality (**Hypothesis 3**).

In addition, labour market performance might also influence the relationship between employment status and job quality (Erhel & Guergoat-Larivière, 2010). With regard to the prevalence of non-standard employment, there is the assumption – derived from social norm theory (Frey & Stutzer, 2002; Roex & Rözer, 2018) – that if unemployment is common, the social norm of what defines a good, stable job is less strong. Therefore, in contexts of high unemployment, non-standard workers might evaluate their own situation in terms of job quality

more favourable (and less different than that of standard workers), compared to workers in contexts with low unemployment rates (Frey & Stutzer, 2002). It is therefore hypothesized that high country-level unemployment, will decrease the strength of the negative association between a non-standard employment status and job quality (**Hypothesis 4**).

2.2.2. Labour market efficiency

Labour market efficiency, as measured by Schwab (Schwab, 2015), gives an idea of the extent to which labour markets manage to use talent in a ‘flexible’ and ‘efficient’ manner. ‘Flexibility’ refers to aspects of working class power and labour market regulation, like the degree of cooperation in terms of labour-employer relations, the degree of decentralization of wage-setting procedures, flexibility and cost of hiring and firing and the degree to which tax and social contribution schemes induce the incentive to work. The second component, ‘efficient use of talent’, is related to the share of skilled workers in the workforce, the degree to which productivity is related to pay, talent retainment and talent attraction, share of female employment and the formality of hiring procedures (Schwab, 2015). Fundamentally, the basic intent of the concept of labour market efficiency is to make sense of the balance between what is good from a macro-economic point of view (i.e., maximization of wealth within society, the number of jobs within an economy), and what is good from the perspective of the worker (i.e., fairness and equity related to employment) (Kruppe et al., 2003). According to Auer (Auer, 2007), countries with such a balance of flexibility and equity, are not only inclined to report higher productivity levels, but also tend to be characterised by better quality and security of employment. The notion of labour market efficiency entails the underlying assumption that a basic level of employment stability and human capital investment, combined with high internal staff flexibility allowing firms to adjust their work planning, are key for a well-functioning labour market yielding decent work (Auer, 2007). Since labour market efficiency is based on

that balance between flexibility and equity, it is hypothesized to find a positive association with good job quality (**Hypothesis 5**).

As efficient labour markets should be oriented towards maximization of employment opportunities and human capital investment, it can be assumed that an efficient labour market is also an inclusive one (i.e., “*a labour market that allows and encourages all people of working age to participate in paid work and provides a framework for their development*”) (Noteboom, 2003). While a too strongly institutionalized labour market is argued to be harmful because it tends to favour labour market insiders over labour market outsiders, efficient labour markets – being closer to an optimal trade-off between flexibility and equity – should have less tendency of dividing between ‘insiders’ and ‘outsiders’ (Rubery, 2017). It is therefore also hypothesized that labour market efficiency is associated to smaller differences between employment statuses in terms of job quality (**Hypothesis 6**).

3. Materials and methods

3.1. Data

The main source of data for this study, was the European Working Conditions Survey (EWCS) of 2015 – because of COVID-19 and related fieldwork delays in the data collection of the 2020 wave, the EWCS 2015 was the most recent EWCS wave available (Eurofound, 2020). The EWCS is a large-scale survey of the European working population (employees and self-employed), organized by Eurofound (Eurofound, 2016). Respondents in the EWCS were surveyed face-to-face on a broad range of factors related to their work. All information is self-reported and cross-sectional. In this study, only EWCS-data from the 2015 European Union (28 countries) was considered. The final sample contained 34,094 respondents, of which 16,704 males (48.99%) and 17,390 females (51.01%). The country with the highest number of

respondents was Spain (N=3,276), while the country with the lowest number of respondents was Croatia (N=789).

3.2. Indicators

(a) *Job quality indicators.* Based on current definitions of job quality (F Green & Mostafa, 2012) and data availability in the EWCS, four dependent variables were selected: physical environment, skills and discretion, working times quality and employment prospects. They were constructed as summed scales, ranging from 0 to 100. Indicator construction follows the recommendations of the EUROFOUND job quality framework (F Green & Mostafa, 2012). Exact EWCS-items for all variables are given in table 1. The scale for employment prospects was transformed into a dummy-variable due to not being normally distributed in our sample, all other job quality indicators are included in the analyses as metric scales.

(b) *Employment status.* Employment status was measured by distinguishing between open-ended contracts, long-term fixed contracts (i.e., more than 1 year), short-term fixed contracts (less than 1 year) and other waged contracts (agency, apprentice, and no contract workers). In addition, three groups of self-employed workers (i.e., economically dependent solo self-employed, independent solo self-employed and self-employed with employees) were included, based on two relevant distinctions within self-employment: (not) having employees and (in)dependency (González-Ricoy & Queralt, 2020). Dependency was operationalized based on having at least two of the following three attributes: not having the authority to hire or dismiss employees, getting paid an agreed fee on a weekly or monthly basis and not having more than one client or customer. The EWCS-items for constructing this classification are given in table 1. The final employment status indicator is described in table 2.

(c) *Macro-economic and institutional features.* Two macro-level indicators were included in the study. To operationalize labour market performance, Eurostat's (Eurostat, 2015)

unemployment rate (i.e., percentage of unemployed persons aged 15-64) was included, while the 'labour market efficiency index' was derived from World Bank macro-data (Schwab, 2015). The latter includes two equally weighted components (flexibility and efficient use of talent) based on several items (see table A.1. in the appendix for the detailed items). Both macro-level indicators were transformed to z-scores.

(d) *Control variables.* The multivariable analyses were controlled for *gender* (men; women), *age* (<25; 25-34; 35-44; 45-49; ≥50), *education* (primary; secondary; tertiary), *citizenship* (respondent and parents born in the country of residence; respondent born in country, parents not born in country; respondent and parents not born in country), and *income quintiles* (lowest quintile to highest quintile and no information). The models were also controlled for the *International Standard Classification of Occupations* (ISCO) (International Labour Organization, 2010) and the *Statistical Classification of Economic Activities* (NACE) (Eurostat, 2016). The distribution of these characteristics within the sample is given in table 2.

3.3. Method

First, descriptive analyses were performed, cross-tabulating employment status with the socio-demographic variables. Absolute numbers and percentages from these crosstabulations are shown in table 3. Percentages were weighted using a sample weight correcting for population sizes to ensure representativeness of the sample to the EU workforce.

Second, multivariable hierarchical regression models were fitted that allowed to separate micro-level and contextual effects (Hox, 2002). The primary data units were individual respondents, while the second-level data units were countries. OLS-regression was the most

appropriate modelling approach for three of the dependent variables (good physical environment, working time quality, and skills and discretion) because they involved numerical, continuous values and the assumption of normal distribution was met (Pohlmann & Leitner, 2003). Because the former assumption was not met for employment prospects, the variable was recoded into a binary outcome contrasting belonging to the 75% best scores (1) against the 25% lowest scores (0). For this variable, a logit estimation (binary logistic regression) was the most appropriate method for analyses (Pohlmann & Leitner, 2003). For each of the dependent variables, a generic stepwise modelling procedure was followed. First, a null model was estimated to observe the intraclass correlation coefficient (ICC). Then a specified bivariate model for each of the independent variables was fitted. Third, a model including employment status and other job quality indicators (e.g., good physical environment, skills and discretion, work intensity, working time quality, good social environment, working time regularity, employment prospects) that were not considered as the outcome of that model (M1) was estimated. In model 2, socio-demographic variables (gender, age, education, citizenship, and income decile) were added (M2). Workplace characteristics were additionally added in model 3 (ISCO and NACE) (M3). These three models allowed to investigate the first hypothesis, considering potential confounding variables. Next, the country-level indicators were added separately to avoid multicollinearity (M4a/b). This allowed to investigate hypotheses 3 and 5. Cross-level interaction-effects between the macro-level variable and workers' employment status were included in a final model (M5a/b) if the macro-level variable was significantly related to the dependent variable in M4. These models related to hypotheses 4 and 6. Complete case analyses was applied: i.e., the sample of the most complete model was used to run all previous models to allow for comparability between them.

4. Results

4.1. Characteristics of the employment status categories

As dual labour market theory (Peck, 1989) suggests, the results showed that some employment statuses had specific socio-demographic profiles (see table 3). Workers holding ‘standard’, open-ended contracts, were more often middle-aged, of middle-income groups and secondary to tertiary-educated, compared to the other employment statuses. Both short- and long-term fixed contract workers were more often female and younger than average. There was also an overrepresentation of workers not born in their country of residence in this group, compared to the total sample. Almost half of short- and long-term fixed contract workers were in the lowest two income quintiles. The economically dependent solo self-employed were slightly more often male and older compared to the average. There were also more workers with a foreign background in this group. The independent solo self-employed were more often male and older compared to the sample average. Lastly, the self-employed with employees were mostly male, older, as well as secondary- to tertiary-educated and from high-income groups.

4.2. Relations between employment status and job quality

To test the first hypothesis, whether workers with non-standard employment contracts have poorer job quality compared to workers with a standard employment contract, several hierarchical regression models were fitted relating workers’ employment status to job quality indicators (tables 4a-4d).

The results showed persistently less favourable job quality (e.g., good working time quality, skills and discretion, and employment prospects) for workers in long-term fixed contracts (>1 year), as well as for those in short-term fixed contracts (<1 year) compared to workers in open-ended contracts. Workers in short-term fixed contracts showed an additional negative association with a ‘good physical environment’ in the bivariate models. By gradually expanding the models with individual-, meso- and macro-level characteristics (see extended

regression results in tables A.3. to A.6.) the magnitude of these effects somewhat decreased, but the effects remained mostly statistically significant. This evidence supports hypothesis 1.

Independent solo self-employed and self-employed with employees showed positive associations with some job quality indicators (e.g., skills and discretion and employment prospects), but negative associations with others (e.g., working time quality and good physical environment) (see tables 4a-4d, models 3). Economically dependent solo self-employed, however, barely differed from workers in open-ended contracts on almost all job quality indicators (except for having better skills and discretion). These findings, therefore, did not completely corroborate to hypothesis 1.

4.3. The effects of labour market performance and labour market efficiency

The intraclass correlation coefficients (ICC) (tables 4a to 4d) showed that part of the variance in the dependent variables can be attributed to the country-level and not to purely inter-individual variation. For ‘good physical environment’ (2.45%), ‘good working time quality’ (1.66%) and ‘employment prospects’ (3.29%), the ICCs were limited, but statistically significant. For ‘skills and discretion’, the ICC showed that 8.92% of the variance was situated at the country-level. Consequently, hypothesis 2 was confirmed (in particular for ‘skills and discretion’) – this justified the search for country-level characteristics explaining inter-country differences (see hypotheses 3-6):

Consistent with hypothesis 3, the country-level unemployment rate was negatively associated to several job quality dimensions (e.g., good physical environment, skills and discretion, and employment prospects) (Tables 4a-4d, Models 4a). Country-level labour market efficiency was positively associated to ‘skills and discretion’ and ‘employment prospects’ (Table 4a-4d, Models 4b), which supported hypothesis 5.

To test the influence of labour market performance and labour market efficiency on the association between non-standard employment and job quality, cross-level interaction effects between workers' employment status and the macro-level indicators were included. Only the cross-level interaction effects for 'skills and discretion' and 'employment prospects' are discussed since the other dependent variables showed no statistically significant cross-level interactions with the macro-level variables.

For 'skills and discretion', cross-level interactions between workers' employment status and unemployment rate were included. The analyses revealed that, the differences in 'skills and discretion' between all types of self-employed workers and workers in open-ended contracts widened as country-level unemployment increased (see table 4c, model 5a). Meaning, the skills and discretion-advantage for self-employed workers compared to workers on open-ended contracts increased further. For 'employment prospects', the only significant cross-level interaction effect was found for self-employed workers with employees (see table 4d, model 5a). The gap between self-employed workers with employees and workers in open-ended contracts increased for 'employment prospects' as unemployment rates increased.

Cross-level interactions between workers' employment status and labour market efficiency for 'skills and discretion' were also included. For every unit increase in a country's labour market efficiency, a worker in an open-ended contract can expect a larger increase in 'skills and discretion', compared to self-employed workers (see table 4c, model 5b). The skills and discretion-advantage for self-employed workers, compared to workers in open-ended contracts, thus decreased in countries with higher labour market efficiency. In terms of 'employment prospects', labour market efficiency increased the advantage for self-employed workers with employees compared to open-ended contract workers (see table 4d, model 5b).

The findings above did not fully support hypotheses 4 and 6, which pertained to the expectation that high unemployment rates and labour market efficiency would decrease differences

between non-standard contracts and workers in standard contracts in terms of job quality. Instead, high unemployment rates increased the already beneficial situation for the self-employed in terms of ‘skills and discretion’ and ‘employment prospects’. Labour market efficiency decreased the beneficial situation for self-employed in terms of ‘skills and discretion’, but increased their advantage in terms of ‘employment prospects’ when compared to employees.

5. Discussion

Fixed-term contracts and other non-standard employment statuses serve multiple purposes. For employees, they might facilitate first access to the labour market; serve as a way to acquire professional experience; or help in balancing paid work with other activities (e.g., studying or travelling) (Turmann, 2006). For employers, fixed-term employment helps to cope with market uncertainty and the need for flexibility, while it is also frequently used as a ‘screening instrument’ in order to assess employees before hiring them on a permanent basis (Turmann, 2006). However, fixed-term contracts can also involve disadvantages for employees and may open the door for improper use, as well as lead to negative health-affecting consequences (M. Virtanen et al., 2005). The results of this study add to these concerns by showing that workers in fixed-term employment score worse on several aspects of job quality (e.g., working time quality, skills and discretion and employment prospects) compared to workers in open-ended contracts (when controlling for satisfaction with working conditions, results stayed the same – *results not shown*). The study highlighted two plausible explanations for these findings. A first, structural explanation, argues that fixed-term workers have typical socio-demographic characteristics (such as being female, young and/or from a migration background) that weaken their (bargaining) position in the labour market and cause less-favourable job quality outcomes (Saloniemi et al., 2004). Based on that explanation, the association between employment status

and job quality can likely be explained by socio-demographic characteristics instead of employment status as such. However, while the strength of most of the observed effects decreased when controlling for socio-demographic confounders, fixed-term contracts remained negatively associated with job quality. A second explanation pertains to the typical characteristics of a ‘fixed-term contract’ itself: i.e., workers in fixed-term contracts generally have low job tenure, causing frequent transitions in and out of employment, and an eroding employability (Schmid & Wagner, 2017). Dual labour market theory asserts that this is related to a power disequilibrium between non-standard workers and their employers. This disequilibrium results in less favourable job quality including higher risks and reduced prospects (McGovern et al., 2004). Additionally, since employers tend to invest less in ‘secondary’ workers’ skills and security, their likelihood of lower job quality increases (A. L. Kalleberg et al., 2000; Schmid & Wagner, 2017).

The results of this study are in line with numerous studies investigating the working conditions of workers in fixed-term contracts (Nienhuser & Matiaske, 2006). Since job quality is, in its turn, associated to negative health-affecting consequences (Holman & McClelland, 2011) and lower worker productivity (Arends et al., 2017), policymakers and relevant stakeholders should make efforts to improve the job quality of workers holding non-standard contracts. But, despite existing efforts to improve the working conditions of workers on fixed-term contracts – such as the European Union Council Directive 1999/70/EC of 28 June 1999 on fixed-term work, these efforts do not translate to the anticipated results. Two barriers for implementation are often described. First, the framework directive is only a set of guidelines without any real binding authority, and with relatively broad recommendations (Kamanabrou, 2017), leaving the directive open to interpretation and to be implemented to varying degrees in the domestic legislation of EU member states. Second, authors have argued that the globalised, cost-competitive, and just-in-time service economy of today, as well as new preferences of workers,

requires a so-called ‘transitional labour market’ (Schmid, 1998). The model of the transitional labour market embraces flexibility and focuses on successful transitions between jobs, periods of education, inactivity, and unemployment throughout the life course. It might not be desirable for employers and governments to limit this evolution (Bosch, 2004; Fudge, 2017; Van Aerden, 2018). From a trade union perspective, of course, this position is disputed (Cazes & Nesporova, 2004). Nevertheless, solutions might rather lay in a further regulation of fixed-term employment in terms of work and employment conditions or social and occupational health protection, than in restricting employers in their use of fixed-term contracts. While further moving towards a transitional labour market (Schmid, 2017), policy might better focus on improving social protection for individuals making frequent moves between contracts and labour market statuses (i.e., facilitating ‘good’ transitions). Practically, this can be achieved by a combination of adequate social protection (Tompa et al., 2010), and by actively investing in workers’ careers (e.g., lifelong learning strategies related to both job-specific and general skills) (Eichhorst et al., 2010; Schmid, 2017). Schmid (Schmid, 2017) additionally emphasizes fair risk sharing regarding these investments: employers are reluctant to invest in training or education if people will not stay for long and employees will not invest in specific skills if their investment is not countered by fair wages, good working conditions and job security. Schmid (Schmid, 2017) thus stresses the importance of the state and social partners, who can play a crucial role by co-financing the education infrastructure, and by defining and controlling quality standards and reasonable employment protection.

With regard to self-employment types, the results showed that economically dependent solo self-employment did not differ from workers in open-ended contracts on most of the job quality indicators. These findings support the assumption that economically dependent solo self-employed workers are in the same situation as regular employees when it comes to their day-to-day work practices (Moisander et al., 2017), although they find themselves in a less stable

and less protected employment situation (Thörnquist, 2011; C. C. Williams & Horodnic, 2018). Nevertheless, a small positive association with skills and discretion pointed to situations where economically dependent solo self-employed might still receive some freedom in terms of decision-authority. Regarding the other forms of self-employment, this study found that independent solo self-employed and self-employed with employees were – compared to employees holding an open-ended contract – in favourable situations in terms of skills and discretion and employment prospects. However, they had the least favourable situation in terms of working time quality. This particular combination, of ‘high discretion’ and ‘poor working time quality’, is known as the ‘autonomy paradox’ (Pérez-Zapata et al., 2016). It explains how self-employed with high levels of autonomy, ‘self-drive’ themselves into working intensively and working hours that go beyond their limits (Khan et al., 2021; Pérez-Zapata et al., 2016; Shevchuk et al., 2019). In particular, for the self-employed, this kind of behaviour is related to the need to maximise market success, as not only their job or income is at stake, but also their property and assets (Lewin-Epstein & Ychtman-Yaar, 1991). Consequently, the self-employed’s autonomy might (quickly) turn into self-exploitation, by working long and non-standard hours (Khan et al., 2021; Osnowitz & Henson, 2016; Shevchuk et al., 2019). This also ties into a larger ideological trend (Pérez-Zapata et al., 2016), fuelled by neo-liberal and capitalist tendencies, in which entrepreneurship is presented as leading to personal and professional success (Anderson & Warren, 2011; Down & Warren, 2008) only when one is constantly investing energy in maintaining work or trying to maximize economic benefits (Lewin-Epstein & Ychtman-Yaar, 1991).

At the country-level, the findings provided support for the theory of unemployment which argues that high unemployment rates are associated to higher acceptance of poor-quality jobs (Erhel & Guergoat-Larivière, 2010). A high unemployment context leads to lower competition for workers, which has a downward pressure on job quality (Burgess & De Ruyter, 2000). In

particular job-seekers are more willing to accept lower-tier jobs (Abraham et al., 2013), because of constrained opportunities to choose (Burgess & De Ruyter, 2000). As a consequence, the vacancies that are eventually filled out, tend to be of lower quality and pay (Schutz et al., 1998). On the other hand, unemployment levels are also argued to be higher in countries with structural labour market deficiencies (Orlandi, 2012), which could have repercussions on working conditions and workplace culture. In terms of labour market efficiency, this study found positive associations with job quality. A combination, or balance, between a flexible labour market and a labour market that invests in human capital, not only relates to efficient labour markets but also to better job quality. This is in line with what Auer (Auer, 2007) argued previously. According to the World Economic Forum, the balance between flexibility and some form of unemployment insurance leads to workers being more patient in their job searches, looking for more productive, higher-wage jobs. In addition, employers tend to create good-quality jobs in these environments. Furthermore, an efficient labour market also involves an increased willingness from employers to invest in employees' human capital, explaining the strong relation with skills and discretion (Schwab, 2015).

Our results also showed that, on one hand, high unemployment rates were correlated with increased differences in 'skills and discretion' scores between workers in open-ended contracts and self-employed workers. On the other hand, they also showed that high labour market efficiency, decreased differences in skills and discretion between the self-employed (all categories) and workers in open-ended contracts. In addition, there is also evidence that self-employment rates correlate with these macro-economic variables (Carmona et al., 2012). This 'co-movement' is expected to follow the following pattern: a high unemployment rate will push increases in the number of self-employed and will induce 'labour market activation policies' (e.g., encouragement of self-employment for job creation purposes). While self-employment rates and labour market efficiency increase, the unemployment rate will decrease

(Grigorescu et al., 2020). In the first phase of such a cycle however, the form of self-employment that is created is likely to be characterized by ‘necessity motivations’ – i.e., self-employment created because of a lack of viable employment alternatives on the waged labour market (Eurofound, 2017; Henrekson, 2007). Compared to ‘opportunity self-employment’ (i.e., self-employment out of an intrinsic motivation), necessity self-employment is often characterised by lower job quality (Amit & Muller, 1995). The former could explain why labour market efficiency decreased differences between workers in self-employment and workers in open-ended contracts, while high unemployment increased the self-employment advantage (i.e., because there would supposedly be less ‘necessity self-employment’). Decreasing unemployment rates, by encouraging self-employment might therefore not have the desired results, at least from a job quality perspective.

Auer (Auer, 2007) previously stated that a ‘one-size-fits-all’ recommendation for a well-functioning labour market entailing decent jobs, is difficult to prescribe. This might well be the case, however, the results of current study at least suggest that labour market efficiency was associated to bigger differences between workers holding open-ended contracts and self-employed workers with regards to employment prospects. This finding might imply that a more efficient labour market also creates more opportunities for self-employed workers. In sum, our results indicate that a labour market organization, centred around both flexibility and equity, can enable high standards of job quality for all employment statuses.

Limitations and strengths

From a career perspective, it is sometimes claimed that, because of its short-handed nature, the negative consequences for temporary workers in terms of job quality are not so important (Booth et al., 2002). Because the data was cross-sectional, this study could not account for that assumption. However, a deeper look into the literature shows that the evidence is mixed. On

one hand, negative effects of fixed-term employment are found to fade away over time, however, on the other hand, also persisting effects have been documented. More specifically, there is evidence for difficult transitions into the primary segment of the labour market once workers get ‘stuck’ in fixed-term jobs (Hveem, 2013). Given this conflicting evidence and the continuing pressure to move organizational structures towards the ‘lean production model’ (involving fixed-term work and sub-contracting) (Hveem, 2013; ter Weel, 2018), it remains important to look at the direct consequences of temporary employment for job quality. The systematic approach to this issue is the strongest merit of current study.

As a second limitation, it is noted that the ICC was relatively small in the null models for good physical environment, good working time quality and employment prospects. Only for skills and discretion the magnitude of the country-level variance was greater. Nevertheless, the multilevel models gave us interesting insights on the impact of labour market performance and efficiency on individual-level job quality and its association with workers’ employment status. Furthermore, likelihood ratio tests showed an improvement in model fit when moving from single-level models to multilevel models for each of the job quality variables.

6. Conclusion

This study concludes with four major findings. First, non-standard employment statuses are indeed associated to poorer job quality. This is certainly the case for employees in short- and long-term fixed contracts, when compared to employees in open-ended contracts. Second, economically dependent solo self-employed workers seem to be in the same situation as regular employees when it comes to their day-to-day job quality, regardless of being in a less stable and less protected employment situation. Third, a high country-level unemployment rate was negatively associated to job quality, and – not fully in line with the hypotheses – high unemployment rates tended to increase differences for ‘skills and discretion’ and for

‘employment prospects’ between workers in open-ended contracts and the already beneficial self-employed statuses. Fourth, labour market efficiency was positively associated to individual-level job quality. It also reduced differences between self-employed workers and workers in open-ended contracts for ‘skills and discretion’, but increased differences between these groups in terms of ‘employment prospects’.

This study’s findings provide an incentive for improving the working conditions of people in non-standard contracts (e.g., fixed-term employment and economically dependent self-employment) by focusing on social protection and active investment in individuals’ skills. Furthermore, the study implies that balancing between flexibility and equity, and enabling inclusivity for all employment statuses on the labour market could have beneficial consequences, not only for macro-economic parameters, but also for the job quality of workers.

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Tables

Table 1. Operationalisation of the job quality indicators, as recommended by Green and Mostafa (2012) and employment status (EWCS 2015 survey question number between brackets).

<i>Variable</i>	<i>Survey-items included in the variable</i>
<i>Good employment prospects (dummy)</i>	My job offers good prospects for career advancement (Q89b)/ I might lose my job in the next 6 months (Q89g) During the last three years, has the number of employees at your workplace increased, stayed the same or decreased? (Q19) The indicator was a scale ranging from -300 to 100. The scale has been converted into a dummy, using the 75 th percentile as a cut-off value.
<i>Good physical environment (scale 0 to 100)</i>	<i>Ergonomic risks</i> Are you exposed at work to vibrations from hand tools, machinery, etc.? (Q29a) Does your job involve tiring or painful positions? (Q30a)/ lifting or moving people? (Q30b)/ carrying or moving heavy loads? (Q30c)/ repetitive hand or arm movements? (Q30e) <i>Biochemical risks</i> Are you exposed at work to breathing in smoke, fumes, powder or dust etc.? (Q29e)/ vapours such as solvents and thinners? (Q29f)/ handling or being in skin contact with chemical products or substances? (Q29g)/ materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc.? (Q29i) <i>Ambient risks</i> Are you exposed at work to noise so loud that you would have to raise your voice to talk to people? (Q29b)/ high temperatures? (Q29c)/ low temperatures? (Q29d)
<i>High skills and discretion (scale 0 to 100)</i>	Over the past 12 months, have you undergone training paid for or provided by your employer? (Q65a)/ paid by yourself? (Q65b)/ on-the-job training? (Q65c) Does your job involve solving unforeseen problems on your own? (Q53c)/ complex tasks? (Q53e)/ learning new things? (Q53f) Are you able to choose or change your order of tasks? (Q54a)/ methods of work? (Q54b)/ speed or rate of work? (Q54c) You are consulted before objectives are set for your work (Q61c)/ You have a say in the choice of your work colleagues (Q61e)/ You are able to apply your own ideas in your work (Q61i)/ You can influence decisions that are important for your work (Q61n)/ You are involved in improving the work organisation or work processes of your department or organisation (Q61d) Does your main paid job involve working with computers, laptops, smartphones etc.? (Q30i) Based on ISCO-classification: average educational level and managerial and professional occupations
<i>Good working times quality (scale 0 to 100)</i>	How many hours do you usually work per week in your main paid job? (Q24) How many times a month do you work at night? (Q37a)/ on Sundays? (Q37b)/ on Saturdays? (Q37c)/ more than 10 hours/day? (Q37d) How are your working time arrangements set? (Q42) Do changes to your working time arrangements occur regularly? (IF YES) How long before are you informed about these changes? (Q43) Would you say that for you arranging to take an hour or two off during working hours to take care of personal or family matters is easy/difficult? (Q47) Over the past 12 months, how often have you worked in your free time to meet work demands? (Q46)/ have you been requested to come into work at short notice? (Q40)
<i>Employment status (categorical)</i>	<i>For the employees</i> What kind of employment contract do you have in your main paid job? (Q11) (A temporary employment agency contract, an apprenticeship, and no contract were collapsed into the 'other employees'-category). For fixed-term contracts: What is the exact duration of the contract in number of years and months? (Q12) <i>For the self-employed</i> Are you working as an employee or are you self-employed? (Q7) Regarding your business, do you have employees (working for you)? (Q9c) (Self-employed who did not have clear information on having employees were considered as self-employed without employees) To make a distinction between 'dependent' and 'independent' (those who say 'yes' on 2 or 3 items were classified as 'dependent'. If no information was available, the self-employed were assumed to be independent. For self-employed with employees, dependency was not considered: Regarding your business, do you have the authority to hire/ dismiss employees? (Q9a) Regarding your business, do you get paid an agreed fee on a weekly/ monthly basis? (Q9b) Regarding your business, do you generally have more than one client/ customer? (Q9d)

Table 2. Descriptive information on the employment status, socio-demographic characteristics and outcome variables within the general sample, EWCS2015, EU28 (N=34,094)

	N	%
Employment status		
Open-ended contract	22,652	66.15
Fixed-term contract of >1 year	1,871	5.67
Fixed-term contract of <1 year	1,537	5.65
Other employees	2,628	7.08
Dependent solo self-employed	861	2.25
Independent solo self-employed	2,984	8.55
Self-employed with employees	1,561	4.65
Gender		
Men	16,704	51.34
Women	17,390	48.66
Age		
Under 25	2,084	7.42
25-34	6,643	20.47
35-44	8,713	26.26
45-54	9,400	27.38
Over 55	7,254	18.47
Citizenship		
Respondent and parents born in country	29,412	87.34
Born in country. parents not born in country	1,592	4.13
Respondent and parents not born in country	3,090	8.53
Education		
Primary	1,357	3.79
Secondary	21,362	64.55
Tertiary	11,375	31.66
Income		
1st income quintile	5,712	16.35
2nd income quintile	5,943	16.03
3rd income quintile	5,962	17.60
4th income quintile	5,727	16.11
5th income quintile	5,553	16.64
Missing on income	5,297	17.27
Employment prospects		
Poor employment prospects	10,329	30.07
Good employment prospects	23,765	69.93
<i>Continuous variables</i>		
Good physical environment	Mean	Std. Dev.
	83.38	14.79
Good working time quality	70.20	14.27
Skills and discretion	55.98	21.10

Percentages (%), Means and Standard deviations (Std. Dev.) were weighted by sample weight (w5_EU28) correcting for population sizes to ensure a representative sample of the EU workforce. Frequencies (N) were not weighted.

Table 3. Sociodemographic composition by employment status, EWCS2015, EU28 (N=34,094).

	Open-ended contract	Fixed-term contract of >1 year	Fixed-term contract of <1 year	Other employees	Dependent solo self-employed	Independent solo self-employed	Self-employed with employees	Total
Gender (%)								***
Men	49.93	46.62	48.31	45.92	60.51	59.90	69.02	51.34
Women	50.07	53.38	51.69	54.08	39.49	40.10	30.98	48.66
Age (%)								***
Under 25	4.57	18.18	17.25	27.33	7.34	2.77	1.16	7.42
25-34	20.02	33.26	32.17	20.98	13.86	14.43	10.56	20.47
35-44	27.94	23.90	24.19	17.90	19.61	25.47	25.17	26.26
45-54	29.71	14.63	16.67	17.25	27.30	28.68	35.88	27.38
Over 55	17.75	10.03	9.72	16.54	31.90	28.65	27.22	18.47
Citizenship (%)								***
Respondent and parents born in country	88.08	83.89	83.84	80.87	85.90	89.42	91.86	87.34
Born in country. parents not born in country	4.09	4.60	3.32	5.67	3.91	3.68	3.81	4.13
Respondent and parents not born in country	7.83	11.50	12.84	13.45	10.19	6.89	4.33	8.53
Education (%)								***
Primary	2.31	3.89	7.27	9.45	7.62	7.19	3.74	3.79
Secondary	63.69	64.89	68.26	71.79	62.18	65.03	61.15	64.55
Tertiary	34.00	31.22	24.47	18.76	30.20	27.79	35.11	31.66
Income (%)								***
1st income quintile	11.35	23.40	30.36	46.71	31.09	17.95	5.53	16.35
2nd income quintile	15.88	25.55	23.76	19.29	10.96	9.69	6.41	16.03
3rd income quintile	20.08	19.59	17.22	8.84	8.21	11.90	8.71	17.60
4th income quintile	19.51	12.28	7.46	5.19	9.71	11.64	11.02	16.11
5th income quintile	18.60	8.17	5.65	3.57	15.07	15.76	34.63	16.64
Missing on income	14.59	10.96	15.55	16.40	24.96	33.06	33.71	17.27

Note. P-values are based on χ^2 test with non-weighted data: *** p. \leq .001; ** p. \leq .01; * p. \leq .05; Percentages were weighted by sample weight (w5_EU28) correcting for population sizes to ensure a representative sample of the EU workforce.

Table 4a. Beta estimates & confidence intervals for the associations between employment status and good physical environment controlled for potential confounders, EWCS 2015, EU28 (N= 34,094)

	Bivariate	Model 1 ^a	Model 2 ^{a,b}	Model 3 ^{a,b,c}	Model 4a ^{a,b,c}	Model 5a ^{a,b,c}
Intercept		76.70***	75.96***	86.49***	86.42***	86.43***
Employment status (open-ended contract)						
Fixed-term contract of >1 year	-0.24 (-0.93, 0.44)	0.41 (-0.22, 1.03)	0.26 (-0.35, 0.86)	0.12 (-0.44, 0.67)	0.12 (-0.43, 0.67)	0.11 (-0.44, 0.67)
Fixed-term contract of <1 year	-1.89*** (-2.65, -1.14)	-0.16 (-0.86, 0.54)	-0.06 (-0.73, 0.61)	0.12 (-0.49, 0.74)	0.13 (-0.48, 0.75)	0.20 (-0.46, 0.86)
Other employees	-1.67*** (-2.27, -1.07)	-1.30*** (-1.86, -0.74)	-0.81** (-1.37, -0.26)	-0.32 (-0.82, 0.19)	-0.30 (-0.81, 0.20)	-0.30 (-0.81, 0.21)
Dependent solo self-employed	-0.19 (-1.17, 0.79)	-3.31*** (-4.24, -2.37)	-2.31*** (-3.20, -1.41)	-0.37 (-1.20, 0.46)	-0.36 (-1.19, 0.47)	-0.42 (-1.25, 0.41)
Independent solo self-employed	-1.19*** (-1.74, -0.63)	-5.06*** (-5.67, -4.45)	-3.46*** (-4.05, -2.88)	-1.89*** (-2.44, -1.34)	-1.88*** (-2.42, -1.33)	-1.85*** (-2.40, -1.29)
Self-employed with employees	0.20 (-0.54, 0.94)	-1.42*** (-2.13, -0.71)	0.11 (-0.58, 0.79)	0.16 (-0.48, 0.81)	0.18 (-0.47, 0.82)	0.21 (-0.44, 0.86)
Country-level characteristics						
Unemployment rate	-1.32** (-2.15, -0.49)				-0.88* (-1.56, -0.20)	-0.79* (-1.48, -0.09)
Labour Market Efficiency	0.77 (-0.04, 1.57)					
Cross-level interactions						
Sig. macro in M4a/M4b X EMPSTAT						
X Fixed-term contract of >1 year						-0.22 (-0.71, 0.27)
X Fixed-term contract of <1 year						-0.27 (-0.81, 0.28)
X Other employees						-0.14 (-0.57, 0.29)
X Dependent solo self-employed						0.41 (-0.36, 1.18)
X Independent solo self-employed						-0.29 (-0.69, 0.11)
X Self-employed with employees						-0.43 (-0.96, 0.11)
Intraclass Correlation Coefficient (ICC)		0.0184	0.0268	0.0238	0.0193	0.0193
Log Likelihood (Degrees of freedom)		-136279,18 (13)	-134597,16 (27)	-131372,96 (44)	-131370,08 (45)	-131366,85 (51)

Note. Estimates are achieved using linear regression; beta estimates with 95% confidence intervals in brackets. Reference category is 'open-ended contracts'. *** p. ≤ .001; ** p. ≤ .01; * p. ≤ .05; a: Models 1, 2, 3, 4 & 5 control for job quality indicators; b: Models 2, 3, 4 & 5 include individual-level characteristics; c: Models 3, 4 & 5 control for meso-level characteristics. Full regression results are shown in tables A.2. to A.5.

Table 4b. Beta estimates & confidence intervals for the associations between employment status and working time quality controlled for potential confounders, EWCS 2015, EU28 (N= 34,094)

	Bivariate	Model 1 ^a	Model 2 ^{a, b}	Model 3 ^{a, b, c}	Model 4a ^{a, b, c}
Intercept		62.94***	61.14***	63.13***	63.09***
Employment status (open-ended contract)					
Fixed-term contract of >1 year	-1.28*** (-1.95, -0.62)	-1.18*** (-1.78, -0.58)	-1.42*** (-2.02, -0.81)	-1.25*** (-1.84, -0.67)	-1.25*** (-1.84, -0.67)
Fixed-term contract of <1 year	-0.93* (-1.66, -0.19)	-0.60 (-1.27, 0.07)	-0.96** (-1.64, -0.29)	-0.85* (-1.50, -0.20)	-0.85* (-1.50, -0.19)
Other employees	0.65* (0.07, 1.23)	0.61* (0.07, 1.15)	-0.15 (-0.70, 0.40)	-0.05 (-0.58, 0.49)	-0.04 (-0.58, 0.50)
Dependent solo self-employed	0.71 (-0.24, 1.67)	1.44** (0.54, 2.34)	0.83 (-0.07, 1.72)	0.72 (-0.17, 1.60)	0.72 (-0.16, 1.61)
Independent solo self-employed	-3.57*** (-4.11, -3.03)	-2.28*** (-2.86, -1.70)	-2.70*** (-3.29, -2.12)	-2.35*** (-2.94, -1.77)	-2.35*** (-2.93, -1.76)
Self-employed with employees	-10.72*** (-11.44, -10.00)	-8.22*** (-8.89, -7.54)	-8.15*** (-8.83, -7.47)	-6.77*** (-7.45, -6.09)	-6.76*** (-7.44, -6.08)
Country-level characteristics					
Unemployment rate	-0.85* (-1.57, -0.13)				-0.46 (-1.19, 0.28)
Labour Market Efficiency	0.46 (-0.21, 1.13)				
Intraclass Correlation Coefficient (ICC)		0.0186	0.0192	0.0208	0.0197
Log Likelihood (Degrees of freedom)		-134869,91 (13)	-134494,58 (27)	-133512,69 (44)	-133511,97 (45)

Note. Estimates are achieved using linear regression; beta estimates with 95% confidence intervals in brackets. Reference category is 'open-ended contracts'. *** p. ≤ .001; ** p. ≤ .01; * p. ≤ .05; a: Models 1, 2, 3, 4 & 5 control for job quality indicators; b: Models 2, 3, 4 & 5 include individual-level characteristics; c: Models 3, 4 & 5 control for meso-level characteristics. Full regression results are shown in tables A.2. to A.5.

Table 4c. Beta estimates & confidence intervals for the associations between employment status and skills & discretion controlled for potential confounders, EWCS 2015, EU28 (N= 34,094)

	Bivariate	Model 1 ^a	Model 2 ^{a, b}	Model 3 ^{a, b, c}	Model 4a ^{a, b, c}	Model 5a ^{a, b, c}	Model 4b ^{a, b, c}	Model 5b ^{a, b, c}
Intercept		18.54***	28.02***	44.63***	44.34***	44.48***	44.13***	44.51***
Employment status (open-ended contract)								
Fixed-term contract of >1 year	-4.76*** (-5.69, -3.83)	-3.30*** (-4.17, -2.42)	-1.27** (-2.08, -0.46)	-1.93*** (-2.68, -1.19)	-1.93*** (-2.67, -1.19)	-1.93*** (-2.67, -1.18)	-1.88*** (-2.63, -1.14)	-1.88*** (-2.63, -1.14)
Fixed-term contract of <1 year	-10.95*** (-11.97, -9.92)	-8.75*** (-9.72, -7.77)	-5.23*** (-6.13, -4.33)	-4.83*** (-5.66, -4.01)	-4.82*** (-5.65, -4.00)	-4.83*** (-5.65, -4.00)	-4.67*** (-5.56, -3.78)	-4.82*** (-5.68, -3.96)
Other employees	-12.02*** (-12.83, -11.20)	-9.32*** (-10.10, -8.54)	-4.49*** (-5.22, -3.75)	-3.86*** (-4.53, -3.18)	-3.85*** (-4.53, -3.17)	-3.86*** (-4.54, -3.18)	-3.77*** (-4.46, -3.09)	-3.78*** (-4.46, -3.10)
Dependent solo self-employed	0.10 (-1.24, 1.43)	2.50*** (1.19, 3.81)	4.12*** (2.92, 5.32)	2.94*** (1.82, 4.06)	2.94*** (1.82, 4.06)	2.94*** (1.82, 4.06)	3.00*** (1.87, 4.12)	2.64*** (1.50, 3.78)
Independent solo self-employed	8.88*** (8.13, 9.64)	10.82*** (9.97, 11.66)	11.14*** (10.36, 11.91)	8.97*** (8.23, 9.70)	8.97*** (8.24, 9.71)	8.97*** (8.23, 9.70)	8.80*** (8.06, 9.54)	8.80*** (8.06, 9.54)
Self-employed with employees	16.59*** (15.59, 17.60)	14.35*** (13.37, 15.33)	13.64*** (12.74, 14.54)	10.57*** (9.71, 11.43)	10.57*** (9.71, 11.43)	10.57*** (9.71, 11.43)	10.42*** (9.55, 11.28)	10.58*** (9.71, 11.44)
Country-level characteristics								
Unemployment rate	-3.56** (-5.89, -1.23)				-2.94*** (-4.62, -1.26)	-3.53*** (-5.23, -1.83)		
Labour Market Efficiency	4.24*** (2.48, 6.00)						2.78*** (1.34, 4.21)	3.36*** (1.92, 4.81)
Cross-level interactions								
Sig. macro in M4a/M4b X EMPSTAT								
X Fixed-term contract of >1 year						0.31 (-0.35, 0.97)		-0.79 (-1.66, 0.08)
X Fixed-term contract of <1 year						0.01 (-0.73, 0.75)		-0.59 (-1.38, 0.20)
X Other employees						0.75* (0.17, 1.33)		-1.04** (-1.69, -0.40)
X Dependent solo self-employed						1.89*** (0.85, 2.93)		-2.69*** (-3.72, -1.66)
X Independent solo self-employed						2.11*** (1.57, 2.65)		-2.45*** (-3.01, -1.88)
X Self-employed with employees						2.46*** (1.73, 3.18)		-2.60*** (-3.37, -1.83)
Intraclass Correlation Coefficient (ICC)		0.0875	0.0995	0.0878	0.0633	0.0595	0.0642	0.0601
Log Likelihood (Degrees of freedom)		-147735,70 (13)	-144536,94 (27)	-141619,69 (44)	-141614,78 (45)	-141613,89 (51)	-141565,57 (45)	-141552,48 (51)

Note. Estimates are achieved using linear regression; beta estimates with 95% confidence intervals in brackets. Reference category is 'open-ended contracts'. *** p. ≤ .001; ** p. ≤ .01; * p. ≤ .05; a: Models 1, 2, 3, 4 & 5 control for job quality indicators; b: Models 2, 3, 4 & 5 include individual-level characteristics; c: Models 3, 4 & 5 control for meso-level characteristics. Full regression results are shown in tables A.2. to A.5.

Table 4d. Odds ratio's and confidence intervals for the associations between employment status and Employment prospects controlled for potential confounders, EWCS 2015, EU28 (N= 34,094)

	Bivariate	Model 1 ^a	Model 2 ^{a, b}	Model 3 ^{a, b, c}	Model 4a ^{a, b, c}	Model 5a ^{a, b, c}	Model 4b ^{a, b, c}	Model 5b ^{a, b, c}
Intercept		0.55***	0.81	0.59**	0.58***	0.58***	0.59**	0.59**
Employment status (open-ended contract)								
Fixed-term contract of >1 year	0.57*** (0.52, 0.63)	0.62*** (0.56, 0.68)	0.59*** (0.53, 0.65)	0.59*** (0.53, 0.65)	0.59*** (0.53, 0.65)	0.59*** (0.53, 0.65)	0.59*** (0.53, 0.65)	0.59*** (0.53, 0.65)
Fixed-term contract of <1 year	0.42*** (0.38, 0.47)	0.51*** (0.45, 0.57)	0.48*** (0.42, 0.53)	0.48*** (0.42, 0.53)	0.48*** (0.43, 0.54)	0.48*** (0.42, 0.54)	0.48*** (0.42, 0.53)	0.47*** (0.41, 0.53)
Other employees	0.51*** (0.47, 0.56)	0.64*** (0.58, 0.70)	0.63*** (0.57, 0.69)	0.63*** (0.57, 0.69)	0.63*** (0.57, 0.69)	0.63*** (0.57, 0.69)	0.63*** (0.57, 0.69)	0.63*** (0.57, 0.69)
Dependent solo self-employed	1.04 (0.89, 1.21)	1.08 (0.92, 1.27)	1.16 (0.98, 1.37)	1.08 (0.92, 1.28)	1.09 (0.92, 1.28)	1.07 (0.90, 1.26)	1.09 (0.92, 1.28)	1.05 (0.89, 1.25)
Independent solo self-employed	1.35*** (1.24, 1.48)	1.19** (1.07, 1.33)	1.24*** (1.11, 1.38)	1.17** (1.05, 1.32)	1.18** (1.05, 1.32)	1.16* (1.04, 1.31)	1.18** (1.05, 1.32)	1.18** (1.05, 1.32)
Self-employed with employees	2.32*** (2.02, 2.68)	1.60*** (1.38, 1.86)	1.66*** (1.43, 1.93)	1.61*** (1.38, 1.87)	1.61*** (1.38, 1.88)	1.82*** (1.54, 2.15)	1.61*** (1.38, 1.88)	1.75*** (1.48, 2.07)
Country-level characteristics								
Unemployment rate	0.77*** (0.70, 0.86)				0.82*** (0.74, 0.91)	0.81*** (0.73, 0.91)		
Labour Market Efficiency	1.22*** (1.10, 1.35)						1.14* (1.03, 1.27)	1.13* (1.02, 1.26)
Cross-level interactions								
Sig. macro in M4a/b/c X EMPSTAT								
X Fixed-term contract of >1 year						0.99 (0.91, 1.09)		0.95 (0.84, 1.07)
X Fixed-term contract of <1 year						1.05 (0.94, 1.16)		1.00 (0.89, 1.12)
X Other employees						1.04 (0.95, 1.12)		1.02 (0.93, 1.12)
X Dependent solo self-employed						1.15 (0.98, 1.34)		0.90 (0.77, 1.04)
X Independent solo self-employed						1.05 (0.97, 1.14)		1.02 (0.94, 1.12)
X Self-employed with employees						0.77*** (0.68, 0.87)		1.34*** (1.16, 1.54)
Intraclass Correlation Coefficient (ICC)		0.0239	0.0263	0.0268	0.0174	0.0176	0.0215	0.0213
Log Likelihood (Degrees of freedom)		-19157,79 (13)	-18896,68 (27)	-18862,27 (44)	-18856,54 (45)	-18843,49 (51)	-18859,30 (45)	-18848,85 (51)

Note. Estimates are achieved using logistic regression; odds ratio's with 95% confidence intervals in brackets. Reference category is 'open-ended contracts'. *** p. ≤ .001; ** p. ≤ .01; * p. ≤ .05; a: Models 1, 2, 3, 4 & 5 control for job quality indicators; b: Models 2, 3, 4 & 5 include individual-level characteristics; c: Models 3, 4 & 5 control for meso-level characteristics. Full regression results are shown in tables A.2. to A.5.