Does the Context Matter? Labour Market Characteristics and Job Satisfaction Among Young European Adults Working on Temporary Contracts

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Abstract:

The main goal of this study is to gain a better understanding of the relationship between job satisfaction and temporary work among youth in the EU, while considering the role of the context of countries' labour market characteristics. To address this issue, we use the EU-SILC 2013 database, with an *ad hoc* module on well-being, which we supplement with macro indicators from Eurostat and ILO. Our findings show that a higher unemployment rate is associated with a lower job satisfaction among youth. Moreover, country-level variables moderate the negative impact of temporary work on the level of job satisfaction among young workers. The negative effect of temporary work is stronger in countries with a higher unemployment rate and a lower level of unionisation.

Keywords: job satisfaction, temporary contracts, youth, unemployment rate, unionisation.

1. Introduction

The purpose of our study is to gain a better understanding of the relationship between job satisfaction and temporary work among young people in the EU. Specifically, we are interested in how country-level contextual factors – labour market characteristics – moderate the negative relation between the temporary work and the job satisfaction.

Our interest was rooted in Boyce, Ryan, Imus, & Morgeson's (2007) theoretical model of temporary workers' stigmatisation, which suggests that certain contextual labour market characteristics might be shaping the relationship between the individual experience of temporary work and the job satisfaction level. Studies exploring the link between temporary work and job satisfaction that take into account macro-level variables are rather scare. Benavides, Benach, Diez-Roux, & Roman (2000) performed multilevel analysis on the second European Survey on Working Conditions and demonstrated that job dissatisfaction was positively associated with fixed-term work. Using data from 15 countries, they controlled for unemployment level, share of temporary contracts, GDP and social protection indicator. The authors didn't find any consistent evidence of the direct or moderating effects of country-level variables. However, they admitted that due to limited number of countries and macro indicators, they cannot conclude that country-level economic conditions or policy do not modify the consequences of the type of employment. Chadi & Hetschko (2013) were successful in showing that temporary work is less detrimental to job satisfaction when the unemployment rate is relatively low. However, this observation was just a by-plot of their analysis and lacked theoretical explanation. The novelty of our analysis lays in the focus on the problem of contextual variables shaping the relationship between temporary work and job satisfaction. Moreover, contrary to previous studies, we analyse the youngest segment of the working population, which is particularly exposed to temporary jobs.

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Temporary work (or contingent work[1]) is one of the main types of non-standard employment. It is defined through limited contract duration (Ashford, George, & Blatt, 2007). Growth in temporary employment started in the 80s and will probably continue, but at a slower pace. This process is considered as 'one of the most spectacular and important evolutions in Western working life'(De Cuyper et al., 2008). However, this revolution was not started in the name of employees. The growth in temporary contract-based employment among youth was particularly visible in countries that imposed less strict regulations on the use of temporary contracts (Gebel & Giesecke, 2016). It is mostly driven by employers' labour demand for a more flexible workforce (Matusik & Hill, 1998). Kalleberg (2009) interprets the increase in the use of fixed-term arrangements as evidence of the growth of precarious work in the US. He defines precarious work as 'uncertain, unpredictable, and risky from the point of view of the worker'. He points at its consequences – rising economic inequalities and instability, negative consequences for individuals, their families and whole communities.

Temporary jobs differ because of the contractual differences in fixed-term arrangements and there are various reasons why employees accept these agreements (Connelly & Gallagher, 2004). Consequently, different types of temporary contracts bring different psychological consequences for employees. In the cross-country comparative analysis, it is important to acknowledge that even similar types of contracts might have a different impact on job satisfaction in various institutional contexts.

We are interested in exploring whether it is possible to capture these differences by controlling basic labour market indicators. Our aim is to investigate how national labour characteristics moderate the impact of temporary work on job satisfaction. Thus, our contribution might be useful for further cross-country comparative studies on the psychological outcomes of temporary work.

Investigating the psychological consequences of fixed-term contracts among the European youth population is justified, because temporary work is particularly popular among young workers (Baranowska & Gebel, 2010). Youth are more exposed to temporary contracts because as fresh labour market entrants, they lack experience (Blossfeld, Klijzing, Mills, & Kurz, 2005). In 2013, 26% of European employees aged 18-30 held a fixed-term position, while among workers aged 30-59 it was less than 10%. In some countries, such as Poland, Italy, Spain and Portugal, more than 50% of recent graduates had temporary contracts (Rokicka et al., 2015).

2. Theoretical background and hypotheses

2a. Temporary work consequences

All types of temporary work contracts have, by definition, a limited time duration, which jeopardises employment continuity (Pearce, 1998). However, temporary workers are a heterogeneous group, consisting of people in different life situations, with different motives for accepting (or not accepting) temporary employment (De Cuyper et al., 2008). Some fixed-term jobs might become stepping stones for regular employment, while others increase chances of labour market exclusion (Booth, Francesconi, & Frank, 2002). The temporary workers' category covers a vast spectrum of employment contracts: 'from short term (daily and on-call contracts) to limited term (fixed term, seasonal, specific tasks, replacement, trainees, probation, and job creation schemes), temporary agency work (both permanent and non-permanent with the agency), and subcontractors' (De Cuyper & De Witte, 2015). Despite wide-ranging types of temporary contracts, self-employed workers are usually excluded from the temporary workers' category, because self-employment is not comparable to other fixed-term contracts (Guest, 2004).

1 According to De Cuyper & Witte, 2015, temporary employment, fixed-term contracts, non-permanent employment and contingent work might be treated as synonyms. However, the term 'contingent employment' is used mainly in American literature, while other terms are more often used in European research (De Cuyper et al., 2008).

Temporary contracts are often related to less favourable working conditions and worse quality jobs than permanent jobs (Dekker & van der Veen, 2015; Guest, Oakley, Clinton, & Budjanovcanin, 2006), lower rank within the organisation (Rogers & Henson, 1997), and lower pay (Kalleberg, 2000). In addition, temporary workers receive less employer-funded training than permanent workers (Fouarge, de Grip, Smits, & de Vries, 2012; Virtanen, Kivimäki, Virtanen, Elovainio, & Vahtera, 2003). Temporary contracts might also bring negative long-term effects – temporary workers have higher chances of receiving further fixed-term contracts or becoming unemployed (Giesecke & Grob, 2003). The explanation for this fact might be that having a temporary job could be interpreted as a negative signal for future employers, so it diminishes chances of temporary workers for improving their position (Barbieri & Scherer, 2009).

2b. Temporary work and job satisfaction

Job satisfaction is not only an important dimension of overall well-being and a factor affecting an individual's mental health. It is also a strong predictor of an employee's productivity, employment turnover, absenteeism and career choices. This subjective measure has already gained popularity in economics and labour market studies (Freeman, 1978; Hamermesh, 1976). Thus, the problem of the impact of temporary work on job satisfaction was already heavily investigated by researchers. A meta-analysis by Wilkin (2013) of 72 studies comparing permanent and contingent[2] workers indicated a small, but significant difference in job satisfaction between the two categories of employees. On the other hand, De Cuyper et al. (2008) concluded in their literature review that existing evidence of psychological consequences of temporary employment are 'inconsistent and inconclusive'. Problems with the research on the link between temporary work and job satisfaction have at least two sources.

First, as temporary workers are a heterogeneous category, observed differences depended on the employment type (Wilkin, 2013). For example, Forde and Slater (2006) analysed the experience of agency employment in Britain. Temporary agency work was associated with lower job satisfaction not only in comparison to permanent, but also to other types of temporary contracts. Hall (2006) found similar results for agency workers in Australia. In comparison to permanent workers, they were less satisfied with their job security, possibilities of skill development, level of pay and degree of autonomy at work.

Second, it is not clear what the mechanisms driving the lowered job satisfaction of temporary workers are. All types of fixed-term contracts have, by definition, limited time duration, which jeopardises employment continuity (Pearce, 1998). Thus, temporary work might be characterised by various uncertainties, regarding not only continued employment, but also job requirements, job location, co-workers and supervisors (Boyce, Ryan, Imus, & Morgeson, 2007). Existing research proves that temporary workers feel less secure in their jobs (Dawson, Veliziotis, & Hopkins, 2017; Green & Heywood, 2011; De Witte & Näswall, 2003). Furthermore, there is strong evidence of the negative psychological and health consequences of job insecurity. De Witte, Pienaar, & De Cuyper (2016) conducted a review of 57 longitudinal studies on the association between job insecurity and health, and various dimensions of psychological well-being. They concluded that in the long-term, the perception of job insecurity is an important work stressor with an empirically established negative impact on the variety of health and well-being indicators, including job satisfaction.

Does it mean that the negative impact of temporary work on job satisfaction is driven by subjective job insecurity? Chadi & Hetschko (2013) argue that frequent job changes and the feeling of being new in a company may mitigate the negative effect of temporary work on job satisfaction. When they control for this 'honeymoon effect', there is a clear negative relationship between type of contract and job satisfaction. However, when they include in their model a variable indicating job security, this negative relationship disappears. Dawson, Veliziotis, & Hopkins (2017) investigated

2 For the purpose of the author's analysis, contingent work is defined as 'any job in which an individual does not have an explicit or implicit contract for long-term employment or one in which the minimum hours worked can vary in a non- systematic manner' (Wilkin, 2013; Polivka & Nardone, 1989, p. 11). Thus, the category of contingent work is similar, but slightly wider than our definition of temporary work.

the association between the type of contract and several aspects of well-being (life satisfaction, psychological distress, etc.). When they controlled for satisfaction with job security (which is lower for temporary workers than for permanent), the type of contract lost its significant influence on general well-being. However, De Witte & Näswall (2003) show that the link between job satisfaction and subjective job insecurity among temporary workers is very weak. This paradox is explained in the framework of the psychological contract theory. According to the latter, temporary work is characterised by asymmetrical power relations between employees and employers and is based on the transactional relationship. There is no promise of job security in the psychological contract embedded in temporary work (Beard & Edwards, 1995). On the contrary, permanent workers expect a high level of subjective job security in exchange for their loyalty. Thus, the negative impact of increased subjective job insecurity on job satisfaction is present only for the permanent workers. Temporary workers have lower job satisfaction, but the mechanism beyond this is not driven by the increased subjective job insecurity (De Cuyper & De Witte, 2006; 2007; De Witte, De Cuyper, Vander Elst, Vanbelle, & Niesen, 2012). There are other explanations for the lower level of job satisfaction among temporary workers.

Social comparison theory suggests that temporary workers compare their job benefits with the situation of permanent workers. As was already mentioned, despite the huge heterogeneity within the category of temporary work, employees with fixed-term contracts are treated in a worse manner and work under less favourable conditions than employees with permanent contracts. Moreover, common job stressors are often related to temporary employment: less autonomy, powerlessness and greater role ambiguity, worse physical working conditions, fewer job benefits, less training and lower informal support within the company (Letourneux, 1998; Aronsson & Göransson, 1999; Sjöberg & Sverke, 2000; De Witte & Näswall, 2003). The perception of relatively worse job conditions leads to lower job satisfaction among temporary workers (Wilkin, 2013).

Another explanation is based on Boyce, Ryan, Imus, & Morgeson's (2007) theoretical model of the stigmatisation of temporary workers. Stigmatisation is defined as treating others in a devalued manner due to some general characteristic. This approach takes into consideration how temporary workers are perceived and treated by other people. The authors argue that existing negative stereotypes regarding temporary workers are based on the conceptions of a group characterised by lower skills, intelligence and a weaker work ethic. However, these stereotypes might be used against temporary workers depending on the contextual factors that are relevant for the labour market situation of other workers. The stigmatisation of temporary workers starts when permanent workers perceive them as a threat to their job security. The higher the permanent workers' level of subjective job insecurity is, the more threatened they will feel by temporary workers. The stigmatisation of temporary workers is functional for permanent workers. It is the permanent workers' defence mechanism, which helps them in sustaining a position superior to that of the temporary workers. It legitimises the unequal status of temporary workers and facilitates downward comparisons, which enhance permanent workers' self-esteem. At the same time, stigmatisation brings unfavourable social labels for temporary workers. It has a negative impact on their self-perception and affects the way in which they are perceived and treated by other workers. This, in turn, lowers their job satisfaction.

These theoretical considerations encouraged us to search for the explanations to temporary workers' lowered job satisfaction in the contextual factors present on the national level. If the job satisfaction in a temporary position depends on the relative distance between temporary and permanent workers, certain characteristics of a national labour market might moderate the impact of temporary work on job satisfaction.

2c. Hypotheses

According to Blanchard's labour market theory, a higher unemployment rate in the economy leads to the lower bargaining power of employees, the stronger position of employers and less favourable working conditions in general (Blanchard, 2016). There is strong evidence to support the claim that a higher unemployment rate has a negative impact on the personal level of well-

being, even after controlling for the individual experiences of unemployment (Tella, MacCulloch, & Oswald, 2003). Luechinger, Meier, & Stutzer (2010) showed that a high unemployment level has a negative effect on people's life satisfaction. However, as this effect is much stronger for private sector's workers than for people working in the public sector, they concluded that the observed effects are mainly driven by people's worries about economic distress. Similar mechanisms might explain lowered job satisfaction among the whole working population of youth. Thus, we expect that in countries with a higher unemployment rate young workers are more worried about losing their job and not finding a new one. Our first hypothesis states that **a higher unemployment rate has a negative impact on the average level of job satisfaction among youth, regardless of the type of contract (H1).**

However, as previously discussed, temporary workers' labour market position is more vulnerable in comparison to permanent workers. Thus, higher unemployment might particularly affect the working conditions of youth who are hired through temporary contracts. Moreover, the theoretical model of the stigmatisation of temporary workers predicts that the less permanent workers feel secure about their job, the more they perceive temporary workers as a threat (Boyce et al., 2007). Thus, a higher unemployment level causes stronger stigmatisation of temporary workers which, in turn, has more negative effects on temporary workers' job satisfaction. Consequently, our second hypothesis states that the **negative impact of having a temporary versus a permanent contract on the job satisfaction of youth should be greater in countries with a higher unemployment rate (H2).**

Finally, we take into account the presence of trade unions in a given country. Classical studies on unionisation and labour market segmentation suggest that trade union membership is usually higher among the core labour force consisting of permanent workers than among the periphery labour force (Doeringer & Piore, 1985; Lindbeck & Snower, 2001). Moreover, a higher trade union density should be associated with relatively higher subjective job security for permanent workers. This should weaken the stigmatisation of temporary workers who, in the presence of strong trade unions, will not be perceived as a threat to permanent workers. Thus, stronger trade unions should decrease the negative effect of temporary work on job satisfaction. However, there is a possible alternative explanation leading to a similar conclusion. Although trade unions were against temporary workers in previous years, now they more often work for temporary workers (Gumbrell-McCormick, 2011). Another study shows that strong trade unions are more inclusive of temporary workers and better represent their interests (Benassi & Vlandas, 2016). Taking this point of view into account, we might expect that stronger trade unions will work to close the gap between temporary and permanent workers. According to social comparison theory, when the relative distance between temporary and permanent workers decreases, temporary workers' job satisfaction should increase. Based on the above, we formulated our third hypothesis: **higher trade union density lowers the negative impact of temporary work on the job satisfaction of youth (H3).**

3. Data and method

3a. Data

To address our hypotheses, we use cross-sectional microdata from EU-Statistics on Income and Living Conditions (EU-SILC) for 2013. The data set from this particular year contains information about job satisfaction among the working population, which is our main interest. This data set is appropriate for our analysis, as it allows for cross-country comparisons and collects information about labour market status. For the purpose of this analysis, our sample is restricted to young people aged 16-29 who are employed and are not in the army. Following Guest's (2004) recommendations, we excluded self-employed individuals from the analysis. Due to the problems with missing data on our variables, we were forced to exclude 3 countries from the analysis (Czech Republic, Denmark and Slovenia). We supplement the EU-SILC data with macro indicators from the Eurostat Database and the International Labour Organization.

3b. Variables

Our dependent variable is based on a 10-points scale, which refers to a respondent's opinion about the degree of satisfaction with his job. The average level of job satisfaction in the total sample equals 7.23, while for youth in temporary jobs it is 7.04.

Our variable of interest – temporary job – is binary, taking the value 1 if a person is employed with a temporary contract and 0 if a person has permanent contract. Inactive, unemployed and self-employed youth are excluded from our analysis. In the total sample, 25% of youth are employed with a temporary contract, however, it is very different among countries – from 3% in Estonia and Romania to 54% in Poland.

As mentioned earlier, temporary work is a heterogeneous category that contains different kinds of jobs. Moreover, numerous job characteristics affect the level of job satisfaction. Therefore, we control for variables that are proxies for the job quality: educational attainment, working in low skilled jobs (agricultural and fishery workers, craft and related trade workers, plant and machine operators and assemblers, elementary occupations) and part-time employment, as it could be involuntary and influence the satisfaction with the job. At the individual level, we control also for sex, age and the family situation (living with partner/spouse, living with own children). As we are interested in the influence of type of contract on the job satisfaction, despite the possible differences in remuneration between these two kinds of working arrangements, we should control for wages. Unfortunately, information about personal earnings in EU-SILC is available only for a small group of countries. Thus, to control for an individual's economic situation, we build an index of material deprivation. This index is based on 7 questions about their ability:

1. 'to replace worn-out clothes with new (not second-hand) ones',
2. 'to possess two pairs of properly fitting shoes (including a pair of all-weather shoes)',
3. 'to get together with friends/family (relatives) for a drink/meal at least once a month',
4. 'to regularly participate in a leisure activity',
5. 'to spend a small amount of money each week on yourself',
6. 'to have an internet connection for personal use at home',
7. 'to regularly use public transport'.

The possible answers were 1 – 'yes', 2 – 'no – cannot afford it', 3 – 'no – other reason'. As we are interested in the economic situation of the respondent, we counted only the answers 'cannot afford it'. Thus, the higher value of the index, the worse is the economic situation of the respondent.

On the macro level, we control for the economic situation of the country by using the GDP per capita in 2012 (measured in Euro, PPS; source: Eurostat). Recent research suggests that national gross domestic product is a better predictor of employees' job satisfaction than many job-related characteristics (Augner, 2015). To address our macro hypotheses, we use country level indicators (both based on the 2012 data): the unemployment rate according to Eurostat and the trade union density, which is provided by the International Labour Organization database (ILO). The latter indicator expresses the trade unions' strength, and it is calculated as a ratio of the number of employees who are members of trade unions to the whole working population in a given country.

3c. Method

To address the issue of the impact of the type of contract on youth job satisfaction, while considering cross-country variation and the moderating effect of labour market characteristics, we apply the multilevel modelling with cross-level interactions and random intercept (Snijders & Bosker, 1999). The first level of the analysis is based on variables providing information about individuals, the second level is defined by countries characterised in terms of their economic situation and labour market settings. As we are interested in how the labour market characteristics affect the satisfaction of young temporary workers, we use the interactions of the type of contract with the country level variables.

Multilevel modelling allows to control for individual level factors and country level characteristics, which might affect individual job satisfaction. Estimations with random intercept help to depict to which extent differences between countries in terms of the shapes of their labour markets explain differences in the youth job satisfaction. Moreover, cross-level interactions help us to investigate if labour market institutions mitigate or worsen the impact of temporary contracts on job satisfaction.

Therefore, our models tested in this article use the following specification:

$$JS_{ij}=\beta_{o}+\beta_{p0}X_{pij}+\beta_{0q}Z_{qj}+\beta_{pq}Z_{qj}X_{1ij}+u_{0j}+\varepsilon_{ij}$$

where JS_{ij} is the level of job satisfaction of person i in country j, β_{0} is the overall mean across countries, X_{pij} is the vector of level 1 explanatory variables, Z_{qj} is the vector of level 2 (country level) explanatory variables, and$Z_{qj}X_{1ij}$ are cross-level interaction effects of labour market indicators with the individual type of contract. The error term is split into two components: u_{0j} – error term at the country level and ε_{ij} – individual level error.

4. Results

4a. Descriptive results

On average, temporary contracts are associated with lower job satisfaction among young adults. Within our sample, the average job satisfaction index for temporary workers equals 7.04, while for youth with permanent contracts it is 7.29. However, this generalisation does not hold across all the countries. Differences in the level of job satisfaction between young permanent workers and young temporary workers are statistically significant in Belgium, Czech Republic, Croatia, Hungary, Lithuania, Latvia, Poland, Portugal, Romania, Spain, Sweden and Slovakia. The only exception is Belgium, where the job satisfaction among youth with temporary contracts is actually higher than among young permanent workers.

Table 1: Mean levels of job satisfaction by country among youth in the sample, controlled for type of contract

country	Total observations	Job satisfaction (0/10)	Observations for permanent workers	Job satisfaction of permanent workers (0/10)	Observations for temporary workers	Job satisfaction of temporary workers (0/10)
AT	789	8.0	726	8.0	63	8.0
BE*	571	7.5	441	7.5	130	7.8
BG	405	5.9	361	6.0	44	5.4
CY	735	7.2	592	7.1	143	7.4
CZ*	524	7.3	390	7.4	134	6.9
DE	1079	7.1	633	7.0	446	7.1
DK	222	8.0	173	8.1	49	7.6
EE	793	7.3	768	7.3	25	6.8
ES*	1022	7.0	518	7.2	504	6.8
FI	655	8.0	485	8.0	170	7.9
FR	856	7.2	590	7.2	266	7.1
GR	437	6.1	325	6.1	112	6.2
HR*	159	7.0	92	7.4	67	6.5
HU*	989	7.2	806	7.4	183	6.3
IE	244	6.9	195	7.0	49	6.6
IT	487	7.1	321	7.2	166	6.9
LT*	359	7.4	343	7.4	16	6.5
LU	399	7.7	315	7.7	84	7.4
LV*	592	7.3	558	7.4	34	6.4
MT	273	7.4	237	7.4	36	7.5
NL	569	7.6	378	7.6	191	7.5
PL*	1275	7.3	589	7.6	686	7.1
PT*	396	7.1	246	7.3	150	6.9
RO*	628	7.4	608	7.4	20	6.8
SE*	478	7.3	336	7.4	142	7.0
SI	268	7.4	177	7.3	91	7.4
SK*	1031	7.2	753	7.3	278	6.9
UK	1007	6.9	917	6.8	90	7.1

*Statistically significant difference in the level of job satisfaction between young permanent and temporary workers.
Source: EU-SILC 2013, cross-sectional

We assume that labour market characteristics influence the level of job satisfaction of youth and differentiate the situation of temporary and permanent workers. Below we present graphs, which depict this relationship. On average, in countries with a higher unemployment rate the level of job satisfaction of both permanent and temporary workers is lower than in countries with a low

unemployment rate. Without controlling for individual characteristics and GDP, we can see that the average job satisfaction of temporary workers is slightly lower and more dependent on the unemployment rate than the level of job satisfaction of youth with permanent contracts.

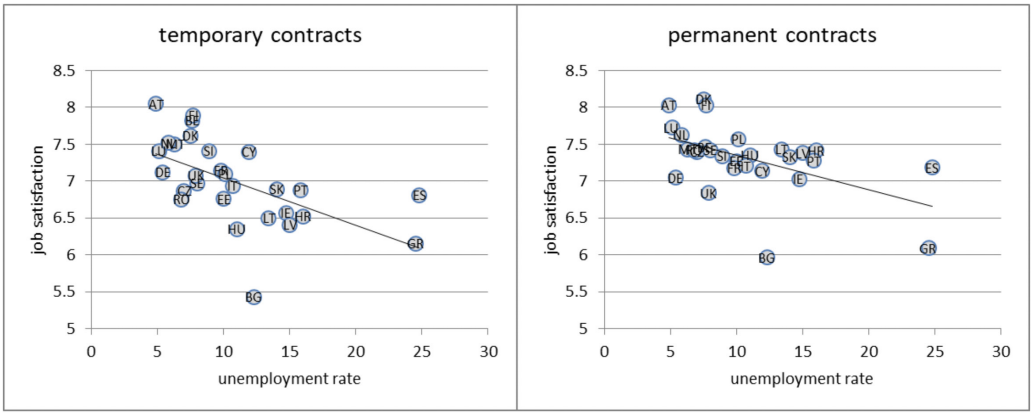

Figure 1: Mean levels of job satisfaction among youth in the sample and country unemployment rate (2012), by type of contract

Source: Own calculation based on EU-SILC 2013, cross-sectional and Eurostat

The relationship between trade union density and job satisfaction seems to be positive for both types of contracts. However, the level of job satisfaction of permanent workers is less influenced by trade union density.

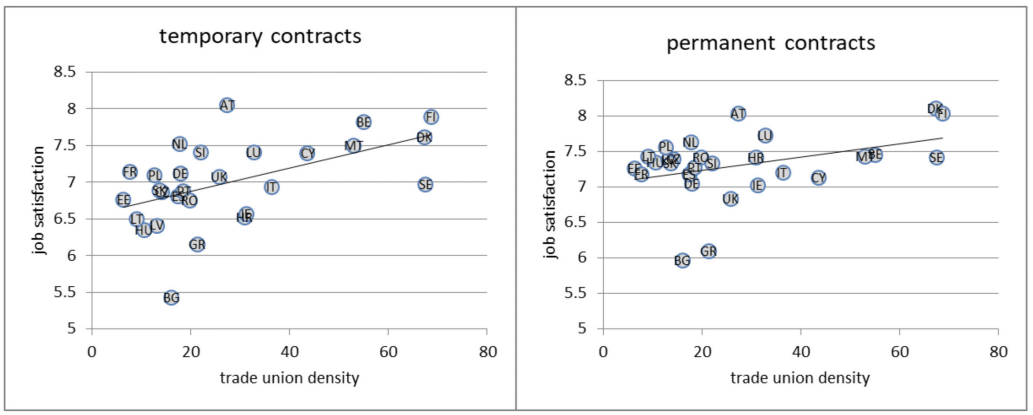

Figure 2: Mean levels of job satisfaction among youth in the sample and trade union density (2012), by type of contract

Source: Own calculation based on EU-SILC 2013, cross-sectional and ILO

4b. Multivariate analysis results

In order to verify our three hypotheses, we estimate several multilevel models (Table 2). The first model contains only individual level variables and random intercept, two other models include country level variables and cross-level interaction of the type of contract and selected labour market characteristics.

Our results show that youth in temporary jobs have on average a lower level of job satisfaction than their counterparts with permanent jobs (model 1). This effect is significant, even when controlling for several variables indicating the quality of job (educational level, low skilled job, part-time jobs), related

income (individual deprivation index), family situation and other individual characteristics.

On the one hand, the great advantage of multilevel modelling is that we can evaluate the significance of contextual factors that affect individual-level variables (model 2 and 3). On the other hand, we expect that the moderating effects of country-level variables will be rather small in their magnitude. When we ask the question about the impact of large-scale socioeconomic processes on the individual job satisfaction, we should be aware of a complexity of mechanisms that are working beyond. In this situation, the presence of a significant finding and its sign are already very informative, as long as we are able to provide a theoretical explanation. Our results show that macro-level indicators expressing the overall condition of national economies and their labour markets are useful in terms of explaining the variability in level of youth job satisfaction across the analysed EU countries. While the first model does not include any country-level indicators (country level variance 0.151), adding macro-level indicators significantly improved the following models. In the second model, adding the unemployment rate reduced the country-level variance from 0.151 to 0.098. In the third model, the decrease in the country-level variance is very small (0.151 to 0.126), but still statistically significant. These results suggest that country-level, macroeconomic factors contribute to explaining the variability in the individual levels of job satisfaction.

In line with our first hypothesis, on average and regardless of the type of contract (temporary and permanent contracts), youth report lower levels of job satisfaction in countries with a higher unemployment rate. The increase in the average unemployment rate by 1 p.p. is associated with a decrease in the measure of job satisfaction by 0.04. This result is consistent with findings regarding the negative impact of the unemployment rate on the workers' well-being (Luechinger et al., 2010; Tella et al., 2003). It is also in line with Blanchard's labour market theory, which predicts that a higher unemployment rate in the economy leads to less favourable working conditions (Blanchard, 2016). Contrary to Augner's (2015) results, in both models (2 and 3) we did not find a significant, positive impact of GDP on job satisfaction among working youth.

Our second hypothesis was also confirmed – the unemployment rate moderates the impact of temporary work on the level of job satisfaction. In countries with a higher unemployment rate, the negative impact of having a fixed term contract on job satisfaction is even stronger. The increase of an average unemployment rate by 1 p.p. causes a drop in the job satisfaction of temporary workers by 0.05. Similar results were achieved by (Chadi & Hetschko, 2013), who analysed German panel data and showed that fixed-term employment is less detrimental to job satisfaction when the unemployment rate is relatively low. Our analysis has a much broader scope – taking into consideration the EU-SILC data for 25 EU countries, we might say that a higher unemployment rate worsens the situation of the young people with temporary contracts more than that of youth with permanent jobs. The mechanism beyond this observation might be based on the processes of stigmatising temporary workers, which is triggered by the higher level of unemployment (Boyce et al., 2007).

Trade union density, reflecting the relative power of employees in their relation to employers, proved to be a significant factor that improves the job satisfaction of young temporary workers, while it does not matter for the situation of permanent workers (model 3). The effect of trade union density is not significant with a relatively high standard error (β=0.004, st. err. = 0.004), we can assume that it is equal to zero. However, the interaction term remains significant. This result means that an increase in the average level of trade union density by 1 p.p. is associated with an increase in the job satisfaction of young temporary workers compared to permanent workers by 0.005. The magnitude of this change is very small, but it has a positive sign and it is significant. In other words, we can neither say that higher trade union density will not have any impact on young temporary workers' job satisfaction, nor that it decreases their satisfaction. **Thus, this finding confirms our third hypothesis.** It might be a sign that trade unions represent the interests of labour market 'outsiders'. This interpretation would be supported by existing studies, which indicate that strong trade unions are also more inclusive of temporary workers (Benassi & Vlandas, 2016; Gumbrell-McCormick, 2011). However, an alternative explanation, based on the model by Boyce et al.(2007), would be that stronger trade unions decrease the level of subjective job insecurity of permanent workers which, in turn, restrains the process of stigmatisation of temporary workers.

Table 2: The moderating impact of macro-level variables on the relationship between temporary work and job satisfaction

VARIABLES	(1)	(2)	(3)
Level 1			
Temporary job = 1	-0.160***	-0.008	-0.273***
	(0.039)	(0.084)	(0.066)
Sex: female	-0.046	-0.047	-0.048
	(0.034)	(0.034)	(0.034)
Age	-0.020***	-0.019**	-0.021***
	(0.006)	(0.006)	(0.006)
Education: lower secondary	0.041	0.040	0.041
	(0.051)	(0.051)	(0.051)
Education: tertiary	0.104**	0.105**	0.103**
	(0.038)	(0.038)	(0.038)
Individual deprivation index	-0.314***	-0.313***	-0.312***
	(0.016)	(0.016)	(0.016)
Low skilled job	-0.287***	-0.285***	-0.286***
	(0.039)	(0.039)	(0.039)
Part-time job	-0.561***	-0.561***	-0.565***
	(0.046)	(0.046)	(0.046)
Living with partner/spouse	0.032	0.029	0.030
	(0.038)	(0.038)	(0.038)
Living with child	0.124**	0.125**	0.127**
	(0.048)	(0.048)	(0.048)
Level 2			
GDP per capita, Euro PPS		5.06e-06	1.04e-05
		(6.68e-06)	(7.28e-06)
Unemployment rate		-0.037**	
		(0.014)	
Interaction: temporary job x unemployment rate		-0.013*	
		(0.006)	
Trade union density			0.004
			(0.004)
Interaction: temporary job x trade union density			0.005*
			(0.002)
Constant	8.038***	8.294***	7.678***
	(0.173)	(0.313)	(0.249)
Log likelihood	-33475.592	-33468.046	-33471.144
Country variance	0.151 (0.045)	0.098 (0.030)	0.126 (0.038)
Observations	16,097	16,097	16,097
Number of groups	25	25	25

Note: Standard errors in parentheses *** p<0.001** p<0.01, * p<0.05

Source: Own calculation based on EU-SILC 2013 (cross-sectional), trade union density based on ILO (2012), unemployment rate and GDP per capita based on Eurostat (2012).

5. Conclusion

In many European countries, temporary contracts are a popular way of hiring young people. There is a vast evidence suggesting that employees with fixed-term contracts receive less favourable job outcomes than those hired with permanent contracts (Aronsson & Göransson, 1999; Sjöberg & Sverke, 2000; De Witte & Näswall, 2003). Our analysis, in line with similar studies examining the association between the temporary work and job satisfaction, confirms that the European youth who have temporary jobs are less satisfied with their jobs than young people who have permanent contracts.

However, previous research suggests that the relationship between the type of job contract and an individual job's assessment is not straightforward (De Cuyper et al., 2008; De Witte et al., 2012; Wilkin, 2013). We argued that this relationship is moderated by several macro-level contextual variables, which describe the actual situation of temporary workers on a given labour market. We rooted our hypotheses in the wider theoretical framework, with a particular reference to the model of the stigmatisation of temporary workers (Boyce et al., 2007).

Our analysis highlights the processual and contextual nature of job satisfaction. We proved that socio-economic conditions and labour market characteristics might moderate the impact of temporary work on job satisfaction. Among countries with a lower unemployment rate or a stronger position of trade unions, the negative impact of temporary work on job satisfaction is weaker.

This paper is not without limitations. We find the model of stigmatisation of temporary workers (Boyce et al., 2007) as a useful theoretical framework, which provides a reasonable explanation for our results. However, further in-depth qualitative and quantitative studies are necessary to verify this theory, in particular, to investigate the problem of causality within the relationship between job satisfaction and temporary work. Temporary work is a very broad concept, thus, for better understanding the impact of such a work arrangement on job satisfaction, we need more detailed information about the characteristics of temporary work. Information about a specific type of job agreement or, at least, some measure of related subjective level of job insecurity would be very useful. In further analysis, we may use other datasets that contain such information.

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Annex

Table 1: Descriptive statistics for dependent and independent variables (individual level)

variable	Mean/share	Standard deviation
Job satisfaction (0/10)	7.23	2.03
Job satisfaction among temporary workers (0/10)	7.04	2.14
Job satisfaction among permanent workers (0/10)	7.29	1.97
Temporary work	0.25	0.43
Female	0.46	0.50
Age	24.86	3.10
Education: at least lower secondary	0.14	0 .35
Education: tertiary	0.31	0.46
Individual deprivation index (0/7)	0.47	1.09
Low skilled jobs	0.34	0.47
Part-time job	0.17	0.37
Living with partner/spouse	0.33	0.47
Living with child	0.16	0.37

Source: EU-SILC 2013, cross-sectional

Table 2: Share of young temporary workers among all youth employees in the sample, by country

country	N (tot. sample)	Mean	country	N (tot. sample)	Mean	country	N (tot. sample)	Mean
EE	793	3%	**IE**	244	20%	**NL**	569	34%
RO	628	3%	**LU**	399	21%	**SI**	268	34%
LT	359	4%	**DK**	222	22%	**IT**	487	34%
LV	592	6%	**BE**	571	23%	**PT**	396	38%
AT	789	8%	**CZ**	524	26%	**DE**	1079	41%
UK	1007	9%	**GR**	437	26%	**HR**	159	42%
BG	405	11%	**FI**	655	26%	**ES**	1022	49%
MT	273	13%	**SK**	1031	27%	**PL**	1275	54%
HU	989	19%	**SE**	478	30%			
CY	735	19%	**FR**	856	31%			

Source: EU-SILC 2013, cross-sectional

Table 3: Macro-level indicators

country	GDP per capita, Euro PPS 2012	Unemployment rate 2012	Trade union density
AT	33,100	4.9	27.4
BE	30,700	7.6	55
BG	12,100	12.3	16.1
CY	23,400	11.9	43.6
CZ	20,700	7	14.2
DE	31,500	5.4	17.9
DK	32,100	7.5	67.2
EE	18,300	10	6.4
ES	24,400	24.8	17.5
FI	29,400	7.7	68.6
FR	27,700	9.8	7.7
GR	19,500	24.5	21.3
HR	15,600	16	30.9
HU	17,000	11	10.6
IE	32,900	14.7	31.2
IT	25,600	10.7	36.3
LT	18,300	13.4	9
LU	67,100	5.1	32.8
LV	16,400	15	13.1
MT	22,100	6.3	52.9
NL	32,500	5.8	17.7
PL	17,100	10.1	12.7
PT	19,400	15.8	18.5
RO	13,600	6.8	19.8
SE	32,200	8	67.5
SI	21,400	8.9	22
SK	19,400	14	13.6
UK	26,600	7.9	25.8

Source: EUROSTAT, ILO (2012)