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Job Satisfaction of Knowledge Workers. The Role of Interpersonal Justice and Flexible Employment

Abstract: Organizational justice is a crucial aspect of good management. It has been shown numerous times that an unjust work environment has an adverse impact on employees in terms of job satisfaction. Yet is this effect homogeneous in all groups of workers? In this paper we strive to provide an explanation for this question, presenting a study concerning the impact of one of the dimensions of organizational injustice—interpersonal injustice, on the job satisfaction of knowledge workers in Poland. In particular, we demonstrate how perceived injustice at work influences their job satisfaction compared with other workers. We also analyse whether flexible employment has a mitigating effect on this relationship. Logistic regressions estimated using sample of 23,942 workers surveyed between 2009 and 2013 showed that in both groups interpersonal injustice significantly diminishes job satisfaction. However, in the case of knowledge workers, this effect is significantly smaller among employees with temporary contracts. The mitigating effect of temporary employment is not present among other workers. The results suggest that permanent knowledge workers, are more vulnerable to interpersonal injustice.

Keywords: interpersonal justice, knowledge workers, employment flexibility, job satisfaction.

Introduction

Attaining job satisfaction is important both from the point of view of the employee and the employer. First of all, in the literature there is an indication of reciprocity between job satisfaction and life satisfaction. That is to say that persons who are satisfied with their jobs tend to have higher subjective well-being and *vice versa* (Judge & Watanabe 1993). Diminished job satisfaction may also adversely impact the mental and physical health of workers (Locke 1976). From the employer's perspective, guaranteeing job satisfaction among employees is important for a variety of reasons, including the prevention of high turnover and absenteeism within organizations (Lévy-Garboua, Montmarquette, & Simonnet 2007; Locke 1976).

For these reasons job satisfaction has been widely studied since the beginning of the last century (Locke 1976). Many factors were studied and analysed as potential predictors of job satisfaction, including organizational justice. The definition of organizational justice evolved in the last few decades. In its present form it is thought to be constructed from four dimensions: distributive justice, procedural justice, interpersonal justice and informational

justice (Colquitt 2001; Greenberg 1990). The impact of distributive justice and procedural justice on job satisfaction is broadly discussed in the literature, e.g. Blader and Tyler (2009); De Cremer (2005); Wiesenfeld, Swann, Brockner and Bartel (2007). On the other hand, the influence of informational and interpersonal justice is often disregarded.

Therefore in this study we propose an analysis of job satisfaction with the focus on interpersonal justice, which reflects to what extent an employee is treated with dignity and respect by superiors or third parties at work. In particular we strive to show how interpersonal justice influences workers with different types of contracts. We distinguish among persons with permanent contracts, temporary contracts and own-account workers. Our aim is to demonstrate whether the reaction to interpersonal justice differs between groups of knowledge workers and other workers.

In the study we also focus on demonstrating the important differences between the group of knowledge workers and the remainder of the workforce in terms of the influence of interpersonal justice and employment flexibility on job satisfaction. Knowledge workers represent an expanding sector of the economy. In the European Union employment in knowledge intensive activities constitutes over 35 percent of all employment (European Commission 2013a). With over one third employed in the knowledge sector it is worthwhile to focus on this group, and to determine the significant differences of this group in comparison with the other workers. In particular our study focuses on Polish workers. The analysis in relation to employment flexibility is especially relevant in the context of Poland, the country with the highest percentage of temporary contracts in Europe (European Commission 2013d) and a considerable percentage of own-account workers (European Commission 2013c).

First of all, we hypothesise that knowledge workers in general value being treated in a fair and friendly manner more so than other workers. One can also expect that knowledge workers would value horizontal rather than vertical organizational structures and partnership relationships with superiors. If these elements are lacking, it might be adversely reflected in their job satisfaction.

H1: Job satisfaction of knowledge workers is more strongly adversely affected by lack of interpersonal justice than job satisfaction of other workers.

Secondly, we expect the workers with flexible employment arrangements to be less affected by interpersonal injustice in terms of job satisfaction than permanent workers.

H2: Job satisfaction of other workers (H2a) and knowledge workers (H2b) with flexible working contracts is less affected by interpersonal injustice.

The rationale behind this hypothesis comes from the nature of temporary and own-account work. The job is temporary and the relationships with the immediate superiors or other authorities within the organization are usually short-lived. For this reason workers with flexible contracts may pay less attention to unfriendly relationships at work. On the other hand, permanent workers may be more affected by a hostile atmosphere and particularly interpersonal injustice as they may suspect it will prevail in the long-run. The unfair treatment may be a symptom of violating the psychological contract established between the permanent workers and the employers, which significantly diminishes workers' job satisfaction (Robinson & Rousseau 1994).

Finally, we suspect that the mitigating effect of flexible employment as hypothesised in H2 is stronger in the group of knowledge workers.

H3: The negative effect of interpersonal injustice on job satisfaction is mitigated by employment flexibility to a larger extent in the group of knowledge workers than the other workers.

We expect the job of own-account knowledge workers to be more independent from authorities and organizational structures. Therefore, the ill effects of interpersonal injustice should impact them to a lesser extent. However, one has to take into account the possibility of so called bogus self-employment. It is estimated that approximately 30 percent of self-employment in Poland is bogus self-employment (OECD 2014b)—in which the self-employed worker provides services for an employer, but de facto their relationship is one of subordination (Kwiatkiewicz 2008). In the case of the own-account workers, we suspect that in some instances the flexible arrangement was imposed on the workers. Such a solution reduces costs of human capital from the point of view of the employer, but at the same time it limits the employment and job security of the employee. As De Witte & Näswall (2003) point out, it is important to discuss employment flexibility in the context of voluntariness of such arrangements. The imposed, involuntary nature of relationship between the employer and the worker, be it in form of bogus self-employment of temporary, not regulated contracts, might in fact adversely impact the feeling of interpersonal injustice.

Our hypothesis draws on the assumption that bogus self-employment, although prevailing across different sectors and occupations, is more characteristic for the group of the other workers than the knowledge workers. The other workers may deal with precarious employment to a greater extent than the knowledge workers, which is further intensified by interpersonal injustice. We also believe that temporary knowledge workers in this context not only have the benefit of short-lived relationships, in which unfair treatment plays a smaller role, but they also have higher level of employability—they are more confident about finding other employment of a similar or better standard.

This paper is organized as follows: Firstly, the related literature is reviewed; the following section introduces the methodology used in the analysis and presents the dataset; subsequently, the results are presented and discussed; the final Section gives the conclusions.

Literature Review

Organizational Justice

In the last few decades organizational justice has increasingly drawn the attention of scholars. Considerations about fairness in the workplace were initially limited solely to the discussion about fairness of outcomes distribution—distributive justice. The well known theory explaining the mechanisms of distributive justice is the equity theory (Adams 1966). According to Adams workers are primarily interested not in the absolute value of their outcomes, but do find it important if they are distributed in a fair manner. To determine if an outcome is fair, workers compare the ratio of their inputs (e.g. education, experience, intelligence, etc.) to outcome with ratio of inputs to outcome of co-workers.

A decade later the domain of organizational justice research has been widened by the notion of procedural justice (Colquitt, Conlon, Wesson, Porter, & Ng 2001). The interest

in procedural justice stems from the idea that workers are not only concerned with just outcomes, but also with the transparency and fairness of the procedures in which they were established. In particular, employees consider a procedure as fair when they can control it in some way (e.g. present their arguments). If this kind of control is provided they are willing to relinquish control at the decision stage. This kind of procedure has been denoted as “fair process effect” or “voice effect” (Colquitt et al. 2001).

The most recent addition to the concept of organizational justice is the interactional justice—idea introduced in 1986 (Bies & Moag 1986). Interactional justice pertains to the aspects of communication between the management and the recipient of justice (Cohen-Charash & Spector 2001). An alternative conceptualization of interactional justice was proposed by Greenberg (1993). He distinguished two separate factors within interactional justice: interpersonal justice and informational justice. Interpersonal justice reflects the degree to which an employee is treated with dignity, courtesy and respect by authorities or third parties involved in executing procedures or determining outcomes. Informational justice focuses on the degree to which relevant information about the reasons for using certain procedures or distributing outcomes in a certain fashion is shared with employees (Colquitt et al. 2001).

One of the motives for analysing interpersonal justice in particular, is the potential positive effects it may bring to organizations. Indeed, fair treatment has a positive impact on workers in terms of commitment, performance, trust, loyalty and others. Also, it proved to have a significant influence on job satisfaction (Colquitt et al. 2001). Thus, we can conclude that interpersonal justice is an important factor in the analysis of job satisfaction.

Job Satisfaction

Among different theories trying to explain the underlying mechanisms leading to job satisfaction is the discrepancy theory proposed by Edwin Locke (Colquitt 2001). According to this theory, job satisfaction is a state that can be acquired when the characteristics of the job fulfil one’s important job *values*, providing they are compatible with one’s *needs*. Values refer to what one considers beneficial, whereas needs are necessary conditions to achieve one’s well-being. In other words, according to the discrepancy theory workers compare their actual job with a reference job—a hypothetical job that fulfils all the important job values. The discrepancy between the values in the reference job and the values in the actual job represents the level of job satisfaction. Depending on the values, their relationship with job satisfaction may be linear—the more the better (e.g. pay), or non-linear, for example bell-shaped. Any discrepancy from the preferred level of the value decreases job satisfaction (Locke 1969).

Another aspect of the theory is that individuals differ in assigning importance to various job facets. For some, a given job facet is very important, therefore its lack has a strong adverse impact on their level of job satisfaction. For others the same job aspect has little importance, so its insufficiency should not affect job satisfaction. We could expect that the workforce is very diverse in this sense—different people value distinct job facets. Taking that into consideration, analyzing the factors of job satisfaction on a disaggregated data could help obtain more homogenous groups of workers and, consequently, to in-

crease the accuracy of the results. In this paper we focus on the group of knowledge workers.

Knowledge Workers

The knowledge sector is an expanding part of modern economies. In more developed countries the knowledge model of economy is the norm. For this reason, concentrating the analysis on the central element of this model, i.e. knowledge workers, is increasingly significant in the present day. For the purpose of the analysis we use combined occupation-based and education-based operationalization of this group. According to this classification, knowledge workers are persons who work in the top three levels of International Standard Classification of Occupations (ISCO-08): managers, professionals as well as technicians and associate professionals (ILO 2012). They have high-level skills indicated by higher education or equivalent qualifications and perform tasks that require expert thinking and complex communication skills with the assistance of computers (Brinkley 2006).

This operationalization is closest to Drucker's definition of knowledge workers. According to him, knowledge workers are simply "professional, managerial and technical people" (Drucker 1993). At the same time, it is important to recognize the internal variability of such defined group of knowledge workers, especially in context of employment flexibility, job satisfaction and organizational justice. Workers classified in the third ISCO-08 group are more susceptible to the involuntary flexible forms of employment.

Another definition of knowledge workers specifies the job content, describing them as individuals whose work requires high levels of creativity, intellectual skills and theoretical rather than purely contextual knowledge (Warhurst & Thompson 2006). The latter definition draws on the core of the idea of the knowledge economy. Yet at the same time it is more difficult to operationalize, due to the scarcity of data about the actual character of the activities individuals carry out at work. On the other hand, our approach is widely used in other studies, which guarantees its comparability. The reference group of workers who do not comply with the characteristics of knowledge workers are referred to as other workers throughout this paper.

Employment Flexibility

Labour market flexibility is concerned with the market's capacity to adjust and respond to evolving conditions (Beatson 1994). There are a variety of flexibilities recognized by scholars. The basic classification distinguishes between external and internal flexibility. External flexibility refers to regulating the amount of labor by changing the number of people employed, whereas internal flexibility is used to control the amount of labour by adjusting, among others the working time or number or variation of tasks. The former type flexibility is often denoted as *employment flexibility* (Beatson 1994). It is common practice to use type of contract as a proxy for employment flexibility.

The analysis of job satisfaction in the context of employment flexibility is especially relevant in the case of Poland, the European country with the highest percentage of temporary workers. For the last few years this percentage remained around 27 percent (26.4 percent

in 2009 and 26.8 percent in 2011 and 2013), whereas the EU average was about 14 percent (European Commission 2013d). However, only a small part of temporary workers (9.8 percent in 2009, 15.3 percent in 2011 and 14.4 percent in 2013) did not desire a permanent job and for the majority of them (72.6 percent in 2009, 61.6 percent in 2011 and 66.8 percent in 2013) the reason for temporary employment was that they could not find a permanent job, considerably higher (12.2 percentage points in 2009, 1.6 percentage points in 2011 and 4.8 percentage points in 2013) than the EU average (European Commission 2013b). An important distinction in the context of Polish labour market is the one between temporary contracts regulated by Labour code, and the civil law contracts, not regulated by Labour code, widely referred to as *junk contracts*, see e.g. Wojciechowski (2015). Work under these types of contracts is considered to be the most precarious form of employment in Poland. It implies not only the lack of job stability and unregulated relationship with the employer, but also the financial insecurity and risk of poverty in the future due to very low levels of pension benefits these contracts entitle to (Oczki 2013).

Poland also has a relatively large number of self-employed workers, in particular own-account workers—self-employed without employees. In the last few years they constituted about 14 percent (14.2 percent in 2009, 14.5 percent in 2011 and 14.0 percent in 2013) of the Polish labour force, 4 percentage points more than the European average (European Commission 2013c). It is estimated that around a third of Polish self-employment is bogus self-employed—persons with this employment arrangement are in fact employees (OECD 2014a).

According to statistics provided by Central Statistical Office of Poland, in the end of 2014, around 7 percent of all workers were employed under *atypical forms of employment* understood as civil law contracts or bogus self-employment (Główny Urząd Statystyczny 2016). An overwhelming majority—around 80% of them were imposed such an arrangement.

Data and Methods

Data

The data used to conduct the analysis were taken from the *Social Diagnosis 2009, 2011 and 2013*. *Social Diagnosis 2000–2013: Objective and Subjective Quality of Life in Poland* (Social Monitoring Council 2013) is a project that supports the study of the conditions and quality of life of Poles. The data are representative on a national and regional level (Czapiński & Panek 2013).

To retrieve the target group of the study, all the non-working individuals were excluded from the sample. Apart from that, we restricted the sample by eliminating agricultural workers and entrepreneurs—self-employed with paid employees. The nature of the work in these two groups differs substantially from the rest of the labour force. Neglecting this heterogeneity would harm the validity of the results. Considering the mentioned groups as separate groups of interest would significantly increase the complexity of the study and could lead to a departure from its central interest.

Finally, 9,549 incomplete cases from three waves have been excluded from the analysis. This considerable number stems from the fact that the income variable used in the study comprises many missing values (5,509 in total). Despite that, we dismissed the alternative model of job satisfaction without the income variable, as it is one of the central determinants of job satisfaction, and so has to be controlled for. If the same respondent took part in the survey in more than one of the analyzed waves, his or her answers for different waves were treated as separate cases. As a result, 23,942 observations from the three waves were used in the analysis.

Model

To empirically test the hypotheses we used descriptive statistics to characterize the data, followed by logistic modelling to construct the model of job satisfaction and identify relationship between job satisfaction and considered factors. Additionally, we introduced the time dimension into the analysis to ensure the stability of the model over time and its robustness to the external shocks such as economic crisis. In particular, we used data from three subsequent waves of the Social Diagnosis survey: 2009, 2011 and 2013. The model was estimated for the 2009 wave. Additionally, dummy variables were introduced, which indicated if observations come from the 2011 or 2013 waves. Interactions of these variables with all the independent regressors were also added to the model. The significance of the results for these interactions would suggest whether the influence of particular variables analysed in the model significantly changed between the 2009 and 2011 or 2009 and 2013 waves.

Measures

Knowledge Workers

The sample was divided into two separate groups: knowledge workers and other workers, by taking into consideration three factors: occupation, education level, and the use of information and communication technologies. Individuals that belong to the group of knowledge workers comply with the following criteria: they work in the top three occupational groups indicated by ISCO-08 classification (managers, professionals, associate professionals), have higher education (bachelor's degree or higher) and use the Internet to collect materials necessary for education or work. As a result 5,049 (21 percent of all analysed workers) knowledge workers were identified in the dataset.

Job Satisfaction

The job satisfaction measure used in the study is a binary variable with the possible outcomes: Very Satisfied and Satisfied or Not Satisfied. Originally, the variable comprised six levels: Very Satisfied, Satisfied, Quite Satisfied, Quite Unsatisfied, Unsatisfied and Very Unsatisfied. The distribution of the variable for the 2009, 2011 and 2013 waves is presented in [Table 1](#).

It has been transformed to a simpler binary variable for a number of reasons. First, our primal goal is to investigate how interpersonal injustice hinders achieving the feeling

Table 1

Distribution of Job Satisfaction Variable (6 levels)

	2009		2011		2013	
	Frequency	%	Frequency	%	Frequency	%
Very Satisfied	497	6.1	613	7.6	539	6.9
Satisfied	3246	40.1	3112	38.5	2844	36.6
Quite Satisfied	3132	38.7	2955	36.6	3000	38.6
Quite Unsatisfied	722	8.9	757	9.4	760	9.8
Unsatisfied	376	4.6	471	5.8	455	5.9
Very Unsatisfied	121	1.5	167	2.1	175	2.3
Total	8094	100.0	8075	100.0	7773	100.0

Source: Own Elaboration based on Social Monitoring Council (2013).

of being satisfied with a job, rather than to compare the impact of this factor on particular levels of the job satisfaction variable available in the dataset. Moreover, most of the original responses were accumulated around two levels: Satisfied and Quite Satisfied. For that reason the levels were aggregated separately, to group the responses equally between the two levels of the final variable. We attempted aggregating the variable into three levels, extracting Quite Satisfied as a separate level and estimating ordered logistic models. However, the differences between the levels of the variables Quite Satisfied and Not Satisfied were not statistically significant, which blurred the overall legibility of the results. For this reason the two-level version of the variable was used in the final version of the analysis.

Type of Contract

In the analysis we distinguish three types of contracts: Permanent Contract, Temporary Contract and Own-Accountancy. The second category includes fixed-term contracts, part-time contracts, short-term contracts, trial contracts, hired work with a written or spoken contract, or without a contract. While developing the presented model, possibility of distinguishing temporary labour code contracts and civil law contracts was explored. The more detailed analysis did not bring any changes to the conclusions drawn, thus the more aggregated model was chosen to picture the analysis. The third category includes own-account workers—self-employed persons without employees.

Interpersonal Justice

Interpersonal justice reflects the degree to which an employee is treated with dignity, courtesy and respect by superiors or third parties. To analyse it in the paper we used the reverse of interpersonal justice—interpersonal injustice. It was measured by an item denoting perceived unfair treatment at work (Unfair). Namely, the answer to the question “In the recent months have you been unfairly treated by others at work?” was used. This measure fairly appropriately reflects the definition of interpersonal justice. However, it has a broader meaning, covering not only the issues of dignified and respectful relations, but also a number of others. For this reason it might intersect with procedural and distributive dimensions of justice.

Controlled Variables

In the model we also control a number of standard variables to reduce the possible effect of confounding variables. The controlled variables include Personal Income, Sex, Age, Years of Study and Working Hours. In the model we have introduced the log2 transformed version of the income variable (Logged Income). This technique simplifies the quantitative interpretation of the results. Such a transformation enables measurement of the effect of doubling the income. This approach seems to be a better alternative to finding the effect of absolute increase in income, taking into account the spread of this factor.

Some researchers imply there is a non-linear relationship between age and job satisfaction (Clark, Oswald, & Warr 1996). In particular they suggest the relationship is U-shaped, which means that job satisfaction diminishes up to some age and then it increases with age. This hypothesis has been empirically proven and widely replicated (Lange 2009; Lévy-Garboua, & Montmarquette 2004; Millán, Hessels, Thurik, & Aguado 2011). For that, both age and age squared have been included in the model.

Results

Data Description

One of the aims of this paper is to demonstrate the differences between the knowledge workers and other workers. Firstly, we characterise the groups using descriptive statistics. The T-student tests for equality of means and χ^2 test for independence of samples have confirmed that the differences between knowledge workers and other workers were significant for all the analysed variables in all the considered periods. In Table 2 the characteristics of the knowledge workers and the other workers for the years 2009, 2011 and 2013 are presented.

Throughout the years, there has been some variation in the percentage of workers who feel treated unfairly at the workplace. However, in most cases the differences between the years are not significant. Surprisingly, in the 2009 and 2011 waves the knowledge workers turned out to be the group with a relatively higher number of persons who felt unfairly treated at work. This percentage decreased in every wave. In 2013 there were 48 percent of knowledge workers who perceived their work environment as unfair, compared to 50 percent in 2009. Contrastingly, the percentage of unfairly treated other workers increased between 2009 and 2013 from 49 percent to 50 percent, although between 2009 and 2011 a 3 percentage points drop in the number of unjustly treated other workers was noted.

One can conclude that the trends in employment flexibility between knowledge workers and other workers are somewhat dissimilar. At each considered point in time the other workers had a considerably smaller percentage of individuals with permanent contracts and a higher percentage of those with temporary contracts than the knowledge workers. The percentage of own-account workers was higher among the knowledge workers group in 2009. Yet the own-account knowledge workers group was shrinking every year, whereas the group of own-account other workers was gradually growing. Thus, in the years 2011

Table 2
Characteristics of Knowledge Workers and Other Workers

	2009				2011				2013			
	Other		Knowledge		Other		Knowledge		Other		Knowledge	
	Mean	%	Mean	%	Mean	%	Mean	%	Mean	%	Mean	%
Income	1,799		2,895		1,922		3,182		2,023		3,111	
Age	40		38		41		39		41		39	
Years of study	12		17		12		17		12		17	
Working hours	41		39		41		39		41		39	
Unfair		48.9		49.8		46.2		48.7		50.2		48.1
Sex		59.4		44.6		59.3		42.9		58.6		40.7
		40.6		55.4		40.7		57.1		41.4		59.3
Employment Flexibility		64.5		73.0		62.0		75.9		60.9		76.4
Temporary		29.1		19.6		31.5		17.6		32.2		18.7
Own-account		6.4		7.4		6.6		6.5		6.9		4.9
Unsatisfied		54.7		47.5		56.0		46.1		59.2		50.3
Satisfied		45.3		52.5		44.0		53.9		40.8		49.7

Source: Own Elaboration based on Social Monitoring Council (2013).

and 2013 the own-account cluster was relatively larger among the other workers than the knowledge workers.

The reason for the decrease in the relative number of own-account knowledge workers can be sought, among others, in the general slowdown of the Polish economy. First, people in an unstable situation are rather risk adverse and more reluctant to choose this employment arrangement (European Commission 2012). Second, a considerable number of own-account workers in Poland are actually not running their own businesses. In fact they are employed within companies that seek to reduce costs of hiring employees under employment contracts. In the event of an economic downturn of the organisation these employees are the most likely to be the subjects of redundancies. Although we assumed that this imposed employment flexibility is rather characteristic of the other workers, it might be the case that the group of knowledge workers is also, or even more influenced, by these practices. On the other hand, the sought after specialists in the trending fields may be offered permanent employment together with other favorable working conditions to give them an incentive to stay longer in the position. More detailed analysis may help identifying divergent trends between knowledge workers from different occupations.

Within the group of other workers, permanent employment is diminishing over time, while alternative contractual arrangements are growing. Within the group of knowledge workers on the other hand, there is a steadily decline in the number of own-account workers and an increase in the number of permanent workers. Yet the trends among knowledge workers that are employed on a temporary basis are not linear. In this group a 2 percentage point fall in the number of permanent workers was noted, between 2009 and 2011. However, in 2013 the percentage of temporary workers increased again by 1 percentage points.

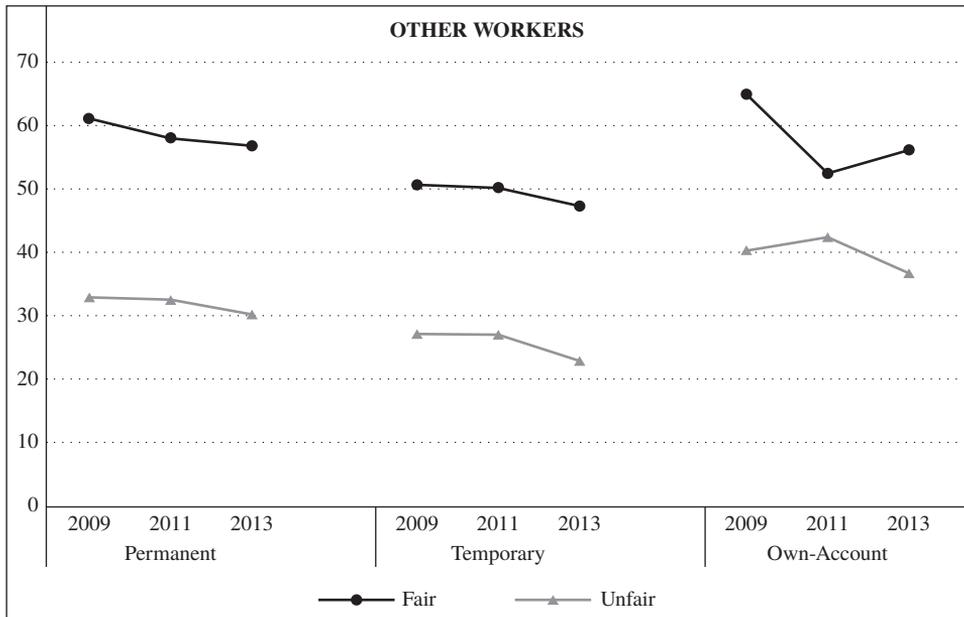
In general terms the percentage of job satisfied knowledge workers is higher than among their counterparts. In each group around half (52 percent in 2009; 53 percent in 2011) of knowledge workers describe themselves as satisfied or very satisfied with their job. However, in 2013 this number dropped to 49 percent. In the group of other workers the relative number of persons satisfied with their jobs stably declined within the analyzed period, dropping from 45 percent in 2009 to 40 percent in 2013. The presented characteristics and their changes over time may suggest that the shift from permanent to flexible working contracts in the case of the other workers adversely impacted their job satisfaction.

The focus of this paper is job satisfaction and its relation to interpersonal injustice and employment flexibility. To see the distribution of job satisfied workers, depending on their employment flexibility and unfair treatment at work [Figure 1](#) and [Figure 2](#) are presented, showing the percentage of other workers and knowledge workers who are satisfied or very satisfied with their jobs for all three considered periods. The results are presented for subgroups determined by the type of contract and interpersonal justice.

Unsurprisingly, in all cases the subgroups of workers who do not perceive themselves as unfairly treated at work had a higher percentage of job satisfied workers. The difference between the unfairly treated workers and those who did not consider themselves as treated unfairly was on average greater among the knowledge workers. However, the percentage of

Figure 1

Percentage of Satisfied Other Workers Depending on Type of Contract and Interpersonal Justice



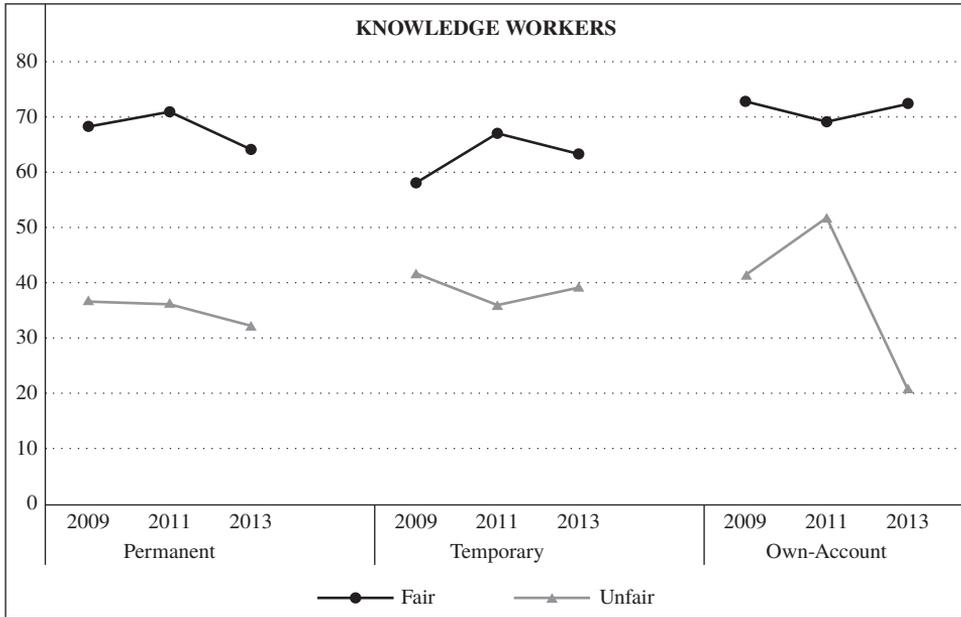
Source: Own Elaboration based on Social Monitoring Council (2013).

unfairly treated knowledge workers that were satisfied with their job was still higher than the percentage of other workers with the same problem. The only exception was the subgroup of unfairly treated own-account workers in 2013. The percentage of satisfied knowledge workers from this group fell drastically in this period. However, the size of this group is very small—in 2013 it was only 44 individuals. Some decrease in the percentage of job satisfied other workers belonging to this contractual group was reported, but the scale of this decline was much smaller.

Between the years 2009 and 2011 the percentage of job satisfied other workers with permanent contracts and own-account workers who did not report interpersonal injustice significantly declined. There were no other significant changes between the two periods. Between 2011 and 2013 the percentage of unfairly treated temporary other workers who were satisfied with their job fell by a significant amount: 4.2 percentage points. Also, a significant drop (6 percentage points) in the percentage of satisfied workers has been noted within the subgroup of permanent knowledge workers who did not struggle with the interpersonal injustice. Within the group of temporary workers the difference in the percentage of job satisfied persons between the unfairly treated individuals and the ones who did not face unfair treatment is smaller than within the group of permanent workers. This is especially true among the knowledge workers. Also, in 2009 and 2013 this difference within the group of temporary knowledge workers was notably lower than within the group of own-account knowledge workers.

Figure 2

Percentage of Satisfied Knowledge Workers Depending on Type of Contract and Interpersonal Justice



Source: Own Elaboration based on Social Monitoring Council (2013).

Model Estimates

To verify the research hypotheses two separate logistic models of job satisfaction for knowledge workers and other workers have been estimated. The separate models, instead of one model with interaction terms, were used to guarantee legibility of the results. Also, the two groups have been proven to have significantly different levels of all considered variables. Apart from that, the mechanisms through which the variables influence job satisfaction of knowledge workers and other workers may differ, therefore it is reasonable to free all the coefficients by estimating separate models. In both models the time element was included to verify the stability of the obtained results over time. We tested if the estimates of coefficients from the year 2009 were significantly different from the estimates from 2011 and 2013.

Table 3 presents results of the logit model estimated for other workers for the year 2009, as well as the estimated changes in values of the coefficients between the waves. According to the estimates there were no significant changes between 2009 and 2011. In general we can conclude that the results are stable over time. The only significant change between 2009 and 2013 was noted in the estimated influence of income on job satisfaction. However, the difference is quantitative rather than qualitative—in both waves income turned out to be a significant positive determinant of job satisfaction. In 2013 its impact was slightly stronger. As shown in Table 2, the average income of this group grew between these two periods, while other factors worsened, e.g. unfair treatment grew and number of

permanent contracts declined. One possible explanation for the increased strength of this factor's impact is that other workers would seek consolation in a better financial situation to compensate for the adverse effects of otherwise poorer conditions.

According to the model, temporary other workers have a significantly lower probability of attaining job satisfaction than the other workers with permanent contracts. Temporary employment may go together with a number of undesirable factors such as high precariousness. This may influence the satisfaction of temporary other workers. What is more, this group may have lower employability than their counterparts from the group of knowledge workers, as they possess less employable assets such as expert skills and knowledge.

The most influential factor determining job satisfaction of other workers in the model is interpersonal injustice. Other workers who believed they were subject to unfair treatment had much lower odds of being satisfied with their job than the people who did not share this belief. As assumed, interpersonal injustice has a strong impact on the job satisfaction of the workers. Drawing on the discrepancy theory, although some people may expect to be faced with unfair treatment at work, being treated with respect and dignity is probably a facet valued by the majority of workers. Therefore discrepancy from the valued reference level of this job feature clearly may result in job dissatisfaction. The interaction term between the unfair treatment and types of contract on the other hand, turned out to be statistically insignificant. From that one can conclude that other workers react to this factor similarly, independently from the type of contract, which contradicts hypothesis H2a about the lower impact of interpersonal justice on flexible other workers.

Table 4 presents the estimates of the logistic model for the knowledge workers for the year 2009 as well as the differences in the value of estimates between this year and the consecutive waves. In this group no significant differences in the estimates of the model between the analysed periods have been observed. We can conclude that the estimated results represent not only the specificity of the given year, but also that they can be generalised to other periods.

Unlike the case with other workers, there is no significant difference between either temporary workers or own-account workers and permanent workers, provided they do not feel unfairly treated. As explained before, it might be associated with the fact that knowledge workers in general have higher employability. Thus, negative outcomes that flexible employment may bring do not affect them as they do the other workers.

Similar to the case of other workers, the job satisfaction of knowledge workers is also significantly impacted by interpersonal injustice. In this case it is also the strongest factor in the presented model. As hypothesized in H1, the impact of this variable is stronger in the case of the knowledge workers. However, the difference between the values of the coefficients for the unfair treatment variable is small. One conclusion would be that both analysed groups are adversely affected by unfair treatment to a similar extent.

Additionally, the interaction term between interpersonal justice and the variable indicating temporary contract have a significantly positive coefficient. It suggests that the temporary knowledge workers are less influenced than the permanent knowledge workers by the unfair treatment at work, in terms of job satisfaction. One could conclude that, job satisfaction of temporary knowledge workers is less affected by interpersonal injustice than job satisfaction of temporary other workers, rejecting hypothesis H1.

Table 3
Logistic Model for the Group of Other Workers

	2009		2009–2011		2009–2013	
	B	S.E.	B	S.E.	B	S.E.
Logged Income	.303***	.039	.070	.055	.187***	.058
Age	-.062***	.016	-.018	.023	-.010	.023
Age Squared	.001***	.000	.000	.000	.000	.000
Male	-.124**	.056	-.126	.078	-.035	.079
Years of Study	.001	.012	-.024	.017	-.009	.017
Working Hours	-.001	.003	.002	.004	-.006	.004
Temporary	-.376***	.080	.120	.111	.086	.114
Own-Account	.114	.132	-.332	.178	-.137	.180
Unfair	-1.143***	.063	.107	.090	.036	.092
Temporary × Unfair	.137	.116	-.106	.161	-.133	.164
Own-Account × Unfair	.113	.222	.442	.317	.274	.313
Constant	-1.448***	.493	-.216	.705	-1.690**	.727
N	18,893					
% Correct Intercept	56.6					
% Correct Model	63.6					
			Cox & Snell R Square		0.089	
			Nagelkerke R Square		0.126	
			-2 Log likelihood		26,229.918	

* p < 0.1; ** p < 0.05; *** p < 0.01

B—estimate; SE—standard error; Exp(B.)—exponentiated estimate

Source: Own Elaboration based on Social Monitoring Council (2013).

Table 4
Logistic Model for the Group of Knowledge Workers

	2009			2009–2011			2009–2013		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Logged Income	.467***	.070	1.595	-.086	.099	.918	-.033	.100	.968
Age	-.072	.037	.931	.067	.049	1.070	-.102	.054	.903
Age Squared	.001***	.000	1.001	-.001	.001	.999	.001	.001	1.001
Male	-.172	.103	.842	-.106	.142	.899	-.223	.142	.800
Years of Study	.015	.033	1.015	.035	.043	1.035	.011	.041	1.011
Working Hours	-.013**	.005	.988	.008	.007	1.008	.006	.008	1.006
Temporary	-.323	.179	.724	.257	.251	1.293	.294	.247	1.342
Own-Account	.115	.251	1.122	-.276	.341	.759	.289	.375	1.335
Unfair	-1.301***	.114	.272	-.151	.155	.860	-.082	.155	.921
Temporary × Unfair	.547***	.243	1.728	-.384	.340	.681	-.065	.336	.937
Own-Account × Unfair	.051	.398	1.052	.702	.557	2.018	-.952	.648	.386
Constant	-2.937***	1.037	.053	-1.006	1.421	.366	1.841	1.462	6.301
N	5,049								
% Correct Only Const.	52.0								
% Correct Model	66.0								
	Cox & Snell R Square			Cox & Snell R Square			0.119		
	Nagelkerke R Square			Nagelkerke R Square			0.168		
	-2 Log likelihood			-2 Log likelihood			8,080.63		

* p < 0.1; ** p < 0.05; *** p < 0.01

B—estimate; SE—standard error; Exp(B.)—exponentiated estimate

Source: Own Elaboration based on Social Monitoring Council (2013).

On the other hand, a weaker effect of interpersonal injustice on temporary knowledge workers partly confirms the hypothesis H2b. In the context of discrepancy theory, this result suggests that the temporary knowledge workers value interpersonal justice less than the permanent knowledge workers. This may be derived from the short-lived relationship with the job. However, a similar effect was not found among the group of own-account workers. It is possible that the relation of own-account workers with the job prevails in the long run.

The hypothesis H3 has been confirmed in the case of temporary workers. In the case of the other workers no mitigating effect was found between unfair treatment at work and temporary employment. What is more, temporary other workers in general turned out to have a lower probability of job satisfaction than the permanent other workers. In the case of knowledge workers the influence of interpersonal injustice has been shown to be weaker among temporary workers than permanent workers. The divergence between knowledge workers and other workers in this matter may stem from the difference in employability between these two groups. The knowledge workers in general may have better employability assets that other workers may be lacking. Thus, they have higher employment security, a feature that can immunize them to the negative effects of interpersonal injustice.

Conclusions

In this paper we strived to demonstrate the influence of interpersonal injustice on workers' job satisfaction, dependent on their employment flexibility and the type of work they perform. In particular we sought confirmation for three research hypotheses. First, we hypothesized that the knowledge workers value interpersonal justice more, thus they would be more affected by unfair treatment than the group of other workers. Second, we formed a hypothesis about the lesser effect of unfair treatment on job satisfaction among both knowledge and other workers with flexible contracts. Finally, we proposed a hypothesis stating that this mitigating effect is stronger among the knowledge workers. To verify the hypotheses, we employed logistic modelling, preceded by descriptive analysis.

Descriptive analysis has shown that relatively more knowledge workers are satisfied with their jobs than other workers. On the other hand, the percentage of unfairly treated persons is similar in both groups. Permanent employment is more common among the knowledge workers than the other workers. Additionally, this form of employment is growing in popularity within this group, while the percentage of the permanent other workers is declining. The opposite is true for the own-account workers: this employment arrangement is diminishing among the knowledge workers, while growing among the other workers. A substantially smaller number of own-account workers have to deal with unfair treatment at work, compared to both permanent and temporary workers, who have in general a similar percentage of unfairly treated employees. Yet the percentage of unfairly treated own-account workers is higher among knowledge workers than the other workers.

In both analyzed groups and under any type of contract, the percentage of job satisfied workers is considerably lower among individuals facing interpersonal injustice.

Logistic modelling has shown that the unfair treatment at work has a similarly strong adverse impact on job satisfaction of both the other workers and the knowledge workers.

Yet, among the latter group the negative effect is smaller for persons with temporary contracts, which led us to reject the hypothesis H1 about the stronger impact of interpersonal justice on knowledge workers. At the same time, it partly confirms the hypothesis H2 stating that the flexible workers are affected by this factor to a lesser extent. However, this effect was not found either among knowledge own-account workers or groups of flexible other workers. The result also supports our third hypothesis H3 regarding the greater mitigating effect of employment flexibility on knowledge workers.

It is by no means to say that temporary workers, who are less impacted by unfair treatment, may be treated with less respect and dignity. Quite the contrary, the conclusion drawn should be that permanent knowledge workers as well as own-account workers are more vulnerable to these undesirable factors. For the permanent knowledge workers the unfair treatment at work may be a sign of a violation or breach of the psychological contract established with the employer. The consequence of violating this informal mutual agreement between the employee and the employer is not only diminished job satisfaction of employees; it also may result in outcomes undesirable for the organization, such as increased turnover and lowered intention to remain at work (Robinson & Rousseau 1994) as well as diminishing workers' loyalty and increased neglect (Turnley & Feldman 1999).

The findings do not unconditionally advocate temporary employment. Indeed, in the case of other workers temporary employment has been shown to be straightforwardly inferior to permanent employment in terms of job satisfaction. On the other hand, in the case of knowledge workers it has been proven to be favorable in conditions of interpersonal injustice. However, there are other factors often associated with temporary employment that need to be taken into account, such as job security (see: Wilczyńska, Batorski, & Torrent-Sellens 2016), employability or social security.

Limitations and Implications for Future Research

There are some limitations to this study. First, the variable used to measure interpersonal injustice might have a broader meaning than the interpersonal injustice itself. Unfair treatment by others may regard to the unjust procedures or unfair distribution of outcomes. In this way it intersects with other dimensions of organizational justice. However, as the measure focuses on the unjust treatment by other persons at work, be it co-workers, superiors or third parties, the interpersonal aspect of this variable is indisputable. That is to say that even if the unfair treatment regards unjust procedures or distribution, the employee perceives the problem on a personal rather than procedural level. For this reason the measure reflects well the interpersonal aspect of organizational justice.

Secondly, the voluntariness of working under a particular form of contract is an important factor forming job satisfaction, which has not been explored in the presented paper due to lack of availability of this data in the used dataset. Majority of employees working under civil law contracts or under bogus self-employment are imposed such an arrangement by an employer. Replicating the presented result, taking into consideration the type of contract preferences of the workers would be an interesting extension of the presented study providing an additional insight into the obtained results. Another implication for the

future research would be to compare the result with the results obtained after beginning of 2016, given the change in the Art. 25 § 4 of Labor Code from February 2016, entitling the workers with temporary labor code contracts to the same notice periods as the permanent workers.

The prevalence of certain type of contract may depend immensely on the nature of the actual occupation. Some occupations, are more exposed to precarious employment. Similarly, the kind of occupation may also determine the importance of unfair treatment by others at work. Some occupations require more interaction with the peers or supervisors than others. In such a case hostile relations could result in being generally more harmful for job satisfaction and well-being at work. The postulate of conducting the research on more disaggregated data in order to distinguish the actual knowledge work from the knowledgeable work is also present in the knowledge work literature (Fleming, Harley, & Sewell 2004). For this reason, a similar analysis on more disaggregated occupational groups of workers would help investigating if, in some occupations, workers prefer flexible over permanent employment.

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