Factors impacting the Czech employees' job satisfaction

Ondřej Dvouletý

Abstract

The article aimed to explore the drivers of employees' job satisfaction. Empirically, the study is based on the Czech data from the 2017 edition of the European Union Labour Force Survey (EU LFS), accounting for 12,699 employed individuals. The implemented methods relied on the employment of the multivariate ordered logistic regression analysis. The estimated model found empirical support for the significance of job-related determinants and individual characteristics. The main findings are that job satisfaction is significantly related to the organization's size, skill level classification of the profession, supervisory responsibilities, working hours, level of education and years of experience. The highest levels of job satisfaction were, on average, observed among highly skilled professions, especially in managerial occupations. From the perspective of the organization's size, employees working in organizations with less than ten persons were, on average, mostly satisfied with their jobs. The study contributes to a better understanding of the drivers of job satisfaction from the context of the Central-European country, and it offers several suggestions for future research.

Keywords: Job satisfaction, employees, occupational skill level, working hours

Article classification: Research paper

JEL classification: J24, J28

1. Introduction

Studying employees' job satisfaction and the factors shaping it has become a multidisciplinary research topic, combining insights from labour economics, human resource management, organizational psychology, happiness studies and other disciplines (Wagenaar et al., 2012; Martínez-Martí and Ruch, 2017; Canzio et al., 2022). In the previous studies, job satisfaction was identified as a factor shaping employees' productivity (Halkos and Bousinakis, 2010), making it a key outcome measure for employers. Still, on the other hand, as a significant part of an individual's overall subjective well-being (Pugliesi, 1999; Petru and Jarosova, 2019; Aydin, 2022; Hauff et al., 2022), job satisfaction has implications for the social and labour market policies and the whole economy (Huang et al., 2017; Morgan and O'Connor, 2022).

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This research study aims to contribute to the existing body of knowledge, studying drivers of job satisfaction from the perspective of job-related determinants and individual characteristics. Previous research has identified broad, impactful factors, including age, gender, educational level, type of contract and profession, family and life circumstances (Kaiser, 2007; Coo et al., 2020; Canzio et al., 2022), as well as employer characteristics, work conditions, and motivation (Micu, 2016; Wilczyńska et al., 2016) and policy interventions (Huang et al., 2017). The happy-productive worker model assumes that all these variables, i.e., individual-level, organization and work-related, and country-specific, serve as essential mediators in determining job satisfaction levels (Aziri, 2011).

Presented research contributes to the field from the context of the Czech Republic, serving as an example of a small open Central-European economy. It expands prior studies conducted by regional and international scholars within the Czech context. As noted by Lange (2009), the Czech labour market was driven by the legacy of the post-communist transition economy, reflected in attitudes, values and beliefs impacting levels of job satisfaction among Czech employees job satisfaction. Particularly, Lange (2009) finds the importance of confidence and the ability to make job-related decisions as essential resources of job satisfaction, while there was no significant effect of working hours or occupational skill level in the sample analyzed (N=3,853). Franěk et al. (2014) provided more novel insights on the individual-level impactful factors from the perspective of survey data (N=1,776) that were analyzed with statistical tests and ANOVA. One of the main findings was that employees working as managers have the highest satisfaction levels, and men are more satisfied with their jobs. Gender and occupational differences were also observed in a study by Čábelková et al. (2015) based on primary survey data (N=459). A later study by Sokolová et al. (2016) studied the importance of benefits and overall payroll and observed a significant correlation with job satisfaction. Uhlíř and Řehoř (2020) found in their recent study (N=4,728) that highly educated employees are more satisfied with their jobs but observed no significant differences between men and women.

As summarized above, heterogeneous effects concerning individual-level factors and job-related determinants of job satisfaction were identified by researchers in the Czech context. Observed heterogeneity may also be driven by the types of survey, their respective sample sizes, years of analysis or analytical methods applied. Therefore the current study contributes to this ongoing discussion by employing a large and representative dataset from the 2017 edition of the European Union Labour Force Survey (EU LFS), accounting for 12,699 employed individuals. The research aims to study the role of job-related determinants and individual characteristics by using the methodological approach established in the field (Kaiser, 2007; Lange, 2009; Čábelková et al., 2015). The applied empirical strategy relies on estimating an ordered logistic regression model with the ambition to provide novel insights that may serve the Czech scholarly community and stakeholders.

2. Data and variables

The study utilizes data from one of Europe's most extensive population-representative surveys, the European Union Labour Force Survey (EU LFS). The participating countries' national statistical offices and authorities handle the data collection procedure. In the Czech Republic, the responsible entity is the Czech Statistical Office. The survey methodology, details about the data collection and the codebook are available in Eurostat documents (2019; 2020). Our research exploits data specifically from the 2017 edition, which also contained unique questions related to job satisfaction and working conditions (Eurostat, 2018), which makes it a good fit for the purpose of this study. We restrict our sample to the Czech respondents. It originally had information about 40,993 individuals. Once limited only to employed individuals, i.e., excluding self-employed, those in the armed forces, students, out of labour market etc. and missing data, the final sample accounts for information about 12,699 employed individuals.

Our main variable of interest represents *job satisfaction*, a single question item reflecting respondent's satisfaction with their working situation, i.e., To what extent are you satisfied with your current job, from 1 = not satisfied at all to 4 = satisfied to a large extent. This is a standard measure established in the literature, used, for example, in studies by Schwarzwald and Shoham (1981), García-Araci and Van der Velden (2008) and Canzio et al. (2022).

We include job and occupation-related characteristics as the main determinants of job satisfaction (Micu, 2016; Canzio et al., 2022). Specifically, we work with *organization size*, classified into four dummy categories (less than 10 persons; 11 to 19 persons; 20 to 49 persons; 50 persons or more), employers *industry classification* (NACE-2 Rev standards.), *skill-level classification of professions*, divided into four International Labour Organization (2008) dummy categories (low-skilled professions, medium-skilled professions, high-skilled professions without managers and managers), seniority measured by the number of *years of experience* in current company or organization. We also control for employees' *supervisory responsibilities* (=1 if a respondent had any) and the *number of hours per week usually worked* in the main job and situation if a respondent worked for more employers (*second job*), identified in the literature with the term multiple jobs holding phenomena (Conen, 2022).

Additionally, our rich dataset includes a wide range of control variables identified by the previous literature, affecting labour market participation and satisfaction of employees (Kaiser, 2007; Wilczyńska et al., 2016), such as *age* (classified into several dummy categories, ranging between 15 and 64 years), *gender* (=1 if a respondent is a female), *nationality non-native* (=1 if a respondent holds different than Czech nationality), the highest *level of education* attained according to International Standard Classification of Education (2011), *marital status* (widowed, divorced or legally separated, single or married), *Partner/spouse living in the same household* (=1), *number of children aged less than 15 years* and *number of persons in living in the household.* Finally, we differentiate whether the respondent lives in cities, towns and suburbs or in the rural area. Sample summary statistics across all variables are provided in Table 1.

Table 1: Sample summary statistics (Employees only, 15-64 years)

Variable	Frequency (%)	N
15-19 years of age (=1)	0.4	12,699
20-24 years of age (=1)	5.0	12,699
25-29 years of age (=1)	11.0	12,699
30-34 years of age (=1)	11.8	12,699
35-39 years of age (=1)	13.8	12,699
40-44 years of age (=1)	16.9	12,699
45-49 years of age (=1)	13.1	12,699
50-54 years of age (=1)	13.2	12,699
55-59 years of age (=1)	9.7	12,699
60-64 years of age (=1)	5.1	12,699
Female (=1)	45.1	12,699
Nationality non-Native (=1)	2.2	12,699
Less than Primary Education (=1)	0.0	12,699
Primary Education (=1)	0.0	12,699
Lower Secondary Education (=1)	4.0	12,699
Upper Secondary Education (=1)	71.9	12,699
Post-secondary Non-tertiary Education (=1)	0.0	12,699
Short-cycle Tertiary Education (=1)	0.0	12,699
Bachelor's or Equivalent Level (=1)	5.7	12,699
Master's or Equivalent Level (=1)	17.7	12,699
Doctoral or Equivalent Level (=1)	0.7	12,699
Low-skilled Professions (=1)	5.1	12,699
Medium-skilled Professions (=1)	56.7	12,699
High-skilled Professions without Managers (=1)	33.8	12,699
High-skilled - Managers (=1)	4.4	12,699
Organization size (less than 10 persons) (=1)	17.0	12,699
Organization size (11 to 19 persons) (=1)	12.0	12,699

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Variable	Mean	SD	Min	Max	N
Organization size (20 to 49 persons) (=1)	21.4				12,699
Organization size (50 persons or more) (=1)	49.6				12,699
Supervisory responsibilities (=1)	19.4				12,699
Second job (=1)	1.0				12,699
Widowed, divorced or legally separated (=1)	14.0				12,699
Single (=1)	30.7				12,699
Married (=1)	55.3				12,699
Partner/spouse living in the same household (=1)	69.5				12,699
Cities (Densely populated area) (=1)	27.8				12,699
Towns and suburbs (Intermediate populated area) (=1)	34.4				12,699
Rural (Thinly populated area) (=1)	37.8				12,699
Variable	**Mean**	**SD**	**Min**	**Max**	**N**
Job Satisfaction	3.4	0.6	1	4	12,699
Years of Experience	10.6	9.7	0	47	12,699
Number of hours per week usually worked in main job	40.6	3.7	23	80	12,699
Number of persons in the Household	2.9	1.2	1	11	12,699
Number of children in the household aged less than 15 years	0.5	0.8	0	6	12,699

Note: Post-stratification weights applied.

Own elaboration based on the Labour Force Survey (LFS) ad-hoc module 2017 data (Eurostat, 2018)

3. Analysis and results

To study factors impacting Czech employees' job satisfaction, we implement a quantitative approach based on the estimation of the multivariate econometric model. Our main variable of interest, i.e., the dependent variable, located on the left side of the regression equation, represents the perceived levels of job satisfaction of employees participating in the survey, while on the right side of the equation, we include the described job-related factors and individual characteristics, having the role of explanatory variables. Given the nature of our dependent variable, i.e., *job satisfaction*, reflecting order/rank, we conduct an ordered logistic regression analysis (Fullerton, 2009). This procedure follows the established practice in the field (Kaiser, 2007; Lange, 2009; Čábelková et al., 2015) and is also in line with the methodological standards of applied econometrics (Fullerton, 2009; Baetschmann et al., 2015). Table 2 presents the final model, estimated with robust standard errors, weights adjusting estimates for the size of the Czech workforce, and industry dummy variables. The reported model is statistically significant (Chi-square's p-value < 0.000), and the statistical significance of the variables is determined by z-tests of the variables' significance (Tansey et al., 1996).

We find that job satisfaction is significantly related to most variables reflecting the type of profession, its specifics, and organization size. The most satisfied with their jobs on average are those working as managers, followed by highly skilled employees (professionals, technicians and associate professionals), medium-skilled employees (clerks, service and sales workers, agricultural, forestry and fishery workers, craft and related trades workers and plant and machine operators, and assemblers). On average, those working in elementary professions are the least satisfied with their jobs. Job satisfaction was found to be positively related to the seniority attributes, such as the number of years of experience, as well as supervisory responsibilities. We further observe that employees working in organizations with less than ten persons were, on average, mainly satisfied with their jobs. Job satisfaction is negatively associated with the number of worked hours per week, and we do not observe any significant effect of having multiple jobs.

Looking at the individual-level characteristics of employees, women are, on average, less satisfied with their jobs. We do not observe a clear significant pattern in our results regarding age differences. Relatively inconclusive findings are also related to the level of formal education, where we see a significant and negative relationship, favouring lower levels of education. Employees living in larger households seem to be more satisfied with their jobs, but we do not observe any other effects related to the role of partner and family. Finally, we observe some heterogeneity related to the place where the respondents live, i.e., individuals living in rural areas seem to be, on average, more satisfied with their jobs.

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Table 2. Results of the Ordered Logistic Regression Analysis

Independent variables/Dependent variable:	Job Satisfaction Scale from 1 to 4
	1 = not satisfied at all, 4 = satisfied to a large extent
20-24 years of age	-0.0282
	(0.244)
25-29 years of age	-0.00779
	(0.239)
30-34 years of age	0.143
	(0.241)
35-39 years of age	0.0520
	(0.241)
40-44 years of age	-0.0299
	(0.240)
45-49 years of age	-0.124
	(0.243)
50-54 years of age	0.00953
	(0.245)
55-59 years of age	-0.205
	(0.247)
60-64 years of age	-0.0404
	(0.254)
Female	-0.0789[+]
	(0.0425)
Nationality non-Native	-0.0441
	(0.151)
Primary Education	-1.290[***]
	(0.311)
Lower Secondary Education	-1.025[**]
	(0.313)

Upper Secondary Education	-0.720*
	(0.297)
Short-cycle Tertiary Education	0.289
	(0.889)
Bachelor's or Equivalent Level	-0.537+
	(0.307)
Master's or Equivalent Level	-0.451
	(0.296)
Medium-skilled Professions	0.472***
	(0.0896)
High-skilled Professions without Managers	1.113***
	(0.100)
High-skilled - Managers	1.307***
	(0.151)
Organization size (11 to 19 persons)	-0.121+
	(0.0710)
Organization size (20 to 49 persons)	-0.0939
	(0.0635)
Organization size (50 persons or more)	-0.108+
	(0.0592)
Supervisory responsibilities	0.362***
	(0.0588)
Years of Experience	0.00391+
	(0.00236)
Second Job	-0.140
	(0.202)
Number of hours per week usually worked in main job	-0.0116*
	(0.00547)
Number of persons in the Household	0.0511*

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	(0.0221)
Widowed, divorced or legally separated	-0.0800
	(0.0738)
Married	-0.0250
	(0.0663)
Partner/spouse living in the same household	-0.0444
	(0.0587)
Number of children in the household aged less than 15 years	-0.0482
	(0.0338)
Cities (Densely populated area)	-0.163**
	(0.0525)
Towns and suburbs (Intermediate density area)	-0.0142
	(0.0426)
cut1 Constant	-5.120***
	(0.474)
cut2 Constant	-3.281***
	(0.465)
cut3 Constant	-0.254
	(0.464)
Industry dummies (NACE-2 Rev)	Yes
Observations	12,699
Prob > chi2	0.000
Pseudo R^2	0.056
Akaike information criterion (AIC)	6135.4
Bayesian information criterion (BIC)	6552.6

Notes: Sample of the Czech employees only. Post-stratification weights were applied. Robust standard errors are in parentheses, statistical significance is reported as follows: + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Reference groups for dummy variables: *Age (15-19 years); Male; Native of own Country; Less than Primary Education; Organization size (less than 10 persons), No Supervisory responsibilities; No additional job; Low-skilled Professions/Elementary Occupations; Rural area (Thinly populated area).*

Source: STATA 14, own calculations based on the Labour Force Survey (LFS) ad-hoc module 2017 data (Eurostat, 2018)

4. Conclusions

This empirical study contributed to the body of knowledge on the factors impacting employees' job satisfaction in the context of the Czech Republic. Inspired by the international (Kaiser, 2007; Wilczyńska et al., 2016; Coo et al., 2020) and Czech context unique studies (Franěk et al., 2014; Čábelková et al., 2015; Uhlíř and Řehoř, 2020), the provided findings extend the regional state of the art from the perspective of statistically representative empirical analysis of Czech employees (N=12,699), extracted from the 2017 edition of the European Union Labour Force Survey (EU LFS). This article's novelty is a more complex understanding of the occupational and organizational aspects of job satisfaction. We observe an increasing job satisfaction with the skill level of the profession, finding, on average, the highest levels of satisfaction among managers, followed by professionals, technicians and associate professionals. Together with the information about the positive role of seniority (years of experience and supervisory responsibilities), this expands earlier findings by Franěk et al. (2014). Our research also supports the importance of organization size (Artz, 2008), noting that Czech employees working in the smallest companies are mostly satisfied with their jobs. Contrary to Lange (2009), who found no empirical support for the role of working hours, our study documents a negative effect on job satisfaction. Furthermore, we did not observe any effect of having additional jobs (Conen, 2020). Franěk et al. (2014) and Čábelková et al. (2015) found no significant pattern among age categories, which was also similar to our analysis, contrary to Lange (2009), who found a non-linear relationship with age. Also, we addressed some contradictory observations of earlier studies regarding gender. Uhlíř and Řehoř (2020) found no differences in satisfaction between employed men and women, and Lange (2009) observed higher satisfaction among women. In contrast, studies by Franěk et al. (2014) and Čábelková et al. (2015) observed higher satisfaction among men, which was also the case in the conducted analysis. Also, the overall effect of the levels of education seems to be mixed and inclusive, which points out rather to the importance of occupation and job-related variables and seniority when it comes to the Czech context.

Such findings are also relevant for the business practitioners, owners and managers of companies, delivering them information on the characteristics, and specifics of workspace and jobs, that determine the overall satisfaction of their employees, bearing in mind that satisfied employees are more engaged and productive at work (Hauff, et al., 2022; Aydin, 2022), as described in the happy-productive worker model (Aziri, 2011). Therefore, employers and business owners should be regularly interested in knowing the satisfaction levels of their employees, for example, through conducting regular surveys of employee satisfaction or interviews, allowing them to identify the most problematic aspects of work-life and dealing with them (Hauret et al., 2022; Nguyen and Uong, 2022).

Despite using a large and representative sample of Czech employees, the study is not without limitations. First, it is based on a one-year dataset. Therefore it would be beneficial to expand our findings by longitudinal research, also comparing job satisfaction over time. Second, there are variables and factors identified by the international literature that still deserve additional attention, but could not have been included in this study due to their unavailability, such as job security, remuneration, benefits and promotion prospects (Lange, 2009; Sokolová et al., 2016) or psychological profiles, values of employees and stress levels (Singh et al., 2019). These are advised to be studied in forthcoming studies. Third, although our analysis was controlled for the regional and industry dimensions, it would be beneficial to explore even more specific context-driven factors shaping job satisfaction in particular sectors (Mohelská et al., 2020), regions (Terpstra and Honoree, 2004) or both within a multilevel methodological setting (Gu et al., 2021).

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