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DETERMINANTS OF VOLUNTARY TURNOVER IN THE SEGMENTED LABOUR MARKET: THE CASE OF A POST-TRANSITION ECONOMY

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ABSTRACT. The paper elaborates on the drivers of voluntary labour turnover in Polish enterprises in the context of segmented labour markets. The data consist of primary CAWI survey results collected from 1000 companies operating in Poland. The ordered choice model is used to analyse the propensity of employees from different labour segments to leave an enterprise voluntarily. The study confirms neither the trap hypothesis nor the concept of compensating differentials. However, it reveals that structural factors are the main drivers of voluntary turnover (with a different impact depending on the labour segment). Additionally, the number of labour segments in the enterprise determines the frequency of voluntary resignations only for employees attached to the primary segment. Since the main drivers of voluntary turnover are related to a person's job satisfaction, this points to the role of HR and managerial practices in reducing the scale of voluntary resignations in companies.

Introduction

Retaining valuable workers is considered a necessary condition for sustainable competitiveness in enterprises (Vidal, Valle & Aragon, 2007; Shaw, 2014). While involuntary turnover is unavoidable, voluntary turnover may be reduced (Price, 1997). There is no consensus concerning the relationship between voluntary turnover and a company's performance – starting from arguments that voluntary turnover is associated with negative effects on the organisation (Hom & Griffeth, 1995; Glebbeek & Bax, 2004), through the belief that some scale of voluntary turnover may be beneficial for the company's performance, to the argument about the mitigating effect of voluntary turnover with an increase in its scale (Shaw, Gupta & Delery, 2005). However, a high voluntary turnover rate may cause multidimensional

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problems for companies (Meier & Hicklin, 2008; Schaap & Olckers, 2020; Skelton, Nattress & Dwyer, 2020).

Studies devoted to voluntary turnover address individual-level predictors as well as organisational determinants of resignation frequency. Economists typically examine turnover from an industry perspective, using predictors such as unemployment levels and labour force composition (Campbell, 1993). The importance of organisational-level turnover studies is also recognised in the organisational (Roberts, Hulin & Rousseau, 1978) and strategic human resources management (Huselid, 1995) literature. At the same time, concepts rooted in labour economics related to the internal stratification of jobs within the organisation – e.g., the theory of segmented labour markets (SLM) – have not been analysed in the context of voluntary turnover. Furthermore, the topic of voluntary turnover is broadly discussed in terms of developed countries, while studies concerning the frequency of resignations in developing and post-transition economies are rather scarce.

This article intends to fill this gap by analysing the problem of voluntary turnover determinants in Poland – a post-transition economy – within the framework of the segmented labour market (SLM) theory. Since the research approach distinguishes enterprises that have two and three labour segments, the impact of the number of segments on the frequency of resignations (and differences in this intensity between primary, intermediate and secondary segments) is also analysed. The aim of the article is twofold: i) to identify how labour segmentation (two vs three labour segments) influences voluntary turnover in enterprises, ii) to verify which factors drive voluntary turnover in particular labour segments within a company in a post-transition economy. The empirical study is based on a CAWI (computer-assisted web interviewing) survey conducted in the middle of 2019 among 1000 managers of companies operating in Poland. Using the SLM theory to understand the mechanism that describes the intensity of voluntary turnover in Polish enterprises may provide valuable knowledge about this phenomenon in other post-transition economies.

The article's contribution to the literature is threefold. Firstly, it distinguishes features that explain the emergence of two or three labour segments within enterprises. Secondly, it investigates whether the number of segments determines the turnover intensity (as turnover intentions differ across the segments). And thirdly, the propensity to quit between workers from the primary and secondary segments is compared, taking into account that attachment to these opposite segments will have a perceivable influence on the key drivers of voluntary turnover.

The remainder of the article is as follows. Section 2 provides a literature review on voluntary turnover and segmented labour markets. Section 3 elaborates on the empirical approach methodology. Section 4 presents the estimation results, while section 5 discusses the implications of the results. Section 6 concludes.

1. Literature review

1.1. Determinants of turnover intention

In the view of psychologists, turnover intention is the extent of employees' psychological attachment to the organisation that employs them (Mowday, Porter & Steers, 1982). The person–organisation fit is considered the key psychological factor that drives voluntary turnover in the Conservation of Resources Theory (Zhen & Mansor, 2020). Therefore, turnover intention is defined as the "conscious and deliberate desire to leave the organisation within the near future" (Kalemci Tuzun & Kalemci, 2012). In order to explain the phenomenon of high intensity of resignations, the concept of organisational identification is

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used (Reiche, 2009). This concept of organisational identification draws its theoretical basis from social identity theory, as well as from the social categorization theory. According to the social identity theory, individuals develop self-conceptions based on their affiliation with particular social groups (which may also be attributed to labour segments). The extent to which they perceive themselves within a specific social group influences their motivation to behave in terms of group membership (Tajfel, 1982; Turner, 1987). The more an individual defines him/herself in terms of their employing organisation, the more his/her attitudes are governed by social identity (Van Knippenberg & Van Schie, 2005). In the context of voluntary turnover, it is argued that individuals who identify with their enterprise integrate the firm as part of their self-concept and become psychologically intertwined with it, thus being more inclined to continue their membership (Reiche, 2009). Organisational prestige (Smidts, Pruyn & Van Riel, 2001), distinctiveness (Reiche, 2009), communication climate (Bartels et al., 2007), motivating job and role characteristics (Wan-Huggins *et al.*, 1998) and organisational tenure (Riketta, 2005) are identified as predictors of organisational identification. A more generalised concept (than organisational identification) is organisational commitment, which refers to a set of organisational goals and values shared across different organisations (Mathieu & Zajac, 1990; Mael & Ashforth, 1995).

Determinants of voluntary turnover are usually divided into environmental, individual and structural (organisational) (Price, 1997; Llorens & Stazyk, 2011). The environmental determinants cover internal (mainly organisational culture) and external (opportunity, labour market situation, and kinship responsibility) factors. As Hulin, Roznowski and Hachiya (1985) argue, more opportunity produces greater employee awareness of alternative jobs in the organisation's milieu. Employees then evaluate the costs and benefits of these alternative jobs, and if the benefits of the jobs are greater than the costs, they decide to quit. Kinship responsibility, defined as the existence of obligations toward relatives living in the community (Price, 1997), is believed to produce less turnover. Having family live nearby produces a sense of obligations in the employees toward these people. These obligations are most easily fulfilled by remaining with the current employer.

Among the individual determinants, general training, job involvement, job satisfaction, positive affectivity and negative affectivity are mentioned most often. General training is believed to translate into higher turnover (Becker, 1964). Highly involved employees exert more effort and receive more rewards for this effort, which leads to greater job satisfaction (Tsui, Pearce & Porter, 1997). Job satisfaction reflects on the person's subjective perception of feelings related to the job, and there is a clear negative relationship between job satisfaction and turnover (Schaap & Olckers, 2020; Skelton, Nattress & Dwyer, 2020). Positive and negative affectivity are dispositional tendencies to experience pleasant or unpleasant emotional states, respectively, which may impact job satisfaction through selective perception. An employee with high positive affectivity may also perceive ambiguous stimuli positively, increasing job satisfaction (Agho, Price & Mueller, 1993).

Among the structural determinants of voluntary turnover, autonomy, justice, stress, pay, promotional chances, routinisation and social support are mentioned most often (Huselid, 1995; Griffeth, Hom & Gaertner, 2000; Alterman *et al.*, 2021). Since many of these determinants constitute drivers of labour segmentation, SLM may be classified as the structural determinant of voluntary turnover. The results of empirical studies indicate that the level of autonomy, awareness of distributive justice, pay, social support and promotional chances negatively impact the intensity of voluntary turnover (Ryu & Jinnai, 2021). In turn, the level of job stress and routinisation increase voluntary turnover by their negative impact on job satisfaction. Interestingly, the level of absenteeism is not identified (at least in Bosnia and Herzegovina) as

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a predictor of the voluntary turnover; demographic characteristics seem to play a more significant role (Karamehmedović, Čelebić & Cero, 2021)

1.2. Segmented labour markets

The most popular concept of segmented labour markets, developed by Doeringer and Piore (1971), is based on dividing the market into primary and secondary sectors (segments), which creates a dual labour market. The primary segment provides "good jobs" with high wages, access to fringe benefits, stability of employment, and promotion prospects. In contrast, the secondary segment contains low-paid unpleasant jobs with high labour turnover and limited advancement opportunities ("bad jobs"). SLM theory argues that mobility between segments is rather limited since there are barriers to entry (including institutional ones – see e.g. Barbieri & Cutuli, 2016), especially to upper-tier segments. Conceptually, this mechanism is described by the "trap" hypothesis, which usually refers to temporary employment. It posits that once an individual enters the secondary segment of the labour market (characterised by temporary or other non-standard employment contracts compared to standard permanent contracts characteristic of the primary segment), he or she will be locked in this segment, as they are unlikely to move from the secondary segment to upper-tier jobs (Gash, 2008).

However, there is also an alternative approach, the "integration" (bridge employment) hypothesis. It posits that companies usually prefer to hire individuals on a temporary (trial) basis to test them before a permanent contract is signed. Thus, flexible, non-standard forms of employment (secondary segment) should finally be transferred into permanent employment (primary segment). As both hypotheses refer to the distinction between temporary and permanent employment, most empirical studies analyse labour market duality, assuming temporary (or non-standard) contracts would be concentrated in the secondary segment, while permanent (standard) employment contracts would characterise the primary labour market.

SLM theory also provides an explanation for labour market division other than dual. However, these theoretical approaches are not empirically analysed so extensively. Daw and Halliday Hardie (2012) identify three segments: primary (jobs offering above-median wages, benefits and maximum job security), intermediate (which include some job benefits/rewards available in the primary segment), and secondary (none of these properties). They tested the hypothesis of compensating differentials, i.e. inequality in labour force utility should be lower than wage inequality, by measuring the subjective success of individuals across the segments. The evidence for compensating differentials is found only in the primary and intermediate segments of the labour market, but not in the secondary segment. This means that individuals can forgo wages to find a job that is in line with their preferences regarding other non-wage benefits, but not in the secondary segment. Fichtenbaum (2006) also distinguished three segments, independent primary, subordinate primary and secondary (for the whole U.S. labour market), while analysing wage differentiation between union and non-union workers. He found the highest wage premium for unionised workers in the secondary segment, followed by subordinate primary. The smallest differences were in the independent primary labour market.

Based on a literature review, the research hypotheses to be verified within this study are:

H1: the number of labour segments, which stem from the internal structure of an enterprise, is an important driver of voluntary turnover in Polish enterprises,

H2: frequency of voluntary resignations is determined by the features of the workplace in the respective labour segments.

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2. Methodological approach

This empirical study is based on primary firm-level data collected using the CAWI technique between July and September 2019 in 1000 companies operating in Poland. Consequently, the results present the characteristics of firm-level labour segmentation in Poland without reference to the influence of the COVID-19 pandemic on labour market processes. Companies were selected based on a random sampling approach with additional stratification by company size, industry and region. The survey contained questions related to the perceived number of labour segments in each enterprise, as well as characteristics of jobs in the respective segments, mobility between segments, and drivers of segmentation at the firm level. Since the survey was answered by managers, the demand-side drivers of segmentation were mainly analysed, with minor emphasis on supply-side drivers.

In this empirical study, segmentation in companies is assumed to take two forms: duality, with primary and secondary segments, or a division into three segments, where the third segment is located between the primary and secondary segments and is characterised by a mix of features of both. As a result, the third "middle" segment may be perceived as transitory. Upgrading from the secondary to the primary segment (and vice versa) will take place via this intermediate segment (which is consistent with Daw and Halliday Hardie's (2012) approach to labour market division). It was the role of the company managers to assess how many segments exist in their enterprises.

Since the number of labour segments in each company is known, in the first step of the empirical methodology, the factors that determine this number are identified by introducing a binary dependent variable, TSEG, which takes a value of 1 for enterprises with three labour segments, and 0 otherwise. The following binary choice model is estimated:

$$TSEG_i^* = x_i\beta + \varepsilon_i, \tag{1.a}$$
$$TSEG_i = I\{TSEG_i^* > 0\}, \tag{1.b}$$
$$\varepsilon_i \sim N(0,1). \tag{1.c}$$

where x_i in equation (1.a) is a vector of variables that describe the companies' characteristics. A list and definitions of potential determinants (grouped into three classes of determinants: individual, structural, and environmental) of the number of labour segments and voluntary turnover are presented in Table 1. Regional dummies are also used in the estimations.

Table 1. Potential determinants of the number of segments and frequency of resignations

Name of variable	Definition
Individual*	
TRAIN	Variable takes three values: 0 for companies in which individuals in respective segments have low access to training schemes; 1 for companies in which access to training is at a medium level; 2 for companies that provide many training opportunities
Structural	
DIGIT	Variable takes three values: 0 for companies in which the digitalisation of workplaces in respective segments is low; 1 for companies in which digitalisation is at a medium level; 2 for companies with a high level of digitisation
TMAN	Binary variable: 1 for companies in which most employees in the respective segments belong to the group of senior managers
LMAN	Binary variable: 1 for companies in which most employees in respective segments belong to the group of line managers and team leaders

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LWORK	Binary variable, 1 for companies in which most employees in respective segments belong to the group of line workers
WAGE	Variable takes three values: 0 for companies in which wages in respective segments are below the national average wage; 1 for companies in which wages are similar to the national average; 2 for companies in which wages are above the national average
INTPL	Binary variable: 1 for companies that offer work via an Internet platform in respective segments
INTERN	Binary variable: 1 for companies which employ individuals in the form of internships and unpaid apprenticeships in respective segments
TELEWORK	Binary variable: 1 for companies in which employees in respective segments take advantage of teleworking
MOTF	Variable describing the intensity of financial incentives offered to employees in respective segments; it takes values between 0 and 1 corresponding to the fraction of respective types of incentives used in the company**
MOTNF	Variable describing the intensity of non-financial incentives offered to employees in respective segments; it takes values between 0 and 1 corresponding to the fraction of respective types of incentives used in the company***
PHY_NUI	Variable takes three values: 0 for companies in which the physical nuisance of workplaces in respective segments is low; 1 for companies in which physical nuisance is at a medium level; 2 for companies in which the level of physical nuisance is high
MEN_NUI	Variable takes three values: 0 for companies in which mental nuisance of workplaces in respective segments is low; 1 for companies in which mental nuisance is at mid-level; 2 for companies in which the level of mental nuisance is high
ROUT	Variable takes three values: 0 for companies in which routinisation of workplaces in respective segments is low; 1 for companies in which routinisation is at a medium level; 2 for companies in which the level of routinisation is high
Environmental	
COM_AGE	Variable indicating the age of an enterprise
MEDIUM	Binary variable taking a value of 1 in the case of medium enterprises
LARGE	Binary variable taking a value of 1 in the case of large enterprises
CIVIL_CONTR	Binary variable taking a value of 1 in the case of enterprises for which the dominant form of cooperation with workers is a contract of mandate or contract work
OUTSOURC	Binary variable taking a value of 1 in the case of enterprises for which the dominant form of cooperation with workers is outsourcing
B2B	Binary variable taking a value of 1 in the case of enterprises for which the dominant form of cooperation with workers is a business to business (B2B) contract

*The study mainly concentrates on the structural and environmental determinants of voluntary turnover, since the CAWI survey was directed at managers. Therefore, only one variable associated with training may be considered an individual determinant.

** Financial incentives analysed in the study cover: bonuses, medical care packages, additional retirement insurance, company phone, company laptop, company car, company apartment, co-financing employee holidays, lunch coupons, vouchers for shopping, vouchers for fitness activities, preferential loans, company shares, company kindergartens, co-financing for individuals' training.

*** Non-financial incentives cover: flexible working time, home office, work-life balance, possibility of self-development, access to training schemes, participation in integration trips, participation in the decision-making process, working with modern equipment, receiving ambitious tasks, employment stability, promotion opportunities, low level of stress

Source: own elaboration.

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Then, the theoretical value of the latent variable $TSEG_i^*$ is calculated, taking into account the estimates of the parameters in models (1.a)-(1.c). The following formula is adopted:

$$T\hat{SEG}_i^* = x_i\hat{\beta} + TSEG_i\frac{\phi(x_i\hat{\beta})}{\Phi(x_i\hat{\beta})} - (1 - TSEG_i)\frac{\phi(x_i\hat{\beta})}{1-\Phi(x_i\hat{\beta})}. \tag{2}$$

Variable (2) - $T\hat{SEG}_i^*$ - is used in the next step as an explanatory variable in the equation explaining the individuals' propensity to quit a job voluntarily when they are employed in the secondary segment. The dependent variable SOD_S takes a value of -1 for companies characterised by a low frequency of voluntary turnover by employees from the secondary segment, 0 for enterprises characterised by a moderate frequency of resignations, and 1 if this frequency is high. Therefore, the parameters of the following ordered choice model are estimated:

$$SOD\_S_i^* = x_i\gamma_1 + z_i\gamma_2 + T\hat{SEG}_i^*\gamma_3 + \varepsilon_i, \tag{3.a}$$
$$SOD\_S_i = I\{SOD\_S_i^* > \mu_2\} - I\{SOD\_S_i^* < \mu_1\}, \tag{3.b}$$
$$\varepsilon_i \sim N(0,1). \tag{3.c}$$

Vector x_i consists of variables describing company features, while vector z_i contains variables related to job characteristics and requirements for employees performing jobs in the secondary segment – used as proxies of the probability of voluntary resignations (as defined in Table 1). γ_1 and γ_2 are vectors of parameters that show the influence of company features and job characteristics, respectively, on the propensity to quit a job voluntarily by individuals working in the secondary segment. Parameter γ_3 depicts the relationship between the existence of three labour segments in the company and the propensity to quit the job voluntarily by individuals working in the secondary segment.

In the last step similar procedure is utilised to assess the propensity to quit the job voluntarily by individuals working in the primary segment. The dependent variable SOD_P is defined in the same way as SOD_S; however, it refers to individuals working in the primary segment. The ordered choice model takes the form:

$$SOD\_P_i^* = x_i\delta_1 + \tilde{z}_i\delta_2 + T\hat{SEG}_i^*\delta_3 + \varepsilon_i, \tag{4.a}$$
$$SOD\_P_i = I\{SOD\_P_i^* > \tilde{\mu}_2\} - I\{SOD\_P_i^* < \tilde{\mu}_1\}, \tag{4.b}$$
$$\varepsilon_i \sim N(0,1). \tag{4.c}$$

where vector x_i consists of variables that describe company features. Vector $\tilde{z}_i$ contains variables related to job characteristics in the primary segment and the requirements for employees who perform these jobs. δ_1 and δ_2 are vectors of the parameters that show the influence of company features and job characteristics, respectively, on the propensity to quit the job voluntarily by individuals working in the primary segment. Parameter δ_3 depicts the relationship between the existence of three labour segments in the company and the propensity to quit the job voluntarily by individuals working in the primary segment.

3. Data analysis

In most of the surveyed companies (n=755, 75.3%), two segments are identified (three segments are reported in almost ¼ of enterprises, n=247).

Table 2 presents the estimates of the parameters of the probit model that identifies factors that drive the development of three labour segments in enterprises. The variables that are significant at the 0.1 level of significance are included in the final specification. The number of labour segments is mainly determined by the size and "age" of companies – the bigger and older the companies are, the higher the percentage of enterprises that report a division into three segments.

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Interestingly, no interregional differentiation is identified. Only in the case of enterprises from the Lodzkie region is the propensity to form three labour segments significantly lower than for companies located in other regions.

Table 2. Estimates of the parameters of the probit model identifying factors that drive the development of three labour segments in enterprises

Variable	Estimate	Average marginal effect	p-value
LARGE	0.783	0.240	0.000
MEDIUM	0.311	0.099	0.033
COM_AGE	0.003	0.001	0.055
LODZ*	-0.486	-0.130	0.033
CIVIL_CONTR	0.480	0.125	0.007
OUTSOURC	0.578	0.178	0.017
B2B	0.703	0.213	0.025

* *LODZ* – regional variable for Lodzkie region
Source: own elaboration.

However, the dominant form of contractual arrangements between employer and employee significantly influences the number of labour segments in companies. For enterprises that rely mainly on standard employment contracts, two segments are usually observed. Three labour segments are reported most often in companies that take advantage of B2B contracts and less often in enterprises that introduced a business model based on outsourcing or cooperation with individuals based on civil law contracts. Thus, the intermediate segment may encompass jobs that are outsourced to other companies. These jobs are also given to individuals whose relationship with the company is based on civil law arrangements (external providers) or to workplaces that are necessary to ensure the efficient cooperation between the enterprise and an external "service" provider. However, as Lee, Fernandez and Lee (2021) revealed, an increase in outsourcing activities in public-owned institutions in the U.S. translates into higher turnover intention.

In order to verify whether assumptions concerning the error term are satisfied, the symmetry (using the Stukel (1988) test) and normality of its distribution, as well as the homoscedasticity, are verified. Since the assumptions concerning the error term are satisfied (Table 3), it is justified to draw conclusions based on the results presented in Table 2.

Table 3. Results of testing the validity of assumptions concerning the error term for models (1.a)-(1.c)

Testing	Statistic	p-value
Normality of error term	3.21	0.231
Symmetry of distribution of error term	0.14	0.932
Homoscedasticity	12.40	0.134

Source: own elaboration.

Employee turnover, measured by the frequency of voluntary resignations, is highest in the intermediate segment, followed by the secondary segment (Table 4). This observation confirms the theoretical SLM assumptions about the instability and temporal mode of employment in the secondary segment, but it also points to the transitory character of the

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intermediate segment. Lower turnover in the primary segment may be associated with higher job satisfaction and more advanced HR practices being provided in this segment.

Table 4. Frequency of voluntary turnover among workers from the primary, intermediate and secondary segments

Segment/Frequency of quits	Primary		Intermediate		Secondary	
	n	%	n	%	n	%
Low	480	48	79	32	383	38
Medium	374	37	124	50	445	45
High	148	15	44	18	172	17

Source: own elaboration.

After identifying the factors that influence the number of segments within enterprises, the parameters of the model explaining the frequency of voluntary turnover are estimated (Table 5). The results indicate a statistically significant relationship between the number of labour segments in an enterprise and the propensity of employees who work in the secondary segment to quit the enterprise.

In turn, the variable $T\hat{SEG}_i$ proves to be statistically insignificant in the equation that explains the propensity to voluntarily quit a job for employees who work in the primary labour market segment. Such a result may be explained by the fact that individuals in the primary segment may be aware that they have better working conditions than other workers in the company, regardless of the number of segments (e.g. these conditions are better than those in the intermediate and secondary segments).

The results from Table 5 indicate that enterprise size – classified as an environmental factor – has an important impact on the propensity to quit voluntarily in both the primary and secondary segments. The largest probability of observing a large scale of resignations is recorded in large and medium-sized enterprises, while small firms are characterised by the lowest frequency of voluntary turnover. This may be associated with the greater anonymity of employees in bigger companies.

Structural variables have a statistically significant impact on voluntary turnover. The physical nuisance of a workplace in the secondary segment affects the ratio of voluntary turnover stronger than in the primary sector. The routinisation of workplaces also increases voluntary turnover. This concerns workers in the primary and secondary segments to a different extent. Wages have a statistically important impact on the intensity of resignations only in the primary labour segment. When the wage offered to employees working in this segment in a given enterprise is lower than the average national wage, the frequency of voluntary turnover is high. However, the readiness of individuals from the primary segment to change firms decreases as the wage grows. Financial and non-financial incentives (taken together as compensation) are important in reducing voluntary turnover (Singh, 2019). However, the intensity of financial incentives offered to employees was insignificant in the equation that explains the propensity for voluntary turnover in both the primary and secondary segments. "Employment" in the form of internships and unpaid traineeships translates into increased labour turnover in both segments, as the estimate of the parameter for the *INTERN* variable is significantly positive.

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Table 5. The results of estimating the parameters of the ordered choice model that explains employees' propensity to quit voluntarily

Variable	Equation for employees working in the secondary labour segment	Equation for employees working in the primary labour segment
$TS\widehat{E}G_i^*$	0.094*	-
MEDIUM	0.417***	0.401***
LARGE	0.587***	0.729***
PHY_NUI	0.397***	0.271***
MEN_NUI	0.407***	-
ROUT	0.397***	0.362***
INTERN	0.185**	0.159*
WAGE	-	-0.175***
TRAIN	-	0.186***
MOTNF	-1.174***	-1.293***
μ_1	0.915	1.235
μ_2	2.463	2.591
Regional dummies		
LODZKIE	-	-0.416**
MALOPOLSKIE	-0.325**	-0.294**
OPOLSKIE	-0.800**	-0.620*
PODKARPACKIE	0.305***	-
PODLASKIE	-	0.436**
WIELKOPOLSKIE	-	-0.295**

*, **, *** denote significance at the 0.1, 0.05 and 0.01 level of significance, respectively
Source: own elaboration.

Participation in training – the only individual factor taken into account in the modelling approach – has a positive impact on the frequency of voluntary turnover of workers from the primary labour segment. The extent to which the knowledge and skills required for a job are transferable between employers positively affects rotation within enterprises among highly qualified workers.

4. Discussion

The results of the empirical study indicate that three segments are recorded more often in large and older companies. Such a result may be explained by the processes taking place inside enterprises. In micro and small companies, the degree of job diversity and hierarchy levels in the organisational structure are limited, and therefore the workplaces tend to polarise into "good" and "bad" ones (Kochan et al., 2003). By contrast, in larger companies, a much greater variety of job positions and multi-level structures arise, creating room for a transitional form between "good" and "bad" jobs within the same organisation, i.e. the intermediate segment. Since company size is usually positively correlated with the number of years it operates on the market, this explains the more frequent occurrence of three labour segments in more mature enterprises.

The relationship between enterprise size and voluntary turnover may be explained by some organizational theories. Since employees are anonymous, it is easier for them to decide about changing organisation, as their sense of social identity with the group is rather weak (Van Knippenberg & Van Schie, 2005). This result may also be explained using the literature of

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human resource management in small firms (Storey, 1994; Wilkinson, 1999). According to the "small and beautiful" scenario, small firms facilitate close and harmonious relationships among employees. As the Bolton Committee Report (1971) suggests, small enterprises provide a better environment than large ones. Moreover, as Ingham (1970) and Schumacher (1973) argue, small firms demonstrate people management with better communication, and there is greater flexibility and a low level of conflict within them. Therefore, the family "atmosphere" in small enterprises, if perceived as compensating for relatively lower wages (Ram et al., 2020), may also contribute to the positive picture of small firms and decrease the turnover frequency. A higher frequency of resignations from large enterprises may also be associated with the fact that employers appreciate candidates with experience in large, well-known companies. Therefore, employees in larger companies may be more self-confident and expect that they will find a job in another company after they resign.

Voluntary turnover appears to be substantially lower in the primary segment, which may be driven by workers' job satisfaction. Carter et al. (2019) revealed that managers (usually assigned to the primary segment) who were selected for succession planning programmes had a lower propensity for voluntary resignations. As Price (2001) argued, the level of job satisfaction should be an important driver of the intensity of voluntary turnover. Comparing what the current job offers with what the alternative job could offer may result in greater dissatisfaction, indirectly increasing turnover. However, differences among segments in the frequency of voluntary resignations are not large. In contrast, numerous studies indicate that voluntary labour turnover strongly depends on human resource management practices (Shaw et al., 1998; Price, 2001; Zhang et al., 2019). They are more advanced in larger companies, while small and medium-sized enterprises are more likely to outsource HR management (Wallo & Kock, 2018).

The relationship between the number of labour market segments and the propensity for voluntary resignations is important among workers from the secondary segment but not significant for workers from the primary labour segment. This result is not surprising. In companies where three segments are identified, employees in the secondary segment may be aware that their position is worse than that of individuals with jobs in both the primary and intermediate segments, with limited chances to upgrade to these segments within the same enterprise (Kalleberg, Wallace & Althauser, 1981). As a result, their propensity to search for a job in other companies (and consequently the frequency of resignations) driven by external environmental factors is higher than in enterprises with a dual job structure, since these employees should have a low/moderate level of organisational identification (Wan-Huggins, Riordan & Griffeth, 1998) and perceive better opportunities outside the company (Hulin, Roznowski & Hachiya, 1985).

The physical nuisance of a workplace in the secondary segment affected the ratio of voluntary turnover stronger than in the case of workplaces in the primary sector. This result is in line with expectations since manual jobs requiring physical effort are more common in the secondary segment than in the primary segment. In turn, mental nuisance in the primary segment has a stronger impact on the frequency of resignations than in the secondary segment. In fact, cognitive jobs that require mental effort very often concern the primary segment. If duties are difficult to fulfil, job stress appears (Price, 2001). As Singh, Amiri and Sabbarwal (2019) and Lo et al. (2018) argue, occupational stress disrupts the psychological balance and decreases job satisfaction. Lower job satisfaction leads to a reduction in an individual's commitment to the organisation and to growing labour turnover (Price, 1997; Kurniawaty, Ramly & Ramlawati, 2019). Therefore, signs of the estimates do not contradict expectations.

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The result indicating the relationship between routinisation and the propensity to quit voluntarily confirms findings obtained by Arendt and Grabowski (2019) and Yuhong and Xiahai (2020). In general, routinisation concerns lower-tier, not well-paid jobs, which are susceptible to automation. Moreover, numerous studies indicate that routinisation of work may negatively impact individual performance as it suppresses creative expression on the job (Baba & Jamal, 1991). It may also increase turnover through its negative impact on job satisfaction (Carmeli & Weisberg, 2006).

A negative relationship between the level of wages and the propensity for workers from the primary segment to quit voluntarily is in line with expectations. Studies on the relationship between wage level and job satisfaction indicate that this linkage is positive (Grund & Sliwka, 2001; Green & Heywood, 2008) and that firms which offer wages below the market average face problems retaining employees (Singh & Loncar, 2010). In Germany, this pattern is observed even among workers earning a low salary (Bossler & Broszeit, 2017). However, our findings concerning employees in the secondary segment are different from those for Germany. The difference may be attributed to the fact that the minimum wage in Germany is much higher than in Poland. Therefore, even a slight increase in wages in Germany may lead to a significant growth in job satisfaction. Moreover, with regard to wages, the difference in the results between the primary and secondary segments in Polish enterprises may be driven by a higher variance of wages in the primary compared to the secondary labour segment. Our results suggest that an increase in wage may reduce voluntary turnover in a post-transition economy if the base wage is not too low.

Financial incentives prove to be insignificant in the model explaining voluntary turnover. This may result from the high correlation between financial incentives and wages, which affect the propensity to quit (Price, 2001). In turn, the intensity of non-financial incentives offered to employees in the primary and secondary segments significantly reduced the frequency of voluntary resignations. This is in line with findings concerning the relationship between non-financial incentives and job satisfaction. Numerous studies indicate that non-monetary rewards positively affect job satisfaction, employee engagement and firm performance (Moreira, Fox & Sparkes, 2002; Waqas & Saleem, 2014; Gabriel & Nwaeke, 2015).

The impact on voluntary turnover of employing individuals in the form of internships and unpaid apprenticeships is self-explanatory in the primary segment. This segment usually contains highly-qualified people working in managerial positions who are not interested in such contractual arrangements. However, in the secondary segment, internships and traineeships might be used – in line with the bridge employment hypothesis (Gash, 2008) – as a way to get acquainted with the company and then sign a permanent employment contract. This does not seem to be the case in our study. Even in the secondary segment, a non-employment mode of cooperation does not establish enough attachment to the company to reduce voluntary turnover.

A positive relationship between participation in training and voluntary turnover may seem surprising at first. However, a rational explanation may be found in Becker's human capital theory (Becker, 1964). A higher frequency of training within an enterprise has a positive impact on worker performance (Arendt & Grabowski, 2017). However, employees with greater capabilities have better opportunities to find a job in another enterprise. As Trevor (2001) argues, high-performing employees are thought to have access to more external employment opportunities than poor performers, and they are therefore more likely to quit. Though our results confirm the findings of similar studies (Price, 2001), they also contribute to the knowledge about the different impact that training has on voluntary turnover through the lens of the segmented labour market theory. These results may tell us that training schemes provided

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to employees in the secondary segment probably concentrate on skills that are specific to the individual enterprise, which are not easily transferable across other companies (Becker, 1993). Therefore, the problem of the high ratio of voluntary turnover among secondary segment workers seems imperceptible.

Conclusions

In this empirical investigation, the role of individual, structural and environmental determinants of the frequency of voluntary turnover is analysed using the ordered choice model. The results do not point to the trap hypothesis in terms of explaining labour segmentation in Poland, as is the case in most studies. They also do not validate the concept of compensating differentials. At the same time, it shows that internal stratification of jobs within companies influences voluntary turnover only for workers in the secondary labour segment, thus confirming the first research hypothesis only partially.

Analysing the drivers of voluntary turnover in the respective labour segments (primary and secondary) reveals that determinants which appeared to explain statistically significantly the propensity for voluntary resignations differ between segments. This verifies the second research hypothesis and posits that HR and managerial practices in companies that operate in post-transition countries should consider labour segmentation as an important driver in activities aimed at mitigating the scale of voluntary turnover. Among the factors that shape the voluntary quit behaviour analysed in the study, the group of structural variables is the most numerous, showing that managers emphasise this category. The role of wages plays an important role for employees from the primary segment but not the secondary segment. If a job requires intensive physical or mental effort, the scale of voluntary turnover increases in both segments, but to different extents. These findings could provide recommendations for companies in which workplaces are physically or mentally intensive. If employees are able to find a work-life balance, they are more satisfied and very often decide to work longer for the same employer. A similar recommendation concerns the routinisation of work. Interchanging tasks among workers, as well as enabling changes of departments, may help reduce the frequency of voluntary turnover, especially in workplaces in the secondary segment.

The role of training – an individual factor analysed in the study – appears to affect voluntary turnover only in the primary segment. This shows that training provided to people in this segment is universal/transferable and may be easily used and monetised in other companies, which brings the practical implication regarding the introduction of payback clauses. And finally, among the environmental factors, the enterprise size is important. Larger enterprises are characterised by a relatively higher frequency of voluntary resignations compared to smaller ones.

The mode of data collection used in this study (a CAWI survey with managers) may be seen as a limitation of this research. The potential drawbacks are related to the characteristics of the technique (e.g. representativeness), as well as to the fact that the information collected shows employers' perceptions (not real data) regarding voluntary turnover and segmentation in the enterprises. However, taking into account that most analyses that deal with SLM theory are based on secondary, public statistical data, it is argued that this drawback may be treated as an opportunity, not a limitation.

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