

THE INFLUENCE OF STAFF TURNOVER ON WORK MOTIVATION AND JOB PERFORMANCE OF EMPLOYEES IN IT SECTOR – THE RESULTS OF EMPIRICAL RESEARCH

ANNA KOSZELA

ABSTRACT

Voluntary staff turnover is becoming increasingly common, especially in the IT sector. It can impact job performance and the factors which shape it, such as work motivation. Given this fact, the aim of this paper is to empirically verify the impact of voluntary staff turnover on job performance and work motivation of employees in the IT sector, and to verify whether voluntary staff turnover can be a moderator of the relationship between work motivation and job performance of employees in the IT sector. The formulated research hypotheses were verified on a sample of 151 employees from organisations within the IT sector in Poland. To verify the impact of voluntary staff turnover on work motivation and job performance, a correlation analysis was conducted. In order to verify the moderation effect, a regression analysis with a moderator was used. The results of the research reveal that voluntary staff turnover has a negative impact on the job performance of employees from the IT sector. Moreover, voluntary staff turnover is a moderator for the relationship between work motivation and job performance of employees from the IT sector and has a negative impact on this relationship, which means that an increase in voluntary staff turnover reduces the positive impact of work motivation on job performance for employees from the IT sector. In this way, it has been proven that – in terms of impact of work motivation on job performance – the phenomenon of voluntary staff turnover is a negative one, although it is common among employees from the IT sector.

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KEY WORDS

Management, voluntary staff turnover, job performance, work motivation, employees from the IT sector.

ANNA KOSZELA

e-mail: anna.koszela@pwr.edu.pl

Wroclaw University of Science
and Technology, Poland

Introduction

Huge technological progress, which has been continuously observed over the last dozen or so years, has contributed to an increase in demand for high-tech products. To meet this demand, an increasing

number of organisations in the information technology (IT) sector are being launched on the market (Budek, 2018; Moore, 2000; Rong and Grover, 2009).

The IT sector is extremely broad in terms of the number of subcategories with which it can be defined. The following are considered to be the main IT subsectors: production, consultancy, sales and service of hardware and software, data processing and analysis, and IT education (Gutta et al., 2011). Naturally, these are only the main categories, and the IT sector itself is attempting to dynamically adapt to the constantly growing needs of customers and the market. Significant factors which contribute to the development of this industry are technological progress, market globalisation, global digitisation, and consequently the accumulation of countless amounts of data from almost every sector as well as the accompanying need to store, process and secure it (Kisilowski and Urbaniak, 2013; Gutta et al., 2011). It is the dynamics of industry development, willingness to meet the growing expectations of customers and answer to the needs of the market, as well as growing competition (Nazdrowicz, 2015), which have contributed to the increase in demand for highly qualified specialists and IT engineers.

Unfortunately, there is still a shortage of employees from the IT sector on the labour market and only a few enterprises are satisfied with the situation on the labour market as it stands (McGee and Thyfault, 1998; Kisilowski and Urbaniak, 2013). As a consequence, it is the employer who has to care more for the employees in the organisation and to offer competitive working conditions. This is a reflection of the fact that it is the employees, attracted by certain incentives, who decide where to take up employment. Such a change on the job market reduces employees' barriers to leaving the company and contributes to an increase in the staff turnover rate (Davidson, 1999; Purohit, 2016). Currently, employees in individual organisations, as well as in the IT sector generally, should

be treated primarily as the most valuable assets (Ferratt et al., 1999). Therefore, all activities related to personnel management should be focused on creating effective use of the potential that lies in the employees (Pocztowski, 2007, p. 31). The output of an entire organisation depends on their competencies, understood as "... a set of knowledge, skills and characteristics allowing for the effective performance of tasks (...) in the context of the adopted strategic objectives of the organisation" (Bieńkowska and Brol, 2011: 177).

Unfortunately, in recent years the IT sector has seen the growing phenomenon of staff turnover (Adams et al., 2006; Purohit, 2016). The impact of this phenomenon on the organisation is not clear, however, especially in the IT sector. General statements indicate that this is a positive phenomenon, especially as it allows for knowledge and personal development (Fallicket et al., 2006; Jacks and Palvia, 2014). On the one hand, it seems that it contributes to the development of employees (as employees in the IT sector look for sources of development outside the organisation) and enables the inflow of new blood to the organisation (fulfilling the need to replace the employees who have left the organisation with new ones) (Urbancová and Linhartová, 2011; Ampomah and Cudjor, 2015). On the other hand, employees who leave the organisation take the knowledge and skills that they possess with them (Listwan, 2010; Ampomah and Cudjor, 2015). Also, a high rate of staff turnover reduces the morale of the employees who remain with the organisation (Munck, 2001; Chambers and Honeycutt, 2009). In addition, staff turnover affects employees' job performance and work motivation within organisations (Wairimu, 2008; Waeyenberg, 2017). Given the negative aspect of staff turnover and the more rapid development of the IT sector when compared to the number of IT

specialists (there is still a shortage of employees in the IT sector (Zielińska, 2018)), staff turnover is becoming an increasingly critical, albeit not yet fully investigated, issue in HRM (Adams et al., 2006). Therefore, deepening research and knowledge on the phenomenon of staff turnover in organisations, especially in the IT sector, is justified. Although a great deal of research has been conducted on this issue over the last decade, it still has not been possible to establish a clear position on this issue and to present literature to fully understand this topic (Adams et al., 2006).

Given the identified research gap in terms of staff turnover, the article aims to identify the impact of staff turnover on both work motivation and job performance of employees in the IT sector, since both phenomena affect the performance of an organisation as a whole, as is well known and widely accepted in general terms (e.g. Vroom, 1966; Bieńkowska and Ignacek-Kuźnicka, 2018). It seems that conducting this type of research is particularly important in the IT industry, where the phenomenon of staff turnover is currently particularly evident (Adam and Clarks, 2006; Purohit, 2016). Moreover, within the research aim of this kind, the impact of staff turnover on the relationship between work motivation and job performance of employees from the IT sector will also be verified. It is hoped that the implementation of the findings presented here will allow for the bridging of the identified research gap.

1. Literature review

1.1 Staff turnover

The repeatedly mentioned Staff Turnover Rate (STR) has already found its place in the relevant literature. A recent review of the literature noted how STR is an often-analysed element by researchers and by human resources practitioners (Hom et al., 2017).

The smooth departure of employees from a given organisation is the responsibility of the Human Resources department in that organisation. The STR is conditioned not only by external reasons (dependent on human and business environments) but also by internal (organisational) factors (Listwan, 2010). The STR problem is especially important in the context of organisations that comprise the IT industry, because employees constitute the greatest value for these types of organisations (Thatcher et al., 2002). As it turns out, many organisations from the IT sector invest considerable amounts of money in the development of their employees (Kappemanet et al., 2017; Bellini et al., 2019), which is understandable given that employees are in possession of the knowledge and qualifications that they have acquired throughout their employment in the organisation and that they are able to share with other employees. The employees leaving the organisation take the knowledge and skills necessary to ensure proper function within the organisation with them, and very often these are difficult to reproduce (Listwan, 2010).

One of the first concepts of STR was presented by Porter and Steers (1973, p. 153) (Aburumman et al., 2010). In the context of STR, they were concerned about “turnover intention” and “intention to leave”, which they defined as “the next logical step after dissatisfaction experienced in the withdrawal process”. Their important proposal was to represent the STR problem as a coefficient of departure. Therefore, Purohit (2016) defines turnover as a ratio of the number of employees that an organisation has to replace in a given period of time to the average total number of employees in the organisation. The author considers the problem of turnover in several categories, but considers that the most dangerous type of turnover is that of skilled employ-

ees who want to leave an organisation voluntarily and seek employment with another organisation (external voluntary turnover of skilled employees), which often contributes to a decline in organisational performance (Bellini et al., 2019). This type of turnover is often called the human capital loss, because these employees have knowledge which is specialised, difficult to reproduce or very expensive to replace (Kochanski and Ledford, 2001; Thatcher et al., 2002); unfortunately this type of STR is most often observed among employees in the IT sector (Purohit, 2016; McKnight, 2009).

The first step that should be taken by specialists to keep employees in the organisation is to recognise the reasons for their departure. Of course, the reasons for leaving will vary according to the individual and may depend on the type of organisation, and the IT market is considered to be one of the most complex in terms of staff turnover, which poses a major challenge for HRM in this type of organisation (Bernthal and Wellins, 2001; Bellini et al., 2019). There are many classifications of causes of turnover (see e.g. Pettman, 1973; Cotton and Tuttle, 1986), one of which was presented by Taylor (2002), who suggested dividing the causes of turnover into four categories: factors attracting employees to the organisation, factors pushing employees out of the organisation, personal reasons, and reasons directly caused by management. Among employees from the IT sector in India, the following factors which push employees to leave were identified: lack of compatibility between the employee and the organisation (no P-O fit), unfair pay, conflict with a supervisor or co-workers, unsatisfactory development and promotion opportunities (Purohit, 2016). When it comes to personal reasons, researchers indicate the mobile nature of employees from the IT sector who, by their very nature, feel a constant need to devel-

op and face new challenges (Fallickett et al., 2006; Jacks and Palvia, 2014). Factors which attract workers to an organisation include competitiveness on the market, which offers many opportunities to change jobs (Urbancová and Linhartová, 2011; Armstrong et al., 2015) (a shortage of employees means that demand for employees from the IT sector is much higher than supply (McGee, 1998, 2002; Panko, 2008; Brooks et al., 2015)). Therefore, as already mentioned, there are multiple causes; the most important thing is to verify them in a given environment (Jacks and Palvia, 2014).

As presented, STR is a general concept and can be used in the context of both voluntary and involuntary turnover. Considering the specificity of the IT sector, the domination of employees' market value over the employer and the freedom of employees in the IT sector to change jobs, this article considers voluntary employee turnover (VSTR) i.e. that which is initiated by the employee. VSTR has become one of the permanent challenges faced by technology-based organisations, as one of the main problems is keeping employees in the organisation (McKnight et al., 2009).

1.2 Motivation

Motivation is highly complicated and difficult to classify in one model. Motivation arises because a person has needs and the ability to satisfy these needs through a specific activity. Motivation is a desire to do something that results from internal and external motives (Sekula, 2008). In the literature, motivation and motivation to work (work motivation) exist as separate concepts (Hackman and Oldham, 1976). Motivation to work is defined as the level of employee motivation to perform work effectively (Hackman and Oldham, 1976). Motivation is one of the management functions because its aim is to persuade the

employee to take a specific action, per the objectives of the organisation and the employee himself (Sekula, 2008). The nature of the job is considered to have a huge effect on the behavior of employees. Employees should respond positively to four basic aspects of work: variety, task identity, autonomy and feedback (Hackman and Oldham, 1976). Considerations conducted by researchers led to the creation of the Job Characteristics Model (JCM), which assumes that internal motivation is determined by three psychological states, which can occur if the work has certain characteristics. These characteristics include: the variety of skills used to perform the task, the identity of the task, i.e. the degree of task performance from beginning to the end, the autonomy of the work, the importance and impact of the task performed on others, and feedback regarding the task performed. JCM assumes that an employee's motivational potential (MPS) should be highest when the job performed is characterised by high levels of autonomy, significance and feedback (Hackman and Oldham, 1976).

It is worth remembering, however, that work motivation factors may vary depending on the work performed and the character of the work (Fu, 2010). As it turns out, there are deviations between the factors which motivate employees from the IT sector and from outside the sector respectively (Saraswathi, 2011). Saraswathi (2011) proves that, for employees from the IT sector, the most important motivational factor is the sense of development and the work itself, whereas for employees from non-IT sectors, work-life balance are more important (Saraswathi, 2011). Courage (1988) also proved that it is the work and the characteristics of the work which are important in shaping the motivation of employees from the IT sector (Eby and Greenman, 1999). Experienced employees es-

pecially appreciate the work itself, which is very important, as is the presence of a high level of autonomy during the performance of tasks, diversifying tasks and properly providing incentives for further improvement of their skills (Saraswathi, 2011). As a consequence, in the context of verifying the level of employee work motivation, the concept of Hackman and Oldham (1976) was adopted.

1.3 Job performance

Employees' job performance plays a central role in determining organisational performance. To achieve a competitive advantage, practically every organisation, including organisations from the IT sector, need high-performance employees (Sriviboon, 2020). This is because individuals who achieve a high level of job performance will be able to help the organisation in achieving its strategic goals and creating a sustainable, competitive advantage. Schmitt and Chan (1998) classify job performance into two categories: "I can do" and "I want to do". "I can do" refers to knowledge, skills, abilities and other characteristics that employees must have to perform a specific job. "I want to do" refers to the employees' motivation to do their job. Employee job performance theory is defined as "a synonym for behaviour that is something people do and can observe" (Campbell et al., 1993, p. 96). The effect of work is treated as a direct result – material and immaterial. On the other hand, Campbell (1993) considers that the effects of work can also be defined as behaviour (June and Mahmood, 2011). Therefore, the effect is behaviour that leads to results (Skowron-Mielnik, 2009), because this behaviour has a significant impact on that work (Johari and Yahya, 2012). Regarding the different concepts of employees' job performance, the main issue raised by researchers is what employee behaviour, regarding work,

indicative of their performance. According to Borman et al. (1993), performance consists of behaviour that helps employees perform their tasks; such behaviour is vital to ensuring long-term performance (Johari and Yahya, 2012).

Given the specific character of employees from the IT sector, it seems most appropriate to adopt Campbell's concept, which defines employees' job performance as employees' behaviour. Researchers verifying knowledge of employees' job performance, including employees from the IT sector, note that their work efforts may be more or less productive. Employees from the IT sector are assigned to specific tasks that are characterised by specific job characteristics. How engaged they are in the task and the nature of their work will depend on their behaviour and their ability to do the job (Edwards, 1991; Zimmerman and Johnson, 2005). Therefore, behaviour that allows employees to perform the specific duties and activities required of them appear to be important in determining employees' job performance (Jube and Mahmood, 2011).

1.4 Motivation and job performance

The ability to increase the influence of work motivation is vital to improving employees' job performance. The link between work motivation and employees' job performance is regularly studied by researchers because the link is consistent with human nature. Concerning Maslow's hierarchy of needs, McGregor (1999) highlighted that employees love to work if their work conditions are satisfactory and they are treated with respect. In general, motivation encourages or drives the employee to do what he wants and loves to do (Olusadum et al., 2017). Employees who are motivated to work will work with more effort and their performance will ultimately im-

prove (Azar and Shafighi, 2013). Research by Olusadum and Anulik (2018) shows the positive impact of work motivation on job performance. Taking action by increasing employees' motivation to work minimises ineffectiveness in said work (Bowling et al., 2007). Moreover, the findings of Reizer et al. (2017) reveal that there are many benefits of autonomous motivation (one characteristic of JCM). The same concept is presented by Across (2005), who states that employees do not achieve good performance at work when they lack autonomy, especially if they had previously experienced independent work (Afful-Broni, 2004). By contrast, Spector (2009) considers that employees can perform their job well on the condition that they have a sufficiently high level of work motivation to ensure a decent level of performance. Importantly, although an individual characteristic, work motivation can be enhanced by external factors. Taking care of high performance of the organization is a basic management task (Smits et al., 1993). Increasing employees' job performance has a positive impact on the organisational performance, and therefore, caring for employees' job performance is also becoming an increasingly important task for HRM (Azar and Shafighi, 2013). It is the task of managers to stimulate employee motivation in such a way as to increase their productivity and thus increase the efficiency of the whole organisation (Fu, 2010). Research shows that if an employer in the IT sector motivates employees by applying fair remuneration, work safety, development and financial and non-financial incentives, it will increase their productivity and allow them to achieve the organisation's goals (Ali et al., 2016). According to Simon (1970), the greatest work motivation is observed when it is tailored to meet the needs of individual employees. Therefore, the effectiveness of the organisation will be greater when the

correlation between organisational goals and the needs of individual employees is strongest (Simon, 1970; Olusadum and Anulika, 2018). Based on such arrangements, the following hypothesis can be formulated:

H1: Increased motivation to work improves the job performance of employees from the IT sector.

1.5 Voluntary staff turnover and work motivation

In turnover models (see e.g. Mobley, 1977; Steers and Mowday, 1981; Price and Mueller, 1975; Allen and Griffeth, 2004), certain factors which are considered by Hackman and Oldham to determine turnover are included in said models by the authors (Shalley et al., 2010). Price and Mueller (1975) have included factors such as autonomy, work routines, responsibility and development opportunities in their turnover model, which can be considered the same as the factors included in the Job Characteristics Model (Hackman and Oldham, 1976). According to Price and Mueller (1975), VSTR is influenced by job characteristics such as autonomy, responsibility and routine (Shalley et al., 2011). Research in their model indicates that autonomy at work, which translates to job satisfaction, reduces the willingness to look for a new job. Responsibility at work directly reduces the level of VSTR. A high level of routine reduces job satisfaction and leads to more intensive job searches (Shally et al., 2011). Other researchers also focus on the factors related to autonomy at work. In their deliberations, they present a variable called autonomy motivation, which means engaging in an activity with full will and through one's own choice (Deci and Ryan, 2008). Furthermore, Jenkins (2009) and Ramlall (2004) state that the main cause of VSTR is disharmony with work motivation (Vnoučková and Klupáková, 2013).

Employee dissatisfaction with unfulfilled expectations and needs, especially in the area of self-development, encourages the employee to look for a new job and, as a consequence, leave the organisation (Vnoučková and Klupáková, 2013).

Ramlall (2004) maintains that the motivational factors leading to employee satisfaction are consistent with Maslow's hierarchy of needs, and reports a correlation between dissatisfaction with the workplace and turnover. It was noted that, among employees whose dissatisfaction with their job is at a higher level, turnover is also at a higher level (Ramlall, 2004; Vnoučková and Klupáková, 2013). Bonenberger et al. (2014) also consider that work motivation, through motivating factors which create job satisfaction, impacts on employees' intention to leave. Therefore, they have indicated work motivation and job satisfaction as a main cause of VSTR; research carried out on healthcare workers confirms these assumptions. The research proves that, as a result, it is necessary to strengthen work motivation through factors which also encourage job satisfaction to neutralise the intention of employees to leave an organisation (Randhawa, 2007).

Sajjad et al. (2013) also confirm that the relationship between work motivation and VSTR is negative. This means that an increased level of work motivation brings about a decrease in VSTR and vice versa. Tan and Igbaria (1994) prove that providing a high level of hygiene for employees from the IT sector will allow for an improved rate of retention of employees in organisations. More recent research, while confirming the significance of the impact of hygienic factors on work motivation and VSTR, shows a much higher impact of internal motivation on keeping employees in organisations (Eby and Freeman, 1999; Thatcher, 2006). Based on such arrangements, the following hypothesis can be formulated:

H2a: An increase in voluntary staff turnover reduces the work motivation of employees from the IT sector.

1.6 Voluntary staff turnover and job performance

Employees' job performance is a key factor for the survival of an organisation, because it represents a set of behaviours for achieving the organisation's goals (Liu and Chiu, 2018). Therefore, the question of whether or not VSTR can contribute to a worsening of job performance should be asked. Any theory of VSTR indicates a loss of specific human capital for the organisation (Asamoah et al., 2015). Global progress, which has led to the growth of the industrial economy, has contributed to the importance of knowledge on the market. Modern technologies, appropriate strategies and innovation, i.e. the factors that determine the competitiveness of an organisation, depend on people and their talents in the knowledge era. For that reason, the source of the main strength and competitiveness of each organisation has become the effective management of the best employees, their knowledge and talents (Smith and Kelly, 1997; Jamal and Saif, 2011). Despite the growing awareness of the need to transfer knowledge within the organisation, there is still so-called "tacit knowledge", which the organisation loses when its employees leave. It is thanks to employees' knowledge, skills and experience that the goals of the entire organisation are achieved (Johari and Yahya, 2012). The high rate of employee turnover (including the knowledge and skills they possess) will contribute to a decrease in the organisation's productivity. Baron et al. (2001) consider VSTR a "disruptive" phenomenon for the organisations they researched, more specifically, newly-created high-tech start-ups in California.

In the literature, many other studies are available which concentrate specifically on VSTR and have found a negative impact of VSTR on organisational performance (Butali et al., 2013; Asamoah et al., 2015). Waeyenberg et al. (2017) consider VSTR not only to be costly, but also as having a negative impact on employee performance, and thus on the organisation. Price (2001) also argues that an increased turnover rate results in lower productivity of the organisation due to the loss of qualified and experienced employees, and often the need to change investment plans (Price, 2001; Shaukat et al., 2017). Employees leaving the organisation generate additional costs by having to hire new employees, i.e. investing in the recruitment and selection process (Shaukat et al., 2017). However, not all studies provide such a clear picture of the results. Sturman (2003) considers the relationship between job performance and VSTR to be curvilinear, which means that the relationship is not the same for all employees. Sturman argues that high-performance and very low-performance employees are more likely to leave the organisation than average-performance employees. Therefore, verifying this relationship becomes even more interesting (Sturman, 2003).

A similar uncertainty is observed among employees from the IT sector. On the one hand, employees from the IT sector change jobs to seek new experiences and professional challenges (Fallickett et al., 2006; Jacks and Palvia, 2014). On the other hand, from an organisational perspective, there is talk of the loss of the knowledge and skills of employees who leave the organisation, which negatively affects organisational performance (McKnight, 2009). Additionally, being in an organisation affected by VSTR may contribute to lowering employee morale and thus their willing-

ness to work as well, resulting in poorer job performance, which is known to lower levels of organisational performance (Armstrong, 2009; CIPD, 2005; Branham, 2007; Katcher and Snyder, 2007; Urbancová and Linhartová, 2011).

Although this uncertainty is not clear, the loss of employees, and thus of their knowledge and skills, are considered more critical to shaping an employee's job performance; therefore, based on such arrangements, the following hypothesis can be formulated:

H2b: An increase in voluntary staff turnover negatively affects the job performance of employees from the IT sector.

1.7 Moderating the effect of voluntary staff turnover on the relationship between motivation and job performance of employees from the IT sector

Employee job performance, as mentioned above, refers to what employees want to do (Schmitt and Chan, 1998). It seems natural that more motivated employees show greater willingness to perform certain activities (Anulika and Olusadum, 2017). This positive impact of work motivation on employee job performance has already been demonstrated by Hackman and Oldham (1975) and continues to be validated by scientists. No deviation from this natural relationship has been proven in the context of employees from the IT sector. If managers take care of their employees' work motivation by choosing the right factors to influence it, they will be able to increase the level of job performance of these employees (Ali et al., 2016). However, it may be interesting to see whether this relationship can be disrupted by the VSTR as a moderator. It may turn out that attempts to increase the level of employees' work motivation will be unsuccessful until the employer takes care of reducing

staff turnover. A review of the literature confirms that there is a negative impact of VSTR on employees' job performance. This means that increasing VSTR in a given organisation will negatively affect the performance of other employees who remain with the organisation (Butali et al., 2012). As already shown, in the context of employees from the IT sector, i.e. knowledge employees, the key here is the knowledge and skills that employees take with them when they leave the organisation. Currently, many organisations, including those in the IT sector, have a huge problem with collecting, storing and sharing knowledge (Stam, 2009). For that reason, an organisation should take care to avoid such a scenario, not only due to the increasing costs associated with VSTR, but also due to the declining performance of the whole organisation, not just the individual employee (Waeyenberg et al., 2016).

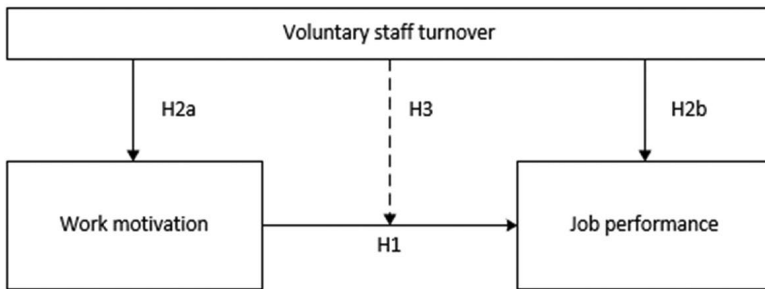
In many models that describe turnover, work motivation is often considered to be a predictor of turnover (based on the Motivation Potential Scale of Hackman and Oldham, 1975). In the model developed by Price and Mueller (1975), turnover is influenced by job characteristics such as autonomy, responsibility and routine (Shalley et al., 2011). Many data points described in the literature concerning the relationship between work motivation and VSTR show that this correlation is negative, including among employees from the IT sector (Wairimu, 2008; Fu, 2010; Sajjad, 2013). The above considerations indicate that staff turnover has a negative impact on both work motivation and job performance. Therefore, it seems natural that VSTR will also have a negative impact on the relationship between work motivation and job performance as a whole (Azar and Shafiqhi, 2013). If VSTR remains at a high level, the strengthening effect of job performance through work motivation will be weakened among

employees from the IT sector. This may be true because the literature review confirms the negative impact of staff turnover on both work motivation and job performance, including in the context of employees from the IT sector (Ramlall, 2004; Butali et al., 2013; Vnoučková and Klupáková, 2013; Bonnenberger et al., 2014; Waeyenberg et al., 2017). The negative impact on both of these factors may therefore translate into a weakening of the positive relationship

between work motivation and job performance of employees from the IT sector. Based on such arguments, the following hypothesis can be formulated:

H3: The higher the level of voluntary staff turnover, the lower the influence of work motivation on the job performance of employees from the IT sector. In light of the above-mentioned considerations, the following research hypotheses can be formulated (Figure 1):

Figure 1. Developed hypotheses



Source: Own elaboration.

2. Research methodology

Empirical research was conducted in order to verify the proposed hypotheses. The research was based on a survey method that was implemented only for the selected respondents panel (limited to employees working in IT organisations in Poland) and using a web application to develop a questionnaire and gather the responses. The main research was conducted in late 2018 among employees of organisations from the IT sector operating in Poland. The obtained sample covered 151 respondents who were employees from the IT sector.

The selection of those employees from that specific sector was intentional, because the growing problem of VSTR – particularly in organisations from the IT sector – is being noticed in contemporary literature; it is the employees who remain in such organisations who are the observers of the phenomenon, which directly influences their work motivation and job performance. The characteristics of the group of respondents participating in the research are presented in Table 1.

Table 1. Characteristics of the group of respondents

Characteristics	Number of samples N = 151		
	n	%	
Gender	male	48	32
	female	103	68
Age	under 30 years old	90	60
	over 30 years old	61	40
Marital status	married	60	40
	single	91	60
Education	master's degree	89	59
	other	62	41
Size of organisation	under 500 employees	20	13
	over 500 employees	132	87

Source: Own elaboration.

Variables measurement

In order to examine the proposed hypothesis, the main variables were defined as follows: work motivation, job performance and employee turnover. Respondents evaluated all variables based on the list of items using a 5-point Likert scale (from “strongly disagree” to “strongly agree”, with the mid-point being “I do not have an opinion”).

Employees' work motivation was measured based on the concept of Hackman and Oldham (1974, 1975). Employees from the IT sector – as observers of staff turnover – evaluated their level of work motivation using this scale. The scale contains 10 items as originally designed by Hackman and Oldham, related to five job characteristics:

- skill variety: the rate at which different skills are used to accomplish the task,
- task identity: the rate at which the task is performed from start to finish,
- task significance: the rate at which the task impacts on other people's lives,
- autonomy: the rate at which the employee performs the task independently,
- feedback: the rate at which the task provides information on the effectiveness of the work performed (1975).

Job performance was measured according to the definition by Campbell (1990, 1993). Willam and Anderson's (1991) questionnaire was adjusted to the specifics of the work of employees from the IT sector (June and Mahmood, 2011). While formulating the scale measuring employee job performance, the specificity of employees' work in the IT industry was taken into account. Employees from the IT sector who work in organisations affected by VSTR, as in the case of work motivation, evaluated their level of job performance using this scale. Each employee assessed their job performance in relation to other employees (relative assessment) with regard to five aspects:

- timeliness of performed tasks,
- speed of completing tasks,
- the number of errors made during the implementation of the entrusted tasks,
- creativity in solving tasks,
- commitment to taking on new challenges at work.

The questionnaire also included a section on experiences with turnover, where the respondents answered questions about the number of employees who

had left the team in the last three months and the number of employees working in the team. This phenomenon was assessed by employees working in teams within organisations affected by VSTR. Employees, who are observers of VSTR, found it easiest to assess the scale of this problem. VSTR was calculated according to the following formula:

Descriptive statistics and reliability analysis of scales

As the first step in the research process, the reliability of the scales of each variable was verified. The results of the analysis of the reliability of the measurement scales, as well as the descriptive statistics of variables, are presented in Table 2. The verification of the reliability of the instruments was carried out using Cronbach's α factor, which indicates a high level of internal reliability of the scales and measurements.

Table 2. Defined variables along with the descriptive statistics values

Variable	No. of items	Cronbach's α	Factor analysis	Mean	Standard Error
Work motivation	10	0.764	68.158% (KMO=0.663)	3.53	0.62
Job performance	6	0.868	61.594% (KMO=0.876)	3.46	0.74
VSTR				0.41	0.39

Source: Own elaboration.

3. Research results

3.1 Relationships between work motivation, job performance and employee turnover

In order to verify hypotheses H1, H2a and H2b, the correlation coefficient among *work motivation, job performance and voluntary staff turnover* was calculated as the first part of the study. The correlation was

analysed with the use of Spearman's correlation in order to verify hypotheses H1, H2a, and H2b. The results are presented in Table 3.

Table 3. Correlation analysis among work motivation, job performance and voluntary employee turnover

Correlation	Work motivation	Job performance
Job performance	$\rho(151)=0.24^{**}$, $p<0.01$	-
VSTR	$\rho(151)=0.054$, $p>0.05$	$\rho(151)=-0.17^*$, $p<0.05$

** Significant correlation $p<0.01$ (two-side)

* Significant correlation $p<0.05$ (two-side)

Source: Own elaboration.

The results show that *work motivation* is statistically significantly correlated with *job performance*. The correlation is positive, which means that an increase in one factor causes a decrease in another. An

increased motivation to work will increase the level of job performance and vice versa. The results also show that *VSTR* is statistically significantly correlated with *job performance*. Moreover, the correlation is

negative, meaning that an increase in one factor causes a decrease in the other. An increase in the level of VSTR will result in a decline in job performance and vice versa. **The results obtained allow for the acceptance of two of the three hypotheses: H1 and H2b**, regardless of the fact that correlation analysis does not verify the cause-effect relation.

Based on the research described in the available literature, the direction of the relationships under investigation has been clearly defined. It seems logical that it is the level of work motivation which influences the level of job performance. It is not possible for the level of job performance to determine the level of work motivation. Similarly to the second relationship, it is the level of VSTR which determines the level of job performance. This also means that, in an organisation in which there is a lower level of VSTR, employees have a higher level of job performance. Although a statistically significant relationship between VSTR and work motivation was assumed, this was not confirmed by the research which was undertaken. The results of the research into the relationship between VSTR and work motivation show that this relationship is statistically insignificant.

As a consequence, there is no reason to accept hypothesis H2a.

3.2 Voluntary staff turnover as a moderator for the relationship between work motivation and job performance

Finally, the effect of strengthening or weakening the relationship between *work motivation* and *job performance* (hypothesis H3) by means of VSTR was statistically analysed. Therefore, a moderator variable was introduced to the model. The moderator variable is built as a product of two standardised independent variables (work motivation as the first independent vari-

able and voluntary employee turnover as the second independent variable). To eliminate the limitations associated with the traditional approach to assessing indirect effects or moderation effects, the macro PROCESS dedicated to SPSS Statistics software (Hayes, 2017) was used. Using the macro PROCESS, it is possible to verify the moderating effect of the VSTR on the relationship between work motivation and job performance. The effect of the moderating variable is statistically characterised as an interaction that can influence the direction between the independent variable – work motivation – and the dependent variable – job performance. In fact, the use of the macro PROCESS involves performing a number of regression analyses on variables. Therefore, it examined a regression between the independent variable (excluding the second independent variable – VSTR) and the dependent variable, the second independent variable and dependent variable, and also the product of two independent variables on the dependent variable. The results of the analysis are presented in Table 4.

Table 4. Regression model statistics

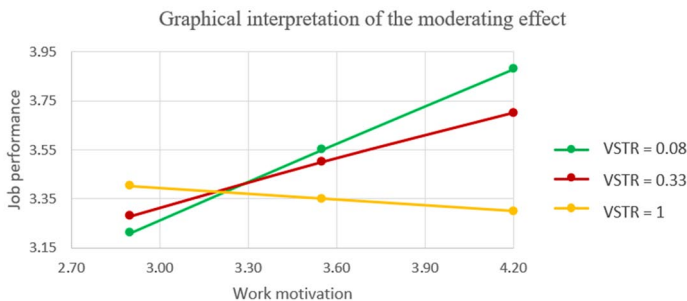
Model description	R2	Delta R2	Moderator coeff.	Standard error	t Stat	P Value
Work motivation VSTR Moderator dependent v.: job performance	0.33	0.11	-0.63	0.30	-2.13	0.03

Source: Own elaboration.

The obtained model clearly shows that *voluntary staff turnover* is a moderator of the relationship between *work motivation* and *job performance* (hypothesis H3). The delta R2 of the obtained model for VSTR as a moderator are statistically significant $F(3.142) = 5.66, p < 0.001$. For that reason, hypothesis H3 can be accepted. This means that an increase in the absorption of VSTR

reduces the impact of work motivation on job performance. This confirms the danger of VSTR. The increase of VSTR leads to a reduction in the positive impact of work motivation on job performance. The negative impact of VSTR on the relation between work motivation and job performance is perfectly reflected in Figure 2.

Figure 2. Graphical interpretation of the moderating effect of staff turnover on the relationship between work motivation and job performance



Source: Own elaboration.

The VSTR rate was adopted in three values ($VSTR = \{0.08; 0.33; 1\}$). As can be seen in Figure 2, the higher the VSTR, the more the linear increase in job performance caused by work motivation declines. It is interesting to note that, given the highest $VSTR = 1$, job performance declines due to work motivation. This shows that this relation is completely distributed by the VSTR moderator.

4. Discussion

The considerations undertaken concern the issue of VSTR and its impact on job performance. There are many HRM solu-

tions that can serve to reduce the negative side effects of VSTR on job performance. Research results show that work motivation is the key factor that affects the job performance of employees from the IT sector. Research also found that VSTR has a negative impact on the job performance of employees from the IT sector. Together with the verification of VSTR as a mediator of the relationship between work motivation and job performance, this study was able to fill the previously sparse area of research in this field to a certain extent. The R-value of the constructed moderator (VSTR) impact model on the relationship

between work motivation and job performance is approximately 33%. This is not a high value, but the value is statistically significant. As a consequence, the constructed regression model has a statistically significant explanatory effect. The conducted research is part of the current problem faced by organisations. The growing market makes it much easier for employees to change jobs. The results obtained ought to help to make employers aware of the phenomenon of VSTR and how it can have a negative effect on job performance.

The results also indicate that work motivation facilitates the improved job performance of employees from the IT sector. Therefore, it is necessary to consider how organisations can manage a reduction in VSTR and how they should construct an effective work motivation system. In order to do so, it is important to identify the factors influencing work motivation, because - as the research proves - they differ for employees from the IT sector compared to employees from other sectors (Fu, 2010). The research shows that, for employees from the IT sector, it is important that their work delivers JCM-compliant effects (Hackman and Oldham, 1976), especially the autonomy and relevance of their work (Saraswathi, 2011). Other literature sources prove that the key factors in the context of shaping proper work motivation may be job satisfaction and organisational commitment. The level of employee satisfaction, e.g. the feeling of pleasure caused by meeting certain expectations of the employees from the IT sector, is closely related to job satisfaction, due to its similarity in terms of the definition.

Job satisfaction is a pleasant emotional state caused by the realisation of employee needs (Wuderzewski, 2013). This means that organisations which want to provide their employees with a sense of satisfaction should focus on fulfilling their needs.

The most important needs in the context of job satisfaction are the appropriate level of remuneration, promotion opportunities, proper relations with the manager and co-workers (Saari and Judge, 2004). Organisational commitment, i.e. the willingness to maintain relations with the organisation, results directly from employees' depth of belief in the organisation's goals and readiness to act on behalf of the organisation (Mowday et al., 1978). Therefore, from the perspective of the organisation, it is important for the employees to be aware of the goals pursued by the organisation and to recruit such employees who will identify with these goals. The literature review conducted in the context of VSTR provides initial information on what action should be taken by the organisation to keep the employees in the organisation.

For employees from the IT sector, it is important to develop a sense of accomplishment (Saraswathi, 2011). To ensure an adequate level of employee development, the employer should offer various training programs to improve employees' professional qualifications. It is also important that the training is adjusted to employee preferences and is conducted at a satisfactory level. Another way to meet the employees' need for development is to offer fair and clear prospects of promotion and job rotation within the organisation, aimed at changing the employees' responsibilities so that they do not fall into a routine (Taylor, 2002; Purohit, 2016).

Conclusions

The article raises a very important and widespread problem of voluntary staff turnover in the IT sector. The phenomenon of voluntary staff turnover observed in the IT sector has been partly explained by the conducted research. It has been shown that voluntary staff turnover negatively affects job performance and also has

a negative impact – as a moderator – on the relationship between work motivation and the job performance of employees from the IT sector. This is a very important conclusion because it indicates that voluntary staff turnover is a risk to employees from the IT sector. It can therefore be concluded that the identified research gap has been partly, but also successfully, enriched by the research undertaken; however, it can yet be filled with more extensive empirical data. The quantitative method chosen to verify the results of the research has certain limitations. Additionally, the research was conducted only on a limited group of employees from the IT sector in Poland.

However, the main limitation of the research is the fact that only a fragment of the phenomenon has been examined. As a consequence, the research does not show how voluntary staff turnover can have an impact on other factors which strengthen the job performance of employees from the IT sector. It does, however, provide the opportunity to further explore the topic and conduct further research in this area. Therefore, the results obtained only allow for the initial verification of the issue raised. For that reason, no binding theories on voluntary staff turnover can be created, but this is an interesting area for further research. Despite numerous research limitations, the indicated aim of the article was achieved by the author. The negative impact of voluntary staff turnover on job performance was proved and the moderating effect of this phenomenon on the relationship between work motivation and job performance was shown. The results of the research, as well as all limitations indicated, can be the inspiration for further exploration of the subject of voluntary staff turnover. While the research provides some information which is relevant to personal management in the organisation, its limited scope may provide motiva-

tion to explore the issue of voluntary staff turnover and its impact on the functioning of the whole organisation more widely. These results give a preliminary view of the management of organisations that voluntary staff turnover should be treated as a negative phenomenon that negatively affects job performance. For that reason, it necessitates reflection on how to keep employees in the organisation so as to prevent negative turnover phenomena among employees from the IT sector.

References

- Aburumman, O., Salleh, A., Omar, K., Abadi, M. (2020), The impact of human resource management practices and career satisfaction on employee's turnover intention, *Management Science Letters*, 10(3): 641-652. <https://doi.org/10.5267/j.msl.2019.9.015>.
- Afful-Broni, A. (2012), Relationship between motivation and job performance at the University of Mines and Technology, Tarkwa, Ghana: *Leadership Lessons, Creative Education*, 3(03): 309. <https://doi.org/10.4236/ce.2012.33049>.
- Ali, A., Bin, L.Z., Piang, H.J., Ali, Z. (2016), The impact of motivation on the employee performance and job satisfaction in it park (software house) sector of Peshawar, Pakistan, *International Journal of Academic Research in Business and Social Sciences*, 6(9): 297-310. <https://doi.org/10.6007/ijarbss/v6-i9/2311>.
- Ampomah, P., Cudjor, S.K. (2015), The effect of employee turnover on organizations (case study of electricity company of Ghana, Cape Coast), *Asian Journal of Social Sciences and Management Studies*, 2(1): 21-24. DOI:10.6007/IJARBSS/v6-i9/2311.
- Asamoah, E.S., Doe, F., Amegbe, H. (2015), The effect of employee turnover on the performance and competitiveness of banks in Ghana, *International Journal of Contemporary Management*, 13(4): 8-26.
- Azar, M., Shafighi, A.A. (2013), The effect of work motivation on employees' job

- performance (Case study: employees of Isfahan Islamic Revolution Housing Foundation), *International Journal of Academic Research in Business and Social Sciences*, 3(9): 432-445. <https://doi.org/10.6007/ijarbss/v3-i9/231>.
- Baron, J.N., Hannan, M.T., Burton, M.D. (2001), Labor pains: Change in organizational models and employee turnover in young, high-tech firms, *American Journal of Sociology*, 106(4): 960-1012. <https://doi.org/10.1086/320296>.
- Bellini, C.G.P., Palvia, P., Moreno, V., Jacks, T., Graeml, A. (2019), Should I stay or should I go? A study of IT professionals during a national crisis, *Information Technology & People*. <https://doi.org/10.1108/itp-07-2017-0235>.
- Bierkowska, A., Brol, M. W. (2011), Zarządzanie przez kompetencje, in: M. Hożej, Z. Kral (Eds.), (2011). *Współczesne metody zarządzania w teorii i praktyce*, Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
- Bierkowska, A., Ignacek-Kuźnicka, B. (2018), Professional trainings of lawyers as an indication of their involvement in the performed work – results of empirical research, in: L. Gómez Chova, A. López Martínez, I. Candel Torres (Eds.), *ED-ULEARN Conference Proceedings from the 10th International Conference on Education and New Learning Technologies* (pp.7182-7190). <https://doi.org/10.21125/edulearn.2018.1695>
- Bonenberger, M., Aikins, M., Akweongo, P., Wyss, K. (2014), The effects of health worker motivation and job satisfaction on turnover intention in Ghana: A cross-sectional study, *Human Resources for Health*, 12(1): 43. <https://doi.org/10.1186/1478-4491-12-43>.
- Borman, W.C., Motowidlo, S. M. (1993), Expanding the criterion domain to include elements of contextual performance, in: N. Schmitt, W.C. Borman (Eds.), *Personnel selection in organizations* (pp. 71-97), San Francisco: Jossey-Bass.
- Bowling, N.A., Hammond, G.D. (2008), A meta-analytic examination of the construct validity of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale. *Journal of Vocational Behavior*, 73(1): 63-77. <https://doi.org/10.1016/j.jvb.2008.01.004>.
- Brooks, N.G., Hardgrave, B.C., O'Leary-Kelly, A.M., McKinney, V., Wilson, D.D. (2015), Identifying with the information technology profession: implications for turnaway of IT professionals, *Acm Sigmis Database: the Database for Advances in Information Systems*, 46(1), 8-23. <https://doi.org/10.1145/2747544.2747546>.
- Budek, K. (2018), Bizancjum rynku pracownika – perspektywy pracy na rynku IT, *Markerinbiznes*, retrieved from: <https://marketingibiznes.pl/it/praca-na-ryнку-it/> (accessed 27 January 2020).
- Butali, N.D., Wesang'ula, P. M., Mamuli, L.C. (2013), Effects of staff turnover on the employee performance of work at Masinde Muliro University of Science and Technology, *International Journal of Human Resource Studies*, 3(1): 1. DOI: 10.5296/ijhrs.v3i1.3111.
- Campbell, J.P., McCloy, R.A., Oppler, S.H. and Sager, C.E. (1993), A theory of performance, in: N. Schmitt, W.C. Borman (Eds.), *Personnel selection in organizations* (pp. 35-70), San Francisco: Jossey-Bass Publishers.
- Chambers, K., Honeycutt, A. (2009), Telecommunications mega-mergers: impact on employee morale and turnover intention, *Journal of Business & Economics Research (JBER)*, 7(2): 43-52. <https://doi.org/10.19030/jber.v7i2.2260>.
- Cotton, J.L., Tuttle, J.M. (1986), Employee turnover: A meta-analysis and review with implications for research, *Academy of Management Review*, 11(1): 55-70. <https://doi.org/10.2307/258331>.
- Davidson, L. (1999), IT professionals respond to "flash and cash", *Workforce*, 78(5): 56-56.
- Ferratt, T. W., Agarwal, R., Moore, J.E., Brown, C.V. (1999, April), Observations from "the front" IT executives on practices to recruit and retain information technology professionals, *Proceedings*

- of the 1999 ACM SIGCPR Conference on Computer Personnel Research (pp. 102-112). <https://doi.org/10.1145/299513.299628>.
- Deci, E.L., Ryan, R.M. (2008), Self-determination theory: A macrotheory of human motivation, development, and health, *Canadian Psychology/Psychologie Canadienne*, 49(3): 182–185. <https://doi.org/10.1037/a0012801>.
- Fu, J. (2010), Is Information Technology career unique? Exploring differences in career commitment and its determinants among IT and non-IT employees, *IJEBM*, 8: 272-281.
- Guthrie, J. P. (2000), Alternative pay practices and employee turnover: An organization economics perspective, *Group & Organization Management*, 25(4): 419-439. <https://doi.org/10.1177/1059601100254006>.
- Gutta, K., Mucha, N., Sadło, M., Jażdżewska-Gutta, M., Dębkowska, M. (2011), Analiza sytuacji rynkowej dla działalności gospodarczej na obszarze województwa zachodniopomorskiego dla branży drzewno-meblarskiej, Szczecin: Wydawnictwo Zachodniopomorskiego Uniwersytetu Technologicznego w Szczecinie.
- Hackman, J.R., Oldham, G. (1976), Motivation through the design of work: Test of a theory, *Organizational Behavior and Human Performance*, 16(2): 250-79. DOI: 10.1016/0030-5073(76)90016-7.
- Hauk, M. (2012), Koncepcja JCM Hackmana i Oldhama w praktyce zarządzania zasobami ludzkimi, *Zarządzanie Zasobami Ludzkimi*, 3-4(86-87): 25-40.
- Hayes, A. F. (2017), Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford publications, retrieved from: <http://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html> (accessed: 3 February 2020).
- Hom, P.W., Lee, T.W., Shaw, J.D., Hausknecht, J.P. (2017), One hundred years of employee turnover theory and research, *Journal of Applied Psychology*, 102(3): 530-545. <https://doi.org/10.1037/apl0000103>.
- Jamal, W., Saif, M.I. (2011), Impact of human capital management on organizational performance. *European Journal of Economics, Finance and Administrative Sciences*, 5(34): 13309-13315.
- Johari, J., Yahya, K. K. (2012), An assessment of the reliability and validity of job performance measurement (Satu Penilaian terhadap Kebolehpercayaan dan Kesahan Pengukuran Prestasi Kerja), *Jurnal Pengurusan (UKM Journal of Management)*, 36. <https://doi.org/10.17576/pengurusan-2012-36-02>.
- June, S., & Mahmood, R. (2011), The relationship between person-job fit and job performance: A study among the employees of the service sector SMEs in Malaysia, *International Journal of Business, Humanities and Technology*, 1(2): 95-105.
- Kisilowski, M., Urbaniak, K. (2013), Wykorzystanie technologii informacyjnych w zarządzaniu publicznym w Polsce, *Studia Ekonomiczne*, 169: 63-78.
- Kochanski, J. – retaining technical professionals, *Research-Technology Management*, 44(3): 31-38.
- Listwan, T. (Ed.). (2010), *Zarządzanie kadrami*, Warszawa: CH Beck.
- Liu, C.M., Chiu, C.K. (2018), Modeling turnover intention and job performance: the moderation of perceived benevolent climate, *Review of Managerial Science*, 1-21. <https://doi.org/10.1007/s11846-018-0302-3>.
- McGee, M.K., Thyfault, M.E. (1998), Congress mulls more foreign workers, *Information Week*, 694, 32-32.
- McKnight, D.H., Phillips, B., Hardgrave, B. C. (2009), Which reduces IT turnover intention the most: Workplace characteristics or job characteristics? *Information & Management*, 46(3): 167-174. <https://doi.org/10.1016/j.im.2009.01.002>.
- Moore, J. E. (2000), Oneroad to turnover: An examination of work exhaustion in technology professionals, *MIS quarterly*, 141-168. <https://doi.org/10.2307/3250982>.

- Mowday, R.T., Steers, R.M., Porter, L.W. (1978), The measurement of organizational commitment (No. TR-15), Oregon University Eugene Graduate School of Management and Business.
- Munck, B. (2001), Changing a culture of face time, *Harvard Business Review*, 79(10): 125-130.
- Namasaka, E., Poipoi, M., Mamuli, L. (2013), Effects of staff turnover on the employee performance of work at Masinde Muliro University of Science and Technology, *Journal of Management*, 22. <https://doi.org/10.5296/ijhrs.v3i1.3111>.
- Nazdrowicz, J. (2015), Employer branding w IT, *Zeszyty Naukowe Uczelni Vistula. Ekonomia IX. Kształtowanie wizerunku pracodawcy*, 44(6): 165-179.
- Olusadum, N. J., Anulika, N. J. (2018), Impact of motivation on employee performance: A study of Alvan Ikoku Federal College of Education, *Journal of Management and Strategy*, 9(1): 53-65. <https://doi.org/10.5430/jms.v9n1p53>.
- Pettman, B.O. (1973), Some factors influencing labour turnover: A review of research literature, *Industrial Relations Journal*, 4(3): 43-61. DOI: 10.1111/j.1468-2338.1973.tb00831.x.
- Pocztowski, A. (2007), Zarządzanie zasobami ludzkimi. Strategie-procesy-metody, Warszawa: PWE.
- Porter, L.W., Steers, R.M. (1973), Organizational, work, and personal factors in employee turnover and absenteeism, *Psychological Bulletin*, 80(2): 151-176. DOI: 10.21236/ad0751672.
- Price, J. (2001), Reflections on the determinants of voluntary turnover, *International Journal of Manpower*, 22(7): 600-624. <https://doi.org/10.1108/EUM00000006233>.
- Purohit, M. (2016), A study on-employee turnover in IT sector with special emphasis on Wipro and Infosys, *IOSR Journal of Business and Management*, 18(4): 47-51. <https://doi.org/10.15373/22501991/jan2014/42>.
- Ramlall, S. (2004), A review of employee motivation theories and their implications for employee retention within organizations, *Journal of American Academy of Business*, 5(1/2): 52-63.
- Randhawa, G. (2007), Relationship between job satisfaction and turnover intentions: An empirical analysis, *Indian Management Studies Journal*, 11(2): 149-159.
- Reizer, A., Sheaffer, Z., Brender-Ilan, Y. (2017), Why do workplace emotions matter? Their mediating role in the motivation and performance link, in: *Academy of Management Proceedings*, 1: 11309. <https://doi.org/10.5465/ambpp.2017.11309abstract>.
- Robak, E. (2016), Lojalność pracowników a zarządzanie potencjałem społecznym współczesnych organizacji, *Zeszyty Naukowe Politechniki Częstochowskiej. Zarządzanie*, 2(24): 82-95. <https://doi.org/10.17512/znpcz.2016.4.2.08>.
- Rong, G., Grover, V. (2009), Keeping up-to-date with information technology: Testing a model of technological knowledge renewal effectiveness for IT professionals, *Information & Management*, 46(7): 376-387. <https://doi.org/10.1016/j.im.2009.07.002>.
- Sajjad, A., Ghazanfar, H., Ramzan, M. (2013), Impact of motivation on employee turnover in telecom sector of Pakistan, *Journal of Business Studies Quarterly*, 5(1), 76-92.
- Saari, L.M., Judge, T.A. (2004), Employee attitudes and job satisfaction, *Human Resource Management*, 43(4): 395-407. <https://doi.org/10.1002/hrm.20032>.
- Saraswathi, D. (2011), A study on factors that motivate IT and non-IT sector employees: A comparison, *International Journal of Research in Computer Application and Management*, 1(2): 72-77.
- Sekula, Z. (2010), *Motywowanie do pracy: teorie i instrumenty*, Warszawa: PWE
- Sektor technologii informatycznych w Polsce (2013), *Polska Agencja Informacji i Inwestycji Zagranicznych*, retrieved from: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKewiysPDq3_LnAhVm_SoKHUOMAsUQFjAAegQIAhAB&url=https%3A%2F%2Fwww.paih.gov.

- pl%2Ffiles%2F%3Fid_plik%3D19605&u sg=AOvVaw2zq2tUP7EqAsUUHBndTw x (accessed 29 January 2020).
- Schmitt, N., Chan, D. (1998), *Personnel selection: A theoretical approach*, Thousand Oaks: Sage.
- Shaukat, R., Yousaf, A., Sanders, K. (2017), Examining the linkages between relationship conflict, performance and turnover intentions, *International Journal of Conflict Management*, 28(1):4-23. <https://doi.org/10.1108/ijcma-08-2015-0051>.
- Shelley, J.J., McQuistan, M.R., Delacruz, G., Marshall, T.A., Momany, E. T. (2011), Significant indicators of intent to leave among army dental corps junior officers, *Military Medicine*, 176(6): 631-638. <https://doi.org/10.17077/etd.4yycwvgt>.
- Skowron-Mielnik, B. (2009), Efektywność pracy-próba uporządkowania pojęcia, *Zarządzanie Zasobami Ludzkimi*, 1(66): 31-44.
- Sriviboon, C. (2020), Impact of selected factors on job performance of employees in it sector: A case study of Indonesia, *Journal of Security & Sustainability Issues*, 9(1): 28-41. [https://doi.org/10.9770/jssi.2020.9.j\(3\)](https://doi.org/10.9770/jssi.2020.9.j(3)).
- Sturman, M.C. (2003), Searching for the inverted U-shaped relationship between time and performance: Meta-analyses of the experience/performance, tenure/performance, and age/performance relationships, *Journal of management*, 29(5): 609-640. https://doi.org/10.1016/s0149-2063_03_00028-x.
- Taylor, S. (2006), *Płynność zatrudnienia: jak zatrzymać pracowników w firmie*, Kraków: Wolters Kluwer Polska.
- Thatcher, J.B., Stepina, L.P., Boyle, R.J. (2002), Turnover of information technology workers: Examining empirically the influence of attitudes, job characteristics, and external markets, *Journal of Management Information Systems*, 19(3): 231-261. <https://doi.org/10.1080/07421222.2002.11045736>.
- Urbancová, H., Linhartová, L. (2011), Staff turnover as a possible threat to knowledge loss, *Journal of Competitiveness*, 3(3): 84-98.
- Van Waeyenberg, T., Decramer, A., Desmidt, S., Audenaert, M. (2017), The relationship between employee performance management and civil servants' turnover intentions: A test of the mediating roles of system satisfaction and affective commitment, *Public Management Review*, 19(6): 747-764. <https://doi.org/10.1080/14719037.2016.1209230>.
- Vnoučková, L., Klupáková, H. (2013), Impact of motivation principles on employee turnover, *Ekonomická Revue - Central European Review of Economic Issues*, 16: 79-92. <https://doi.org/10.7327/cerei.2013.06.03>.
- Vroom, V. H. (1966), Organizational choice: A study of pre-and postdecision processes. *Organizational Behavior and Human Performance*, 1(2): 212-225. [https://doi.org/10.1016/0030-5073\(66\)90013-4](https://doi.org/10.1016/0030-5073(66)90013-4).
- Wairimu, A., (2008), A Hie impact of motivation on the rate of staff turnover, doctoral dissertation, Department of Extra Mural Studies, University of Nairobi, Kenya.
- Wudarzewski, G., (2013), Satysfakcja z pracy – konceptualizacja pojęcia w świetle badań literaturowych, *Zeszyty Naukowe Wyższej Szkoły Bankowej we Wrocławiu*, 5(37): 323-344.
- Zielińska, A., (2018), Praktyki stosowane w zakresie polityki personalnej w przedsiębiorstwach IT na przykładzie województwa śląskiego, *Marketing i Rynek*, 9 (CD): 1047-1060.

Anna Koszela earned her master's degree from the Department of Organisational Management and Development at the Faculty of Computer Science and Management, Wrocław University of Science and Technology, Poland. Currently she is a PhD student in the Department of Management Systems and Organisational Development at the Faculty of Computer Science and Management, Wrocław University of Science and Technology, Poland. Her research interests include human resources management, especially staff turnover. ORCID no. <https://orcid.org/0000-0002-3145-4203>.