

FACTORS DRIVING TURNOVER AND RETENTION OF INFORMATION TECHNOLOGY PROFESSIONALS

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Abstract. Taking into consideration turnover phenomenon and retention issues, the purpose of the paper is to reveal the employee perceptions on organisational and job-related factors impacting decisions to leave and to stay with the current employer. Based on theoretical discussion related to voluntary turnover and retention of employees, the research instrument was developed. A total of 143 responses were collected from employees working in private IT companies of Lithuania. The results revealed that base pay and challenging work content were perceived as the most important employment characteristics. Turnover prediction models disclose turnover intentions of project managers, which can be explained by participation in strategy development, support of top managers and negative perception of the base pay. Meanwhile, turnover intentions of heads of departments/high level managers can be explained by negative associations with performance incentives/bonuses, career opportunities and working conditions. The findings of the paper let us to develop theoretical insights and provide manager recommendations leading to the retention of information technology professionals.

Keywords: voluntary turnover, turnover intentions, IT professionals, retention, job-related factors, organisation-related factors, human resource practices.

JEL Classification: M1, M12, M15, M19.

Introduction

Skill shortages have become an urgent issue for many firms all around the world (Wahl, Prause 2013; Budria, Moro-Egido 2014). The war for talented employees has been continuing even with an economic slow-down and massive-restructuring (Beechler, Woodward 2009). On the other hand, competition among firms for talented employees is especially intense in service industries.

The development of information technology (IT) industry has posed challenges for IT companies, seeking to recruit and retain professionals (Erturk, Vurgan 2015). Considering the fact that success of a company depends on human capital (Bhati, Manimala

2011), talented employees are seen as a factor impacting the growth of a firm and as the potential to generate organisational rents. On the other hand, skill shortage has driven high employee turnover, which is seen as the issue for IT firms. Meanwhile, some scholars state that empirical studies have seldom targeted IT professionals or engineers as a unit of analysis (Pare, Tremblay 2007; Lee *et al.* 2014). Hence, exploration of turnover, turnover intentions and means to diminish turnover of IT professionals are seen as a promising area of research that has recently attracted attention of researchers.

Notably, employee retention is seen as the most frequent problem in Lithuania (Gaiduk *et al.* 2009). The rates of emigration from Lithuania have been increasing since the country joined the European Union in 2004 (OECD 2013). The majority of studies revealed demand- and supply-side factors of migration (Balkyte, Tvaronaviciene 2011; OECD 2013) or tackled quality of life issues (Korsakiene *et al.* 2011; Streimikiene, Barakauskaite-Jakubauskiene 2012). However, only few investigations assume that migration out and/or reluctance to return to Lithuania “may reflect employee dislike for management and/or organisational practices in Lithuanian companies” (Gaiduk *et al.* 2009: 150).

To date, we know little about factors impacting on intentions of Lithuanian IT professionals to stay or to leave. Taking into consideration the call of practitioners and researchers for effective retention management, the development of appropriate retention strategies of IT firms could help to retain talented employees. Hence, the study aims to contribute to the existing knowledge on factors that cause employees to quit and remain with their current employer. The research is grounded on theoretical insights and survey of IT professionals.

The remaining of paper is organised as follows. The first part provides insights into theoretical aspects of voluntary turnover. The second part investigates turnover and retention of IT professionals. The third part provides information related to procedure and methods applied. The fourth part provides results of the survey. The final part draws conclusions.

1. Theoretical aspects of voluntary turnover

Employee turnover has been extensively investigated in scientific literature (Ongori 2007). The contribution to the scientific field is provided from both practitioners and scientific studies. According to Abbasi and Hollman (2000), turnover comprises rotation of workers around the labour market; between firms, jobs and occupations and between the states of employment and unemployment. Price (2001: 600) states that turnover is “individual movement across the membership of an organisation”. Meanwhile, the latest scientific discussions broadly define turnover as employee exit from an organisation and separate turnover into mobility and entrepreneurship (Carnahan *et al.* 2012). Hence, mobility of employees is observed when an employee joins an already existing company while entrepreneurship is observed when an employee creates or joins a new venture.

Prevailing attitudes toward voluntary employee turnover are twofold. The discussions in scientific literature acknowledge the positive side of low and moderate level of turno-

ver. Therefore, the contribution of low turnover to improved workforce performance by increasing workforce innovation, flexibility and adaptability has been emphasised (Shaw *et al.* 2005). On the other hand, the majority of investigations reveal negative sides of turnover. Hence, a close look at negative aspects of voluntary turnover has to be discussed.

Turnover rate causes additional costs and is seen as a negative consequence for organisations. The investigations carried by Shaw *et al.* (2005) disclosed that turnover of employees in key network positions can negatively impact the performance of organisations. Hence, the conclusion can be drawn that turnover not only increases inefficiencies in organisations and costs them in terms of human capital deficits but also in terms of lost relationships among people. The scholars conclude that leaving employees take with them valuable knowledge and customers (Terence *et al.* 2001). On the other hand, the companies face indirect costs such as exit interview time and administration, the cost of replacement and training.

The latest studies disclose that entrepreneurial exits of high performers have worse consequences for the performance of the parent firm than exits of high performers to established competitors. Campbell *et al.* (2012) investigated legal services industry and revealed that employee entrepreneurship events have larger negative effect on the performance of the parent firm than employee moves to established firms. The scholars revealed that specific opportunities, such as ability to transfer client accounts or capitalise on underutilised technologies or enter new markets, trigger employee entrepreneurship.

The main explanation of turnover danger resides in the ability of high performing employees to capitalise on the transfer of resources and complimentary assets. The transferred resources comprise technologies, team members and social networks. Meanwhile, different groups of complimentary assets, such as organisational knowledge, non-human complimentary assets and human complimentary assets, are distinguished in scientific literature (Campbell *et al.* 2012). Examples of organisational knowledge comprise codified routines, knowledge embodied in products and processes and intellectual property rights. Meanwhile, non-human complimentary assets comprise physical capital, contractual relationships with buyers/suppliers and brand equity. Finally, human complimentary assets embrace tacit knowledge embodied in other employees.

The literature on the turnover aim to explain different factors that cause employees to quit, namely: a growing economy and low unemployment rates, an inadequate supply of professional labour, a low organisational growth rate, a worsening of reputation or decline in socially responsible behaviours of the organisation, a decline in satisfaction with the organisation and characteristics of an employee (Doh *et al.* 2011). Hence, current scientific investigations of voluntary turnover are grounded on the pull and push theories. Pull theories focus on the factors that are external to employees (economy growth, unemployment, supply of labour) and explain job alternatives and how job alternatives emerge. Meanwhile, push theories focus on internal factors and aim to explain job-related perceptions and attitudes of employees related to specific behaviour.

The scholars distinguish three perspectives on voluntary turnover research (Von Hagel 2009). First, linkages between employee turnover and satisfaction are investigated. Second, satisfaction-turnover links are broadened to a theory based on attitude-behaviour consistency. Third, multiple types of voluntary turnover decisions were suggested. However, the array of controllable factors contributes much more to the turnover than uncontrollable factors. Taking into consideration, that some factors are beyond the control of an organisation, the authors of the paper aim to narrow the research and focus on the controlled factors impacting on the voluntary turnover of employees.

2. Voluntary turnover and retention of IT professionals

Scientific studies report on increased turnover rate, especially among IT professionals over the world. Statistical data provided by U.S. Department of Labour confirm that the voluntary turnover rate increased among IT specialists by over 7.2% in 2005–2006 (Von Hagel 2009). Meanwhile, other studies reveal high turnover rates of the Indian IT service sector ranging from 30% to 100% (Lacity 2008). These trends raise challenges for managers of IT companies taking into consideration costs required to replace IT professionals.

While many studies focused on voluntary turnover in sectors of banking, nursing, accounting and grocery stores, investigations of IT professionals are rather scarce (Von Hagel 2009). IT professionals are attributed to knowledge workers and possess individual and personal knowledge transformed by the firms into shared social knowledge. Notably, knowledge workers, described by the motivation and capacity to co-create new insights and capability to communicate, coach and facilitate new ideas, are seen as less loyal to their current employers.

One stream of researchers aimed to focus on understanding the reasons, for which IT professionals voluntarily leave their organisations. Damien *et al.* (2007) conducted a meta-analysis of the existing research on turnover of IT professionals. The research led to the conclusion that “the 43 antecedents to turnover intentions of IT professionals could be mapped onto distal-proximal turnover framework” (Damien *et al.* 2007: 547). Hence, job satisfaction and perceived job alternatives partly mediate the relationships between the more distal individual attributes, job-related and perceived organisational factors and turnover intentions. Meanwhile, Lacity *et al.* (2008) investigated turnover intentions of IT professionals and concluded that job satisfaction, organisational satisfaction and social norms affect turnover intentions.

Reasons for satisfaction with the current employer are seen as a key antecedent of employee turnover. The investigations from different perspectives revealed that job satisfaction measures are “the most informative data a manager or researcher can have for predicting employee behaviour” (Lambert *et al.* 2001: 234). Although job satisfaction is seen as a complex phenomenon with different affecting components, the authors of the paper took into consideration the main of them leading to the turnover of IT professionals. Notably, two groups of factors that affect employee satisfaction and are widely discussed in the literature are: demographic characteristics and work environ-

ment factors. However, statistically significant differences weren't revealed taking into consideration genders of IT professionals (Von Hagel 2009).

The studies that focused on job satisfaction distinguished work flexibility, work-life balance, job performance, lack of consistency in the work place policy and career development as the main factors leading to the turnover of IT professionals (Allen *et al.* 2006). Hence, taking into consideration scientific investigations into work related factors (Lambert *et al.* 2001), task variety, financial rewards, relations with co-workers and participation were selected. Meanwhile, other studies confirm relation of promotion chances and supervisory support with job satisfaction and organisational commitment (Gaertner 2000). Therefore, leadership behaviour related to enabling other, setting examples and rewarding is seen as a significant factor impacting on role clarity, self-efficacy and job satisfaction. In addition, effective learning and opportunities to learn contribute to retention of employees. Kyndt *et al.* (2009: 207) investigated private companies and concluded that “the perception of the importance of learning to employees and quality of work climate is a strong predictor of employee intentions to remain with the current employer”. The investigations into “a gap” and “appreciative” approaches, adopted by firms, led to the conclusion that appreciative approach contributes positively to employee retention. The firms adopting this approach acknowledge strengths of employees and create possibilities to develop qualities. Finally, work-life balance has been acknowledged by practitioners and researchers what has led to innovative work place programs enabling employees to meet their family and life obligations. The investigations confirmed that work–life balance initiatives can lead to significant improvements in recruiting, absenteeism, voluntary turnover, organisational commitment and job satisfaction (Hobson *et al.* 2001).

Meanwhile, another stream of researches is focused on specific human resource strategies and practices for attracting and motivating knowledge workers. Different studies support the assumption that retention practices of IT professionals rely on performance incentives and competitive pay package (Horwitz *et al.* 2003). These findings are similar to the findings carried out in other industries and concluding that common retention practices applied by firms focus more on the factors that are believed to cause employee turnover (De Vos, Meganck 2009).

Hausknecht *et al.* (2008) stated that the majority of studies aimed to disclose factors that cause employees to quit, while very few of them focused on factors compelling to stay in the company. Consequently, the factors that impact the leave of employees might be different than factors impacting to stay in the company. Additionally, the researchers started to note that traditional approaches to work remuneration and reward are less appropriate for knowledge workers. Therefore, freedom to act independently or job design has been cited as the practices that increase the retention of employees (Kinnear, Sutherland 2000). Such human resource practices as challenging work assignment, freedom to plan and execute work independently are causing employee retention. Meanwhile, other studies cite training and development opportunities, a supportive work environment, initiatives to improve work–life balance (Horwitz *et al.* 2003; Tarabkova 2014), growth opportunities, participation in decision making, fairness of rewards/recognition

(Allen *et al.* 2003). Intentions to increase retention are related to desire to increase attractiveness of an organisation and a concern with employees (Cardy, Lengnick-Hall 2011). Hence, the understanding of retention factors contributes to the development of appropriate retention strategies and policies.

3. Methodology

The above discussion leads to several research questions. The first relates to the employee perceptions related to factors impacting on decisions to leave and to stay. The second research question aims to predict what factors drive turnover of IT professionals. The research questions are grounded on the insights provided by De Vos and Meganck (2009), calling for the need to relate retention factors to employee views on their importance. Finally, we are going to investigate if significant differences among various job positions exist.

Procedure and participants

The survey was conducted in April 2014. The sample consisted of employees working in Lithuanian IT businesses. Convenience sampling was used. A questionnaire was developed based on the literature review. The questionnaires were sent by e-mail.

A survey was filled out by 143 employees, working in private IT firms. Of those respondents, 69% were male and the majority of respondents were between 25–30 years (30.9%) and between 30–35 years (31.8%). The majority of respondents indicated being single (49.5%) or married (37.1%). The respondents occupied positions of specialists (45.1%) and senior specialists (29.2%), project managers (15%) and heads of departments/ general managers (10.6%). Of all respondents, 46% indicated having one child. Meanwhile, work experience with the current employer amounted to 1–3 years (28.3%) and 3–5 years (20.4%). The data regarding demographic characteristics of respondents are presented in Table 1 and Table 2.

Measures

In order to disclose factors that influence retention decisions, respondents were asked “What are the top reasons that make you feel satisfied with the current employer?” The respondents were able to select nine most acceptable factors impacting on their satisfaction. The following nine factors comprised organisational and job-related factors: competitive financial rewards, advancement opportunities, learning opportunities, recognition, interesting job content, self-realisation possibilities, acceptable leadership style, good interrelations with co-workers, opportunity to maintain life–work balance.

Aiming to reveal factors, that influence turnover decisions, respondents were asked “What are the top reasons that make you feel dissatisfied with the current employer?” The respondents were able to select factors that influence their dissatisfaction with the current employer. The factors comprised organisational and job-related factors and were: inadequate financial rewards, lack of advancement opportunities, lack of learning opportunities, lack of recognition, lack of task variety, lack of self-realisation possibilities, unacceptable leadership style, poor interrelationships with co-workers, inability to maintain life–work balance.

Table 1. Demographic characteristics of respondents

Gender	%	Age group	%	Family structure	%
Female	31	Less than 25	5.2	Single	49.6
Male	69	25–30	30.8	Married	37.2
		30–35	31.7	Divorced	4.4
		35–45	19.3	Life partner	8.8
		45–55	11.4		
		Over 55	1.6		
Total	100	Total	100	Total	100

Note: n = 143.

Table 2. Demographic characteristics of respondents

Number of children	%	Job position	%	Work experience with the current employer	%
None	46.0	Specialist	45.1	Less than 1 year	18.5
1 child	27.4	Senior specialist	29.2	1–3 year	28.3
2 children	22.1	Project manager	15.0	3–5 year	20.4
3 and more children	4.5	Head of department/ high level manager	10.7	5–7 year	14.2
				7–10 year	6.1
				Over 10 years	12.4
				Total	100

Note: n = 143.

The level of importance of respondent employment characteristics was assessed. Grounded on the theoretical discussion presented above, organisational and job-related determinants were selected. While organisation-related determinants let us observe perceptions of respondents related to their organisation, job-related determinants lead to specific job characteristics. Notably, organisation-related determinants were as follow: base pay, performance incentives/bonuses, non-financial rewards (e.g. car, insurance, etc.) and career opportunities, ethical behaviour of managers, performance management, team-building initiatives, career opportunities, training and development. Meanwhile, job-related determinants comprised good working conditions, flexible working time, perceived workload, support of managers, freedom to plan and execute work independently, assignment of responsibilities, involvement in decision-making process, participation in strategy development, cooperation with co-workers, friendly co-workers, challenging work content and task variety. The employment characteristics were derived from other turnover studies of IT professionals disclosing organisation and job-related determinants (Ghapanchi, Aurum 2011). Answers to the question were given on a five-

point Likert scale ranging from (1) “not at all important” to (5) “important to a great extent”.

Intentions to leave were measured according to the likelihood of leaving the current employer. The scholars conclude that intentions to leave are related to the actual turnover and, thus, are the strongest predictor (Nissly *et al.* 2005). The turnover intent of employees was measured by the question “How likely is it that you will make a genuine effort to find a new job (with another employer) within the next year?” Answers were given on a three-point scale: “very likely”, “somewhat likely” and “not likely at all”. This one item measure was reported in other studies (Lambert *et al.* 2001).

The respondents were also asked: “Do you imagine your future with the current employer?” and “Would you recommend the current employer to your friends?”. Answers were given on a two-point scale: “yes” and “no”. Notably, scientific studies did not reveal the relationship between the retention and recommendation of the current employer to friends (Milman, Dickson 2014). However, the investigations of some scholars confirm that non-work influence outside an organisation is seen as a potential retention factor (Hausknecht *et al.* 2008).

4. Discussion of results

Factors impacting on the decision to stay

The answers of respondents to the question “What are the top reasons that make you feel satisfied with the current employer” revealed that the most significant factors impacting on decisions to stay with the current employer are: good interrelations with co-workers (80.5%), an opportunity to maintain life–work balance (70.8%), competitive financial rewards (58.4%) and interesting work content (49.6%). The least important factors impacting on decisions to stay with the current employer are: recognition (46.0%), self-realisation possibilities (41.6%), advancement opportunities (37.2%), training and development opportunities (32.7%) and acceptable leadership style (32.7%).

While good interrelations with co-workers and an opportunity to maintain work–life balance predominated in the sample, the comparison of responses according to job positions revealed some differences (Table 3). Notably, heads of departments/high level managers emphasised other factors such as competitive financial rewards and self-realisation possibilities (58.3% of all answers). Meanwhile, responses of senior specialists revealed high significance of competitive financial rewards (75.8%).

The conclusion can be drawn that the top reasons for satisfaction coincide with other surveys. For instance, the survey carried out by Von Hagel (2009) reported that general factors contributing to the decision to stay among IT professionals were: employees feeling valued and respected, positive relationship with the direct manager/supervisor and good benefits.

Factors impacting on the decision to leave

The answers to the question about the top reasons that make respondents feel dissatisfied with their current employer and that impact on the decision to leave indicate: in-

Table 3. Factors impacting on satisfaction with the current employer (frequencies of answers, %)

Factors	Special-ists	Senior specialists	Project managers	Heads of department/high level managers
Competitive financial rewards	47.1	75.8	58.8	58.3
Advancement opportunities	45.1	30.3	35.3	25.0
Learning opportunities	35.3	30.3	41.2	16.7
Recognition	47.1	45.5	41.2	50.0
Interesting job content	47.1	63.6	52.9	16.7
Self-realisation possibilities	39.2	42.4	35.3	58.3
Acceptable leadership style	47.1	24.2	23.5	8.3
Good interrelations with co-workers	84.3	87.9	82.4	41.7
Opportunity to maintain life–work balance	74.5	81.8	64.7	33.3

Note: n = 143.

adequate financial rewards (65.4%), an unacceptable leadership style (62.6%), the lack of advancement opportunities (58.9%), the lack of learning opportunities (55.1%), the lack of variety in tasks (47.7%), poor interrelationships with co-workers (45.8%), the inability to maintain work–life balance (43%), the lack of self-realisation possibilities (42.1%) and the lack of recognition (42.1%).

The obtained results are similar to those of the survey of IT professionals carried out by Von Haged (2009), which distinguished the following most significant factors that contribute to the decision to leave: a job offer with more money and employees not valued or respected. Meanwhile, the study carried out by Horwitz *et al.* (2003) reported that the main reasons behind resignation of knowledge workers were related to a better pay and prospects. The survey carried out by Ghapanchi and Aurum (2011) concluded that salary is the most important organisational factor impacting on IT personnel’s decision to leave. However, fairness of reward and advancement can affect intentions to leave to a lesser extent.

The comparison of responses according to a job position revealed that heads of departments/high level managers distinguished the lack of advancement opportunities (58.3%). Meanwhile, group managers and senior specialists emphasised an unacceptable leadership style (respectively 70.6% and 72.7%). The most significant factor impacting on the decision to leave for specialists is inadequate financial rewards (66.7%). The data are provided in Table 4.

To sum up, the top reasons to stay and top reasons to leave do not fully overlap. While the main reasons to stay were related to the social atmosphere (good interrelations with co-workers) and the opportunity to maintain work–life balance, these reasons weren’t considered as the top reasons to leave the current employer. On the contrary, the top

Table 4. Factors impacting on the decision to leave (frequencies of answers, %)

Factors	Special-ists	Senior specialists	Project managers	Head of department/high level manager
Inadequate financial rewards	66.7	60.6	54.7	41.7
Lack of advancement opportunities	47.1	63.6	54.7	58.3
Lack of learning opportunities	47.1	57.6	58.8	50.0
Lack of recognition	31.4	48.5	47.1	41.7
Lack of task variety	47.1	54.5	35.3	25.0
Lack of self-realisation possibilities	25.5	57.6	41.2	50.0
Unacceptable leadership style	49.0	72.7	70.6	50.0
Poor interrelationships with co-workers	41.2	54.5	47.1	16.7
Inability to maintain life–work balance	33.3	51.5	41.2	41.7

Note: n = 143.

reasons to leave were related to inadequate financial rewards and an unacceptable leadership style and weren't considered as the top reasons to stay with the current employer. The same trends were observed by investigating the responses of respondents according to different job positions.

Importance of employment characteristics

Answers to the question about the level of importance of employment characteristics let us disclose that the most important were: the base pay (mean = 4.43), a challenging work content (mean = 4.37), performance management (mean = 4.29) and ethical behaviour of managers (mean = 4.26). The least important employment characteristics were: non-financial rewards (mean = 3.28), involvement in decision making process (3.42), support of managers (mean = 3.49) and team building initiatives (mean = 3.59). Meanwhile, comparison of responses according to respondent job position demonstrates some differences (Table 5).

While organisational determinants predominated among specialists, job related determinants were the most significant among heads of departments/high level managers. The most important characteristics for specialists were: friendly co-workers (mean = 4.53), the base pay (mean = 4.43), ethical behaviour of managers (mean = 4.33) and training and development (mean = 4.33). The most important characteristics for senior specialists were: a challenging work content (mean = 4.52), variety in tasks (mean = 4.45), the base pay (mean = 4.36) and performance management (mean = 4.24). Meanwhile, the most important characteristics for group managers were: the base pay (mean = 4.71), performance management (mean = 4.44), friendly co-workers (mean = 4.41) and a challenging work content (mean = 4.41). Finally, heads of departments/high level managers distinguished the base pay (mean = 4.25), ethical behaviour of managers (mean = 4.25), involvement in decision-making process (mean = 4.25) and a challenging work content (mean = 4.25).

Table 5. Level of importance of employment characteristics

Employment characteristic	Specialists		Senior specialists		Project managers		Heads of department/ high level manager	
	Mean	St. deviation	Mean	St. deviation	Mean	St. deviation	Mean	St. deviation
Base pay	4.43	.677	4.36	.859	4.71	.470	4.25	.622
Performance incentives/bonuses	3.88	.895	3.85	.870	4.35	.702	3.58	.900
Non-financial rewards	3.37	.999	3.18	1.103	3.24	.903	3.25	1.138
Good working conditions	4.20	.857	3.97	.847	4.18	.883	3.83	.577
Flexible working time	3.98	.820	3.73	.911	3.35	1.169	3.67	1.073
Perceived workload	3.88	.887	3.28	1.114	3.65	.862	3.27	.905
Support of managers	3.43	.964	3.42	.936	3.82	.809	3.42	1.240
Ethical behaviour of managers	4.33	.712	4.12	.857	4.29	.849	4.25	.866
Performance management	4.29	.756	4.24	.751	4.44	.512	4.17	.577
Freedom to plan and execute work independently	3.94	.835	3.97	.770	4.00	.866	4.08	.900
Assignment of responsibilities	3.63	.824	3.70	.847	3.94	.899	3.92	.996
Involvement in decision making process	3.84	.834	4.03	.728	4.18	.636	4.25	.754
Participation in strategy development	3.08	1.074	3.67	1.190	3.59	1.064	4.00	1.044
Career opportunities	4.08	.913	3.73	.977	4.18	.728	3.75	1.138
Training and development	4.33	.622	4.00	.791	4.24	1.147	3.91	1.300
Cooperation with co-workers	4.39	.666	4.34	.827	4.06	.748	3.50	1.382
Team building initiatives	3.78	1.006	3.33	.890	3.88	1.166	3.08	1.379
Friendly co-workers	4.54	.676	4.03	.782	4.41	.712	3.33	1.155
Challenging work content	4.28	.607	4.52	.667	4.41	.618	4.25	.622
Variety in tasks	3.84	.857	4.45	.666	4.06	.827	4.00	.853

Notes: n = 143; Level of importance: 1 = “not at all important”, 5= “important to a great extent”.

To conclude, the most important employment characteristic was perceived to be the base pay. The perceptions of respondents about the significance of the base pay coincide with the top reason to leave the current employer – inadequate financial rewards. Notably, the respondents at both higher levels and lower levels indicated the significance of the base pay, which distinguishes our findings from other investigations, citing that rewards are the primary reason to stay for lower level employees (Hausknecht *et al.* 2008).

A challenging work content was perceived as the second most important characteristic reported by IT professionals reflecting desire of employees to be stimulated by their job. The assumptions of respondents about a challenging work content coincide with the top reason to stay with the current employer – an interesting job content. Notably, this characteristic of employment becomes of higher significance at the highest levels of hierarchy. These findings coincide with the research carried out by Allen *et al.* (2008). Hence, the conclusion can be drawn that a challenging work content provided by IT firms contributes to a supportive work environment of IT professionals.

Predicting the turnover of employees

Answers to the question “How likely is it that you will make a genuine effort to find a new job (with another employer) within the next year?” reveal that respondents were “very likely” and “somewhat likely” to move to another employer within the next year (respectively, 11.6 % and 44.2%). Meanwhile, answers to the question about the future with the current employer indicate that only 54% of respondents think about remaining with the current employer. These findings lead to the conclusion that almost half of respondents are considering to change the current employer in a short and long term periods. Meanwhile, 70.8% of respondents would recommend the current employer to their friends.

A step-wise regression was conducted aiming to predict what factors impact on turnover intentions of IT professionals. The dependent variable selected for the investigation was likelihood to make a genuine effort to find a new job (with another employer) within the next year. Independent variables included the level of importance of all employment characteristics provided in Table 5. Results were calculated for different job positions. However, any significant variables weren't obtained for specialists and senior specialists. Meanwhile, our calculations explain variables that predict turnover intentions of project managers and heads of departments/high level managers.

The results provided in Table 6 let us state that three variables significantly predicted turnover intentions of project managers, namely: participation in strategy development, support of top managers and the base pay. The variance explained by the regression model was 82%. Multicollinearity was assessed by analysing the Variance Inflation Factor (VIF) provided in Table 7. The highest detected value is 1.252.

Notably, higher turnover intentions were predicted with a negative base pay what is most likely related with the perception of respondents of their organisations' commitment to their well-being (Milman, Dickson 2014). Meanwhile, higher turnover intentions were predicted with a positive support of managers and participation in strategy development. Positive associations of participation in strategy development, support of

managers and intentions to leave are most likely due to changes in personal goals of employees leading to the changes in perceptions related to their personal carrier. Hence, we can assume that this group of employees do not perceive the current employer as a potential carrier.

The data provided in Table 7 and related with heads of departments/high level managers let us state that three variables significantly predicted turnover intentions, namely: career opportunities, good working conditions and performance incentives/bonuses. The variance explained by the regression model was 92%. Multicollinearity was assessed by analysing the Variance Inflation Factor (VIF) provided in Table 7. The highest detected value is 3.487.

Table 6. Multiple regressions

Predictors	R	Unstandardised coefficients		Standardised coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
Participation in strategy development	.776	.678	.101	.798	6.745	.000	.847	1.181
Support of managers	.885	.559	.126	.522	4.451	.001	.861	1.162
Base pay	.926	-.467	.185	-.307	-2.522	.027	.798	1.252

Notes: R Square = 0.858; Adjusted R Square = 0.822.

Table 7. Multiple regressions

Predictors	R	Unstandardised coefficients		Standardised coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
Career opportunities	.670	-.432	.073	-.644	-5.883	.001	.705	1.419
Good working conditions	.853	-1.544	.203	-1.188	-7.596	.000	.346	2.94
Performance incentives/bonuses	.974	-.763	.149	-.879	-5.121	.002	.287	3.487

Notes: R Square = 0.94; Adjusted R Square = 0.924.

Notably, higher turnover intentions were predicted with negative career opportunities, working conditions and performance incentives/bonuses. Hence, the conclusion can be drawn that the lack of promotability and inappropriate working conditions result in a lower satisfaction with the current employer and, consequently, higher turnover intentions of this group of IT professionals. Personal discussions carried out with this group of managers have led to the conclusions that firms change performance incentives often and perceptions about fairness of these incentives are quite low, which leads to dissatisfaction and, most probably, intentions to leave.

Conclusions

The research investigated factors impacting on decisions of IT professionals to stay and to leave their current employer. Our study focuses on IT professionals and contributes to the understanding of their behaviour. The study investigates the differences among prevailing job positions of IT professionals, which distinguishes our research from other researches.

The study revealed that good interrelations with co-workers, an opportunity to maintain life–work balance and competitive financial rewards are the most significant factors impacting on satisfaction with the current employer and leading to the decision to stay. Notably, relationships among co-workers, managers and organisation are seen as the most important factor among IT professionals. On the other hand, high-ranked IT professionals reported on competitive financial rewards and self-realisation possibilities as the top factors that let us reveal differences among job positions. Meanwhile, the top reasons to stay and top reasons to leave do not fully coincide. Hence, the research concludes that inadequate financial rewards, an unacceptable leadership style and the lack of advancement opportunities are the top factors impacting on dissatisfaction with the current employer and leading to the decision to leave. While high-ranked professionals emphasised the lack of advancement opportunities, specialists distinguished inadequate financial rewards.

The assessment of 20 employment characteristics has led to the conclusion that the base pay and a challenging work content were perceived to be the most important characteristic. Surprisingly, the respondents at both higher and lower levels of hierarchy distinguished the significance of the base pay.

The turnover prediction models based on the significance of employment characteristics let us disclose variables explaining turnover intentions of project managers and heads of departments/high level managers. While turnover intentions of project managers can be explained by their participation in strategy development, support of managers and negative perception of the base pay, turnover intentions of heads of departments/high level managers can be explained by negative associations with performance incentives/bonuses, career opportunities and working conditions.

The obtained data reveals the main variables that might be useful for managers responsible for the development of policies and strategies. The information helps HR managers to develop retention strategies based on the perceptions of employees in different job position. On the other hand, our findings are important for HR managers aiming to manage turnover phenomena of IT professionals. Hence, incentives impacting on social atmosphere, career incentives and changes in a leadership style have to attract a considerable attention of managers. There is a need of differentiation in strategies that would consider job positions. Therefore, job-related determinants should become the priority in the development of retention strategies for high-ranked IT professionals.

Limitations of the research are related to the sample of respondents. Notably, the data were obtained using one source. Hence, future research has to focus on a broader sample

of respondents. In addition, the opinions of HR managers have to be obtained and compared with the opinions of employees. The study focused on organisation and job related determinants, impacting on the decision to leave and to stay. Hence, the future research has to focus on individual, psychological and environmental factors. In addition, further investigations are needed focusing on the detail measurement of identified variables.

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