

INVESTIGATING THE VOLUNTARY EMPLOYEE TURNOVER IN IT COMPANIES IN THE REPUBLIC OF NORTH MACEDONIA: A DELPHI APPROACH

Nika Ivanovska

Junior Human Resources Consultant

ivanovskanika@yahoo.com

Violeta Cvetkovska

Faculty of Economics - Skopje, Ss. Cyril and Methodius University

violeta.cvetkoska@eccf.ukim.edu

ABSTRACT

Globally, the voluntary turnover of labor is an inevitable reality which every organization must face. The voluntary mobilization means that a person leaves the organization as a result of a personal decision, whereas for the organization it is a loss of a specific knowledge, skills and abilities. Therefore, to keep the talents inside the organization, the human resources specialists have to be proactive instead of reactive. Bearing in mind the high level of turnover and deficit of labor in the IT sector in the Republic of North Macedonia, being able to keep the quality employees is a challenge for the domestic companies in this sector. The human resource management is requested to apply specific measures that will affect the process of keeping the talents in the organization and will keep the organizational performance on a long term. The purpose of this paper is to identify the key factors that lead to a voluntary turnover of the IT employees in the country and to show how in modern conditions the human resource management manages the labor turnover. An empirical research has been made with the qualitative method for forecasting - Delphi where the analysis sample is constructed by human resource managers of IT companies in the Republic of North Macedonia. The obtained results are presented and analyzed and they show valuable insights for the management of the IT companies in North Macedonia.

Keywords: *voluntary turnover, employee retention, IT sector, human resource management, Delphi method*

JEL classification: J24

1. INTRODUCTION

When discussing the workforce turnover as a widely researched organizational phenomenon, it is necessary to point out that it presents a serious problem for any organization, while retaining employees is an important task of the human resource management. The focus of this paper is the voluntary turnover that occurs when an employee, for personal or professional reasons, decides to terminate his employment with the employer on his own. Starting from the topicality of the global phenomenon, this paper highlights its serious implication on the information technology (IT) sector in the Republic of North Macedonia. By analyzing the information technology sector in the country in recent years and the behavior of the workforce in it, it is learned that it has a high rate of turnover and maintaining a high level of commitment and dedication of the staff is a real challenge for any IT company in the domestic market. Hence, the main research question is the identification of those key factors that cause voluntary turnover in the IT staff in the country. In

addition, insight will be gained into what domestic IT companies do in order to retain its employees. The originality of this paper is seen in the application of the method for qualitative forecasting – Delphi for examine the voluntary turnover of the IT staff in the country. For the first time in our country, this qualitative method for forecasting has been applied to the research of the mentioned phenomenon.

Besides the introduction part, in Section 2 the focus is on the voluntary employee turnover with emphasize on the factors that affect it. In Section 3 the voluntary employee turnover in IT companies is described, so that, as a case, one country is considered, i.e., the Republic of North Macedonia. In Section 4, the methodology and data are described. In Section 5 are presented and analyzed the results, whereas in Section 6 is given the discussion. In Section 7 is presented the conclusion.

2. VOLUNTARY EMPLOYEE TURNOVER

The beginnings of research aimed towards voluntary workforce turnover date back to 1917, when it was the beginning of the analysis of the costs incurred in the organization as a result of the turnover of employees with the attention focused on how to reduce the costs (Fisher, 1917). According to Armstrong (2006), workforce turnover is defined as the inflow and outflow of intellectual capital into and out of the organization over a certain period of time. From an organizational point of view, employee outflow is a loss of specific knowledge, skills and abilities that have been acquired in the organization over time (Lee and Whitford, 2013). In practice, workforce turnover can be described as the ratio of how and how quickly an employer recruits and loses its employees (Chikwe, 2009). According to Price (1977), when calculating the turnover rate, companies observe the ratio between the number of members of the organization who left and the average number of people who remain in that organization during the observation period. According to Mondy (2010), this rate for the organization, in addition to being an indicator of the effectiveness of the employment, is also an indicator of its overall organizational performance. Furthermore, the workforce turnover is treated differently depending on whether it is a voluntary or involuntary withdrawal of the employee from the organization. Voluntary departure can be explained as departure initiated by employees and involuntary by the organization (Choi, Musibau, Khalil and Ebi, 2012). This definition emphasizes the difference between voluntary and involuntary turnover.

As most common reasons for leaving the current job voluntarily are the possibilities of better working conditions in another company or a desire to change the career path. In the literature, there are significant theoretical models related to the phenomenon of voluntary turnover. According to the March and Simon model (1958), the voluntary turnover of the individual from the organization depends on his desire for a change, but also on the ease with which he/she can move in and out of the organization. Before making a decision to leave the organization, the individual analyzes the internal and external possibilities for turnover. The existence of attractive alternatives or opportunities in the external environment allows the individual to leave the organization in an easier way. This model is considered as one of the first theoretical findings in the study of voluntary turnover. In their model, Porter and Steers (1973) emphasize the set against the fulfilled expectations of the individual and the connection of the same with his intention to leave the organization. When an individual's personal expectations are not met, his or her tendency to leave the organization will increase as much as possible. According to the Mobley (1977) model, behavior that leads to turnover is influenced by a number of decisions and cognitive phases that begin when an individual evaluates his or her current work and is often accompanied by an

emotional state of dissatisfaction. In contrast, Lee and Mitchell (1994) argue that employees in an organization do not evaluate their work until situations arise that give them a reason to do so. The mentioned situations are called "shocks" in their model, which are described as negative events that affect the employee to leave his current job.

2.1. Factors affecting the employees voluntary turnover intention

Over the years, the authors investigating this phenomenon have paid close attention to discover the factors that influence people to voluntarily leave their jobs. Research shows that discrepancies between personal and organizational goals (Medlin and Green, 2009); the lack of opportunity for advancement (Hamel and Breen, 2007) and job dissatisfaction (Palazzo and Kleiner 2008, Garcia and Kleiner, 2001, Hannay and Northam, 2000) have the greatest impact on employees' decision to leave the organization. According to Hissom (2009) the most common reason for employees to leave the organization is the salary amount, as they are in constant search of a high-paying job position. The negative relationship between job satisfaction and the intention to leave the organization has been proven in literature (Saeed et al., 2014). When job satisfaction is higher; the intention to leave will be lower and vice versa. In this regard, the management of each organization should pay attention to the satisfaction with the work that employees feel in order to reduce the potential outflow of their staff.

Factors that affect voluntary turnover can be categorized into three groups: (1) demographic factors, (2) factors related to the individual's work, and (3) psychometric factors (Kane-Sellers, 2017). Factors of influence can also be distinguished to internal factors, i.e. factors related to the current work and the satisfaction of the individual from it and to external factors, such as the workforce market situation and identified job alternatives.

There is no standard framework in the literature for understanding the process of employee turnover as a whole, but authors around the world present a wide range of factors that are useful for interpreting this phenomenon.

3. VOLUNTARY EMPLOYEE TURNOVER IN IT COMPANIES

Globally, the labor market in the IT industry is a dynamic and competitive environment. IT companies are constantly looking for new talents that will successfully meet their organizational needs. Hence, the retention of hired workers becomes especially important for organizational success in conditions when the demand in the labor market exceeds the supply. The turnover of skilled labor from IT companies is causing instability, high costs and a loss of future business opportunities.

There are numerous studies in the literature, the subject of which is the voluntary turnover of professionals in the IT industry. A study by Igarria and Greenhaus (1992) involving 464 IT industry employees found that the intention to leave the organization was influenced by job satisfaction and organizational commitment. Namely, how much satisfaction they will feel from their work and how much they will be dedicated to the job depends on their attitudes towards work, and especially on how much they feel exhausted from their work (Moore and Burke, 2002). The psychological phenomenon called burnout is a state of physical and mental exhaustion associated with workplace activities. Empirical studies on this issue show that this category of employees is particularly vulnerable to exhaustion from work and stress, which of course leads to the decision to leave their job voluntarily. According to Levy (2003), a key element in the decision-making process whether an IT professional stays in the organization or leaves it is job satisfaction. According to Purohit (2016), the biggest impact on turnovers in the IT sector has a compensatory

package. There are many opportunities for qualified IT staff in the market, so for that reason, they can go to another organization at any time where they will be paid more. The most common reasons why IT professionals would leave their company are: the need for a higher salary, the need to improve their IT skills, and the need to work in a company where IT function is a priority (Spiceworks, 2017). In the next part, special attention is given to the voluntary turnover of employees in IT companies in one developing country, i.e., the Republic of North Macedonia.

3.1 Voluntary employee turnover in IT companies in the Republic of North Macedonia

The Information Technology Industry is one of the key drivers for growth in the domestic economy, as well as an important source of innovation in the Republic of North Macedonia. Due to the large selection of domestic and foreign IT companies that are constantly looking for new talent, employees have great self-confidence and easily decide to change their job even though they usually work in convincingly favorable and attractive working conditions. Hence, this sector has a high rate of turnover and maintaining a high level of commitment and dedication to staff is a real challenge for any IT company in the domestic market.

The internet portal for information technology IT.mk has conducted a research “Mapping the IT industry in North Macedonia - 2019” and it is based on 4 surveys where as respondents were 1135 IT professionals from North Macedonia¹. The survey was conducted in a period of one month. The surveys were divided into the following areas: programming / development / IT administration, graphic design, digital marketing and other IT industries. Based on the obtained results from 856 IT professionals involved in programming, development and IT administration, the most important factor during employment for the IT staff in the country is the possibility to learn and grow. The main disadvantages that this profile of employees often identify in their workplace are: poor internal organization, inadequate project management, poorly defined job responsibilities, work pressure, poorly written documentation, lack of teamwork and incorrect deadline for assigned job responsibilities. They express their dissatisfaction in direct conversation with their supervisor, find another job and then resign, work with minimal effort, do not recommend the company to others, resign and then look for a new job, refuse to work on projects, publicly express dissatisfaction on social media, etc.

In the research in this paper we want to investigate the factors of key importance that affect voluntary turnover of IT employees in companies of this sector in North Macedonia, and to gain insights what the human resource management do in order to manage the voluntary turnover. Next section describes the methodology used in the research and how the data is obtained.

4. METHODOLOGY AND DATAThe overall objectives of the research in this paper are the following:

- to identify the key factors that lead to a voluntary turnover of the IT employees in the country; and
- to show how the human resource managers that in the IT companies in Republic of North Macedonia, manage the voluntary turnover of the IT employees.

¹ Mapping the IT industry in North Macedonia 2019, available at: <https://www.it.mk/mapiranje-na-it-industrijata-vo-mk/>, (accessed 10 June 2020).

In order to achieve the objectives, an empirical research has been conducted with the qualitative method for forecasting - Delphi where the sample for analysis consist of human resource managers in the IT companies in Republic of North Macedonia.

The Delphi method is used to study and forecast uncertain or possible situations for which we are unable to perform objective statistical regularities, set a model, or apply a formal method. These are phenomena that are difficult to quantify, because they are of a qualitative nature, i.e. there are not enough statistical data on the basis of which the study would be performed. This method is a tool for consensus in situations where a wide range of panel views can be used - experts, as well as their creativity in opinions about similar situations. Before using the Delphi method, the problem for which forecasts are expected should be defined. Then the group is defined, i.e. the experts who will participate in the process are selected. A prerequisite that the selected experts must meet in order to be included in the forecasts is to have the necessary knowledge, experience and expertise for the specific problem (Cvetkoska and Dimoska, 2019). An important feature of this method is the implementation of several rounds of questionnaires, whereby the selected experts remain anonymous and have the opportunity in each subsequent round to see the answers of others and decide whether to keep or change their answer, and it is necessary to provide an explanation if they make a change.

The empirical research in this paper is performed through three consecutive rounds. The opinion and experience of the experts will be used to find out the key factors that affect voluntary turnover in the IT staff in the country. In addition, the most common reasons for employees leaving IT companies will be identified. Additionally, it will be determined what the human resource management in domestic IT companies do about reducing the voluntary turnover of IT staff.

In the first round based on the Delphi method, the experts will need to answered three open-ended questions and one closed-ended question, which required the respondents to assess on a scale of 1-5 (1 - least important, 5 most important) according to their opinion, the importance of the given nine factors that affect voluntary turnovers of the IT staff in the country. Also, they will be given an opportunity to add factors that according to them are important, but not listed, and to assess their importance by using the same scale.

In the second round to the respondents will be send the same list with nine factors, and they could see their answer (grade of importance), as well the answer to the other respondents (they will be gives as respondent, 1, 2, 3 etc., and to each respondent separately will be assign a number and he/she will know its own number) and they could change their grade but with an explanation of it. In case of added new factors, from few or all of the participants, they will be given the list with the same 9 factors and the added factors (with their grades) and they will need to assess the new factors (if they were not done that in the previous round), but also, they will be given the opportunity to change grades with an explanation.

In the third round, they will be given the list with all factors (separate grades from each participant and the mean for each factor) and be asked to check and to change a grade if they think that is needed with an explanation. If some changes are made to the factors, than again, the list will be send to them (with the changes), otherwise this will be the last round.

For all Delphi rounds, the questionnaire was made by using the online software – Typeform², that is specialized for building online surveys. The questionnaire was available only via generated survey link (a custom URL) that the respondents received on their email address. In addition to

² <https://www.typeform.com/>

the questionnaire, in the rounds that follow after round one, to the respondents was sent a list with all answers (grades and average grades for each factor) obtained by all of them from the previous round of the Delphi method.

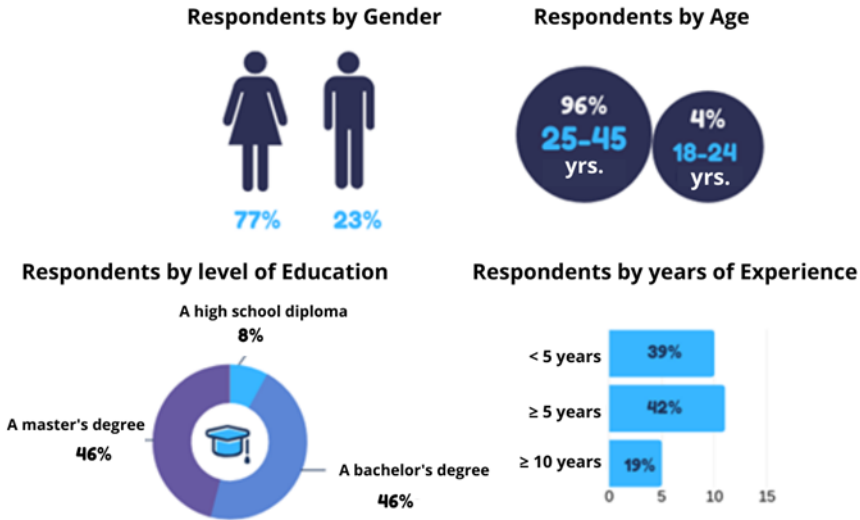
The empirical research was conducted over a period of 2 months. The first round was conducted from 8th to the 30th of March, 2020. The period to fulfill the questionnaire from the second round was from March 30 to April 22, 2020. The last round was conducted from April 22 to May 8, 2020.

5. RESULTS AND ANALYSIS

The sample of respondents who participated in this research was composed of 26 experts, i.e., human resource managers of IT companies in the Republic of North Macedonia. The identities of those surveyed were not disclosed. In addition to the main research questions, information was obtained on demographic data on the group of respondents and the characteristics of IT companies such as: location and time of existence, number of employees and type of employer in the IT sector (domestic or foreign IT Company).

In terms of gender, 77% of respondents are women, 23% are men. Most of them are between the age of 25 and 45 (96%), while only one respondent (4%) is between the age of 18 and 24. According to the level of education, 46% have completed a second cycle of studies in the field of human resources or other related field, 46% have higher education and 8% have completed secondary education. In terms of work experience, 39% of respondents have work experience less than 5 years, 42% more or equal to 5 years, and only 19% more than 10 years (Figure 1).

Figure 1: Characteristics of the sample of analysis



(Source: Authors own calculations (Data visualization has been done using the web-based design software -Canva))

As for the location of IT companies, 25 are based in Skopje, while only one IT company is located in Bitola. In terms of period of existence, the youngest IT Company involved in the survey is 2 years old, and the oldest is 25 years old. According to the number of employees, 39% were small companies with 10 to 49 employees, 42% were medium-sized companies with 50 to 249 employees and 5 large companies with 250 or more employees. Based on the answers received for

the type of employer, most of the experts or 62% work in foreign IT companies that have an open representative office in the country, 23% work in domestic IT companies, while 15% work in companies with mixed capital (domestic and foreign).

In 5.1 are presented the results from round one, while in 5.2 the results from round two and three.

5.1 Delphi Method – round one

Regarding the first question, which concerned the reasons given by the employees for leaving the IT companies, the obtained answers are given in Table 1. For repetitive responses; the frequency is also indicated. Respondents cited more than one reason in their responses. A total of 10 reasons were provided, and the highest frequency is observed in emigration from the country in search for a better standard of living, which was stated by 13 respondents. Other common reasons, according to respondents, are: the possibility of greater financial compensation (9 respondents) and the search for a challenge and a change in work (7 respondents).

Table 1: Causes of voluntary employee turnover in IT companies in the Republic of North Macedonia

No.	Causes	Frequency
1.	Emigration from the country in search of a better standard of living.	13
2.	Opportunity for greater financial compensation.	9
3.	Search for challenge and change at work.	7
4.	Possibility for better working conditions.	3
5.	Opportunity for a higher job position and greater responsibility	2
6.	Dissatisfaction with labor relations and management.	2
7.	Engaging in another field of interest.	1
8.	Feeling stagnant and oversaturated from the current job	1
9.	Problems with fitting into organizational culture.	1
10.	Work overload.	1

(Source: Authors own calculations)

The answers to the second question were the grades of importance from the respondents for the nine factors that affect the voluntary turnover of the IT staff in the country. Based on their individual grades, the average grade of importance is calculated for each factor and these grades are shown in Table 2. From the presented results in Table 2 it can be seen that the factor that affects the most of the voluntary turnover from IT companies in the country is the need for bigger challenge at work ($\bar{x} = 3.6$) followed by the need to improve the IT skills of the employee ($\bar{x} = 3.2$), the need for greater financial compensation ($\bar{x} = 3.0$), etc.

Table 2: The importance of factors affecting employee turnover in IT companies in North Macedonia

No.	Factors	The average grade of importance
1.	Need for a bigger challenge at work.	3.6
2.	Need to improve the IT skills of the employee.	3.2
3.	Need for greater financial compensation.	3.0
4.	Need for a better work environment and interpersonal relationships.	2.7
5.	Desire to work in an IT company with a higher market reputation.	2.7
6.	Need for a better benefit package.	2.6
7.	Need for balance between private and business life.	2.6

8.	Due to experienced "burnout" syndrome.	2.4
9.	Desire to work with a more talented IT team.	2.3

(Source: Authors own calculations)

The third question, which was opened, gave to the respondents an opportunity to add new factors to the list of factors given to them in the second question. The respondents listed other seven factors in total that were not given, and according to them are important, i.e. they affect the decision for the voluntary turnover of the IT staff in North Macedonia. The new factors are: the need for flexibility in operation, absence of work with challenging technologies, current political, economic and social factors, intention to emigrate from the country, absence of employee opinion evaluation, lack of effective communication and transparency and absence of career plan for employee development. They were assessed by the respondents who listed them by using the same scale from 1 to 5 according to the level of importance. Additional factors, their frequency and the average grade of importance are shown in Table 3

Table 3: The importance of additional factors affecting employee turnover in IT organizations

No.	Additional factors	Frequency of listing the factor	The average grade of importance
1.	Need for flexibility in operation.	6	5
2.	Absence of work with challenging technologies.	5	5
3.	Due to current political, economic and social factors.	4	4,6
4.	Intention to emigrate from the country.	5	4
5.	Absence of employee opinion evaluation.	1	4
6.	Lack of effective communication and transparency.	1	4
7.	Absence of career plan for employee development.	1	3

(Source: Authors own calculations)

The fourth question referred to what the human resource management in domestic IT companies do to reduce the rate of staff turnover. The answers obtained from the respondents are shown in Table 4. Respondents cited more than one activity in their responses. From the 22 retention activities, the highest frequency has the continuous improvement of the benefit package, which was stated by 7 responds. The other most common activities that are used are: continuous improvement of working conditions (6 respondents), work on challenging projects (4 respondents), etc.

Table 4: Implemented retention activities in IT organizations

No.	Implemented retention activities	Frequency
1.	Constantly improving the benefit package.	7
2.	Continuous improvement of working conditions.	6
3.	Working on challenging projects.	4
4.	Flexible work and the opportunity to work from home.	3
5.	Assign work tasks that require the application of the latest technologies.	3
6.	Increasing the amount of financial compensation.	3
7.	Timely direct communication and transparency.	3
8.	Undertake activities to improve organizational culture.	3
9.	Opportunity to work with a foreign market.	2
10.	Additional benefits such as: private insurance, free telephone and subscription, food, and free sports activities.	2
11.	Payment of bonuses.	2
12.	Opportunities for improving knowledge and skills.	2

13.	Implement a work-life balance program.	1
14.	Opportunities for traveling abroad.	1
15.	Implement an employee retention and loyalty program.	1
16.	Educating the human resources team on how to increase employee loyalty.	1
17.	Regular evaluation of employee satisfaction.	1
18.	Carrying out activities aimed at improving employee motivation.	1
19.	Finding the source of manifested employee dissatisfaction.	1
20.	Providing a work environment that offers good professional progress.	1
21.	Increasing employee involvement in decision making.	1
22.	Set clear and transparent goals for the company and employees.	1

(Source: Authors own calculations)

5.2 Delphi Method – round two and three

Because new factors that affect the voluntary turnover in the IT staff in the country were added by some of the participants, in this round the list was given to them with the same 9 factors (from round one, with the grades of importance), and the added factors (also, from round one, with their grades) and they assessed the new factors (if they were not assessed them in the previous round), but also, they were given the opportunity to change grades from the previous round with an explanation.

The results (average grade of importance) obtained from the second round of the Delphi method are shown in Table 5. According to the respondents, the most important factors influencing the departure of IT staff are: the need for greater financial compensation ($\bar{x} = 4.0$), the need for a better benefit package ($\bar{x} = 4.0$), the need for greater work challenge ($\bar{x} = 3.9$), the intention to emigrate from the country ($\bar{x} = 3.7$), and the absence of work with challenging technologies ($\bar{x} = 3.6$).

Table 5: The importance of factors affecting voluntary turnover in IT organizations - results from the second round of applied Delphi method

No.	Factors	The average grade of importance
1.	Need for greater financial compensation.	4.0
2.	Need for a better benefit package.	4.0
3.	Need for a bigger challenge at work.	3.9
4.	Intention to emigrate from the country.	3.7
5.	Absence of work with challenging technologies.	3.6
6.	Need to improve the IT skills of the employee.	3.4
7.	Due to current political, economic and social factors.	3.3
8.	Need for flexibility in operation.	3.2
9.	Lack of effective communication and transparency.	3.2
10.	Desire to work in an IT company with a higher market reputation.	3.1
11.	Absence of career plan for employee development.	3.0
12.	Absence of employee opinion evaluation.	2.9
13.	Need for a better work environment and interpersonal relationships.	2.9
14.	Desire to work with a more talented IT team.	2.8
15.	Need for balance between private and business life.	2.8
16.	Due to experienced "burnout" syndrome.	2.7

(Source: Authors own calculations)

In the third round, the list with the sixteen factors (Table 5) was sent to the respondents with grades from the respondents obtained in the second round along with the average grade of

importance for each factor, and based on their responses there were no changes, so the results remain the same as in round two.

6. DISCUSSION

Palvia, Ghosh, Jacks, and Serenko (2020) in their book present studies where research is conducted on the global problems in IT in 37 countries around the world. In 2013, an international team of researchers started to develop a standard instrument for research in order to obtain information about the global IT environment, thereby taking reasonable accountability of the difference of the countries, more precisely, their national culture, economic growth, political systems, social and religious beliefs, as well as the nature of the organizations themselves and the professional IT culture in all of the included countries. In the research, over of 11,000 records and 1.7 million data items were obtained. According to the set research framework of the project, the problems that IT employees faced are classified in three categories such as organizational, technological and individual problems (Palvia, Ghosh, Jacks, Serenko, and Turan, 2020). What follows are obtained information from some of the countries involved in the research such as: the United States of America, China, Russia, Turkey, Iran, Pakistan, Italy, France, the United Kingdom, Greece and North Macedonia.

In the United States of America (USA), there were 308 workers in the IT staff involved. Based on the received answers, listed as the most important organizational problems are: IT reliability and efficiency, security and privacy, and attracting and retaining IT professionals. Technological problems refer to: networks/telecommunications, enterprise application integration, and collaborative and workflow tools. IT professionals in the USA show a high level of satisfaction in their work, success and a moderate quality of work pressure, little worry for the balance between their professional and private life, little worry for the safety in their job and a strong desire to stay in their work place in the next years (Jacks and Palvia, 2020).

The research conducted in China obtained answers from 310 IT employees. As main organizational problems are listed: IT reliability and efficiency, security and privacy, and IT strategic planning. The main technological problems are: networks/telecommunications, big data systems, data mining, software as a service, and business intelligence/analytics. In addition, more than half of the respondents were satisfied in their work place, that is, they feel safe and will not change their work place in a short term (Yu et al., 2020).

In Russia, because of its political and economic history, there are a few notable problems appearing that are not common in the Western countries. Here, the main organizational problems are: IT reliability and efficiency, security and privacy, and revenue-generating IT innovations. Technological problems are relying on business intelligence/analytics, business process management systems, and enterprise application integration. Unlike China, the networks/telecommunications are on the bottom of the result list. The individual problems are similar like the other countries, identified with little professional self-efficiency and intentions of leaving (Jacks et al., 2020).

According to the received results from Turkey, IT reliability and efficiency, security and privacy and outsourcing services are among the most important organizational problems. In the technological sense, the biggest concern is seen in business intelligence and analytics, enterprise application integration and networks and telecommunications. The IT staff in Turkey is satisfied with their work, they feel safe in their work place and they emphasize moderate level of leaving (Turan et al., 2020).

In Iran, in the last few years, IT and telecommunications infrastructure are developing and enhancing rapidly. The three main organizational questions connected with the IT sector in Iran are: revenue-generating IT innovations, business agility and speed to market, and alignment between IT and business. The main technological problems are: enterprise application integration, networks and telecommunications, and ERP systems. The employees in the IT sector point out that they are moderately satisfied of their work even though they come across significant pressure (Ghosh et al., 2020).

Revenue-generating IT innovations, IT strategic planning, and business productivity and costs are the organizational IT problems who are ranked the highest in the research conducted in Pakistan. Between the top technological problems are: business intelligence/ analytics, customer relationship management (CRM) systems, and mobile and wireless applications. The workers of the IT industry in Pakistan are satisfied of their work, with moderate levels of burnout, pressure and assigned workload. Most of the IT labor in Pakistan is motivated to stay in the domestic IT industry in the future (Qureshi et al. 2020).

In the part that follows, the focus is on some of the European countries which are part of Palvia, Ghosh, Jacks, and Serenko (2020) book.

According to the Italian IT workers, IT strategic planning, IT service management, knowledge management, alignment between IT and business point out as the most significant IT questions. The main technological problems include enterprise application integration, business intelligence/analytics, collaborative and workflow tools and networks/telecommunications. The IT workers in Italy are satisfied of their work and feel safe with a small level of leaving noted (Frigerio et al., 2020).

According to the employees of the IT staff in France, the main three organizational IT problems are: generating IT innovations, security and privacy, and project management. The three main technological problems are: business intelligence and analytics, customer relationship management systems and mobile and wireless systems. Generally, the IT employees are satisfied with their work place and profession and plan to remain with their current employer in the next period (Kefi et al., 2020).

Because of the big number of technological innovations, the United Kingdom is ranked as the most enterprenural country in Europe. In the research, there were 95 IT workers involved. According to the respondents, the three most important organizational problems are: IT reliability and efficiency, security and privacy, and alignment between IT and business. The three main technological problems consist of: mobile and wireless application, business intelligence/ analytics, and software as a service (SaaS). The workers in the IT sector in the United Kingdom are in a large extend satisfied of their work and believe they add worth to their company. The participants are not worried about their work places and are expected to stay in the IT industry in the future (Powell et al., 2020).

In Greece there were 106 workers of the IT staff included. The main organizational problems that were identified of the IT workers are: IT reliability and efficiency, security and privacy and IT strategic planning. Business intelligence/analytics is the highest ranked technological problem, whereas the social networking/media are considered as the least important. IT workers in Greece are generally satisfied of their work places and experience moderate work pressure (Serenko and Bhandari, 2020).

According to Levkov et al. (2020), the IT industry is a key sector in North Macedonia especially if its taken under consideration the big potential for export of IT services and the number of newly opened companies. The questionnaire was created online by using SurveyMonkey and the research

was conducted in the period from March to July 2016. In the research 294 IT workers have participated. In relation of the demographic characteristics of the respondents, 65% owned a bachelor's degree. Furthermore, most of the respondents (83%) had an IT work experience from 0 to 9 years in the field. 83% of the respondents were in a full-time employment and more than half (60%) in the organizations worked as part of the IT sector. In relations of their work position in the company, a small number of the respondents (13,6%) were part of the senior management. In accordance of the analysis of the recieved answers, as the most important organizational problems which the North Macedonian IT sector faces are: knowledge management, lack of IT staff, and very high IT employee turnover rate. On the other side, business intelligence/analytics and software as a service (SaaS) are identified as the most important technological and infrastrucural problems. In relation to the individual problems, it is important to note that most of the IT professionals in North Macedonia are satisfied and like their current job. In that way, employment in the IT industry in North Macedonia continues to be compilling for younger population. The top ranked organizational problem, refered to knowledge management, is a result of the fact that a lot of the IT sectors in big organizations in North Macedonia are faced with lack of IT staff and a high rate on the IT employee turnover. When the knowledge of a certain IT system or project for software development resides only in the framework of a certain IT professional, the knowledge is lost when that same IT professional leaves the organization. Therefore, building systems based on the knowledge are considered as a priority for the Macedonian companies and a way for them to be secured when the employees leave the organization. Based on the presented results, an insight is obtained that the high demand for IT professionals on the global market affects the dynamicity on the IT market in North Macedonia, and, consequently, causes a high turnover rate, which is mostly driven by the emigration process (Levkov et al., 2020).

According to the results presented in our research study, the highest ranked reason why the IT staff voluntarily leaves their work place is that exact intention for leaving the country in search for a better life standard (Ivanovska and Cvetkoska, 2020). Hence, if we connect the two North Macedonia studies, we can conclude that: despite the high net income in the IT sector, because of current political, economic and social factors, the IT staff decides to leave the work place and continue their career path outside the country.

7. CONCLUSION

The performed empirical research within this paper provides valuable information about the key factors and reasons that influence the voluntary turnover of the IT staff in the IT companies in North Macedonia. The research was conducted with the aid of the qualitative method for forecasting – Delphi.

Based on the obtained results, the three most common reasons why IT staff leave their jobs voluntarily are: 1) intention to emigrate from the country in search of a better standard of living; 2) the possibility of higher financial compensation in another competing company and 3) the search for a change of job.

According to the human resources management of the IT companies included in the analysis, the most important factors influencing the voluntary turnover of IT staff are: the need for higher financial compensation, the need for a better benefit package, the need for greater work challenge, the intention to emigrate from the country and the absence of working with challenging technologies. The most common activities that domestic IT companies undertake in order to reduce the rate of IT staff turnover are: continuous improvement of the benefit package, continuous

improvement of working conditions and assignment of work to challenging projects. The results from the conducted research show that domestic IT companies are aware that retaining their best employees is extremely important for achieving success in the global competitive environment. Therefore, to retain key employees, the HR management in the IT companies should continuously monitor the work environment, in order to identify the issues due to which IT employees would voluntarily leave and consequently take the corrective measures for prevention and early solving of the potential problem.

When using the Delphi method, the respondents are known for their expertise for the problem of interest and the questionnaire is only addressed to this group. However their number is not high, i.e. it might be a group of panel experts of 5 respondents. This is not a case when we are using a standard questionnaire where is required a larger number of respondents (minimum of 30 in order to make general conclusions). In our research the sample of respondents was composed of HR managers who work in IT companies in the territory of North Macedonia, and we have analyzed their points of view for the problem of interest. In order to obtain a broader picture and insight for the reasons why the IT staff voluntarily leaves the companies, in our next research the standard questionnaire will be created and addressed to the IT employees in IT companies.

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