

THE CHARACTERISTICS OF INTERNATIONAL AND HUNGARIAN TALENT SHORTAGE

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Abstract: *The current challenge of the labour market is the labour shortage appearing even on a global level. Nowadays the majority of employers face this problem the handling of which has become one of the central tasks of a human resource manager besides keeping the employees. The appearance of labour shortage is realised on different levels in the market (expert shortage, knowledge shortage, skilled worker shortage etc.) of which the latest approach is the lack of talented employees. It is vital to define precisely and interpret the problem in order to tackle it effectively. The research relied on Hungarian and international literature to provide an answer to the right definition of talented employee and the lack of it. The appearance of talent shortage cannot be connected to a single state but it can be looked upon as globally extensive. The most thorough mapping of the talented employee shortage on an international level has been done by a Manpower Group research with the help of which we can receive detailed information about the global scales and the tendencies experienced in the measured countries. The results of the research draw conclusions from the difficulties of filling positions highlighting the scale of talented employee shortage in the countries measured. We are given an answer to which professional fields are the most difficult to find the right employee for. It also reveals what difficulties the employers are facing and how they try to handle the problem. The study introduces a few targeted solution strategies to manage talent shortage based on literature and Manpower expert recommendations. The need for excellent people has undoubtedly become one of the most pressing economic questions which requires a targeted solution as soon as possible. To make this happen it would be useful to do a research which specifically reveals the Hungarian peculiarities which can interpret the question country-specific thus could provide a more efficient help to shape a solution strategy.*

Keywords: *talent, labour market, labour shortage, ability, human resource management*

JEL classification: *E20; E29; F66; J00; J24; O15.*

1. Introduction

An inevitable part of the current labour market situation is managing the labour related difficulties. From the employer's side the state of labour shortage makes the organizational everyday harder. One of its causes is the growing demand for quality labour. Nowadays labour shortage affects employers on several levels, it appears

most often in the form of professionals shortage, knowledge shortage, skilled worker shortage, at the same time experts have recently specified another area more frequently which is identified as talent shortage.

The lack of balance occurring in the talent market is obviously not unique and it affects not only one country but it can be observed as a global phenomenon. Because of the unbalanced labour market present in the majority of countries not only the small countries but even the biggest ones suffer spectacularly. "Despite the high unemployment global economy has entered the decade of unprecedented talent shortage" – stated at the World Economic Forum, which gathers the leading world powers, in 2010 (World Economic Forum, 2010). That is why it is worth examining the situation of other countries before dealing with the Hungarian statistics in order to receive a realistic benchmark and to view the state of the local labour market proportionately. Having measured the international situation in terms of talent shortage we can view the national tendencies in a more targeted way. Considering that this type of labour shortage has been defined on national level recently, no specific national survey has been made in this matter thus we can only work with international results or results that affect our country and the related data when we want to identify the Hungarian talent shortage.

The realization of the research could be justified from several aspects. On the one hand, in the current state of the national labour market we can observe unemployment and labour shortage at the same time which puts a heavy burden on the economy and it affects the employees and employers as well. Revealing the extent and details of talent shortage can provide useful information for both target groups that can support a more efficient employment and more efficient recruitment. On the other hand, the problem of labour shortage affects the whole enterprise and has been unable to reverse itself so a targeted intervention is essential to create a long-lasting solution. Supposing that the most important step to solve a problem is to get to know it in its minutest details thus revealing it can mean the vital background piece of the general solution and can serve as thought-provoking for the field's experts.

2. Labour market aspects of talent and talent shortage

According to Sternberg and Davidson (1990) the definition of talent can always be deducted from the expectations and needs of the prevailing society. This depends on in what aspect the notion becomes important at the given period thus we can state that the definition and the evaluation can change depending on the age and place. Based on the Hungarian Concise Dictionary (2003) talent means mostly an instinct and ability towards something. We cannot produce a generally applicable definition though scientist agree that it contains some kind of special inner power which assures the possibility of growing social productivity (Gyarmathy 2006). Examining from a practical point of view one of the most generally accepted notions on a national level is connected to Czeizel (1997) which says that talent is a certain degree of potential and promise regarding that the individual can produce outstanding result in the field of some kind of human profession or activity that is socially useful and on top of that it fills the individual satisfaction and sense of achievement. Under the definition of talent "we describe a complex not uniformly definable quality group which most generally enables the individual for a socially useful activity at a higher than average standard" (Herskovits, 2005). Starting from

these descriptions we can summarize that talent shortage on the labour market shows a shortage of those people whose work generally produces outstanding performances and involves high potential, the key to their achievements assumes a special inner driving force. The novelty of the expression “talent shortage” is supported mainly by the fact that the Hungarian Concise Dictionary cannot produce a meaning to the definition so when interpreting it we can mostly rely on what the researchers of the field have put down. Nevertheless it means that we deal with a relatively young expression which is not that well-spread in the Hungarian language and it is also justified by the low matches offered by the Google search engine. The interpretation is further made difficult because there is no notion that summarizes the phrase in the Hungarian literature mostly the meaning can be interpreted only by relating explanation. But in many cases there is no unified usage of the notion in terms of content in the not too rich literature related to the topic. According to one of the simplest national interpretations “talent shortage” means the increased demand for talents and the decrease of the talent supply available (Balogh, 2014). According to Szabó (2011) talent shortage can be defined as relative, which is quality labour shortage. According to Manpower’s report (2012) it can be connected to the lack of “good” experts who have the right technical and professional experience and the lack of them means obvious slowing down in the operational every day. Though there are researches which totally identify talent shortage with labour shortage among others Rácz (2013) applies the notion in the same context when he writes that as an effect of the world economic crisis the oversupply of labour and talent shortage appear on the labour market simultaneously. There is another interpretation which invests talent and knowledge with the same meaning the result of which is the almost equal interpretation of talent shortage and knowledge shortage. Szabó’s (2011) interpretation is a good example for that saying that the central aspect of human capital and knowledge brings with itself the importance of researching talent-related difficulties in a primary way both in practical life and on a theoretical level. In Manpower’s (2013) report unlike in the previous year talent shortage is related to professional skills and the labour market in general. *“In the American continent talent shortage is mostly caused by the lack of proper technical, professional skills (so-called hard skills) and the lack of applicants in general”*. Thus the expression talent shortage is related to the thin layer of employees who can help their employees to competitive advantage on the market through their certain, personal skills (talents). Their economic value thus can be looked upon as inversely proportional to their quantity available. It is also important to underline that talent shortage appears as quality shortage on the job market which means that in many cases quantitatively there are enough candidates for a position but for the lack of quality they cannot be employed for the given position. Moreover we should not forget that by interpreting labour shortage it remains a vital aspect to employ the right person for the right job which is the basic target of human resource management. The right person in the right position does not equal the talented employee though since from a job market point of view the talented employee will be the one who can not only stand his or her ground in one position but can be “deployed in several fronts”. We can ascertain that thanks to the changing environmental effects a special competition has evolved that has led to the appreciation of the significance of abilities and skills (Dajnoki – Kun, 2016). According to Gergely (2016) the abilities and skills become definitive not just in a general sense but obviously contribute to career development nowadays. Not to mention that from a Deloitte (2015) survey it is clear that possessing the necessary

abilities on an employer level is a key to consumer satisfaction which is one of the keys of organizational effectiveness. Furthermore quality labour is the determinant of business success as well which is a universal law that will never change based on the 2016 survey of SHRM. To use a common metaphor, if we look at the labour market as a house of cards – e.g. rummy – the right employee at the right place could be the “ace”, but cannot compete with the “Joker” who can be a “King” anywhere, “Ace” too but if it is necessary can be a “Two”, as well. So a good workforce can be very valuable and indispensable as well but only within its own field while a talented employee can continuously reproduce itself and stand its ground at the right place in the necessary condition and performs well – thus he/she becomes the Joker of the labour staff.

3. Talent shortage as a global phenomena

A lot of researches and analyses have been done concerning the impediments occurring on the job market from which the most often cited problem stems from the disproportion of job demand and supply. As a result of oversupply unemployment happens while over demand creates labour shortage. Both situations form an extreme state on the market as a result of which the economy will suffer and that is why there is a constant pursuit to create the optimum level.

The concept that talent shortage causes problems not just in our national economy is proven by Gordon's (2009:38) survey showing that already in 2009 62% of the total jobs in the USA require high qualification and simultaneously it means higher wages. To fill these positions approximately 97 million people would be needed but taking qualifications into account only 45 million people have the necessary qualifications. 38% of the jobs fall into low-payment category and requires low qualification. The economy would require 61 million people for these areas although for these types of jobs 100 million people would be available according to statistical data. While there is an over demand for higher quality jobs (labour shortage) there is an oversupply for lower quality jobs (labour surplus) in the American economy.

Manpower which is a company dealing with temporary employment and human resource has done several surveys in different countries concerning talented employees. Since the beginning of 2000 they have published international results concerning the extent of labour. It is important to point out that concerning the extent of talent shortage Manpower surveys do not differentiate between the demand for talent and knowledge thus they handle these areas as one topic. The reason of this is that the two aspects are hard to separate within the world of labour so in fact the survey shows the simultaneous lack of talent and knowledge in a global context. Thus from a methodological point of view the interpretation and approach become disputable however, currently there is no more precise and thorough publicly available survey that we know of, to measure this special labour market factor therefore my analysis has been made by using these data (Szabó 2012).

During its 2010 survey Manpower contacted 35,000 employees in 36 countries and from their answers it found that 31% of employers have difficulties to fill the available positions and one of the reasons is the lack of talented employees. In some sectors for example health, education, IT sector and business services – independent of their geographical location – there is a different but determinative shortage of talents. As a logical consequence to this condition during the “fight” for these well-positioned talents we could notice the “seduction” of talents from one organization to another or

from one country to another (Szabó 2011). In 2010 Japan was the country where it was the most difficult to find employees for the vacant positions (76 % of the employers indicated that they cope with these difficulties), the countries following Japan were Brazil (64%), Argentina (53%) and Singapore (53%), in Hungary the ratio was 30% in 2010 (Manpower, 2010 p.3). Since the 2010 results the situation has not changed much proportionally until now, one of the biggest changes is connected to the number of measured countries since in the 2016 survey 43 countries were involved (Figure 1.).

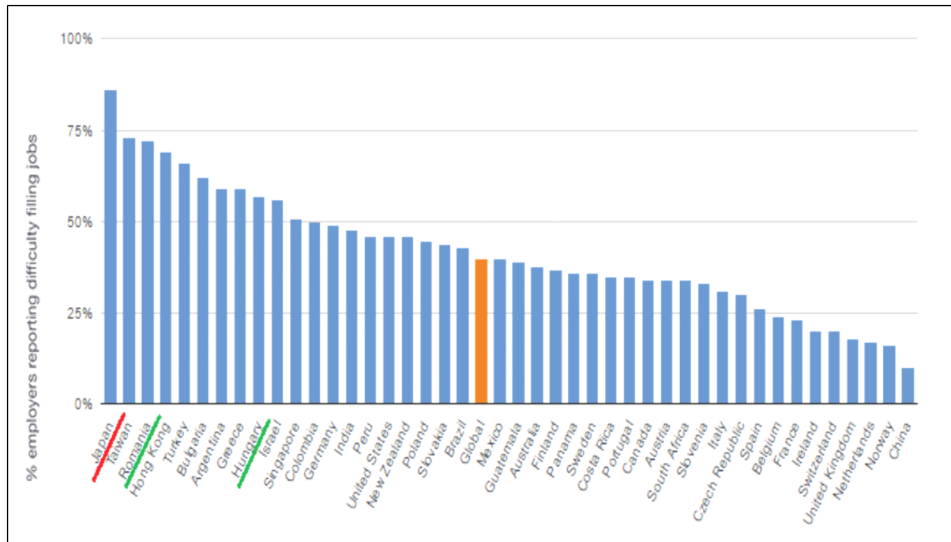


Figure 1. The difficulties of filling vacant positions according to employers based on Manpower survey (in a percentage)
Source: Manpower 2016/2017 talent shortage survey

According to the results Japan still tops the list of countries compared. Comparing the results with the ones in 2010 we find that in the last 6 years the number of employees facing difficulties to fill vacant positions have risen by 10% in Japan while in Hungary it has doubled, which raises the possibility of significant talent shortage. Whereas in Japan which tops the list 83% of the employers face these difficulties the proportions in Peru is 68%, Brazil 64%. In the European region the leading group of countries are Romania (73%), Greece (62%) and Hungary (60%). Romania, which is at the top of the list in Europe, has been continuously above the average since 2008 when it comes to job filling difficulties. This suggests that the country's labour supply related problems are not new and are extremely high on a European level. During the measured period (between 2008 and 2016) it has been over the Hungarian job filling difficulty level with the exception of 2014. Our country with its 60 % has reached the "noble" 9th place among the 43 countries ranked in the survey. But this position in the leading group is not something to be proud of since the results, considering the size of the compared countries, mean a significant shortage in our country, which is further confirmed by the latest Manpower survey (2016) which shows that the lack of talented labour has doubled since 2010. Based on this we can state that there has been a significant demand growth recently in connection with

the existence of the right or in another term talented labour. Further analysis of the data provides the opportunity to get to know that among the measured countries proportionately in how many of them more than half of the employers indicated job filling difficulties (Figure 2.) as well as what proportion of these countries are European or non-European.

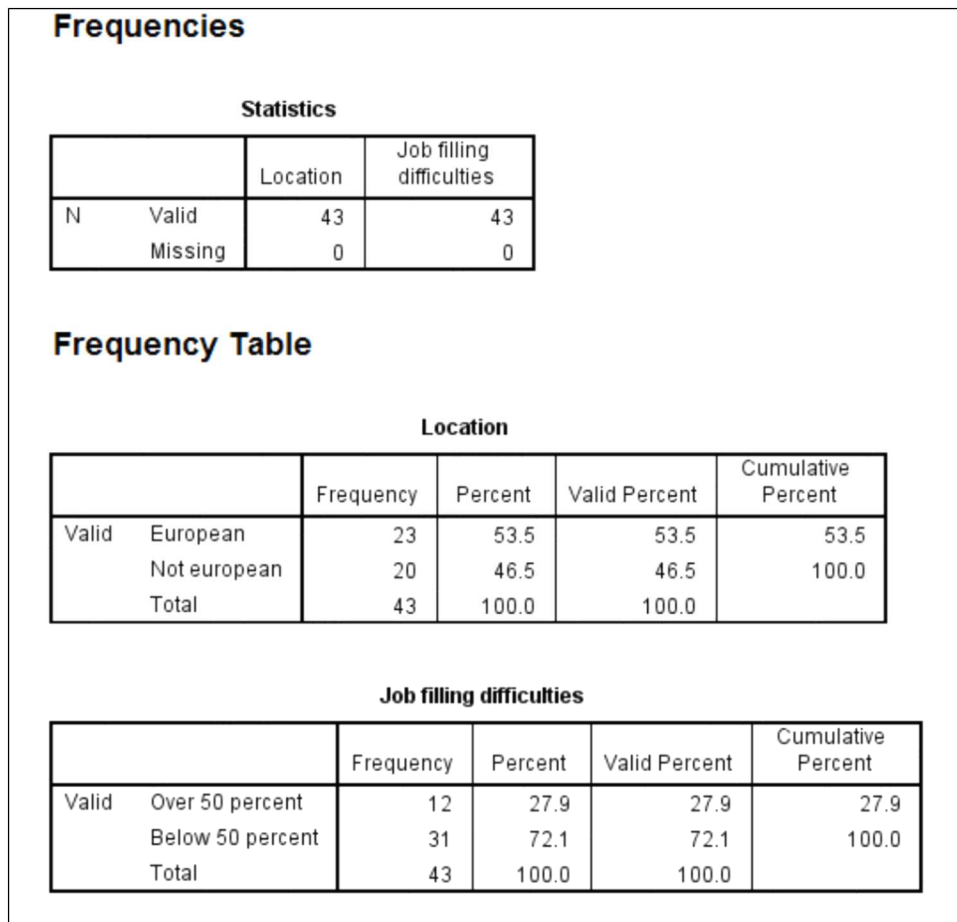


Figure 2. The extent of job filling difficulties according to employers in a percentage spread

Source: Manpower 2016/2017 talent shortage survey, own editing based on these data (2017)

Based on the result of the analysis we can ascertain that in 72% of the sample that is 31 countries less than half of the employers face job filling difficulties while in 12 countries (among others in Hungary) which is 28% of the sample we can recognize a higher shortage which shows a more than 50 % job filling difficulties. Furthermore we can see that 53.5% of the countries belong to Europe and a little less than half of them are not situated on the European continent. Out of the countries showing a

more than 50% value only four form a part of Europe (Hungary included) the remaining 8 countries do not belong to this region.

To sum it up, whereas most of the countries measured are situated in Europe the higher extent of talent shortage can be observed in non-European regions still our country is among the leading European countries concerning the lack of talented labour.

In an international survey Workforce (2014) gathered the potential challenges which the employers have to face due to the labour market processes (Figure 3.).

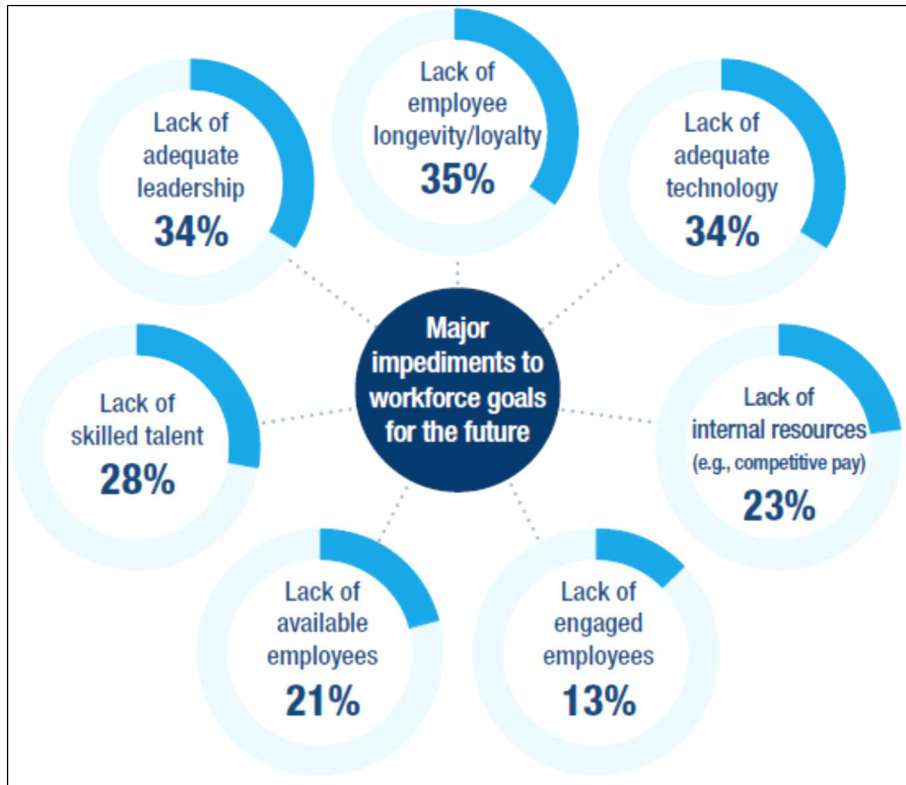


Figure 3. The expected most significant challenges of organizations concerning workforce

Source: Workforce (2014)

The created “impediment categories” were defined as a shortage in the determinant factors and these could mean the main barriers in the future to reach organizational targets. Based on the survey we can include adequate leadership, employee loyalty, adequate technology, internal resources (e.g. competitive pay), engaged employees, available employees and talented employees.

4. Labour and talent shortage in Hungary

The problem of labour shortage as it is obvious from the data can be considered a world phenomenon though it is important to point out that it can shake Hungarian

employers even more than the global average. This shortage can be interpreted as extensive and related to the whole labour market from which even the civilian organisations are no exceptions since typically even in this area there is a limited workforce available (Pierog-Szabados, 2015). This can be traced back to the fact that they must fight for the outstanding experts not just with the Hungarian competitors but also with the Western-European and multinational companies. But in this pursuit the bottle-neck is the low wages that are offered by Hungarian employers. The potential pay rise in many cases can put the organisations' competitiveness at risk which all employers try to avoid however, chronic labour shortage also leads here (Dalányi, 2016).

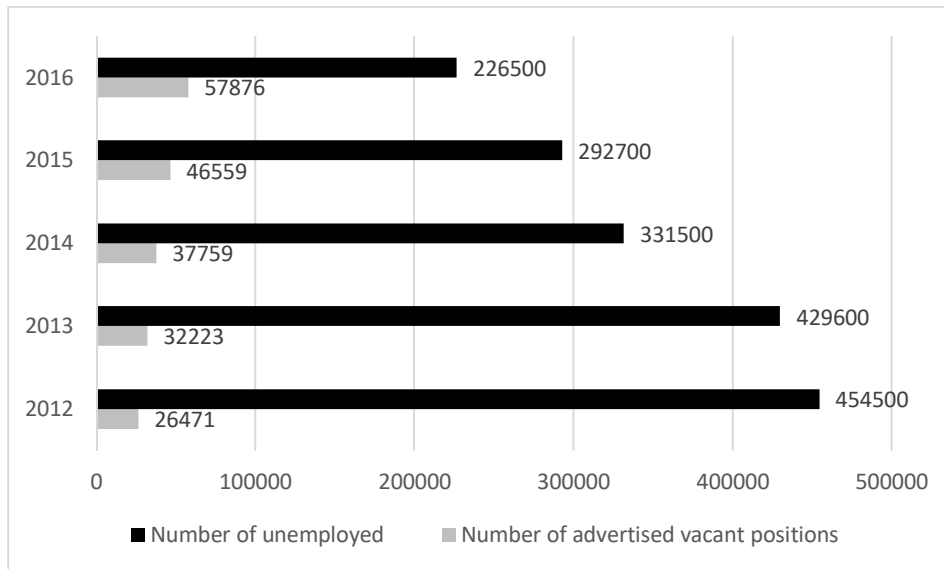


Figure 4. The changing rate of the number of unemployed and the advertised vacant positions comparison based on data between 2012-2016 Q3
 Source: KSH (Central Statistical Agency) (a) (2017), KSH (b) (2017) own editing

One of the most generally applied index to measure the extent of labour and talent shortage according to the Manpower surveys is the ratio of job filling difficulties. On a national level examining the situation of job filling difficulties can be analysed based on KSH (Central Statistical Authority) databases. We can see that the number of vacant positions have grown continuously in the last 5 years while simultaneously the number of unemployed show a decreasing tendency (Figure 4.). Starting from the relation of the two factors it is predictable that there is an inverse ratio between the two. So the more we raise the number of vacant positions the more unemployment decreases – so there is a very close connection between them which can be considered significant. It is a fact though that during the recent measured years there have been significant difference between the two values though following the tendencies within the next few years the disputed numbers can be in close proximity. Though the question is, if we can totally eliminate unemployment only by increasing the continuously growing vacant positions. Considering the statistics we can say that it is only a question of time and the total elimination of unemployment

will happen (though simultaneously a huge, disproportionately big job filling difficulty occurs on the employer's side) if the ratio continues to develop similarly. In reality though we cannot handle this question so one-sidedly since there is only a small percentage of qualified workforce among jobseekers which is most needed on the labour market (Virovác, 2016).

The solution could stem from the change of unemployment base multitude structure (qualification, literacy, skill, ability etc.) since in its current state the labour demand on the market required by employers does not match the openly available labour supply. By improving the qualities and knowledge of employees on the open labour market the number of talented employees needed for the organisations can be increased. This could lead to significant economic equalization since in the expected future period "consumer need" (from the employers' side) would grow constantly for the "quality material" which appears in the form of talented workforce (Manpower 2015 (b)).

Due to the fact that at some areas the lack of employees is especially high in certain professions job filling difficulty emerges. Based on Manpower's latest survey we can establish a national and international list of the top 10 occupations where it is the most difficult to find employees for, which we can see in Table 1. in a descending order.

Table 1. The most difficult positions to be filled in Hungary in 2015/2016

The most difficult positions to be filled in Hungary in 2015/2016	The most difficult positions to be filled globally in 2015/2016
1. Skilled workers (electrician, joiner, welder etc.)	1. Skilled workers (electrician, joiner, welder etc.)
2. Drivers	2. IT professionals
3. Engineers (technical, electrical, building)	3. Sales managers
4. Workers in the catering industry	4. Engineers
5. Doctors and other health workers	5. Technicians
6. IT professionals	6. Drivers
7. Group leaders	7. Accountancy and financial professionals
8. Accountancy and financial professionals	8. Group leaders
9. Nurses	9. Machine operators
10. Semi-skilled workers, machine operators	10. Office assistant

Source: Based on Manpower talent shortage survey 2016/2017 own editing

Supplying IT professionals stands at sixth on a national level in the difficulty ranking. For European countries it could mean significant difficulties that in the coming period there could be a considerable shortage of properly qualified IT professionals. The lack of professionals needed can dampen the area's economic growth and decrease its competitiveness. In three years there would be another half a million IT workers less than needed – Financial Times citing the prediction of IDC market Research Company from 2010. The accuracy of the theory is proven by Márk's (2016) result that is there are more than 20,000 IT professionals missing from the national market.

In addition, we can state that globally it is the same professions where labour shortage is the most significant as a result of which we can easily predict that a well-qualified skilled worker or IT professional can find a job abroad easily as well, the only difference is that one would get multiple times the salary of what one gets for the same job here.

Besides analyzing the statistical data the opinions of the affected were also examined. Based on 750 Hungarian company executives and HR professionals we can summarize the most often emerging difficulties which are caused by the barriers of finding the ideal employees (Figure 5.). The extent of the effects of certain factors can be examined in a three-year period which helps to observe the tendencies.

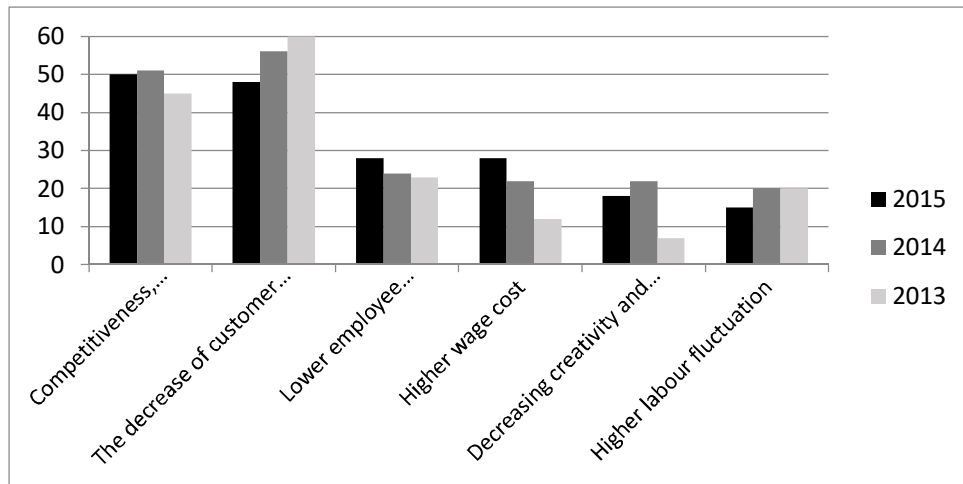


Figure 5. The most general organizational difficulties caused by labour and talent shortage according to Hungarian employers (values are given in percent)
Source: Karácsony 2015

Based on the results of the last three years' data the biggest problem is caused by the lack of talented employees leading to the decrease in the companies' competitiveness and productivity and also customer service deteriorates. In the long run all of these factors can lead to the expense of organizational judgement which can lead to a spiral-like popularity deterioration. At the same time the problem of increasing wage cost have spectacularly strengthened according to employers simultaneously the decreasing creativity and innovation ability have caused greater problems which threaten the organisations' self-supporting ability.

A further question that can emerge is what causes the significant dissatisfaction of filling vacancies according to employers. According to 32% of the Hungarian employers coping with labour shortage taking part in Manpower's (2016) survey believe that the high rate of vacant positions is mostly caused by the lack of applicants for the advertised position, another large group of employers (31%) traces the problem back to the inadequate qualifications of the applicants. Another reason is the high wage demand – 12% of employers said that and the lack of adequate and necessary competencies and the lack of professional experience were both considered the most urgent problems by 7% of the employers.

Having identified the problem of job filling difficulties unequivocally it is important to define a targeted action plan. However, based on the Manpower surveys of 2015 (a) and 2016 we can say that 43% of the organisations have no specific strategies which means close to half of the people responded. Of course there are organisations that tackle the problem consciously and plan on that level in the long-term, which make specific efforts to find a solution to the problem. The most often applied efforts are trainings, pay rise, offering different fringe benefits, alternative recruitment tools, more seldom outsourcing and internal reorganisation. But according to Oladapo's (2014) research in the long run the introduction of talent management systems can be the solution for companies. Consequently the management of talented employees can be done within an organized framework with the support of HR professionals – since besides getting the necessary employee staff employers should aim at keeping them as well – but for this a professional leadership is essential. Nevertheless Manpower (2015 (c)) has formulated four strategic proposals how to handle the organizational talent shortage, which are the following:

1. Forming own talent supply – the organisations should connect to educational institutes with their needs and they should shape and develop future employees along these
2. Discovering new ways to access talents – introducing innovative communication tools, defining new target groups (women, people with disabilities), involving experienced “veteran colleagues”
3. Making decisions in connection with the target – do I want to shape the talented employees for myself or do I want to find them?
4. Decrease the need for talents – a more conscious management of internal staff, their development and the exploration of their talents

5. Summary

One of the central issues of the current labour market situation is how to handle the labour related difficulties. While from the employee's side it is unemployment, from the employer's side it is labour shortage that needs to be solved. Labour shortage as a general problem is manifested at several levels nowadays from which one of the latest concepts is identified with talent shortage. The lack of talented employees can be found only moderately in Hungarian literature and the available related explanations in many cases even if they are related have a different approach. In the majority of cases the lack of talented employees is identified with the lack of quality, good, professionally qualified employees, lack of knowledge or in an extreme perception with labour shortage itself. The precise definition of the notion is essential though for the workers in this area since for the targeted solution a precise interpretation of the problem is needed. Based on our research the talented employee is a colleague who regarding the job design can be successful not only in one area but by virtue of the individual skills is continuously able to renew which appears as a priceless value on an organizational level in an ever changing environment. So talent shortage is applied to the thin layer of employees who, through their personal abilities (talents) can deliver competitive advantage for their employers, this way their market value is inversely proportional with their estimated quantities.

As far as the issues of labour shortage and talent shortage are concerned we can say that this is not a problem exclusively related to Hungary but we are facing a

situation that needs to be tackled globally. It is proven by the fact that the positions causing the most general difficulties on a national and global level can be put into perfect parallels so it means that almost the same jobs have the most vacant positions in our country and in the majority of foreign countries. However, besides indicating that the measured areas have the same need it is also proven that getting a job abroad has become easier for a well-qualified professional, the leaving of whom would weaken the given country's competitiveness and increase the extent of migration. Manpower, an international company dealing with temporary employment and human resources, has made several surveys since the year 2000 among the world's countries to find solution to labour related questions. In their latest research (Manpower 2016/2017 talent shortage survey) they included 43 countries (among others Hungary and Romania as well) in which they measured the employees' experiences in connection with among others the job filling difficulties of the given area, which is summarized in the survey with the notion of talent shortage. It is important to point out though that at the notion of talent shortage in the Manpower surveys they do not differentiate between the talent and knowledge demand in their reports so they handle these areas as the same topic. Among the countries measured we can find European and non-European regions as well which slightly makes it harder to compare them however, it is totally suitable to illustrate the holistic feature of the problem and can form a benchmark to evaluate Hungarian labour market processes through other countries' results. Based on the survey's results we can sum it up that in 72% of the sample (31 countries) less than 50% of the employers struggle with job filling difficulties that is the problem of talent shortage, which can be considered significant. The number of countries where more than half of the employers perceive the problem can be put at 12 among which Hungary is included. Among all countries measured Hungary stands at position 9 based on the opinion of the employers questioned. So out of 43 countries we are ninth in the order where it is the most difficult for employers to find the proper employees for themselves. The seriousness of the situation is further underlined by the fact that on a European level (out of 23 countries) we are third in having the most difficulties in finding the proper employees. It is also important to point out that in terms of European countries Romania tops the group which claims a podium position also on an international level with its third place in terms of job filling difficulties ahead of such huge countries as Hong Kong or Turkey. The reason for this considerable advantage can be that Romania similarly to Hungary have to tackle those difficulties that they have to serve not only national companies on an employee level but the settled enterprises with foreign parent companies also enter into a competition with each other in order to recruit workforce. In this unbalanced fight a further limiting factor is the growing number of migration which complicates the situation further. One of the most general ways to manage the handling of the general labour and talent shortage is to increase average skill level and to increase the number of qualified, civilized people through the education system according to targeted needs of the organisations parallel with decreasing the scale of migration. Within the organizational framework for the successful management of talents we need to introduce a talent management system where within an organized framework the organizational level management of talents can be realized with professional support.

On the basis of all these it can be stated that we are facing highly topical labour market issues which without exaggerating it has been established as one of the most

vital economic problems. The importance of the topic is further proven by Hungary's leading position on an international level which has to prompt clear actions from experts. Its first step could be a nationwide survey marking the starting point where the focus would be exclusively on the specific examinations of the Hungarian processes and might as well be based on the Manpower methodology.

References

1. Balogh G. (2014): Doktori értekezés. Integratív tehetségmenedzsment szempontrendszer a gazdasági felsőoktatásban. http://ktk.pte.hu/sites/default/files/hir_mellekletek/2014/10/balogh_gabor-disszertacio.pdf 2017.01.30.
2. Czeizel E. (1997): Sors és tehetség, Fitt Image és Minerva Kiadó, Budapest.
3. Dajnoki K. – Kun A. I. (2016): Frissdiplomások foglalkoztatásának jellemzői az agrárgazdaságban. *GAZDÁLKODÁS Agrárökonómiai Tudományos Folyóirat* 60. évf.:(IV. szám) pp. 289-304.
4. Dalányi L. (2016): Egy év alatt tíz százalékponttal nőtt a munkaerőhiánnyal küzdő munkáltatók aránya Magyarországon <http://beszerzes.hu/2016/10/27/egy-ev-alatt-tiz-szazalekponttal-nott-a-munkaerohiannyal-kuzdo-munkaadok-aranya-magyarorszagon/>
5. Deloitte (2015): The skills gap in U.S. manufacturing 2015 and beyond <http://www.themanufacturinginstitute.org/~media/827DBC76533942679A15EF7067A704CD.ashx>
6. ÉKsz (2003): Magyar értelmező kéziszótár. Főszerk. Pusztai Ferenc-szerk. Gerstner Károly et al. 2. átd.kiadás. Budapest: Akadémiai Kiadó ISBN 978 963 05 8737 2
7. Gergely É. (2016): Karriervizsgálatok egyetemisták körében. *KÖZÉP-EURÓPAI KÖZLEMÉNYEK IX. évfolyam:(2. szám, No.33.)* pp. 134-145.
8. Gordon, E. [2009]: The Global Talent Crisis. *Futurist*, September-October, pp. 34-39. www.wfs.org
9. Gyarmathy, É. (2006): A tehetség fogalma, összetevői, típusai és azonosítása. Budapest: ELTE Eötvös Kiadó.
10. Herskovits, M. (2005): A tehetségfejlesztés útjai és tapasztalatai külföldön. In: Balogh L. - Tóth L. (szerk.) *Fejezetek a pedagógiai pszichológia köréből* Neumann Kht., Budapest. http://mek.oszk.hu/04600/04669/html/balogh_pedpszich0028/balogh_pedpszich0028.html. Letöltés: 2015. 05. 10
11. Karácsony Z. (2015): Óriási a tehetséghiány Magyarországon <http://www.hrspirit.hu/toborzas/25-oriasi-a-tehetseghiany-magyarorszagon.html>
12. KSH (2017a): Üres álláshelyek száma és aránya http://www.ksh.hu/docs/hun/xstadat/xstadat_evkozi/e_qli027a.html
13. KSH (2017b): Munkanélküliek száma korcsoportok szerint, nemenként http://www.ksh.hu/docs/hun/xstadat/xstadat_evkozi/e_qlf010b.html
14. Manpower (2010): 2010 Talent Shortage Survey Results. us.manpower.com/us/en/multimedia/Global-Shortage-Survey-Results.pdf
15. Manpower (2013): Éves tehetségfelmérés. Kutatási eredmények <http://docplayer.hu/854800-Eves-tehetseg-felmeres-kutatasi-eredmenyek.html>

16. Manpower (2015a): Talent shortage survey http://www.manpowergroup.com/wps/wcm/connect/db23c560-08b6-485f-9bf6-f5f38a43c76a/2015_Talent_Shortage_Survey_US-lo_res.pdf?MOD=AJPERES
17. Manpower (2015b): Recruiting a Competitive Workforce: Should Needed Skills be Built or Bought? http://www.manpowergroup.co.uk/wp-content/uploads/2015/04/DevelopingTalent_Recruiting-a-competitive-workforce.pdf
18. Manpower (2015c): Strategies to Address the Talent Shortage <http://www.manpower.us/Website-File-Pile/Whitepapers/Manpower/MitigatingTurnover-StrategiestoAddresstheTalentShortage.pdf>
19. Manpower (2016): 2016/2017 talent shortage survey <http://www.manpowergroup.com/talent-shortage-explorer/#.WHScffkrLIU>
20. Márk E. (2016): Több mint húszezer informatikus hiányzik. Világgazdaság <http://www.vg.hu/vallalatok/tobb-mint-huszezer-informatikus-hianyzik-472181>
21. Olapado V. (2014): The Impact of talent management on retention. In Journal of Business Studies Quarterly http://jbsq.org/wp-content/uploads/2014/03/March_2014_3.pdf
22. Pierog A., Szabados Gy. N. (2015): Civil szervezetek vezetési szempontból VEZETÉSTUDOMÁNY XLVI. évf. február: (2015. 2. sz.) pp. 35-46.
23. Rácz I. (2013): Tehetséghiány a tudásgazdaságokban. http://kgk.sze.hu/images/dokumentumok/VEABtanulmányok/racz_irma.pdf 2017.02.01.
24. SHRM (2016): The new talent landscape <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/documents/shrm%20new%20talent%20landscape%20recruiting%20difficulty%20skills.pdf>
25. STERNBERG, R. és DAVIDSON, J.E. eds. (1990) Conception of Giftedness. New York, Cambridge University Press.
26. Stimulating Economies... [2010) Stimulating Economies through Fostering Talent Mobility. World Economic Forum in collaboration with Boston Consulting Group, Geneva.
27. Szabó K. (2011): Tehetség és kompetencia a tudásgazdaság kibontakozásának egy alapvető korlátjáról. pp. 293-312. In: Jubileumi tanulmánykötet Nagy Aladár professzor 70. születésnapjára. (Szerk. Kocziszky Gy. – Bihari Á.) Miskolci Egyetem Gazdaságtudományi Kar, Miskolc, 414 p. ISBN: 978-963-661-948-0
28. Szabó K. (2012): Tehetség és tehetséghiány: az innováció egy alapvető korlátjáról. In: Innovációs verseny. Esélyek és korlátok, szerk. Hámori B. – Szabó K. [file:///C:/Users/M%C3%A1ria/Downloads/hamori_szabo_innovacios_verseny%20\(2\).pdf](file:///C:/Users/M%C3%A1ria/Downloads/hamori_szabo_innovacios_verseny%20(2).pdf)
29. Virovác P. (2016): Egész Európában nálunk hiányzik legjobban a munkaerő http://www.portfolio.hu/gazdasag/munkaugy/egesz_europaban_nalunk_hianyzi_k_legjobban_a_munkaero.235025.html
30. Workforce (2014): Workforce 2020. Looming Talent Crisis <https://d2rpq8wtqka5kg.cloudfront.net/276492/open20140917052500.pdf?Expires=1491993438&Signature=i8wNEFayKLMbdGg1Y6vCXyRWYGCu36sVGbrMnh10f0AK4FgLP1xINoGo3zvO31dEHS9NUd714V5MRZL1vsabG-bN2Fs6a0e2hQ~YXXwDOrSpToHo0YTdMA7oIv4tqr9e1wLLW~qo9eZy2GO-vf->

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