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WHAT KINDS OF COMPETENCES DO WE REQUIRE AT THE EMPLOYMENT MARKET?

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Abstract: *The epidemic of coronavirus induced radical changes on the employment market as well, hence we may reasonably ask what (new) competences do we have to own to become successful in seeking jobs. The goal of this research is to shed light on the employment market's new competence demands by analysing job offers found on the website workline.hu. Execution of the investigation took place during the Spring of 2022, during which 410 job vacancies were examined. By utilizing the method of content-analysis, the most important competences were defined first, they were compared to other research findings, and then, using KSH's employment rate statistics, crosstab analysis have revealed the developments of the most paramount key competences, specializations, competence expectations and connections between the regions. Ultimately, I have determined the foreign language knowledge demanded by employers, and other requirements displayed in the advertisements. Based on the results, the most important key competences include precision, independent working skills and excellent communication skills, which fulfilled a major role in sortiments both by regions or national economy sectors. Furthermore, the higher skill demands of inviting applications originated from Transdanubial regions were also corroborated. Beyond said competences, however, numerous other factors (consisting but not limited to: computer science knowledge, B-category driver's license) may also play a significant role during selection of employees. That being said, the examination did not confirm bigger successfulness rate amongst people with foreign language knowledge. Further investigation of the study includes compare and contrast or results with the competence demands found on other job advertisement portals.*

Keywords: employment market changes, job vacancy examination, competences

JEL Code: F66, J24

INTRODUCTION

The appearance and spread of the virus COVID-19 induced crises and dramatic changes in all aspects of our lives. The confining provisions conceived by the authorities to prevent or mitigate the spread (such as curfews, complete border lock-downs, store closures) have forced employment market participants as well to react accordingly (for instance: application of home-office, relocations and mass discharges). And even though during the examination period it seemed that we have successfully pulled through these hard times, the long-term effects of the crisis shall be noticeable in the entire world. It can be observed effectively that upon the exhaustion of the pandemic, employers once again are offering several opportunities for career entrants and people looking for new possibilities. Most of them prefer online platforms in accordance with their needs of promptitude and efficiency, whilst the once-popular paper-based job advertisements are getting effaced and played down. Internet job-seeking homepages can be classified as exterior recruiting tools, namely, the company can not fill the emptied position from within its own stocks of personnel, hence, in this case, an advertisement for a new position is conceived. Besides the popularity of online job-seeking sites (MOURYA, 2022), the number of job advertisements displayed on community websites are also outstanding, as the information can find its way to great masses of users within a short time, and can even positively influence the corporational brand in some cases (MCCABE, 2017).

The goal of this study is to highlight those competences of key importance, which may prove crucial for employees during the selection process. The examination took place at the Spring of 2022, during which 410 job vacancies of the website workline.hu have been subjected to research. First, I have performed

source reviews on the related literature, which summarily describes the various approaches on the concept of competence. The „results” chapter showcases the competences assorted by regions, as well as national economy sectors, also demonstrating said key competences on a Pareto-diagram and it also aims to compare with previous research results. Furthermore, we can take a good look on other kinds of requirements in job vacancies, too (for instance: foreign language knowledge, computer science knowledge, professional experience). And even though the results obtained during this investigation are ought to be tested and collated with much more extensive samples, I still firmly believe that the employers’ expectations uncovered during the reviews of job vacancies in this sample will mean great assistance to obtain better knowledge on the current trends of the employment market. Furthermore, gaining insight into employer competencies and other requirements uncovered during job advertisement analysis can prove to be beneficial during career decision-making processes. These insights can indeed illuminate new expectations that have emerged in the aftermath of the COVID-19 pandemic situation for professionals. Consequently, they can more effectively assist individuals in making informed choices regarding their career and profession.

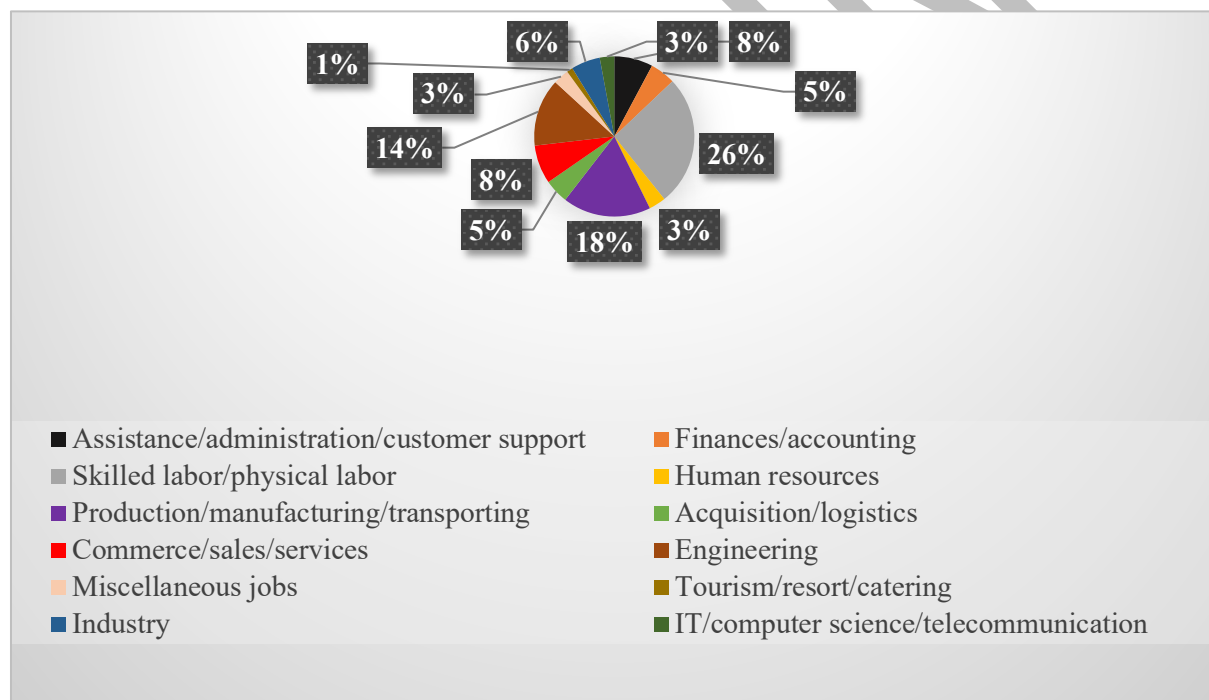
LITERATURE REVIEW

Competence demands have been examined prior by several studies (HINCHLIFFE G.W. and JOLLY, 2011; PEGG et al. 2012). In respects of employment, the results of researches performed on this subject may prove to be extremely useful, as employees can be integrated into the system more easily, provided they have the right competences, not to mention they might be able to perform better (BALÁZS and SZABÓ, 2020). Due to the constant changes in economy and society around the world, the employers manage their competence expectations in accordance with the current situations which emerge in the employment and goods market (CAPPELLI, 1995). Before presenting the most important competencies unveiled during the research performed on *workline.hu*, however, it must be ascertained exactly what do we classify under the word „competence”. Establishing a unified, collective definition is highly improbable, due to differences in theoretic basics, usage of competence goals, cultural discrepancies, and contradictions in terms (HOFFMANN, 1999; ROBOTHAM and JUBB, 1996). The first pedagogic approach on an attempt of defining „competence” can be linked to Noam Chomsky. Within the confines of the generative linguistics subject, he can be credited establishing the theory on the antagonism between competence and performance. The author distinguishes the abilities of recognizing grammatically correct statements (competence), and the fore-claimed statements (performance). In other words, linguistic competence, in this aspect „forms the base of behavior, but [...] will not appear or display itself in a direct and simplified way” (CHOMSKY, 2003:141). Based on the claims of BAARTMANN and DE BRUIJN (2011:126), „competence can be described as a combination of integrated knowledge, skill and attitude, which is ultimately necessary to perform adequately at the workplace”. The fundamental concept of competence according to HAMEL and PRAHALAD (1990) includes all those abilities and skills, which are essential in respect of the company’s performance and strategies, thus, they form sort of a foundation for the company to build upon them in regards of the many different segments of the market, and establish itself in the competition. Furthermore we may also make a claim that competence is the cluster of relevant knowledge, attitude, and skills, which in fact, has a great influence above employment, correlating with performance, can be measured and even improved (PARRY, 1996). Summarizing all the concepts of competence in literature, it is safe to determine that competence is a combination of inherited or obtained knowledge/ability, which makes every job seeker unique on a labour market which constantly shifts and changes. For this reason, it might be extremely important to acquire the adequate competences prior to the entering to the employment market. This is heavily emphasized in the studies prepared by CHAN (2016) and SMALL et al. (2018), to, according to whom, delivering these key competences are ought to be a primary objective for educational institutions and social background – taking the employer’s requirements of employing into account.

MATERIALS AND METHODS

In my analysis, prepared by the data collected upon the examination of job-seeking website *workline.hu*, I made great efforts to unveil the employer’s expectations in regards of their employees. This research was conducted to process the contents and information of the advertised jobs. During the first stage of

the two-staged data acquisition method, those job-seeking sites have been chosen, which can be easily accessed by anyone, the amounts of their on-site data can be reasonably analyzed, and there is possibility to designate the required competences for the job advertisements. The job-seeking sites workline.hu and karrierem.hu fulfilled all these conditions flawlessly. During the second stage, the job offers (N=410) that form the basis of this study have been gathered during the Spring of 2022. It should be emphasized that only those job advertisements have been included in taking the sample, which satisfied at least one competence requirement towards the job seekers. As such, without a proper designation of the needed competence, an advertisement could not be included in this examination. Gathering the job advertisements may result in such a measurable and comparable research database, which can reveal any changes in scopes of activities (HARPER, 2012). Reviewing job advertisements can be best compared to methods of content analysis, which have emerged into the focus of attention since the 1950s, by the effect of the press. The first scientific approach of the procedure can be linked to HOLSTI (1969). The basic definition for the method of the content analysis is: „a research method, whose goal is to describe the communication’s manifested contents with quantitative means objectively and systematically (BERELSON, 1952:18)”. It can be classified as a non-intervening method, as the document had already been created prior to the data collection. The objective of the content analysis is to have the documents reviewed and evaluated during a systematic procedure to ascertain their meanings, understand them, and improve empirical knowledge (CORBIN and STRAUSS, 2008).



Most of the job vacancy samples taken were full-time jobs (402 pcs). As for reviewing the distribution of scholastic qualification requirements, we could have seen that the website offers 89 elementary (8 elementary school classes), 189 intermediate (technical college, high school) and 132 superlative (BSc, Master’s degree) type of jobs for the job-seekers. The most advertisements have been submitted from counties Zala (51), Győr-Moson-Sopron (33), Hajdú-Bihar (33), Bács-Kiskun (32), Somogy (31), and Baranya (30). Their allocation in regards of specialization can be viewed on figure 1.

Figure 1: The rate of invited applications aránya by national economy sectors

Source: own construction based on the results of the research

According to the results of the analysis, the most widespread choices are allocated for those job-seekers, who desire to take up positions within skilled/physical labor (26%), production/manufacturing and transporting (18%) and engineering (14%). In contrast, advertisements from the sectors of tourism/resort/catering and building/real estate categories were the lowest in numbers within the time

period subjected to this research. The most probable reason for that might be that job advertisements of this sector did not assign any competences. Despite the quantitative and qualitative profile of this research, it can be noticed that there are certain confines. These are included but not limited to the sample with relatively few subjects, and taking one sole job-seeker website under the scope of research. In the foreseeable future, it might be a reasonable idea to collate the results with a research which includes more samples, as well as compare & contrast between several different job-seeking websites' advertisements.

RESULTS AND DISCUSSION

The following chapter shall summarize the topmost results of the research: all those key competences have been disclosed, which are at high demand at employers, as well as the correlations between competences and the various sectors of national economy / regions. Moreover, the examination unveiled all the other expectations (such as foreign language knowledge, computer science knowledge, professional experience) as well.

Competences

Foremost, all those competences have been described, which have proved the most paramount according to the jobs advertised during the reviewed time period. The results were displayed in a Pareto-diagram, which represents the distribution of data in a descending order, marking the percentage rate compared to the grand total with a cumulative line on the secondary axis (figure 2).



Figure 2: The most frequently demanded competences

Source: own construction based on the results of the research

Based on the examination, according to the job advertisements, the competences most wanted for work activities can be classified among standard (precise, self-sufficient, diligent, reliable) and professional (good communication and problem-solving skills) groupings. The research results of FÜLÖP (2008)

also well emphasize how paramount precision and self-reliance are at the employment market. The appearance of Covid-19 virus have caused the competences required by the employment market to be rearranged, which was also corroborated by the nationwide research SZÚCS et al. (2021) performed during the pandemic. According to their results, the most desired competences include but are not limited to flexibility, communication skills, empathy and self-reliance, whilst importance of competences based on personal presence (for instance: teamwork and collaboration) have dwindled. HORVÁTH-CSIKÓS and JUHÁSZ (2021) have also rated flexibility and good communication skills among the most wanted competences by the employers. The obtained results for teamwork skills' importance on the employment market, however, show a discrepancy; while Szűcs and his accomplices judged it to be less important, the latter authors claimed them to be most essential. Surprisingly, the research results could not corroborate either author's claims; hence in this research, working as part of a team can be classified as a moderately frequent demand. Confidence, creativity, critical and analytical thinking were deemed to be the least demanded by the job advertisements reviewed in this sample.

During my own research, I compared the 10 most important competencies I obtained with the competency rankings of the World Economic Forum (2018, 2020) and Szűcs et al. (2021) (chart 1). In each case, only the top 10 competencies were examined.

Chart 1: Comparison of the most important competencies

World Economic Forum 2018	World Economic Forum forecast 2022	Poór et al. 2021	Own research 2022	World Economic Forum forecast 2025
Analytical thinking and innovation	Analytical thinking and innovation	Flexibility	Precision	Analytical thinking
Complex problem-solving	Active learning and learning strategies	Communication	Independent working	Active learning and learning strategies
Critical thinking and analysis	Creativity, originality and initiative	Digital competence	Communication	Complex problem-solving
Active learning and learning strategies	Technology design and programming	Empathy	Diligence	Critical thinking and analysis
Creativity, originality and initiative	Critical thinking and analysis	Independent working	Reliability	Creativity, originality and initiative
Attention to detail, trustworthiness	Complex problem-solving	Cooperation, teamwork	Problem solving	Leadership and social influence
Emotional intelligence	Leadership and social influence	Stress tolerance, loadability	Teamwork	Technology use, monitoring and control
Reasoning, problem-solving and ideation	Emotional intelligence	Problem-solving	Loadability	Technology design and programming
Leadership and social influence	Reasoning, problem-solving and ideation	Health awareness	Flexibility	Resilience, stress tolerance and flexibility
Coordination and time management	System analysis and evaluation	Expertise	Client orientation	Reasoning, problem-solving and ideation

Source: Based on the World Economic Forum (2018, 2020), Szűcs et al. (2021), and my own research findings, with my own editing

The table excellently illustrates that the World Economic Forum's 2018 research concluded that in 2020, workers would still need similar competencies as in previous years. The change observed was mainly in the ranking of these competencies. Additionally, two new competencies were added to the 2022 forecast, presumably due to rapid digitalization. These were technological design and programming, as well as system analysis and evaluation. It is essential to note that when creating the 2022 forecast,

researchers could not anticipate the emergence of the coronavirus pandemic. In their study, Szűcs et al. (2021) shed light on the most critical competencies during the pandemic. Six of these competencies appeared in my own research but in a different order. Independent work and problem-solving skills received more emphasis in my job advertisement analyses compared to the results of Szűcs et al. (2021). Conversely, communication skills, teamwork, endurance, and flexibility competencies were different. According to the World Economic Forum's forecast, the competencies deemed most useful in 2022 will remain the most important in the labor market in 2025. However, flexibility and stress tolerance have been added as new competency elements to the future competency ranking list. This suggests that lifelong learning and digital competencies will continue to be crucial in the coming years.

Hereinafter, the connections between single specialties and required competences shall be defined (chart 2). In all cases, the competences most relevant (6) will be rendered to a certain particular branch in frequency order.

Chart 2: The hierarchy of the most important competencies by industry branches

Specialty	Key competences					
Assistance/administration /customer support	communication skills	self-reliant working	precision	diligence	reliability	problem solving skills
Acquisition/logistics	self-reliant working	diligence	reliability	precision	loadability	problem solving skills
Miscellaneous jobs	precision	diligence	communication skills	self-reliant working	problem solving skills	reliability
Building/real estate	reliability	communication skills	self-reliant working	creativity		
Human resources	communication skills	proactivity	diligence	self-reliant working	precision	problem solving skills
Tourism/ resort/ catering	precision	teamwork	diligence	flexibility	loadability	client orientation
IT/ computer science/ Telecommunication	problem solving skills	self-reliant working	precision	communication skills	teamwork	client orientation
Industry	self-reliant working	precision	diligence	reliability	loadability	monotony endurance
Commerce/ sales/ services	communication skills	self-reliant working	precision	reliability	problem solving skills	client orientation
Engineering	problem solving skills	communication skills	precision	diligence	flexibility	teamwork
Finance/Accounting	self-reliant working	communication skills	precision	flexibility	proactivity	loadability

Skilled/physical labor	precision	diligence	reliability hatóság	self-reliant working	loadabi lity	teamwo rk
Production/ manufacturing/transporti ng	precision	diligence	communic ation skills	teamwork	self- reliant workin g	loadabi lity

Source: own construction based on the KSH (2022) and on the results of the research

According to the various sectors and branches of national economy, the most frequently noted competences are precision, self-reliant working, good communication skills and diligence, which are also in accordance with the order of the most wanted competences listed by the job-seeking website. It can also be noticed that precision is recorded among the most desired skills by employers in all sectors, excluding building/real estate. The results of the job advertisement analysis performed by GYÖRGYI (2007) also corroborate the outstanding importance of good communication skills, self-reliant working, and problem-solving skills. SÓSKÚTI and HÉDER-RIMA (2020) have received very similar results regarding to the importance of competences as well, whose believe that within intellectual scope of activities, problem-solving skills, communication skills and self-reliant working can be deemed as the most desired competences, in comparsion with physical labor, where expectations towards diligence and precision were higher. As for the research performed by KIS et al. (2019), it shows towering success for employees with great reliability, creativity and self-reliance. Beyond the most important competences, sporadical key competences appear at various special sectors, originated from the features and nature of the workplace. These may include creativity (building/real estate), proactivity (human resources, finance/accounting) and monotony endurance (industry).

According to the data of the Central Bureau of Statistics (KSH) (2021a, 2022), the number of employed people during the first quarter of 2022 (4 674 thousand) show a decrease, compared to the last quarter of 2021 (4 688 thousand). These statistical values offered a great opportunity for a deeper research on the number of employed people divided by national economy sectors, whose results are recorded in Chart 1 under the classification titled „Specialty” with three different colours. The colour red marks those specialties, at which a dwindle could be experienced in regards of the number of employees, the colour yellow marks stagnation, whilst the colour green marks increasement of employees. Although it seems that the employment market was well prepared by the time the fifth wave of the coronavirus epidemic has spread across, decreased employment rates could be measured in more than half among the national economy sectors included in the sample. Furthermore, it can also be noted that the finance/accounting sector was the only one, where there was little to no change in the numbers of employees. However, job-seekers who venture into these territories must own special skills, such as flexibility, proactivity and loadability. Meanwhile, the common element for sectors with more favourable values (5) is ought to be good communication skills. As a conclusion, the role of constant communication as a competency can be crucial in the job advertisements for fields that are on the rise in terms of the number of employed individuals. This is because in our ever-changing world, possessing this competency and continuous adaptation have become indispensable for maintaining competitiveness.

Amongst other things, shortage of labour can be considered as one of the biggest challenges for the employment market (COHU, 2022; FOGG and HARRINGTON, 2009) along with the lack of competences demanded by the advancements in technology (SCHWAB, 2016). The former is supported by the statistical data provided by KSH (2021b) as well, according to which, the rate of vacant jobs have increased from 2% to 2,3% in 2021 nation-wide. The mid-section regions of Hungary could have been characterized as having the highest assortment of jobs (37487), whilst the least advertised jobs have been recorded at the Southern Transdanubian region (3660). And even though this own research is based on a much smaller collection of taken samples, still, the intention behind the classification and grouping of the advertised jobs by regions was to perform an examination in regards whether or not a trend could be uncovered and defined in regards of employability and the required competences (figure 3).

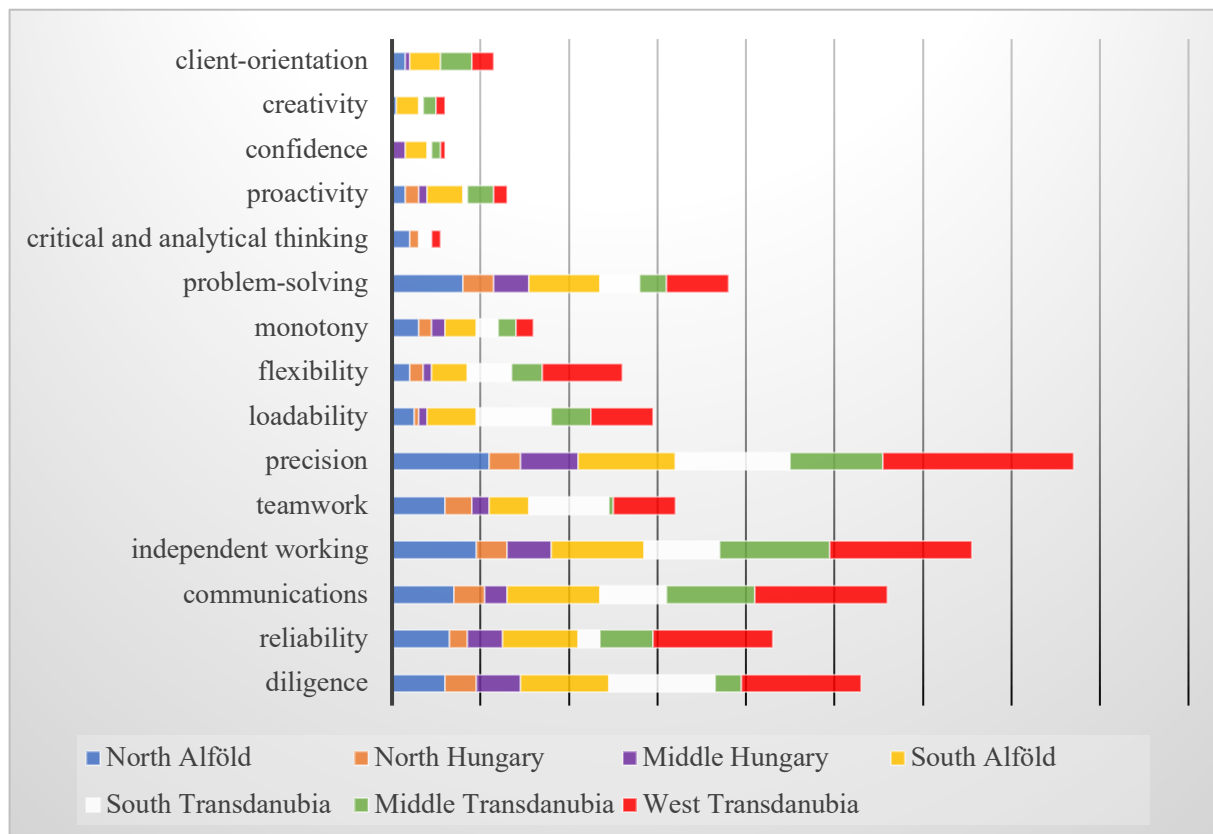


Figure 3: The most important competences recorded by regions

Source: own construction based on the results of the research

According to the results returned that employers file more competence claims towards the job-seekers at the more advanced Transdanubian regions than at any other regions. The most required competences in the job advertisements were also recorded at the West Transdanubian region (236). KOVACS and BIHARI (2006:54) pointed out that „the employment capacity of the dynamic center for Budapest and the middle-west Transdanubian region resulted in conceiving and realizing a constantly active (showing higher than standard economical activities) at the northwest quarter of the country, which became hyperactive near the country’s borders and along the main traffic/transport lines”. The gross average earnings are also the highest here in the entire Hungary (KSH, 2022); therefore, the demands towards employees working at these regions, and the amount of wages are proportional. In contrast, the Northern Hungarian region with a more detrimental employment market position (57) requires the existence of competences in the least amount. Within the examined region, employees with good communication skills, precision, self-reliance, diligence and precision can be deemed as the most desirable ones. So, it can be assumed that in the latter mentioned areas, only the possession of the most fundamental soft skills is expected, while hard skills are less important in the selection process for positions that require lower levels of education.

Advantages and miscellaneous expectations

Employers were given the opportunity to offer such advantages in their advertisements, which would greatly increase the chances of the job-seeker of being chosen upon possessing them. According to the results, 57% of the advertisements have featured certain conditions which offered advantages. During offerings of the advantages, there was a possibility of multiple offerings as well, thus, there were 300 of such conditions were defined within the 232 job advertisements containing priorities. The sample yielded only 5 of such advantages; having professional knowledge (137), computer science knowledge (mostly Microsoft Office) (110), having a category-B drivers’ license (38), inclination for travel (13) and a second foreign language knowledge (2). The research results of KISS (2015) corroborate the employee’s successfulness at the employment market with additional knowledge (abroad or professional

experience, high-leveled foreign language knowledge), as they seem to find an employment sooner than those employees who lack these skills. The reason for this is probably that employers surmise a higher production rate from a more qualified applicant, hence he shall get a more favorable adjudication during the selection process. The results of the survey performed by VARGA et al. (2017) within the sphere of employers seem to signify that demands for knowing foreign languages and having decent computer science skills have greatly increased in the past few years. As opposed to this, the research prepared by SÓS (2019) have established that possession of these skills are less significant during the actual work. Job advertisers have worded their demands of owning professional experience 105 times as a distinct requirement towards the job-seekers. In this case, they have specified this demand of theirs in years, which is represented at Figure 4.

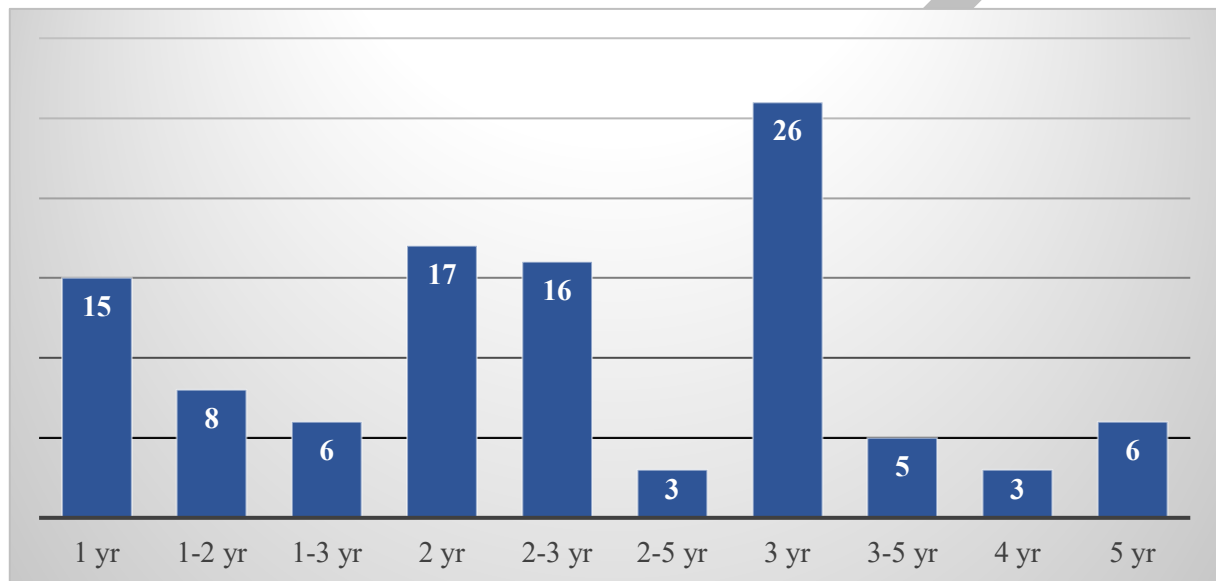


Figure 4: Distribution for the amount of expected professional knowledge

Source: own construction based on the results of the research

In the light of the gathered data above, it can be noted that the most frequently expected amount of professional knowledge is usually 3 years (26). Generally speaking, employers rather demand less experience than requiring the job-seeker to have more. Summarizing all the results in regards of professional experience, we can clearly see that possessing professional experience is a requirement for 26% of the job vacancies in the taken sample, and it may also mean an advantage for 33% of the job vacancies during the selection process. This means, 41% of the job vacancies can be filled without having prior professional knowledge, which may prove to be a positive sign for career entrants. In regards of scholar qualifications, the results were more or less the same; professional experience emerges mostly at intermediate (50%) and college graduate (47%) qualifications, as a requirement, whilst at elementary qualification (3%), its presence is much less significant.

Foreign language knowledge shows up for 38% of the jobs at the taken sample, as a requirement. In the biggest rate, fluent English (89), intermediate English (26) and fluent German (84) could have been found within the advertisements. Besides elementary English (6) and intermediate German (3), in some cases, employers also demand the job-seeker to possess elementary and advanced English, elementary and advanced German, Serbian, French, Spanish, Romanian or other foreign language knowledge. And even though most of the job vacancies can be filled without prior foreign language knowledge, Livinski (2019) firmly establishes that job-seekers owning foreign language skills have a much greater advantage at the employment market.

It can be assumed that the conditions highlighted as advantages in job advertisements may become minimal expectations in the future labor market, or perhaps they already are, but for

some reason, they are not treated as such. Consequently, young individuals should pay special attention to enhancing and developing their competencies during their studies, as these can have an impact on their future career success. Dual education programs can play a role in facilitating this, and their significance may become even more pronounced.

SUMMARY

The research performed at the Spring of 2022 – during the end of pandemic – tried to make an effort on determining which competences' possession can ensure success for job-seekers at the employment market, furthermore, what other kinds of requirements employers may demand from the people applying for the job. According to the research results, precision, diligence, self-reliant working and good communication skills proved to be the most paramount competences, which were also highly in focus during the allocations for both national economy sectors and regions. Demands for special key competences (such as creativity, proactivity, monotony endurance) have only appeared sporadically, mostly pertaining to the special features of a certain sector. Moreover, the research have unveiled the Transdanubian employers' higher competence demands in accordance with the higher wages their job vacancies offer. In contrast, employers demand less competences from job-seekers at the economically and employment market-wise disadvantaged Northern Hungarian regions. Beyond the competences, however, several other factors (for instance, professional knowledge possession, computer science knowledge, category „B” drivers' license) may have an important role during the selection process of the job-seekers, even though the research did not corroborate the bigger success rate for job-seekers having foreign language knowledge. Summarizing all the obtained results, I believe that during the establishment of the employment market's demands, we should highly prioritize those positive changes (for example, developing new company strategies, widespread usage of digitalized tools, home office expansion, emphasize training, supporting lifelong learning approach), which may – directly or indirectly – contribute to employability increasement.

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