

University doctoral (PhD) dissertation abstract

**ANALYSING THE EMPLOYMENT OF DISABLED WORKERS BY
ACCREDITED ORGANISATIONS IN THE NORTH GREAT PLAIN
REGION**

Nóra Nagymáté

Supervisor:

Dr. Zsolt Csapó

associate professor



UNIVERSITY OF DEBRECEN

**Károly Ihrig Doctoral School of Management
and Business**

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1. RESEARCH PRELIMINARIES, OBJECTIVES AND HYPOTHESES

My research topic is the analysis of the economic situation of disabled workers in the North Great Plain region. I chose this topic in 2008, when, during my university studies, I prepared a study within the framework of the National Council of Student Research Societies focusing on the marketing of products aimed at disabled people both in Hungary and internationally. This topic raised several other aspects; therefore, I have been pursuing my research as a PhD student since September 2009 with an extended economic focus. The timeliness of the topic lies in itself, more specifically the high number of disabled people. Statistics show that the proportion of Hungarian disabled people is the highest in this region. The social network established for people suffering from health impairment is in a constant change; therefore, I would call the current, or rather, the constantly changing situation and its analysis a “snapshot” instead of a static examination. This approach is also verified by the changes of the classification and the legal background during the examined period (between September 2009 and May 2016). During my research, I got in touch with all organisations from the available nationwide database who were open to communication and data provision on the regional level.

As a matter of course, it was not possible to cover all issues in connection with this field and there were fundamental limits of the research. The “interdisciplinarity” of the topic raises many aspects. The situation of disabled people can be examined from various viewpoints as is done by various organisation on various fora. However, my research mainly focuses on the analysis of the economic aspect, more specifically the regional analysis of employers’ and employees’ side, as well as the analysis of employment and its various forms. I wanted to examine the chances of this target group and what the economy can gain from processes generated by employment and rehabilitation. These were the main questions in the focus when I started my research.

During my research, I established the following hypotheses.

H1: It was assumed that the interests of disabled workers started to improve by gaining better income opportunities and professional development as a result of increasing the rehabilitation allowance in 2010. For this reason, “subsistence” is a less significant factor when looking for a job and disabled workers would even be willing to return to a non-accredited workplace.

H2: It was assumed that employers decide about the employment of disabled workers based on economicalness aspects, while loyalty elements also appear on behalf of employers at accredited workplaces.

H3: It was assumed that the confirmation of permanent disability, the previous open labour market experience, the degree of disability and the settlement type of the place of residence influence the chance of people finding jobs and that the amount of time spent unemployed depends on the extent of health impairment, educational level, settlement type and age.

H4: It was assumed that the wage of disabled people is unaffected by the extent of their health impairment.

2. DESCRIPTION OF THE DATABASE AND THE APPLIED METHODS

During my examinations, I used the two internationally acknowledged methods, the ecoscopic or secondary method and the demoscopic or primary method (MALHOTRA, 2002).

2.1. Questionnaire survey of accredited employers

One of the bases of my primary research was a questionnaire survey aimed at disabled workers and their employers. My database contains the responses of all accredited employers in the North Great Plain region who were open to data supply.

My primary data collection was based on questionnaires in the case of accredited employers. I took the database of the National Employment Service (the register of accredited employers) as a basis. Of these, I selected the employers which operate in the North Great Plain region and started to establish connection with them one by one (AFSZ, 2009).

Simple random sampling was performed by contacting accredited organisations. As a matter of course, responses were given anonymously and voluntarily; therefore, it was not specified either in the questionnaire or during processing which organisation the given data originated from.

During the inquiry, I first contacted the research subjects by phone. Those who showed openness were sent the questionnaire either electronically or by post and they sent it back to me the same way. I personally visited the premises of the ones I could not contact on the phone and I inquired whether they would cooperate with me in my research by filling out a questionnaire.

Lots of experience can be gained from personal inquiries. Also, the condition of the premises says a lot: how well they are maintained used and how modern they are. In the overwhelming majority of cases, personal inquiries resulted in good observations: I managed to obtain enough information from employers who were open to supplying data. By using this method, nearly 30% of the basic population (390 organisations) sent back filled out questionnaires (110 organisations altogether).

2.2. Questionnaire survey performed among disabled workers

The survey of employees was performed the following way: when I contacted employers personally or by phone, I also asked them whether they agree to have a few of their employees fill out the employee questionnaire. This way, both sampling was performed in parallel. This sampling had the same characteristics as employers' sampling: simple random sampling was performed with anonymous and voluntary responses. In the case of personal inquiries, this sampling also resulted in lots of practical experience. The sample collected this way (that is, the number of interviewed disabled workers) was 1030 which meets the criteria of representability.

The evaluation of questionnaires obtained from employers and employees provides one part of primary research.

2.3. Analysis of the Austrian research

The other main field of my primary research was the research conducted in Austria, in Steiermark province, where I examined the employment opportunities of disabled people. I had previously been awarded a research scholarship by Steiermark province which enabled me to study the practice of employing disabled people for two months (between September 2011 and November 2011). The means of research were the following: case study, conducting in-depth interviews, attending programs related to this topic, visiting organisations. During my stay, I obtained lots of practical experience in the examined field, i.e., the employment of disabled people. I have not found any examination of this sort in bibliographical resources; therefore, I can classify it as primary research and it is a unique examination in this form. I consider this aspect to be important because Austria is a neighbouring country; therefore, it is geographically very close to Hungary and it is in the same economic block (the European Union), but it has a totally different economic background. For the purpose of analysing feasibility conditions, a PEST analysis was performed for Hungary and Austria.

2.4. My own secondary research

I performed part of my secondary research based on the time series of the Hungarian Central Statistical Office, I used the data published in the "Hungarian Statistical Yearbook" series. I selected the information related to the labour market situation of

disabled workers from the whole, regularly published database, reorganised them into a table and started to evaluate them. By applying the method of time series analysis, I mainly examined the numbers of the highlighted years of the recent period. The time series of the Hungarian Central Statistical Office represent the changes during the examination period from several aspects which are related to the labour market. In many cases, it is worth observing the changes of the comparative tables of the same index. Therefore, a part of the performed secondary research is the above described analysis that is built on the database of the Hungarian Central Statistical Office.

I thematically examined the available and topical technical literature. The secondary research was carried by processing available technical literature sources.

2.5. Methodology of evaluation

As regards the magnitude and period of examinations, the largest database was provided by the questionnaire analysis; therefore, its methodology is described in more detail.

In the case of listing and ranking type questions (factors influencing work), frequency analyses and distributions were examined focusing on the number of respondents who mentioned each alternative response, while the results provided by ranking were also cumulated.

The economic regulations available in the related provisions of law and the data provided in the questionnaire were used during the calculations referring to employers in order to examine each case of employment and payment of public charged linked to wages in the case of accredited and non-accredited employment.

The primary objective of my research is to examine the economic aspects of employment. I analysed the data collected with the questionnaire in several ways, one of which was survival analysis. This method is the best way to examine the economic aspects of employing disabled workers. This method focuses on examining the chances of looking for a job from various aspects.

By using survival analysis, my aim is to show the risk that disabled people can find a job only after a while, if they find a job at all. For this reason, the examined result is employment after declaration of disability, and the survival time is the number of months passed until employment. Survival analysis makes it possible to manage the so-called

partial information. Respondents about whom only partial information are available are called “truncated” cases (Balogh et al, 2007). In my research, there were people who did not indicate the beginning of their employment. The amount of time passed until employment has to be regarded as partial information. I used the analysis described by Kaplan – Meier (1958) to estimate survival curves. This analysis can be used in the case of discreet values (number of months). In my case, the horizontal gap represents the amount time which passes until a given percentage of people in one of the two examined groups find jobs compared to the same proportion of people in the other group. The vertical gap represents the extra proportion of people who find jobs during a given period of time in one of the groups in comparison with the other. The establishment of groups can be performed based on various aspects, such as educational level, age and the degree disability.

I used Log-rank, Breslow and Tarone-Ware tests to identify the differences between the survival functions of the two groups. Statistical analyses were performed with SPSS 15.

Cox model is a parametric model; therefore, it can be used not only to show a difference between two groups, but also to estimate chances of an event. For example, it is possible to provide the chance of someone from a given group finds a job earlier than someone from the other group. The parameter estimations of this model were done using the Wald Chi-square test. The correctness of the model was checked with a likelihood ratio test and Pearson’s Chi-square test. The fitting of the model was shown to be adequate and all variables in the analysis were significant. The survival time incorporated into the mode represented the amount of time which passes between the classification of the individual and employment. This definition is a non-standard interpretation of the concept of survival time as the shorter the survival time is, the more favourable it is for the given person as it means that the individual finds a job as soon as possible. This interpretation must be taken into consideration during the interpretation of parameters.

3. MAIN FINDINGS OF THE DISSERTATION

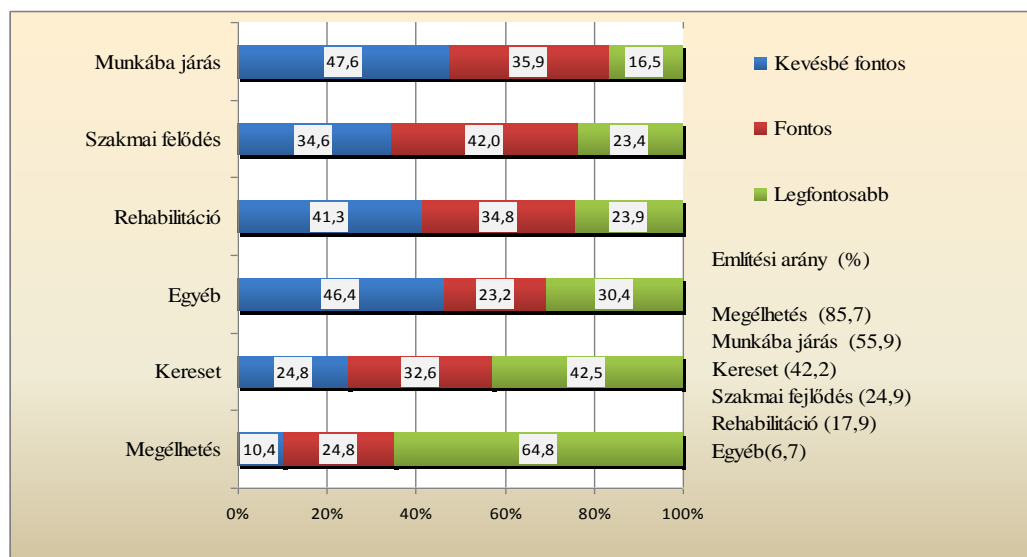
3.1. Analysis of the results of the questionnaire survey

This section focuses on the analyses performed on the database which resulted from my questionnaire survey.

H1: It was assumed that the interests of disabled workers started to improve by gaining better income opportunities and professional development as a result of increasing the rehabilitation allowance in 2010. For this reason, “subsistence” is a less significant factor when looking for a job and disabled workers would even be willing to return to a non-accredited workplace.

Respondents were asked to rank certain factors which they considered to be important in a job. The following results were obtained (Figure 1).

Figure 1. Frequency and importance of the occurrence of each factor influencing work [%]

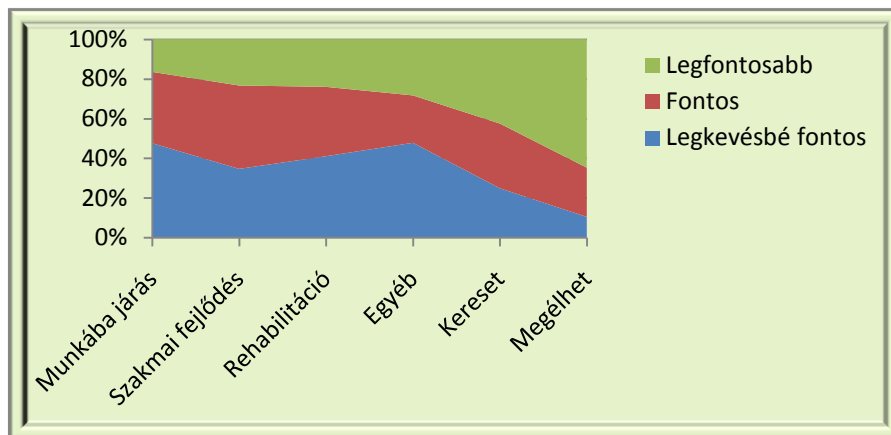


Source: own research, 2014, n=1030

*Going to work-Professional development-Rehabilitation-Others-Wage-Subsistence-Less important-Important-Most important-Occurrence (%)

Employees had to choose from a number of factors according to what they consider to be important in work and they were asked to rank these in order of importance.

Figure 2. Importance of factors influencing work on behalf of employees



*

Source: own research, 2014, n=1030

*Going to work-Professional development-Rehabilitation-Others-Wage-Subsistence
Most important-Important-Least important

Figure 2 shows that subsistence is not only the most frequently mentioned, but the most important factor for employees.

The following responses were given to the question whether employees would return to non-accredited workplaces if it was possible (Figure 3).

Figure 3. Returning to a non-accredited workplace [%]



*

Source: own research, 2016, n=1030

*Would return-Would not return-Non-rehabilitable

It can be observed that more than half of employees would return to a non-accredited workplace and only one fifth stated that they would not return.

Consequently, Hypothesis 1 was partially confirmed: favourable income is an important factor for employees. However, the part of this hypothesis stating that professional development became more important and subsistence is less important for employees was refuted. The intention to return to non-accredited workplaces was also confirmed.

H2: It was assumed that employers decide about the employment of disabled workers based on economicalness aspects, while loyalty elements also appear on behalf of employers at accredited workplaces.

Two types of calculation were performed on behalf of the employer focusing on the economicalness of employment. In the first case, I assumed the situation of a non-accredited organisation and examined the employment costs of a disabled worker (*ceteris paribus*, i.e., examining only wage and rehabilitation allowance).

According to the performed calculations, four-hour employment is the most economical form of employment in the case of non-accredited conditions.

The yearly cost of rehabilitation allowance (964 500 HUF) would mean a monthly cost of 80 375 HUF.

The monthly wage of workers is 55 500 HUF (50% of the minimum wage, due to the four-hour employment). If this sum is corrected with the social contribution tax and the vocational training contribution, the resulting amount is 71 318 HUF. In this case, 9057 HUF “extra” income is realised by the employer as a result of employing a disabled worker if it is only compared to rehabilitation contribution. In addition, the “useful work” performed by the employee is realised as a profit for the enterprise. Therefore, employers may decide based on whether disabled workers’ wages including public charges linked to them would be lower than the yearly sum of rehabilitation allowance.

In the case of accredited organisations, the cost of accreditation, wages including charges linked to them and the cost of accessibility may arise as expenses (again, the examination was performed *ceteris paribus*, i.e., disregarding the other influential factors).

Obtaining the accreditation certificate costs an organisation 200 000 HUF (until 250 employees). Due to the nature of the examined area, 5 years can be considered to be a long-term planning period; therefore, the cost of the accreditation certificate was assumed for a 5-year-period. This way, the yearly cost was 40 000 HUF and the monthly cost was 3333 HUF.

89.8% of the employees in the examined sample are employed part-time and only 10.2% of them are full-time employees. The wage of four-hour employment including the linked public charges is 71 318 HUF.

The cost of rebuilding the workplace showed the following tendency among the examined enterprises. No rebuilding was necessary in the case of 74.8% of respondents. 9.9% provided full accessibility and 9.9% provided partial accessibility, while 5.4% performed other type of rebuilding. The cost of rebuilding was 9 620 000 HUF on average. Calculating with 6% depreciation costs (considering the fact that most respondents referred to the modification of buildings, but not solely), the yearly amount of depreciation is 577 200 HUF (6% of total average costs) which means 48 100 HUF per month.

If we add up the accreditation fee and the wage of the employee (considering 4-hour employment) including public charges linked to the wage and the cost of accessibility, the resulting cost is 122 751 HUF per month.

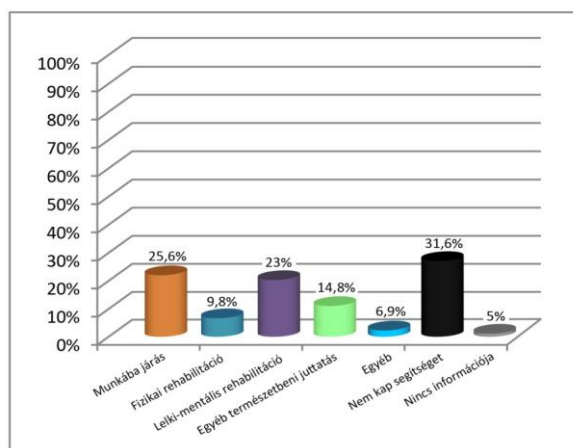
However, if we consider that no accessibility was provided by 74.8%, i.e., three quarters of the examined accredited organisations, it is possible to perform a calculation which involves only the accreditation fee and the wage of the employee. In this case, the monthly cost is 74 651 HUF for 4-hour employment.

Therefore, if enterprises do not have to spend on accessibility and the disabled worker is employed four hours a day, the monthly cost is 74 651 HUF.

I attempted to analyse the loyalty of employers to employee by examining a different group of questions.

Employees were also asked about whether they get any help from the company and if yes, what kind of help do they get. Multiple responses were possible; therefore, the sum of responses is not 100%. Figure 4 shows the ratio of help to employees.

Figure 4. Providing help to employees



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Source: own research, 2014, n=1030

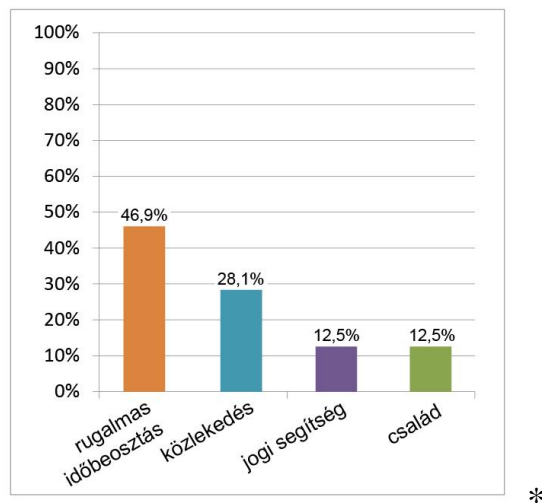
*Going to work-Physical rehabilitation-Spiritual-mental rehabilitation-Other benefits in kind

Others-No help-No information

Consequently, based on the obtained partial findings, the partial elements of the loyalty of employers to employees appear.

Figure 5 shows the forms of “other” forms of help.

Figure 5. Other forms of help



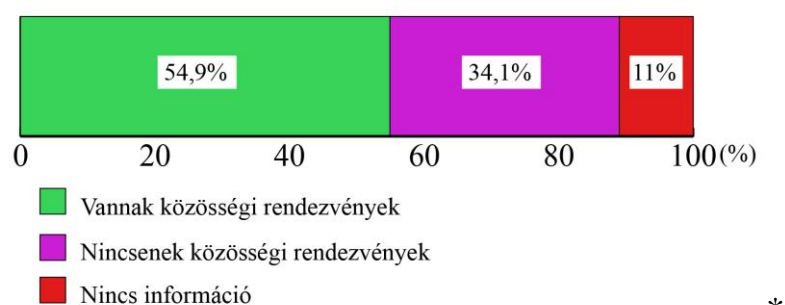
Source: own research, 2014, n=1030

*flexible work schedule-transport-legal help-family

It can be observed that responses in the “others” category can be categorised into four main topics. Flexible schedule was mentioned most often (46.9%).

I asked the interviewed employees whether employers organise any programs. Responses to this question are shown in Figure 6.

Figure 6. Community programs organised by employers [%]



Source: own research, 2016, n=1030

*there are community programs-there are no community programs-no information

More than half of employers organise community programs, which can be interpreted as a form of loyalty on their behalf.

In the case of those who were given help, there were also other forms such as more flexible working hours, help with transport, legal assistance and help provided to the family.

Consequently, Hypothesis 2 was confirmed. The employment of disabled people by non-accredited organisations is “profitable” in the case of 4-hour workdays. As regards accredited organisations, the employment of disabled workers is profitable in accordance with my analyses only in the case of 4-hour workdays and if little to no money has to be spent on accessibility. I also accept the elements of loyalty of employers to employees.

H3: It was assumed that the confirmation of permanent disability, the previous open labour market experience, the degree of disability and the settlement type of the place of residence influence the chance of people finding jobs and that the amount of time spent unemployed depends on the extent of health impairment, educational level, settlement type and age.

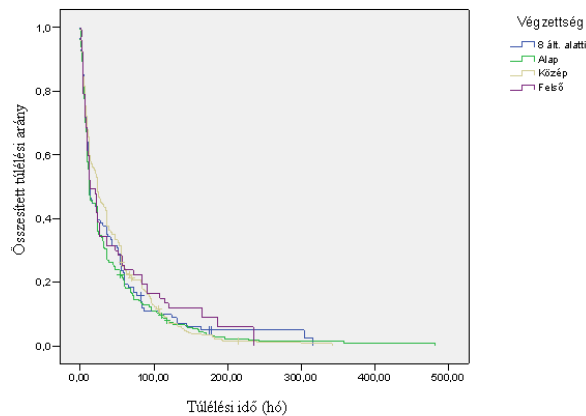
This section describes the findings of analyses performed by survival analysis. The focus was on description of the findings obtained with job and the amount of time which passed without a job, as well as the examination of factors which were influential in this respect.

I built the examination of employment on my questionnaire survey performed with disabled workers. Survival analysis is the statistical method designated for this examination.

By using survival analysis, my aim is to show the risk that disabled people can find a job only after a while, if they find a job at all. For this reason, the examined event is employment after declaration of disability, and the survival time is the number of months passed until employment. In my case, the horizontal gap represents the amount time which passes until a given percentage of people in one of the two examined groups find jobs compared to the same proportion of people in the other group. The vertical gap represents the extra proportion of people who find jobs during a given period of time in one of the groups in comparison with the other. The establishment of groups can be performed based on various aspects, such as educational level, age and the degree disability.

The following figures show the results of survival analysis.

Figure 7. Survival analysis curves based on educational levels



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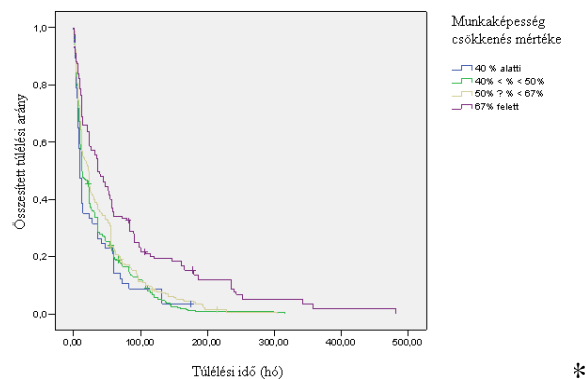
Source: own research, 2014, n=1030

*Cumulative survival ratio-Survival time (months)-Educational level-Below primary school

Primary school-Secondary school-Higher education

Figure 7 shows survival curves based on educational level. The amount of time which passed between the declaration of disability until the confirmation of permanent disability is the lowest in the case of those with primary school degrees and the highest in the case of people with higher educational degrees. As regards people with primary school and secondary school degrees, the standard deviation of survival times is below 10%; therefore, subsamples are homogeneous in terms of survival times and no extreme fluctuation can be observed in the case of the other subsamples either. The highest standard deviation was observed in the case of people with higher education degrees. In the whole sample, it can be concluded that people with various degrees find a job in 42.5 months on average.

Figure 8. Survival curves based on the extent of disability

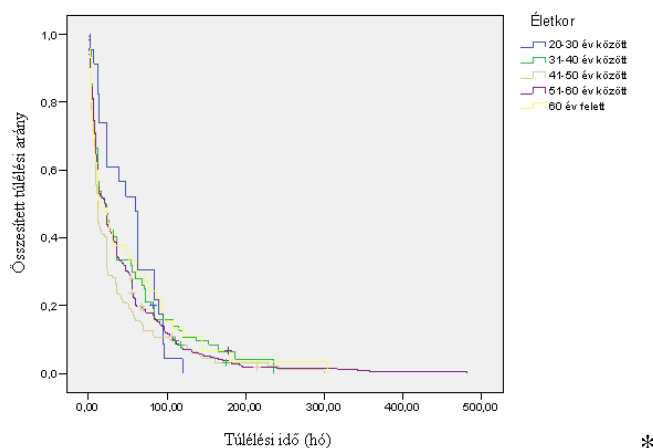


Source: own research, 2014, n=1030

*Cumulative survival ratio-Survival time (months)-Extent of disability-Below 40%-Above 67%

Figure 8 shows the curve shapes and the shifts of the maximum values. Those who suffer from a lower degree of disability find a job in less than 200 months and the sharp decline of the curve means that the more time passes after declaration of disability, the lower the proportion still unemployed people is. The curve of the 67% category has a steadier decline than those of other categories and it also spreads longer (even up to 500 months may pass until employment). It is very difficult for people in this category to find a job.

Figure 9. Survival curves in each age group



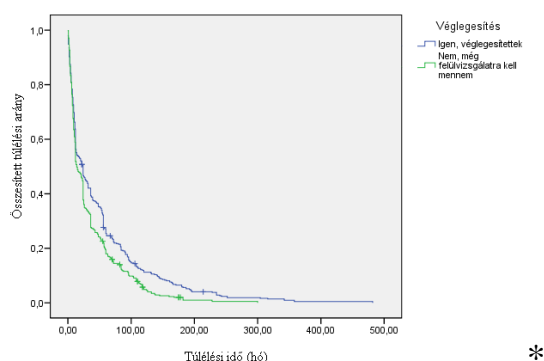
Source: own research, 2014, n=1030

*Cumulative survival ratio-Survival time (months)-Age-20-30 years of age-31-40 years of age-41-50 years of age-51-60 years of age-Above 60 years of age

The survival curves are shown in Figure 9. The amount of time which passed between the declaration of disability and the confirmation of permanent disability is the highest in the case of the youngest and the oldest age group. This period is the shortest (35 months) in the age group between 41–50 years of age. This age group is in the most favourable situation.

The curves of those between 20–30 years of age deserve particular attention, as they decline very slowly in comparison with the other curves, but they do not exceed 120 months. The curves of those between 41–50 years of age should also be pointed out, as they have very quick decline and are below all other curves. This means that people between 40-50 years of age find jobs to a much higher proportion in a given month and a given proportion of them are employed much sooner than the same proportion of people from a different age group.

Figure 10. Survival curves based on the permanence of declaration



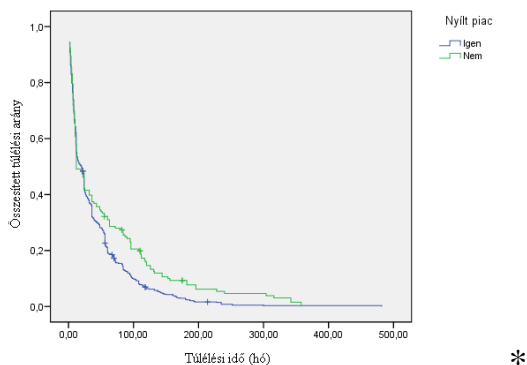
Source: own research, 2014, n=1030

*Cumulative survival ratio-Confirmation of disability-My disability was confirmed-No, I still have to go for a follow-up examination

Figure 10 shows the survival curves in terms of the permanence of confirmation of disability. Obviously, the amount of time which passed between the confirmation of permanent disability and finding a job is higher in the case of those who have been confirmed permanently disabled (around 51 months). People without a permanent confirmation face a shorter period of time (35 months on average) compared to those who are confirmed to be permanently disabled.

Results show that 50% of those who have to visit a follow-up examination find a job within 14 months (but not more than 18 months).

Figure 11. Survival curves based on open labour market experience



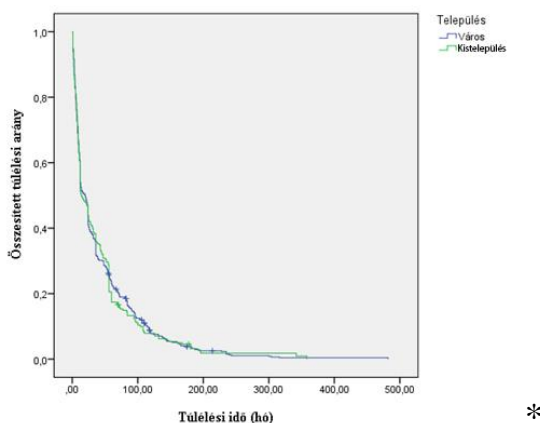
Source: own research, 2014, n=1030

*Cumulative survival ratio-Survival time (months)-Open labour market-Yes-No

Figure 11 shows the survival curves based on open labour market experience. Obviously, the amount of time which passed between the confirmation of permanent disability and finding a job is lower (around 39 months) in the case of those who have open labour market experience. It takes relatively more time (58 months on average) for those who do not have such experience to find jobs.

The group of those without experience deserves particular attention, as their curve has a slower decline than the other.

Figure 12. Survival curves depending on the place of residence



Source: own research, 2014, n=1030

*Cumulative survival ratio-Survival time (months)-Settlement-City-township

Figure 12 illustrates survival curves depending on the place of residence. The group of people living in townships deserves particular attention as their survival curve is the same as those living in cities until around the 60th month. Altogether, it can be stated that the impact of the place of residence of disabled people results in differences only in the case of 5–8 years of looking for a job, but no significant difference was observed in the whole sample.

The Cox model

Based on the data of the survival analysis, the confirmation of permanent disability was incorporated into the Cox model, similarly to the open labour market experience, the extent of disability and the place of residence.

The benchmarks (reference groups) are the category above 67%, those who have experience, people with confirmed permanent disability and those living in townships in the case of the extent of disability, open labour market experience, confirmation of disability and settlement type, respectively. For example, those who have open labour market experience have 1.3 times higher chance of finding jobs sooner. As regards people with confirmed permanent disability, the 0.850 relative risk value shows that the amount of time which will pass until employment will be increasingly longer and people who do not have confirmation have a 1.18 times ($1/0.850$) higher chance. The settlement variable did not show any significant difference.

As regards the extent of disability, it can be concluded that the lower the extent of disability is, the higher chance people have to find jobs.

It can be stated that the probability that people in the category below 40% find jobs in a certain amount of time is 3.4% higher than in the case of the 40–50% category.

Hypothesis 3 was partially confirmed, because the performed analyses resulted in the following findings: confirmation, the previous open labour market experience, and the extent of disability and affect the chance of disabled people finding jobs. Also, the amount of time spent unemployed depends on the extent of health impairment, educational level and age, while the settlement type is a less influential factor. It can be concluded that my

expectations were mostly met as a result of my analyses, except in the case of settlement type which did not result in any significant difference.

H4: It was assumed that the wage of disabled people is unaffected by the extent of their health impairment.

In the questionnaire, I asked respondents about which category employees belong to: the classification based on “reduction of work capacity” or “the extent of health impairment” and about what their percentage proportion is in each category.

I was also seeking answer to how much gross salary employees are given. In the examined sample, 89.8%, i.e., more than three quarters of employees were employed part-time.

The respective regulation accepts 4-hour employment as a basis for inclusion into the compulsory employment level (during the calculation of rehabilitation allowance); therefore, the related analysis could be performed on the data of my own sample.

Wage category 1: 50 000 HUF per month or 500 HUF per hour; wage category 2: 50 001–70 000 HUF per month or 501–800 HUF per hour. Wage category 3: 70 001–120 000 HUF per month or 801–1000 HUF per hour; wage category 4: above 120 000 HUF per month or 1001–1200 HUF per hour; wage category 5: above 1201 HUF per hour.

I compared these wage categories to each work capacity reduction class.

I used the abbreviation “WCR” for the classification system based on “work capacity reduction” and “EHI” for the “extent of health impairment”.

Wage category 3 is the most frequent (22.47%) in the WCR classification category below 40%, followed by category 2 (18.12%) and category 1 (10.87%). Wage category 4 was rather slightly represented, while the proportion of category 5 is 0%.

Most employees in the WCR category between 40–50% belong to wage categories 1 and 2, while 15% of the sample belongs to wage category 3. The proportion of wage categories 4 and 5 is 0%.

Examining the WCR category between 50–67%, it can be observed that most employees represent wage categories 2 and 3 (20.03% and 18.13%, respectively). The proportion of employees belonging to wage category 1 is relatively high (17.84%). At the same time, the proportion of employees in wage categories 4 and 5 is low to zero. In the WCR category

above 67%, wage category 3 is represented the most (18.36%), followed by wage categories 2 and 1 (16.10% and 11.02%, respectively). Compared to other WCR categories, employees in wage category 4 have the highest proportion in this category (5.08%).

This analysis was also performed in the case of the classification system of the extent of health impairment.

Wage category 3 had the highest representation (26.47%) in the EHI category below 32%, while the proportions of wage categories 2 and 1 are still significant (11.77% and 8.82%, respectively). Wage category 4 also appears with a relatively higher proportion (5.88%), while wage category 5 is represented with 0%. The proportion of employees belonging to wage category 2 is the highest (23.81%) in the EHI category between 32–39%, followed by wage categories 3 and 4 (14.29% and 14.28%, respectively) and category 1 (13.10%), while category 5 is also represented with a proportion higher than in the previous cases (4.76%).

The next category of EHI is the group of disabled workers classified between 39–49%. Wage category 2 was represented with the highest proportion (24.31%), followed by wage categories 1 and 3 (18.73% and 14.15%, respectively), while the proportion of wage category 4 is insignificant and that of category 5 is 0%.

The distribution of wages covers the first three categories in the non-rehabilitable EHI category between 49–79% (category 1:19.26%, category 2: 15.98%, category 3: 21.31%). Again, category 4 is represented at a very low proportion and category 5 has a proportion of 0%. In the EHI group above 80%, most employees belong to wage category 2 (19.42%), followed by wage category 3 (15.54%).

It is interesting to compare rehabilitable and non-rehabilitable groups with the same proportion of health impairment. In the lowest wage category, there are several employees from the non-rehabilitable group, while rehabilitable workers have a much higher proportion in wage category 2. In wage category 3, the proportion of non-rehabilitable people is higher. (The proportion of people in wage category 4 is insignificant, while their proportion in category 5 is basically 0%.) Consequently, there is no correlation between the possibility of rehabilitation and the wage of employees.

Based on the above described analyses, Hypothesis 4 was confirmed, as similar tendencies can be observed if WCR and EHI examinations are compared to each other: the extent of health impairment and the wage of employees were not proportional to each other.

3.2. Case study: presenting the Austrian research (Steiermark)

I devoted one subsection of my dissertation to the examination of the labour market support of disabled people in Austria, more specifically in Steiermark province.

The reason why I could include this subsection is that I had previously been awarded an Austrian research scholarship provided by the province during my PhD studies between September and November 2011. Therefore, I had the opportunity to study the situation of disabled people in relation to the labour market in Graz, the capital of the Styrian province. The two countries have different macroeconomic background which has an impact on the possible implementation of their ideas. The summary of these factors is described with PEST analyses performed for Austria and Hungary separately.

I described the visited thematic events, i.e., “Diversity Day”, “Inklusio Expo”, as well as organisations such as “atempo”, “Chance B”, “Johannes von Gott Pflegezentrum” and “Anwaltschaft für Menschen mit Behinderung”.

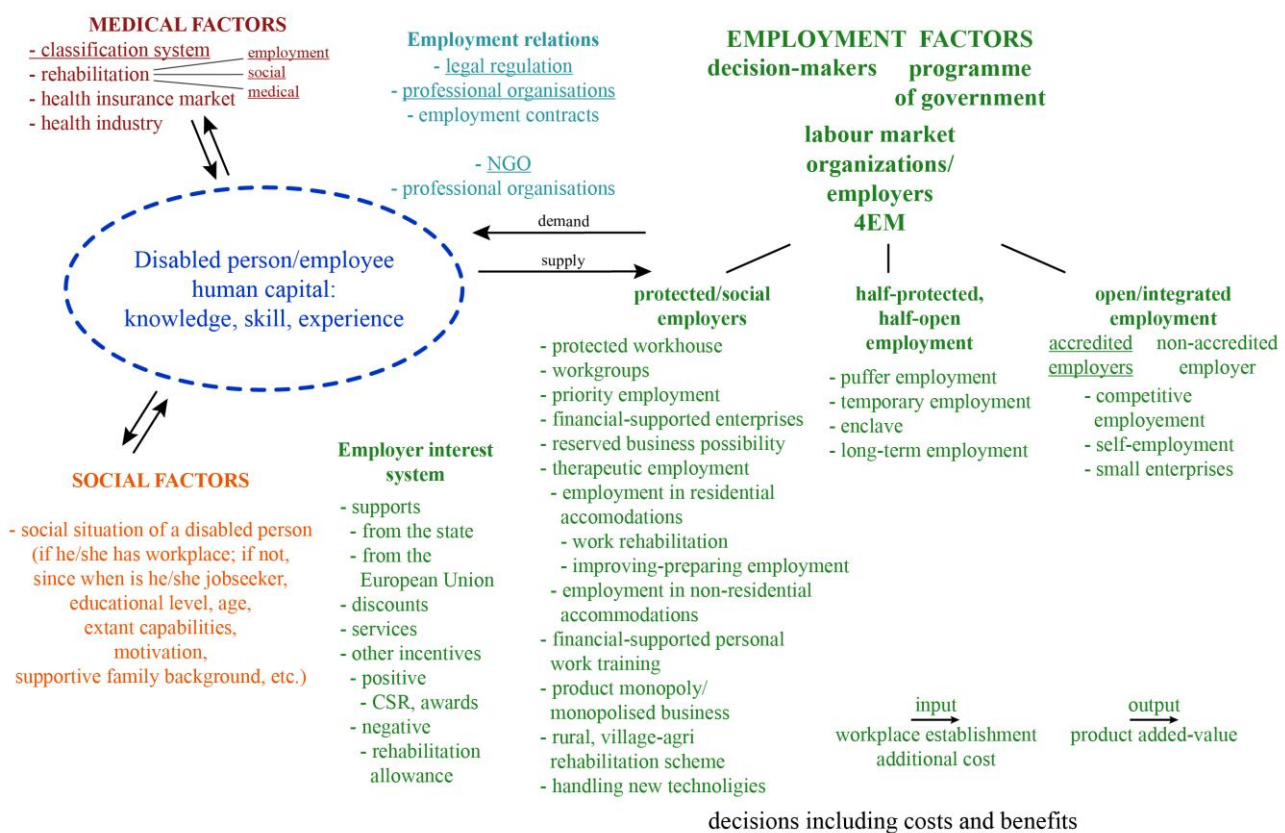
Target organisations are established for those in need and they can turn to these organisations and request services that they demand (ranging from help in everyday life to finding a job on the labour market). They have the proper legal ground for doing so and there are financial resources available. The disabled people and their relatives can choose which organisation they would like to provide the given services. In this relationship, the disabled client will be the principal and the given organisation will be agent and the party responsible for performance is regulated by law. Disabled employees have to act as active citizens by enforcing their rights and finding out the methods of doing so. There are numerous target organisations in this field, such as Atempo or ChanceB.

As it can be seen, I examined my own database from various aspects. In certain cases, I obtained the result that I had previously expected, while my findings were quite the opposite of my expectations on other occasions.

3.3. The comprehensive model of the situation of disabled workers and their employers

As a result analysing the situation of accredited organisations employing disabled workers, as well as that of their employees, I created a comprehensive model to summarise the impacts, factors and environment which affect their situation. This model is represented by Figure 13.

Figure 13. The comprehensive model of the situation of disabled workers and their employers



Source: own research, 2016

Figure 13 shows that three main factor groups were created which are analysed also during the complex classification of workers. These groups are employment, medical and social factors. The underlined partial elements are thoroughly dealt with in this dissertation.

4. NEW AND NOVEL FINDINGS OF THE DISSERTATION

Based on the performed primary and secondary research, I make the following statements which can be considered new or novel from the aspect of the analyses carried out in this topic.

1. As a result of my analyses, I can determine the willingness of disabled workers, a less favoured group of the labour market, to return to non-accredited workplaces. I concluded that the majority (55.5%) of employees at accredited organisations would return to non-accredited workplaces at the time of performing this research. This result clearly shows that there is a real opportunity of reducing the number of employees supported by accreditation within the economically active population by means of the examined group returning to non-accredited workplaces. Due to the nature of this topic, it has to be added that this conclusion mostly affects the employees who fall into this category based on the complex classification they undergo, i.e., there was no significant change in their conditions which would make them classified as “non-rehabilitable”. According to the medical statement of disabled workers in my sample, 23.6% are non-rehabilitable. As regards this group of people, I consider it to be the maximum potential achievement from the aspect of employment to provide accredited or other protected employment. Only one fifth of respondents stated clearly that they would not return to non-accredited workplaces.

The introduction of rehabilitation allowance did not “improve” the market labour situation of disabled workers to the extent that they would consider aspects other than “subsistence” to be especially important in work, such as the opportunity of “professional advancement”. This finding is also shown by the fact that employees strive to return to non-accredited workplaces which could also be because they assume better income opportunities at these places (considering the fact that the constantly significant role of “subsistence” was shown as a result of my examinations).

2. The following conclusions can be drawn on behalf of employers during the analysis of the employment of disabled workers: in the case of non-accredited organisations, it is

possible to calculate when it is “profitable” to employ disabled workers. Employers can decide about employment on the basis of comparing the costs related to employment and the usefulness of work performed by disabled workers. As regards costs, I only performed a “*ceteris paribus*” (i.e., no other costs were considered, such as financial support for employers, discounts, etc.) analysis of the comparison of rehabilitation allowance and employment costs. From this viewpoint, the employment of disabled workers is “profitable” only in the case of 4-hour employment from the aspect of economicalness.

Also, in the case of accredited organisations, employers make their decisions about employing people based on the above described aspects. At the same time, it can be concluded that the only way how employing disabled workers can be profitable is if little to no money has to be spent on accessibility. Based on the comparison with the monthly cost of rehabilitation allowance obligations of non-accredited organisations, it can be concluded that the 4-hour employment of disabled workers is more economical in the case of accredited employers if little to no money has to be spent on accessibility.

It is also important to survey whether there is a real need for accessibility, as three quarters of the accredited organisations examined by this study did not provide any accessibility.

Also, loyalty elements appear on behalf of the employer, such as helping workers with the transport to the workplace and mental rehabilitation. Other forms of help and assistance include flexible working hours, assistance with transport, legal help and providing help to the family. In addition, more than half of employers organise community programs which can also be interpreted as a loyalty element.

3. I performed a comprehensive economic analysis of the labour market situation (based on the primary questionnaire database) with the help of survival analysis and the Cox model. I determined which factors have an impact on the chances of finding jobs and the amount of time spent unemployed in the case of the examined group, people living with disabilities. The performed analyses resulted in the following findings: the confirmation of permanent disability, the previous open market experience, and the extent of disability do influence disabled people’s chances of finding jobs; also, the amount of time spent

unemployed depends on the extent of health impairment, educational level and age, while settlement type is a less influential factor. It is easier for employers to find employees in regions of countryside settlements which are more affected by unemployment. This has a balancing effect in terms of the temporal differences in terms of the amount of time spent without work between cities and small settlements. This balancing effect is bigger than what was expected before performing the analyses of this research.

4. Differences in the “human capital” of disabled workers are not realised as difference in wages: their wage does not depend on the various extent of their health impairment; i.e., wage and health impairment are realised by the employer as two factors which are completely independent of each other. No difference should be made in terms of wage between disabled and non-disabled workers and also between employees with various extent of health impairment.

5. I demonstrated the system and situation of disabled workers in Steiermark province, Austria. It can be concluded that the system established in Austria works well and several of its elements can be adapted.

Establishing various categories of the “compensation fee” (rehabilitation allowance) as per the Austrian example could be easily adapted: bigger organisations would be obliged to pay higher fees if the compulsory employment level is not conformed to. It would be a further advantage that it would represent extra costs for only bigger organisations which are supposed to be better equipped with capital.

The employers who employ disabled workers who take part in a training course would be provided a “premium” which equals to the given yearly “compensation fee”. Consequently, by employing disabled workers who take part in training courses, employers meet the requirement of the compulsory employment level and they are also given a premium. This regulation does not only affect organisations employing 25 people or more; therefore, even smaller organisations would be motivated in terms of

employment. I have not found any example for this practice in the Hungarian technical literature; therefore, I recommend its adaptation in Hungary.

The importance of educational programs should also be emphasised, as they provide an opportunity to establish personal relationships with the experts of the given field. These programs have a positive impact in terms of demand and profit generation in various sectors of the economy (travelling, hotel bookings and tourism generated). They also have an important role in “forming the social approach”. These programs can be entirely adapted in Hungarian circumstances.

I found the operation of the so-called “social franchise” system to be especially interesting and adaptable in Hungary. In order to strengthen the labour market situation of disabled people, I can recommend the establishment of a social franchise system.

The complex activity of labour market intermediate organisations is also important and my research findings show that there is a strong need for such activity also on the Hungarian market: both employers and employees prefer to use the help of intermediate organisations which could also be performed by community organisations.

Two factors of organisational approach could be emphasised for the purpose of strengthening them in Hungary: the so-called “community-based” approach: to support employees in their own community and the so-called “person-centred” approach: providing every person exactly the service they need as individuals. I consider this approach to be important and adaptable in Hungarian conditions.

6. As a result of my examinations, I established a model which summarises the environment of disabled people and their employers, as well as the factors which have an impact on their labour market situation in a complex way. I identified three main groups of factors: employment, medical and social factors. Of these factors, I focused more thoroughly on certain elements in this dissertation, mainly concerning employment, more specifically accredited employers. I carried out a primary analysis to demonstrate employment by accredited organisations within integrated employment, the current legal

regulation within the system of employment relations, as well as the operation of professional organisations by means of an Austrian case study. In a few cases I also demonstrated the activity of NGOs both in a Hungarian and an Austrian example. Of the examined medical factors, I described the classification system in more detail regarding the period following the political restructuring in Hungary, as well as the main fields of rehabilitation, with special emphasis on employment rehabilitation.

I summarised the forms of employment which can potentially appear in the case of employing disabled people, as well as the incentives which may influence the employment of disabled workers on behalf of employers.

The novelty content and novel character of the model created in this study lies in the fact that the situation was demonstrated in a complex way by putting together all partial elements to obtain a whole view. Also, the partial fields researched by others and the areas examined by me were identified. As a next step, I could designate new research directions in relation to yet unexplored areas.

As regards employment factors, a new research direction was identified by focusing on the more detailed analysis of employment by non-accredited, half-protected and protected employers, as well as the analysis of employers' support, discounts and services.

I found no detailed research results as secondary sources concerning medical factors; therefore, new research areas and directions could be potentially designated by the health insurance market and the health industry.

Also, new research directions can be identified in the field of social factors, since no complex research can be found in the existing technical literature sources, apart from partial findings.

It can be concluded that several new research directions can be designated due to the fact that the examined area is rather complex and it contains a multitude of elements: the field of social and medical factors provide further opportunities to perform analyses.

5. THEORETICAL / PRACTICAL USABILITY OF THE OBTAINED RESULTS

It was one of the main objectives of my doctoral dissertation to provide a clearer perspective of this special segment of the labour market which has a significant impact on the situation and development of a given region. An accurate situation report of a given region contributes to working out specific development strategies and the more efficient distribution of development funds. In various strategic and project documents, the primary objective is to improve the characteristics of economic sectors. The examination and development of the labour market is indispensable in order to achieve these goals.

On one hand, I consider my new and novel scientific findings to have practical usability from the aspect of decision-makers who can obtain a clear view from my work in order to make decisions related to disabled employees. On the other hand, these results could be useful for the sectorial actors such as employers and employees, so that they can obtain a complex view of the topical and recent situation and even develop a more successful cooperation based on the outlined situation report. In my opinion, both sides should make steps, as it can potentially lead to development in cooperation.

The “interdisciplinarity” of the topic could provide many other research directions and I think that the examination and analysis of the economic aspect resulted in exploring correlations in order to improve the current situation and also to come up with potential development or further development alternatives.

6. PUBLICATIONS IN THE FIELD OF THE DISSERTATION



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Candidate: Nóra Nagymáté
Neptun ID: XJJDCM
Doctoral School: Ihrig Károly Doctoral School of Management and Business Administration

List of publications related to the dissertation

Article(s), studies (7)

1. **Nagymáté N.:** A megváltozott munkaképességűeket érintő egyes jogszabály-változások és a besorolási rendszer változásai Magyarországon 2008 és 2013 között.
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Address: 1 Egyetem tér, Debrecen 4032, Hungary Postal address: Pf. 39. Debrecen 4010, Hungary
Tel.: +36 52 410 443 Fax: +36 52 512 900/63847 E-mail: publikaciok@lib.unideb.hu Web: www.lib.unideb.hu



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The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of Web of Science, Scopus and Journal Citation Report (Impact Factor) databases.

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