

# RELATIONSHIP BETWEEN THE QUALIFICATION AND LABOUR MARKET SITUATION OF DISABLED WORKERS IN HUNGARY

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**Abstract:** My PhD research focuses on special rehabilitation firms (they are specialised to employ disabled people) and their employees. Two questionnaires for the above mentioned firms and their employees were created in order to gather information on their activities as well as to explore the relationship between the firms and their employees. Altogether 1030 employees and 109 employers filled in the questionnaires. The current study shows the results of this survey. It can be stated that this paper shows the risk of finding a workplace after a certain time period. According to the latest trends I analyse the labour market situation of people living with disabilities with survival analysis. The survival analysis is able to manage partial information, as well. After summarizing all claims of participants we can make an impression in this area and demonstrate the problems for the labour market generally. I use the Log-rank, Breslow and Tahane-Ware probe..

**Keywords:** survival analysis, people living with disabilities, labour market

## Introduction

Nowadays the growing rate of economically inactive population is a considerable problem in Hungary. Rural development has become more and more important issue in Hungary since rural areas also contribute to the efficiency of the national economy (Kárpáti et al., 2010). There were radical changes in the economy as well as in the labour market in the 1990's. The rate of employment and activity was the lowest between 1996 – 1997. After that in the consequence of the economic boom it was growing till 2000. Between 2000 and 2007 it showed stagnation, including some short temporary growing periods (11).

There are two main ways to determine the degree of disability. 'People living with disabilities' can be arranged in two groups considering that the incapacity is a congenital malformation – this means an infiltration into the labour market with disability – or an impaired health status caused by a medical emergency or an accident – this means the person had worked in the labour market without disability and later he had to cope with the changed situation according to his impaired health.

Dramatic differences in labour market outcomes are observed on the basis of disability (Acemoglu and Angrist, 2001 and DeLeire, 2000 cited by Jones 2005). In the UK, for example, the current employment rate is just 32.8% for the disabled, compared to a rate of 80.3% for the non-disabled. In addition, the size of the disabled group has grown and their labour market outcomes have deteriorated over the past twenty years (Bound and Burkhauser, 1999 and Bell and Smith, 2004 cited by Jones 2005). Their low rates of partici-

pation raise concerns about the presence of employer discrimination and social exclusion of the disabled (Burchardt, 2003 cited by Jones 2005) and the implications of high rates of social security benefit claimants on public spending (McVicar, 2004 cited by Jones 2005).

Let us analyse the definition of disability. Any study of disability faces problems in defining those in the sample who have a 'disability', since it is not a clearly defined condition. A number of studies have drawn upon the distinction made by the World Health Organisation between disability, impairment and handicap, whereby:

- Impairment is defined as a psychological, anatomical or mental loss, or other abnormality (e.g. blindness, mental retardedness, loss of hearing, diabetes, heart disease, asthma, colour blindness, difficulty in lifting heavy objects or climbing stairs);
- Disability is any restriction on or lack of ability (resulting from an impairment) to perform an activity (e.g. work) in the manner or within the range considered normal;
- Handicap is a disadvantage resulting from an impairment or disability.

The disabled are more likely to be absent from work due to sickness and length of absence is likely to be longer in their case. The able-bodied on average have higher educational qualifications than the disabled, but shorter labour market experience and slightly lower tenure with the current employer, reflecting the association of disability with age (Kidd et al., 2000).

Generally speaking it would be better for the Hungarian economy to employ disabled people because the number of

inactive population could be lower and the state wouldn't have to provide them with supplies. According to the Hungarian Law, if there is not possible to give job to these people, support has to be provided them by the state (I2).

The situation of people living with disabilities is very special on the labour market. Their participation on labour market is very limited (Pfahl et al., 2010). In Hungary – according to the international trends – vocational rehabilitation and workmen's compensation are provided by the state (Kálmán et al., 2002). The disability is no more considered for one person but for some activities (Münnich, 2007). The holistic, ecological approach becomes more and more trendy (Pordán, 2007), that circumstances and the abilities of people living with disabilities have to be harmonized (Münnich, 2006). The problem is that these people don't have the right to make a decision on their job, too (Bass, 2008) although they are in the practice stable, precise and are capable of hard work (Holló, 2007).

## Materials and Methods

In this stage of the research, results have been reached so far are presented. The research focuses on special rehabilitation firms and their employees (they are specialised to employ disabled people). Two questionnaires for the above mentioned firms and their employees were created in order to gather information on their activities as well as to explore the relationship between the firms and their employees. Altogether 1030 employees and 109 firms filled in the questionnaires. The second questionnaire focused on special rehabilitation firms. The current study shows the results of these surveys.

## Results and discussion

I work with the survival analysis because I want to demonstrate how much risk a disabled person has in finding or not finding a workplace after a certain time period. The examined event is finding a workplace after being qualified as disabled; the survival time is the number of months within they find a workplace. Using the survival analysis we can analyse partial information as well. In the survival analysis people with partial information are called 'censored cases' (Kovács – Béri, 2007). In my survey some people didn't give the beginning date of their labour relation, so they probably didn't find a job until the time of the survey. This time period is partial information, because they can find a workplace later, so this can happen later after this survey. To estimate the survival curve I use the analysis of Kaplan-Meier (1958), which is adaptable in cases of discrete values (number of months). "The Kaplan – Meier curves of the survival functions are stepped functions. To compare two Kaplan – Meier curves we analyse the distance between the curves. The vertical distance shows the differences between the survival rates of the different groups at that moment.

Analysing the horizontal distances we can see how much time it needs to be the survival rates equal in the different groups" (Kovács – Béri 2006). Analysing the two groups the horizontal distance shows how longer it takes for a certain per cent of people in the first group to find a job compared to a certain per cent of people in the second group. The vertical distance shows the ratio of people finding a job within a certain time period in the two groups. Groups can be created in many ways, for example: by qualification, age, impaired health status, etc. I use the Log-rank, Breslow and Tahane-Ware probe to analyse the difference between the two groups' survival function. Data processing was performed by SPSS for Windows 15.0.

The above mentioned tests are very similar, but they are different as they handle the survival times, the methods weight survival times differently. The Breslow test takes into account with greater weight the earlier forthcoming occurrences, the shorter survival times. The Log – Rank test takes into account each survival time with the same weight, while the Taronia – Ware test gives a mean solution. The Log – Rank test is the most efficient if the survival tests have an exponential or Weibull distribution and censored cases can be found only randomly. The test is very sensible to the later differences between the survival times. The Breslow test is the most effective if the survival times have lognormal distribution and less effective if we have a lot of censored cases. In my survey I accepted the difference as significant if at least two tests showed differences between the groups.

*Table 1:* Estimated main statistics after survival curves by qualification

Qualification	Mean	Standard deviation	Coefficient of variation	Median	Lower bound of the conf. interval	Upper bound of the conf. interval
Primary	45.20	6.69	14.80	12	8.70	15.30
Elementary	39.33	3.62	9.20	12	8.94	15.06
Secondary	44.17	2.74	6.21	24	19.66	28.34
College graduated	48.03	8.12	16.91	13	5.65	20.35
Full sample	42.55	2.04	4.80	18	15.76	20.24

*Source: own research, 2011*

The average time between being qualified as disabled and finding a job is the shortest in case of elementary qualified people, the highest is in case of college graduated people. In case of primary and elementary graduated people the deviation of the survival times is under 10 per cent, so the subsamples are homogeneous according to the survival times, there are no extreme variations by the other subsamples. The highest deviation can be found in the case of college graduated people.

As regards the full sample, it can be stated that people with different qualifications can find a job within 42,5 month in the average. The medians of the survival times shows, when disabled people can find a workplace in the certain

qualification category with 50 per cent chance. According to the full sample half of the people found a job within 18 months, the other half didn't find a job even after 1,5 years. The median is the highest in case of people with secondary education, 50 per cent of this group didn't find a job within even 2 years. In case of 50 per cent of people with the lowest qualification the time between being qualified as disabled and finding a workplace is between 8 and 15 months; the largest range can be found in case of college graduated people. Half of the college graduated people found a job within 6–20 months. For people with secondary education we found the highest value for the lower and upper bounds of the median. This means that they can find a workplace with 50 per cent chance just within 20 and 28 months. To sum up the results it can be stated that people with lowest qualification level find a job with 50 per cent chance earlier from the time of being qualified as disabled and the average time of finding a work place is shorter, too. The bounds of the confidence interval of the estimation of the median are lower, and the length of the interval is narrower, as well.

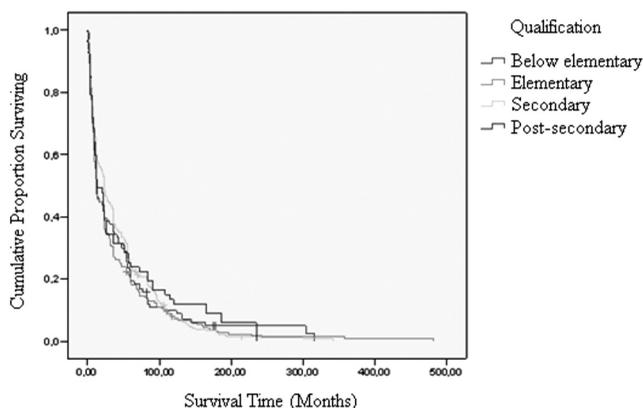


Figure 1: Survival curves by qualification  
Source: own research, 2011

## Consequences

I worked with the survival analysis because I wanted to demonstrate how much risk a disabled person has in finding or not finding a workplace after a certain time period. The examined event was finding a workplace after being qualified as disabled; the survival time is the number of months within they find a workplace. Using this method we can analyse partial information as well. I analysed the full sample regarding this questions. As regards the full sample, it can be stated that people with different qualifications can find a job within 42,5 month in the average. The medians of the survival times shows, when disabled people can find a workplace in the certain qualification category with 50 per cent chance. According to the full sample half of the people found a job within 18 months, the other half didn't find a job even after 1,5 years. The median is the highest in case of people with secondary education, 50 per cent of this group didn't find a job within even 2 years.

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