

MALATYINSZKI SZ. 2007: Human Capital Investments in two Counties in Hungary, Journal of Economics and Social Research, Banska Bystrica, Ekonomicá Faculta, pp. 154-163.

HUMAN CAPITAL INVESTMENTS IN TWO COUNTIES IN HUNGARY

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Abstract. In my study I would like to focus on the value of human capital. The exploitation of human capital is really little compared to the value hiding in it. Costly machines are brought into use and its expenses are expected to bring profit before they get outdated. However, the return of human capital is hardly ever kept an eye on. Human capital is the only single 'raw material' which, as time passes by, cannot only lose from its value, but also can widen its experiences gained throughout the years.

Key words: human capital, human costs, employment

The aim of the analysis

My aim is to show the similarities and differences between a more developed county (that is, Fejér) and a less developed one (that is, Békés). I will do research into the amounts of money spent on the education of the population in these two counties. The further aim of the study is to find connections/correlations which will help to start further research.

Hypothesis and methods

According to my presupposition, both in the Békés as well as Fejér counties big amounts are spent on education and training. In spite of that, the vast majority of this is not profitable, does not get integrated into the economy, the society, or even if does so, only in an indirect way. A correlation can be shown between the amounts spent on training, the quality of employment and the efficiency of the economy.

By the help of the statistical almanach of KSH (2001) I shall show the amount of money having spent on the education and training of the inhabitants of the two counties mentioned above. I shall also show how much of this money brings a profit and how much of it 'gets lost'. The data of 2005 is also available but in spite of that, for the sake of comparability I have counted everything based on the data of the census of 2001.

Demography

The number of inhabitants of Békés county has been constantly decreasing since the 1960's. Since the year of 1970, its population has decreased with over 50,000 people. This demographical phenomenon is still not over, and it is much stronger than the rate of the decrease on a national level.

Fejér county, however, shows a tendency of the opposite side. Between 1970 and 1980, there was a significant raise, and then a smaller, but still growing tendency in the number of the population. This must be due to the fact that in the footsteps of favourable economical changes people migrated there in big groups.

The aging index shows similar differences. In 2003, this index in Fejér county was 86.3%, while it was 109.4% in Békés county. We can say that Békés county has an aging population, while in Fejér young people make up the majority of the population.

Qualifications

In general, it can be clearly seen that in both counties the number of the illiterate has decreased to a minimum from 1970 to our days. (By the term 'illiterate' we mean someone who has not finished even the first grade of primary school.) Paralelly with this tendency, during the past 30 years, the number of people finishing primary school doubled. Also, the number of people finishing secondary school nearly tripled. The differences are not so clear if we try to get an insight into the number of people with a degree. Today, 4.4 times more people get a degree in Fejér county than back in 1970. However, this number in Békés county is only 3.5. The differences in the number of people with a degree were constantly growing as the years were passing.

The qualifications of employees shows a much less clear picture as the data mentioned before. The most significant change is that while in 1980 the number of employees was almost 5,000 more than in Békés county, this difference grew to be as many as 50,000 by 2001. This growth can be due, among other things, to 'inside-the-gate' unemployment, however, the real reason for this must be lying in the differences of the economical situations of the two counties. While in Békés county there are hardly any bigger size employers now, workers are transported in an organized way to the factories in Fejér county, in order to serve their grown needs.

Interestingly, the number of people who have only got primary school qualifications is bigger in Fejér than in Békés. From this, it seems like a clear consequence that in this region, it is easier to get into the labour market even with such basic qualifications. However, one must not forget about the fact that it is cheaper to employ unskilled people.

With secondary school (final exam) qualifications, in Fejér county more and more people have found a job from 1980. This tendency is exactly the opposite way round in Békés. In this area, out of this group of potential employees, 41,064 people found a job in 1990, but 11 years later only 38,826 did. The reasons for this may be complex – one is the decrease in employment, the other is the great increase in the number of people with a degree.

Analysing the number of people with a degree and the employment data, we can find some intrigue numbers again. Between 1990 and 2001 in Békés, the 4,500 people with university qualifications increased the number of employees only with 1,900. This means that as many as almost 2,700 people with a degree were unable to get integrated into the labour market. In Fejér, the same kind of a difference means 2,600 people who

were 'unnecessarily' trained at university. The differences may show that even if the employment situations are different in the two counties, at the same time, the problems are similar. That is, a lot of people are trained to get a degree who the labour market will not be able to accept.

Table 1: The number of employees, based on qualifications in Békés and Fejér counties (1980-2001)

Qualifications	Fejér county				Békés county			
	1970	1990	1980	2001	1970	1990	1980	2001
Hasn't finished 1st grade at primary school	4740	2872	3304	2214	7899	4793	4036	2077
Has finished at least 8 grades at primary school	151276	214065	257933	323051	144731	200370	238510	282922
Has at least got a final exam	35708	64062	80356	118824	32193	56311	72657	94808
Has a degree	7245	13690	23110	31549	6378	11122	18202	22506
Total	198969	294689	364703	475638	191201	272596	333405	402313

Table made by my own, based on data by KSH

The most important change that happened in the field of employment during the 20 years in the two counties was a decrease in the number of agricultural cooperatives' members. The decrease in Békés was 5.2 percent while in Fejér 8.6 percent. Numerous members started to cultivate the lands having gained back. This number does not appear in the data mentioned before.

The number of employees in 1980 was kept at an artificially high level. However, 10 years after the change of the regime, this number showed a significant decrease. In Fejér, it decreased 86.4 % and in Békés it went down to 74.4 percent.

There are significant differences in the group of enterprises in the analysed counties. A willingness to start an enterprise shows the most the condition of the economy as well as the opportunities of individuals. In normal circumstances, a person sets up an enterprise if he can see that his work will be profitable within a certain period of time. For setting up an enterprise, it is also necessary to have some starting capital. In Fejér county, the number of people working for enterprises almost tripled in 20 years. However, the growth is only half as much in Békés.

Table 2: Number of enterprises in Fejér and Békés counties, 2003

	Out of these					
	Working enterprise	Public limited company	Public-company	Cooperatives	Limited partnership	Private enterprise
County						
Fejér	33 956	5 271	119	206	7 142	20 025
Békés	24 600	2 860	73	260	3 735	17 128

Table made by my own, based on data by KSH

In the chart above, it can be clearly seen that in Békés county in 2003, almost 70 percent of enterprises is a private enterprise. In Fejér this number is less than 60. This field also shows the lack of capital .

Table 3: The number of employees based on field of employment in Békés and Fejér counties 1980-2001 (number of persons)

Number of persons			
Fejér	1980	1990	2001
being employed	176759	169256	152684
cooperative's member	20407	14074	1757
working for an enterprise (self-employed etc.)	7429	8236	20992
total:	204595	191566	175433

%			
Fejér	1980	1990	2001
being employed	100	95,8	86,4
cooperative's member	100	69,0	8,6
working for an enterprise (self-employed etc.)	100	110,9	282,6

Békés	1980	1990	2001
being employed	138499	129116	103091
cooperative's member	48554	32172	2507
working for an enterprise (self-employed etc.)	13139	11548	19553
total:	200192	172836	125151

Békés	1980	1990	2001
being employed	100	93,23	74,43
cooperative's member	100	66,26	5,16
working for an enterprise (self-employed etc.)	100	87,89	148,82

table made by my own, based on data by KSH

In regards to their main field of employment, there are two areas in which the two counties show differences. Since it is a region on a plain area, 6.7 percent of employees in Békés county work in the fields of forestry and agriculture. However, this number is a mere 2.6 % in Fejér. In Békés, this number sounds really low, as many more people work in agriculture. This data does not include people working in agriculture, but only

for their own needs. Moreover, a huge amount of agricultural workers are 'invisible' since a lot of people do seasonal work for daily wages.

The number of people working in assembly, machine operation and similar jobs is 7 percent higher in Fejér county. The main reason for this is clearly in the development level of the area.

Table 4: Number of employees based the main field of employment in 2001

Main field of employment	Békés county		Fejér county	
	fő	%	fő	%
People working in legal system, authorities, and economical managers	8 989	7,2	13 791	7,9
People with a job which need degrees	12 085	9,7	15 345	8,7
Other people with jobs which need degrees or secondary school qualifications	15 582	12,5	23 241	13,2
People doing officework	6 154	4,9	8 873	5,1
People doing services	19 551	15,6	24 842	14,2
Workers of agriculture and forestry	8 332	6,7	4 618	2,6
Workers of industries and construction	27 880	22,3	37 341	21,3
Drivers, machine operators, assemblers	14 016	11,2	32 207	18,4
Unskilled workers	10 155	8,1	11 930	6,8
Employees of armed organizations	2 407	1,9	3 245	1,8
Total	125 151	100,0	175 433	100,0

table made by my own, based on data by KSH

Competition and human capital

The competitive power of a region is made up by several factors. Main factors can be its geographical position as well as its natural resources. A favourable geographical position can be exploited by a region in the fields of tourism, commerce, business, economy etc. Natural resources can appear both in favourable as well as unfavourable agricultural areas and raw material sources. Our country is rich in agricultural lands which could be exploited properly. However, we can enjoy its profits less and less, due to the lawmakers of the European Union. These of our areas are getting drier and drier,

and we tend to use more and more fertilizers, too, unfortunately. The pollution of the ground is extending as well. During the past couple of decades, we have exploited and sold the vast majority of our raw materials. As Tibor László says: 'the real competitive advantage is getting less and less defined by the raw materials and geographical position. What is getting more and more important now are the qualifications, the quality of technology, an ability to get reborn and get updated, keep pace with the changes, and information.... The performance and efficiency of the economy is getting more and more dependant on knowledge. There is an ever growing relationship between the success of the economy and the use and exploitation of knowledge.'

Experts agree on the fact that we are living in a society of knowledge and skills. Even so, we do not pay enough attention to widening our skills, knowledge and then using these. Thinking and creativity give opportunities and abilities to a society to get rid of its problems and solve its crisis situations. In order to do so, however, an aim is to be defined. Also, members and groups of the society need to be defined whose intellectual powers are often not used properly. As early as in 1950, Adam Smith realized that '...acquiring skills and knowledge, the studies of an individual mean real costs – which in fact is capital invested into that particular individual in question.' This capital can be mobilised and exploited only in practice, by work and work experiences, otherwise it will get lost.

Till the moment when an employee enters the labour market, the costs of his studies and training are financed by himself, his state and his family. His workplace will not ask him how much his training so far has cost. From the day of his being accepted to the job, the company will use the employee. It will train him on its own cost. For the company, the training of the employee will have costs only from this moment. When the employee loses his job, the costs will be over. In an ideal case, the society, however, has gained an experienced and well-trained employee.

For measuring human capital, only indirect indexes and methods are available in an international practice. Some of the possible indexes include the following: the analysis of amounts spent on research and development, the changes in the number of technological staff, the number of researchers, the number of patents etc. (3)- valójában ez itt egy picit 3-as!

According to an other research, human capital is influenced by the following factors:

- the composition of the population
- qualifications
- the condition and composition of the labour market
- employment

Even if the investment in human capital is undoubtedly defined also by the factors mentioned above, in our present research we intend to focus on the factors which appear during training. Dr Habil Gyula Lakatos has made a really deep and thorough research on the topic. Based on this research, the capital hiding in the human power of Békés county can be well analysed. According to this, educating an individual costs the following:

**Table 5: The costs of educating and training an individual
(based on prices in 2001)**

Persons below 8 primary school education	5.846.000.-
Persons with 8 primary school education	6.272.000.-
Persons with a vocational school education	9.126.000.-
Persons with a secondary school education	10.400.000.-
Persons with a degree	16.335.000.-

The amounts above include:

- family costs: costs of a period when the child goes to creche and nursery, textbooks, schoolbooks, educational aids, school programmes, medical care, hygiene, clothing, eating, household, transport and transfer costs etc.
- government costs: the amortization of equipment and buildings used throughout the education, income which was lost during education (this appears on a macroeconomical level in a loss of GDP)

These amounts do not cover totally all the costs related to an individual's education. However, the chart does present the most important costs. This way, it can be clearly seen that in Békés county how much money was spent on education by the government and the population. In the year of 2001, it was over 3 billion forints and in 2005 about 3.64 billion forints. In Fejér county, the amount of money spent on the whole population in is almost 3.5 billion forints in 2001, while it is near 4.1 billion in 2005.

Table 6: all training costs spent on the whole population of Békés and Fejér counties

Institution finished	As regards to the educational, thousand person		Outgoings, million Ft	
	Békés county	Fejér county	Békés county	Fejér county
Below 8 primary education	86,3	79,5	504.509,8	464.757,0
8 primary education	105,2	114,8	659.814,4	720.025,6
vocational education	84,5	90,8	771.147,0	828.640,8
secondary school education	66,4	78,0	690.560,0	811.200,0
degree	28,4	40,8	464.482,0	666.468,0
total:	370,8	403,9	3.090.513,2	3.491.091,4

table made by my own, based on data by KSH

The whole population of Fejér county is 8.9 % higher than the population of Békés. In spite of this, the number of people with only 8 primary school education is almost 7,000 higher than in Fejér county. The number of people with 8 primary education and vocational education is not parallel with the differences in the population. The biggest difference can be found between people having secondary school and university qualifications. In Fejér county the percentage of people with a degree is 43 percent higher than in the other county.

In spite of the fact that the population of Fejér county is 8.9 % higher than that of the other region, the amounts spent on training are 13% higher there. This also shows that the level of qualifications in Fejér county is far higher in Fejér county.

As it can be seen, the amounts refer to whole populations. Even so, we get meaningful data if we compare these with the data of the employed.

Table 7: Training costs in Békés and Fejér counties based on their numbers (2001)

Institution finished	As regards to the educational, thousand person		cost, thousand Ft	Outgoings, million Ft	
	Békés county	Fejér county		Békés county	Fejér county
Below 8 primary education	0,853	1,563	5.846	4.986,6	9.137,3
8 primary education	25,809	42,520	6.272	161.874,0	266.685,4
vocational education	42,190	54,937	9.126	385.025,9	501.355,1
secondary school education	38,826	50,848	10.400	403.790,4	528.819,2
degree	17,473	25,565	16.335	285.421,5	417.604,3
total:	135,153	175,433	-	1.241.098,4	1.723.601,3

table made by my own, based on data by KSH

In terms of employment, differences are very big. Employment is 20% higher in Fejér county and costs of training are also 40 percent higher there. This data is very meaningful and certainly makes one think, even if the population of this county is 8.9% higher than that of the other region.

Unfortunately, the number of economically inactive people grew more in this region than on a national level. In the year of 2001, this number came to be over 250,000. If we multiply this number with training costs (8,335,718 forints per head), what we get is that the 'value' of economically inactive people in Békés county is over 2.1 BILLIÓ forints. If we consider the training costs of the 19,509 people looking for a job in October, 2006, even that number comes to be over 250 thousand forints.

Although the economically inactive population presented above does not appear formally among the active members of production, we still cannot consider these people inactive members of the society.

First and above all, it is useful to take a look behind the statistical data. The agricultural lands of Hungary were privatized when agricultural cooperatives stopped working.

Still, big amounts of lands are owned by people who have not set up private enterprises. These inhabitants often make a living by letting their lands out, but their activities are not shown in the statistics. However, one does not need a really big land in order to be able to provide his own family with fruits and vegetables. An intensively cultivated land (on the Great Plain tomatoes, green peppers, cucumbers, watermelons and melons, while in the villages on hills grapes) can provide a living even on a relatively small area. In rural areas (I could easily mention some regions and settlements in the Great Plain), a number of families spend their summers doing seasonal work illegally. This way they can spare some money, and during the winter months, they live on that, supplemented by social security benefits. In the next spring, they start seasonal agricultural work again.

In commerce, according to very careful estimations, 20 percent of the income is realized in the black or grey economy. More realistic estimations suggest that this number is actually 30 to 40 percent. This means that this amount of people work totally illegally. Some of them may have never worked legally, and have never actually been registered by the job centres. I could list many more similar examples.

These activities are often to be punished by the authorities. At the same time, they create a coherence of the society and 'fill the gap' between legal paragraphs. Education and training is part of these jobs just as much as that of legal employment. In my opinion, it would be a great mistake to claim that only the training of legal workers is acceptable. It is impossible to restrict all members of the economy into this category.

Summary

Basically, demographic changes are in connection with people's possibilities. People tend to move into the direction of higher employment, and this is particularly true for the young. In these areas bigger amounts of money can be spent on education and training. In a region with a higher economical performance, the willingness to set up an enterprise is higher. Here, the number of economically inactive people is smaller, and fewer persons try and find a way to become inactive in some form or other. In less prosperous counties, there are important reserves of human capital. In the future, it will be a task of experts to use and exploit these reserves. With suitable methods, with the understanding of the dynamics of the local society, as well as by the integration of decision makers, this can be carried out.

Directions of the research

The study has analysed the counties as homogenous areas. As a continuation of it, it seems really useful and necessary to analyze the more subtle connections and relationships within the county, however. It is necessary to make a difference between small areas as well as towns and villages.

It is recommended to extend this research to a national level and paralelly with this, analyze how the areas of knowledge centres effect human capital and employment.

It could also lead to interesting results to see if there is any connection between areas with high training costs and the frequency of persons with academic qualifications.

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