# **UNIVERSITY OF MISKOLC**

# **FACULTY OF ECONOMICS**

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#### THESIS STATEMENTS OF

# RELATIONSHIP BETWEEN POVERTY AND ECONOMIC GROWTH IN TRANSITIONAL COUNTIRES AFTER 1990

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#### 1. RATIONALE OF THE RESEARCH

Poverty has recently been a problem of global dimensions. Almost eight million people die yearly (more than 20 thousands daily) as a direct consequence of poverty (Besenyei 2009). Eliminating or reducing poverty is supported by the altruistic idea of helping the others on the one hand. On the other, poverty reduction is important because of the higher economic and political stability that follows it (Világbank 1998). Economic growth and poverty reduction are usually correlated, which means that the increase of poverty slows down economic growth. Moreover, efforts to reduce poverty are usually supported by political and strategic considerations.

Poverty reduction has become a question of the hour. Strategies to reduce or eliminate poverty are based either on the increase of income, the redistribution of income, or both (Odekon 2006). The role of economic growth on poverty reduction, however, is still a question under debate. It is obvious that faster economic growth goes together with faster poverty reduction, but experts have long been debating about the exact nature of the relationship between these two factors. In the recent economic situation, when slowed economic growth or even economic decline is experienced worldwide, it is crucially important to be aware of how to reduce poverty and how to avoid mass poverty.

As instead of the quantitative definition of economic growth, the qualitative approach of development has become important taking into account social, economic and environmental factors as well, it is also important to examine the relationship between poverty and development.

The main research questions of the study are the following.

- How does poverty depend on the applied poverty concept? Is there a significant difference between the poverty lines defines by subjective and objective concepts of poverty? How can the relationship between poverty line and other measures of poverty be described?
- How do economic growth and development affect poverty? Can they reduce the number of the poor and the depth of poverty significantly?
- Provided that poverty is a multidimensional concept, how do its dimensions affect growth and development?
- How do economic growth and development affect income distribution? If economic growth or development reduces poverty, do they increase income inequalities or does the reduction of inequalities go together with the increase of poverty?

- What is the role of the welfare system, namely the intra generation income redistribution? Does it affect economic growth and human development?

#### 2. RESEARCH BACKGROUND AND METHODOLOGY

I have been dealing with poverty since my graduation in 2005. I have focused my attention on the main determinants of poverty at the county, regional, country and international level in the three years spent as a PhD student and in the two and a half years spent since then. I have given many presentations at conferences in Hungary and abroad and I have published many articles in Hungarian and English languages. As a student of sociology, I dealt with poverty, too. I wrote my final thesis about subjective poverty in Borsod-Abaúj-Zemplén county. I got first prize on the national graduate student competition in 2008. During the year spent in the United States of America as a Fulbright visiting researcher, I dealt with the methodology suitable for the analysis of subjective poverty and I applied the methods of systematic data collection.

I have kept the course economic sociology for three years at the University of Miskolc, which has the topic of revealing the causes and consequences of poverty and wealth.

The study aims at creating a model to describe the relationship between economic growth, human development and poverty and applying this model to the countries of interest. The area of the research includes the transitional countries classified to the same income category by the World Bank. Uppermiddle income Eastern European countries consist of nine countries (Croatia, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Russia and Slovakia) that all changed their political and economic system from planned economy to market economy at around 1990. Thus the analysis examines the nearly 20 years since 1990. With the help of the model, I try to reveal as much as possible about the nature of the relationship between poverty and economic growth and human development.

In chapter two, I give an overview of the possible definitions of poverty, the changes of ideas about poverty over time and the most important theories about the relationship between poverty, economic growth and human development. Chapter three deals with the trends of poverty and economic growth in the countries of interest, while chapter four is about the applied methodology. The next chapter highlights the importance of the choice among poverty concepts. The sixth and seventh chapters deal with the analysis of the relationship between poverty and economic growth. The two-way analysis is important because not only economic growth can have a significant effect on poverty, but the components of poverty can also play a crucial role in

moderating or accelerating economic growth. Chapter eight deals with the effect of income redistribution on economic growth and human development. The dissertation is closed with the summary of the main ideas and the conclusions.

The main information sources of my research were the books and articles published in the subject matter and data gained from statistical brochures and primary surveys.

I carried out my analysis using qualitative (interviews and questionnaire-based surveys) and quantitative (estimation, hypothesis testing, bi- and multivariate correlation and regression, elasticity) statistical methods. I used the methods of systematic data collection to collect primary data. These methods were developed in the 1980s by the anthropologist, Susan C. Weller and the mathematician, A. Kimball Romney in the United States of America. The advantage of the method is that it diminishes the sample size required in social science research in a revolutionary way while the reliability of the results is still as high as in case of traditional techniques. It takes into account the cultural competence of the population in determining the sample size (Weller – Romney 1988). I carried out the primary data collection in 2007 in Borsod-Abaúj-Zemplén county.

Secondary data analysis is based on the data of Eurostat, World Bank, IMF and the Hungarian census. Moreover, I used the data of International Financial Statistics and Government Finance Statistics of IMF and the Human Development Reports of the United Nations. I used SPSS 17.0 to carry out the analysis and to create graphs. In multivariate regression analysis, I found the optimal regression model with backward method.

In the analysis of the effect of economic growth and human development on poverty, the poverty rate, the poverty gap, the squared poverty gap (the mean of the squared proportionate poverty gap) and a poverty index are used as measures of poverty. The latter is defined as the arithmetic mean of the first three measures. The applied poverty threshold is 4.3 dollars a day as the World Bank defines poverty line for Eastern Europe. In the analysis of the effect of poverty on economic growth and human development, the complex approach of poverty is applied. Besides monetary components, non-monetary ones (regional cohesion, rate of long term unemployment, rate of early school leavers and average life expectancy at birth) are also taken into consideration. To measure income inequalities, Gini-coefficient and the ux Pareto measure are used. Moreover, an index of inequality is also applied, created from the previous two measures. The study measures economic growth with GDP per capita on purchasing-power parity, with average income / expenditure per capita and with the index of economic growth formed from the two former measures. Indexes are used to make it possible to express the changes of the different measures reflecting some aspects of the concept of interest in one measure. To operationalize complex development, Human Development (HDI) is used.

#### 3. NEW AND NOVEL OBSERVATIONS OF THE RESEARCH

I will introduce the statements of the research concerning the relationship between economic growth, human development and poverty – in the forms of thesis statements – centered around three points:

- possibilities to eliminate poverty and the role of economic growth and human development in poverty reduction in the literature;
- importance of the choice among the applied poverty concepts;
- relationship among poverty, economic growth, development, income inequalities and income redistribution in the transitional countries of interest.

# 3.1. Historical overview of the ideas about poverty

Methods worked out to help the poor and to reduce income inequalities changed over time depending on who was blamed for poverty.

Supporters of income redistribution considered poverty reduction necessary in order to ensure utility, social justice or equality. Considering utility important means that alleviation of poverty is necessary because of its costs. The first proposals to diminish the costs of poverty appeared in the 18th century (the proposals of Townsend, Young and Bentham). Later, representatives of liberal social theories claimed that capitalism is the most effective social system in order to reduce the costs of poverty and inequality. The idea of justice claims that helping the poor is necessary in order to reduce social and economic inequalities. The main motivation power of the fight against poverty can also be the ensurance of equality. Collectivism states that one of the most important ideas is equality. Some representatives of collectivism believe that equality can be achieved in the framework of market economy, others claim that the state has to have a dominant role.

Income redistribution helping the poor was offended at the beginning of the 19th century and later by libertarian social theories. These ideas were the critics of the social system on the one hand. On the other, these ideas claimed the importance of ensuring liberty, as the most important value.

Those, who are against income redistribution, accept private donations and local help to reduce the extent of poverty. Instead of or besides income redistribution, international aids can contribute to poverty reduction.

Economists have long been debating about the relationship between economic growth and monetary poverty. Many economists (Chenerey et al (1974), Adelman and Morris (1973), Ravallion (2009)) believe that economic growth is not enough to reduce poverty. Some findings (Dollar and Kray (2001), Kanbur (1987), Adams (2003)), however, appeared that supposed a significant positive relationship between economic growth and poverty. In the elimination of monetary poverty, education and health system can play an important role. As besides per capita GDP, they are the components of human development, the role of human development in poverty reduction may be significant.

In the analysis of the effect of poverty on economic growth, it is not enough to deal with monetary poverty. Other components of multidimensional poverty have to be taken into consideration as well. The effect of monetary poverty on development is not constant. In the analysis of the relationship, other factors like inequality, unemployment or life expectancy have to be taken into account. The reason for it is that they can define liberty together, which can lead to development (Sen 2003).

In the analysis of the relationship between economic growth and poverty, income inequalities and income redistribution have to be taken into account, too. Theories about helping the poor are summarized in Figure 1. The model of poverty, economic growth and human development can be seen in Figure 2. The aim of my analysis is to reveal the characteristics of the relations described in Figure 2.

#### Thesis 1

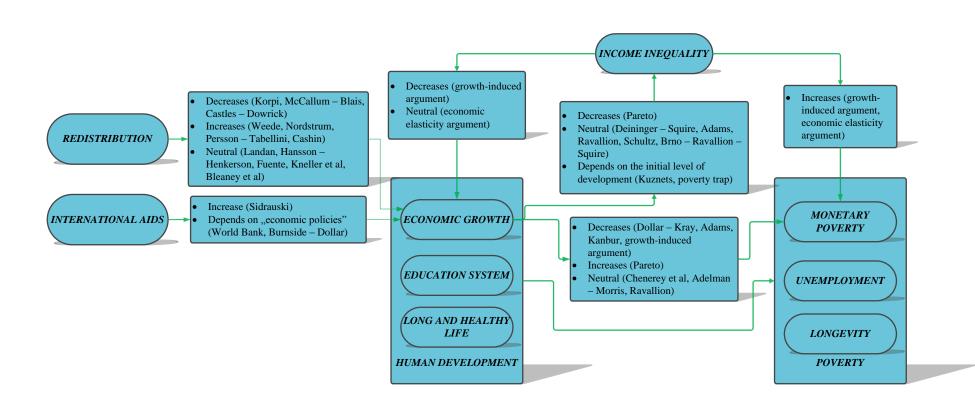
Provided that social justice or equality are the most important aims, the causes of poverty are considered to be external of the individual and poverty is considered to be harmful because of its cost, then redistribution of income is possible and desirable in order to reduce poverty. If, however, liberty is the main aim and the poor are blamed for being poor, then the need for redistribution is much more moderate.

FIGHT AGAINST POVERTY **WAYS AIMS** Maximization of Without international aids With international aids profit With income redistribution and income redistribution (Utilitarism) Social justice Ensure working Separation of the Economic growth Ensure (Rawls) possibility Private donations Local help (Kanbur, Adams, subsistence poor (Townsend, (Malthus) (Murray) Dollar – Kray) (Bentham) (Beveridge) Young) Equality (Collectivism)

Figure 1: Ways and aims of the fight against poverty

Source: own compilation

Figure 2: Model of poverty, economic growth and human development



Source: own compilation

#### 3.2. The role of choosing the poverty concept

As studies about poverty and international comparisons mostly use absolute and relative concepts of poverty, their deviation from subjective poverty concept can bias the results of the research.

The Easterlin (1995) paradox states that wealthier people tend to be happier than the poorer ones, but above a certain level of per capita average income (somewhere between USD 10,000 and 20,000) there is no relationship between average income and subjective well-being. As in Hungary the average income level was USD 7453 in the year of the research, I hypothesise that poverty lines defined based on subjective and absolute concepts of poverty highly correlate. A study prepared in 2008 proved that relative position of the individuals has an effect on the subjective perception of poverty only among upper income households. The poor, however, care only about absolute deprivation (Fafchamps – Shilpi 2008).

Based on the theory of Althusser (2008) and Poulantzas (1978), the political concept of poverty reflecting the ideology of the ruling class is independent of the subjective assessment of the whole population about poverty. My initial hypothesis states that subjective and political poverty thresholds do not coincide.

Based on the primary data collection carried out in Borsod-Abaúj-Zemplén county, with the methods of balanced incomplete block designs and quick sort, the items most related to poverty are low income level, Roma descent, unemployment and entitlement to social supports. To a lesser extent, several other items, like illness, large family, low level of comfort, low educational level, alcoholism and early founding of family are related to poverty. I used rating scales to find the exact meaning of these concepts when it was necessary. The different poverty thresholds can be seen in Figure 3.

Using hypothesis testing, I showed that there is no discrepancy in the identification of the poor between absolute, relative and subjective poverty concepts. Social poverty line differs from subjective poverty threshold in 41 percent of the cases. The bulk of the differences can be found in the case if income level. In the case of the number of children, educational level and old age, the coincidence is high.

Subjective

40

30

10

Absolute Relative Political

Poverty thresholds

Figure 3: Poverty thresholds in Borsod-Abaúj-Zemplén county, 2007

Source own compilation based on KSH (2008), Eurostat, 224/2006. 7. § 329/2006. governmental regulation 6. § and own calculations

#### Thesis 2

T2a: Items related to poverty are low income level, Roma descent, unemployment and entitlement to social supports. To a lesser extent, several other items, like illness, large family, low level of comfort, low educational level, alcoholism and early founding of family are also related to poverty.

T2b: Absolute and relative concepts of poverty coincide with the subjective assessment of poverty that reflects the values and believes of the society in Borsod-Abaúj-Zemplén county. Welfare political poverty thresholds differ from the subjective poverty line in 41 percent of the cases.

Besides the comparison of poverty concepts, it is also important to find out how the choice among the different poverty lines affects different poverty measures. The findings of Pareto (1964) about the relationship between income distribution and income level can be applied to describe the relationship between poverty line and poverty rate. My hypothesis states that the relationship between poverty line and poverty rate can be best described with power function and that the constant term in the index is around 1.5. I try to prove that the relationship between poverty line and povery gap can be described in the same way.

Using the available data, I proved that the relationship between poverty line and the number of those earning more than the given income level can be best described with exponential function. The relationship between poverty line (x) and poverty rate (H) can be described with the following formula:

$$H = 1 - \frac{1.295 \cdot 10^9 \cdot 0.995^x}{n}$$

where n is the number of the population. The relationship between poverty line (x) and poverty gap (PG) can be described as follows:

$$PG = e^{4.410 - \frac{263217}{x}}.$$

#### Thesis 3

In the transitional countries of interest, poverty rate has been related to poverty line exponentially since 1990. The relationship between poverty line and poverty gap can be described with S curve.

# 3.3. The effect of economic growth and human development on monetary poverty

Adams (2003) found that economic growth can significantly reduce income inequalities and poverty, when he included Eastern European and Middle Asian countries as well into their analysis. When he excluded Eastern European and Middle Asian countries, the relationship between economic growth and poverty was still negative, but the point estimation of elasticity became lower in absolute value than in the previous case. The effect of economic growth on income inequalities, however, was not significant any more. So the hypothesis states that economic growth and human development can significantly reduce poverty and income inequalities simultaneously in the countries of interest. I carried out the analysis ignoring Russia and for decades, too.

Based on the regression analysis, I concluded that neither economic growth, nor human development effect Gini coefficient significantly. Pareto measure, however, can be significantly increased by each measure of economic growth. Analysis for decades (table 1) showed that while in the 1990s per capita GDP did not affect income inequality  $(u_x)$  significantly, it can reduce income inequalities significantly in the 2000s.

The index of economic growth can decrease income inequalities significantly, but the effect of human development is not significant. There are no differences between the two decades concerning these relationships. The analysis carried out exluding Russia has the same results.

Table 1: Regression coefficients of the effect of economic growth and human development on poverty

		Economic growth				
		Average	Per capita	Index of	Human	
		income	GDP	economic	development	
		level		growth	_	
Income inequality	1					
Gini coefficient	1990s	0.104	0.093	-	0.575	
	2000s	-0.103	-0.243	-	0.261	
	1990s	1.831*	1.088	-	1.863	
<i>u</i> <sub>393</sub>	2000s	1.495*	2.573 <sup>*</sup>	-	3.370	
Index of income	1990s	-	-	-0.462*	0.372	
inequality	2000s	-	-	-0.947*	-0.801	
Poverty						
D	1990s	-1.690 <sup>*</sup>	-1.024	-	-1.824	
Poverty rate	2000s	-3.231*	-4.642 <sup>*</sup>	-	-4.205	
D	1990s	-2.102*	-1.033	-	-1.749	
Poverty gap	2000s	-2.534*	-4.133 <sup>*</sup>	-	-1.168	
Squared poverty	1990s	-2.280*	-0.903	-	-1.545	
gap	2000s	-2.531*	-3.085	-	2.073	
	1990s	-	-	-2.693*	-1.858	
Poverty index	2000s	-	-	-4.382 <sup>*</sup>	-3.094	

Note: - the analysis of the given relationship is not a question of interest

\* the relationship is significant

Source: own compilation

Both measures of economic growth (average income level and GDP) reduce poverty rate and poverty gap significantly, they do not affect, however, squared poverty gap significantly. In the case of average income and GDP, the growth elasticities of poverty are nearly the same. The effect of GDP is not significant on either measures of poverty after excluding Russia. The effect of per capita GDP was not significant on poverty in the 1990s. After 2000, however, it has a significant role in the reduction of poverty rate and poverty gap (Table 1). The index of economic growth can decrease income poverty significantly, but the effect of human development is not significant. The nature of the relationship is the same for the two decades of interest (Table 1) and also after excluding Russia.

#### Thesis 4

T4a: In the transitional countries of interest, the effect of economic growth and human development on poverty and income inequality is different.

T4b: The increase of per capita GDP on purchasing power parity can decrease poverty rate and poverty gap to the same extent as per capita average real income / real expenditure.

T4c: Since 2000 the effect of per capita GDP on inequalities and poverty has become more important than before.

The effect of economic growth on poverty can also be examined using analitical elasticity, assuming that the Lorenz curve does not change. The hypothesis states that growth elasticity of poverty is independent of the initial level of development and the poverty line.

Table 2: Characteristics of the curves describing the relationship between development level and elasticity

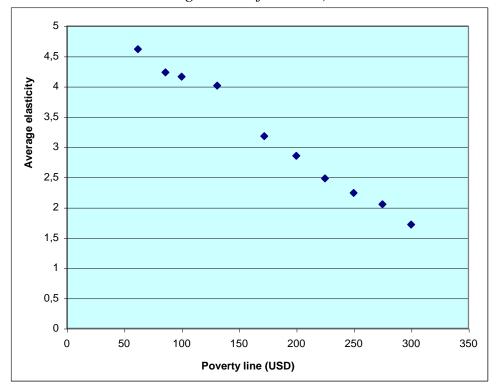
development tevel and elasticity							
	With res	pect to th	e logarithm of	With respect to the standard deviation of the logarithm of income			
Function		incon	ne				
	F	F sig.	Adjusted R <sup>2</sup>	F	F sig.	Adjusted R <sup>2</sup>	
Linear	103.529	0.000	0.730	82.521	0.000	0.688	
Logarithm	49.679	0.000	0.562	41.456	0.000	0.522	
Inverse	22.340	0.000	0.360	20.553	0.000	0.346	
Exponential	85.125	0.000	0.689	266.070	0.000	0.878	
Power	61.888	0.000	0.616	287.349	0.000	0.886	
S	34.359	0.000	0.467	266.070	0.000	0.817	

Source: own computation

The relationship between elasticity and initial level of development is linear with respect to the logarithm of income. This relationship, however, can be best described with a power function with respect to the standard deviation of the logarithm of income (Table 2). It means that the initial hypothesis about the independence of the two variables has to be rejected.

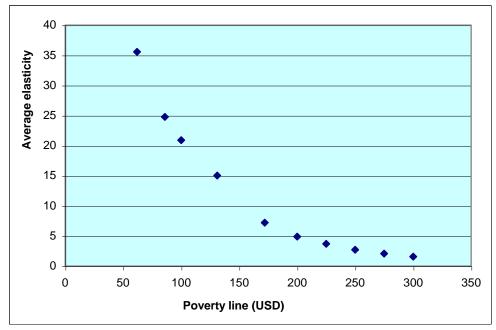
The relationship between poverty line and elasticity can be seen in Figure 4 and 5. I fit different trends to describe their relationship. On the basis of F values calculated for the best fitting curves (that is found based on the values of the adjusted coefficients of determination), I proved that elasticity is not independent of the poverty line.

Figure 4: Average elasticity in the function of poverty line (with respect to the logarithm of income)



Source: own compilation

Figure 5: Average elasticity in the function of poverty line (with respect to the standard deviation of the logarithm of income)



Source: own compilation

#### Thesis 5

5a

Growth elasticity of poverty depends on the initial level of development. The relationship between initial level of development and elasticity with respect to the logarithm of income is linear. This relationship, however, can be best described with a power function with respect to the standard deviation of the logarithm of income.

5b

The growth elasticity of poverty gap depends on the poverty line. The relationship between poverty line and elasticity is dependent upon the definition of elasticity. Elasticity with respect to the logarithm of income is inversely related to poverty line, while elasticity with respect to the standard deviation of the logarithm of income is related to poverty line exponentially.

### 3.4. The effect of poverty on economic growth and human development

The effect of poverty on economic growth and human development can be best analysed if not only monetary, but multidimensional poverty is taken into consideration. In an economy where private ownership and competition exist, economic phenomena are complex and their elements are related to each other (Pareto 1901). Based on Social Protection Committee (Szivós 2005), the following indicators of poverty are used:

- poverty rate  $(\%) x_1$ ;
- poverty line (euro)  $x_2$ ;
- poverty gap (%)  $x_3$ ;
- regional cohesion (%)  $-x_4$ ;
- long term unemployment rate  $(\%) x_5$ ;
- rate of early school leavers (%)  $x_6$ ;
- average life expectancy at birth (year)  $-x_7$ ;
- Gini coefficient (%)  $-x_8$ .

Because of the limited available data, analysis is only possible for the period after 2000. With multicollinearity tests I revealed that poverty rate, Gini coefficient and average life expectancy can be expressed as a linear combination of the other explanatory variables. That is why these variables are excluded from the further research. As a result of the multiple regression analysis, per capita GDP on purchasing power parity  $(Y_1)$  can be expressed with the following regression equation:

$$lgY_1 = -5.391 + 2.713 \cdot lgx_2 + 3.219 \cdot lgx_4 - 1.534 \cdot lgx_5.$$
  
(-1.786) (3.083) (3.178) (-3.211)

The regression equation for human development  $(Y_2)$  is the following:

$$lgY_2 = -0.358 + 0.087 \cdot lgx_2 + 0.046 \cdot lgx_3 - 0.031 \cdot lgx_4 - 0.023 \cdot lgx_6.$$

$$(-4.270) \quad (5.101) \quad (2.131) \quad (-2.204) \quad (-2.333)$$

On the basis of the above presented analysis, the following conclusion can be drawn:

#### Thesis 6

Since 2000, economic growth has been significantly affected by poverty line and labour market conditions (long term unemployment rate and regional cohesion). Human development, however, has been affected not only by monetary poverty (both poverty level and relative poverty gap) and labour market conditions (regional cohesion), but also by knowledge level.

# 3.5. The effect of intra generation income redistribution

Capitalism creates inequalities that can be corrected with the redistribution of income (Vigvári 2005). This is the socially fair and politically determined rearrangement of the income (Vigvári 2004). Based on Cashin (1995), the initial hypothesis states that in the countries of interest, social and welfare spendings have been significantly related to economic growth and poverty since 1990. I hypothesize that this relationship is positive, similarly to Cashin's model.

To test the hypothesis, the growth rate of per capita GDP  $(Y_1)$  and the growth rate of human development  $(Y_2)$  are used as dependent variables. Independent variables are the following, on the basis of Cashin's model:

- stock of public capital as a share of GDP (%) IGOV;
- natural logarithm of the rate of growth of GDP at the start of each subperiod INIT;
- expenditure on social security and welfare as a share of GDP (%) SOCSEC;
- current revenue as a share of GDP CURREV;
- gross enrollment of children at secondary school as a share of the total number of children aged 12 to 17 (%) EDUC.

Optimal regression models are defined in four steps (table 3). First, only the natural logarithm of the rate of growth of GDP at the start of each sub-period is included out of the explanatory variables (first column of table 3) in order to examine how initial level of development is related to economic growth. I proved that absolute beta convergence is not observed in the data, which means that higher initial GDP values are associated with higher rate of growth. Second,

I added EDUC as an explanatory variable (column 2 table 3). This does not change the value of the partial regression coefficient, showing that conditional beta convergence is not onserved, either. The results of generalized instrumental variable estimation are presented in column 3 and 4 of table 3, excluding and including EDUC, respectively. As for the significant explanatory variables, the two model has the same results. The effect of the stock of public capital as a share of GDP, IGOV is not significant in these cases. All other variables, however, are proved to be significant. The expenditure on social security and welfare as a share of GDP, SOCSEC is significantly related to economic growth in both cases. Given that the explanatory variables enter in logarithmic form, their coefficients indicate elasticity. Ten percent increase of expenditure on social security and welfare increases economic growth by 0.56 (including EDUC) or 0.87 percent (excluding EDUC) on average.

Table 3: Regression for economic growth and human development, 1990-2009

Tu also da d	Rate of growth of per capita GDP				Rate of growth of HDI			
Included indepen- dent variables	INIT	INIT, EDUC	INIT, IGOV, SOCSEC, CURREV	INIT, EDUC, IGOV, SOCSEC, CURREV	INIT	INIT, EDUC	INIT, IGOV, SOCSEC, CURREV	INIT, EDUC, IGOV, SOCSEC, CURREV
Constant	0.152	0.057	0.115	0.037	0.028	0.028	0.063	0.063
	(12.861)	(1.74)	(1.946)	(0.611)	(9.437)	(8.979)	(4.025)	(4.025)
IGOV		•••	-	-	•••	•••	-0.008 (-1.750)	-0.008 (-1.750)
INIT	0.033	0.033	0.018	0.015	0.004	0.004	0.003	0.003
	(8.272)	(8.742)	(3.293)	(2.996)	(5.720)	(5.325)	(2.524)	(2.524)
SOCSEC			0.056 (1.716)	0.087 (2.960)			0.032 (3.321)	0.032 (3.321)
CURREV			-0.083 (-2.798)	-0.073 (-2.693)			-	-
EDUC		0.001 (3.358)	•••	0.001 (3.544)	•••	-	•••	1
$\boldsymbol{F}$	68.424	51.026	15.343	20.559	32.722	28.352	20.711	20.711
F sign.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Adjusted R <sup>2</sup>	0.477	0.599	0.544	0.716	0.383	0.368	0.720	0.720

Note: ... The given variable is not included in the model.

Source: own computation

In the case of human development as dependent variable, current revenue as a share of GDP is eliminated from the model. The effect of income redistribution is significant in this case, too. Ten percent increase of expenditure on social security and welfare increases human development by 0.32 percent.

<sup>-</sup> The effect of the given variable on the dependent variable is not significant.

#### Thesis 7

Intra generation income redistribution, that is the expenditure on social security and welfare has had a significant positive effect on both economic growth and human development. A 10 percent growth of the expenditure on social security and welfare as a share of GDP raises economic growth by 0.6-0.8 percent and human development by 0.32 percent.

# 4. POSSIBLE APPLICATION OF THE RESEARCH RESULTS

I have published the main statements of my research in order to promote future reseach. Further application of the results is possible in economic policies, in the elaboration of the entitlement to social programs and in higher education.

The model of economic growth, human development and poverty for the examined transitional countries can be seen in Figure 6.

Monetary poverty

Redistribution

Economic growth

Human development

Labour market

Figure 6: The model of economic growth, human development and poverty in the countries of interest since 1990

Source: own compilation

conditions

Knowledge level

Income inequality

In the recent global economic crisis, it is crucially important to highlight that poverty reduction (the reduction of poverty rate and poverty gap as well) and the decrease of income inequalities can be promoted by economic growth.

Economic growth can be supported by labour market conditions like the decrease of long term unemployment or the increase of regional cohesion. It is also important to highlight that redistribution slows down neither economic growth nor human development. On the contrary, it promotes both. If governments of upper middle income Eastern European countries try to promote economic growth, which is one of the most important aims in the recent global crisis, they have to be aware of the fact that redistribution is not against this aim.

The difference between subjective and welfare political concepts of poverty highlights that only a certain portion of the people considered to be poor by the bulk of the society is entitled to social supports. It makes it extremely difficult or impossible to get out of poverty.

The results of my research can be integrated into the course material of regional and rural development and economic sociology at the University of Miskolc. Within these courses, dealing with poverty, wealth and inequalities are important and relevant issues.

## 5. FUTURE RESEARCH PROSPECTS

In the future, my work can be expanded to examine the relationship between poverty and economic growth at country, regional and county level and to reveal any potential differences among upper middle income Eastern European countries.

A wider range of poverty concepts could be applied in the analysis. The effect of economic growth and human development on poverty could be examined by using relative poverty concept. A study about developing countries revealed that unlike absolute poverty that decreases with economic growth, relative poverty is much less sensitive to the changes in gowth (Ravallion – Chen 2009).

Comparison of the different poverty concepts can be extended to the other counties of Hungary and to the other transitional countries. In this way, potential differences among the countries can be revealed.

Besides, by examining the effect of redistribution on poverty and income inequalities, the focus of current economic policies could be revealed. It would be important to know whether the focus is on poverty reduction or the decrease of income inequalities.

#### 6. REFERENCES

- 224/2006. (XI.20.) governmental regulation.
- 329/2006 (XII. 23.) governmental regulation.
- Adams, Richard H. Jr. (2003) *Economic Growth, Inequality and Poverty*; Policy Research Working Paper, World Bank.
- Adelman, Irma Cynthia T. Morris (1973) *Economic Growth and Social Equity in Developing Countries*. Stanford: Stanford University Press.
- Althusser, Louis (2008). *On ideology*. London; New York. Verso.
- Besenyei Lajos (2009) *A szegénység mint világprobléma*; Nemzetközi Konferencia a szegénységről Kelemen Didák atya halálának 265. évfordulója alkalmából, Miskolc.
- Cashin, Paul (1995) *Government Spending, Taxes, and Economic Growth.* IMF Staff Papers, 42 (2) pp 237-269.
- Chenerey, Hollis Ahluwalia, Montek Bell, C. L. G. Duloy, John Jolly, Richard (1974) Redistribution with Growth. New York: Oxford University Press.
- Dollar, David Aart Kray (2001) *Growth is Good for the Poor*. World Bank Policy Research Working Paper # 2587, Washington DC, World Bank.
- Easterlin, Richard. A. (1995) Will Raising the Incomes of All Increase the Happiness of All? Journal of Economic Behavior and Organisation, 27 (1) pp 35-47.
- Fafchamps, Marcel Shilpi, Forhad (2008) *Subjective welfare, isolation, and relative consumption*. Journal of Development Economics, 86, pp 43–60.
- Kanbur, S. M. Ravi (1987) *Measurement and Alleviation of Poverty: With an Application to the Effects of Macroeconomic Adjustment.* Staff Paper International Monetary Fund, 34 (1) pp 60-85.
- Központi Statisztikai Hivatal (2008) *Létminimum 2007*. Budapest.
- Odekon, Mehmet (2006) *Encyclopedia of World Poverty*; SAGE Publications.

- Pareto, Vilfredo (1901) *Le nuove teorie matematiche*. Giornale degli economisti, 22, pp 235-252.
- Pareto, Vilfredo (1964) Cours d'Économie Politique. Genéve, Libraire Droz.
- Poulantzas, Nicos (1978) State, Power, Socialism. London.
- Ravallion, Martin (2009) Why Don't We See Poverty Convergence? World Bank Policy Research Working Paper, 4974.
- Sen, Amartya (2003) *A fejlődés, mint szabadság*. Budapest, Európa Könyvkiadó.
- Szivós Péter (2005) *Laekeni indikátorok*. Budapest, "Metod" Műhely.
- Vigvári András (2004) *Pénzügy(rendszer)tan*. Budapest, KJK Kerszöv kiadványok.
- Vigvári András (2005) *Közpénzügyeink*. Budapest, KJK Kerszöv kiadványok.
- Világbank (1998) Assessing aid: what works, what doesn't and why?
- Weller, Susan C. Romney, A. Kimball (1988) *Systematic Data Collection*. Qualitative Research Methods, 10, Sage Publications.
- Database of Hungarian Central Statistical Office. www.ksh.hu.
- Database of Hungarian National Bank. www.mnb.hu.

### 7. AUTHOR'S DISSERTATION RELATED PUBLICATIONS

- 1. Impoverishment in Northern Hungary. Business Studies, 2010, (7) 2 pp. 121-146.
- 2. Contributions to Exploring the System of Relations between the Performance of the Economy and Poverty. North Hungarian Regional Strategy Papers, 2010, (7) 1 pp 56-70.
- 3. The role of poverty line in defining poverty. XI. RODOSZ Conference Social Sciences, pp 373-390, ISBN: 978-973-88394-3-4. November 12-14, 2010.
- 4. Subjective Poverty and Its Relation to Objective Poverty Concepts in Hungary. Social Indicators Research, DOI: 10.1007/s11205-010-9743-z.
- 5. Subjective poverty in Minnesota results of a primary data collection. Conference of Pro Scientia Medalists, Budapest, 30 September 30 October 3, 2010.
- 6. How has the effect of economic growth on income inequality changed in Eastern Europe since 1990? Szellemi tőke, mint versenyelőny "avagy a tudásmenedzsment szerepe a versenyképességben" Scientific Conference Komárno, Slovakia, June 19 2010. pp. 750-760. /CD publication/ ISBN 978-963-216-270-6.
- 7. Nicholas Barr: Economics of the Welfare State (bibliography review). Public Finance Quarterly, 2010, LV (2) pp 402-406.
- 8. The effect of economic growth and human development on income inequalities in Eastern Europe. Annual Meeting of the Midwest Sociological Society and the North Central Sociological Association, Chicago, USA, March 31 April 3 2010.
- 9. Impoverishment in Northern Hungary. North Hungarian Regional Strategy Papers, 2009, 6 (2) pp 68-88.
- 10. The effect of economic growth on poverty in Eastern Europe. 1st International Scientific Conference in the Modern Public Affairs Management series; Revitalisation processes and local and regional development; Krakow, 18-19 November 2009.
- 11. The role of economic growth and income distribution in poverty in Eastern European countries. 2nd International Economic Conference, Kaposvár, 2-3 April 2009. ISBN 978-963-9821-08-8, /CD-publication/

- 12. Support or communal work? National and Regional Economics VII, Herl'any, Slovak Republic; 1-3 October 2008. pp 819-825.
- 13. Judgement of Poverty in Borsod-Abaúj-Zemplén County According to the Method of Systematic Data Collection. University of Miskolc, Proceedings of microCAD 2008 International Scientific Conferenc, 20-21 March 2008, pp. 187-193.
- 14. Poverty in Eastern and Central Europe. University of Miskolc, PhD Students Forum, Proceeding of the Faculty of Economics, 13 November 2007, pp 166-172.
- 15. The evaluation of social programmes in Hungary. 2nd Central European Conference in Regional Sciences, 10-13 October 2007, Novy Smokovec, Slovakia, ISBN 978-80-8073-957-7, /CD-publication/. pp. 950-954.
- 16. Analysis of poverty using data reduction techniques. 6th International Conference of PhD students, 12-18 August 2007, pp. 365-370.
- 17. Who is considered to be poor? 28th OTDK Conference of PhD students, University of Miskolc, 26 April 2007, pp. 110 ISBN 978-963-661-768-4.
- 18. Poverty and attempts to handle the problem in Borsod-Abaúj-Zemplén county. University of Miskolc, Proceedings of microCAD 2007 International Scientific Conference, 22-23 March 2007, pp. 325-331
- 19. Components of poverty in two subregions of Borsod-Abaúj-Zemplén county. University of Miskolc, PhD Students Forum, Proceeding of the Faculty of Economics, 9 November 2006., pp. 135-141
- 20. The conditions of the Roma minority in Borsod-Abaúj-Zemplén county. Apáczai Csere János International Conference; 13 October 2006, (2) pp. 142-146
- 21. Factors of poverty in Borsod-Abaúj-Zemplén county. 6th Hungarian Prognostic Conference, Győr, 6-7 October 2006, pp. 150-156
- 22. Relation between adaptation to the changing roles and marital status. Pannon Conference of Economics, Veszprém, 2 June 2006, pp. 106-111
- 23. Adaptation to the changing roles among the Roma population in Hungary. Tavaszi Szél 2006 Conference, pp. 499-502
- 24. Possibilities of the integration to the society of those who are socially excluded. University of Miskolc, PhD Students Forum, Proceeding of the Faculty of Economics, 9 November 2005., pp. 169-174