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*Eszterházy Károly College*

*H-3300 Eger, Egészségház u. 4.*

*novadam@ektf.hu*

*Editorial Assistant:*

Julianna CSUGÁNY

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# PERIODICA OECONOMICA

Dear Reader,

This issue of *Periodica Oeconomica* contains papers presented at the “Competitive Edges, Sustainability theory and Practice” conference held October 12, 2009, at Eszterházy Károly College, Eger, Hungary. While the papers consider diverse topics, they all share common threads: economic activity and resource allocation. This is consistent with the conference title, of course, and also consistent with the mid-recession economic concerns prevalent in fall 2009.

The scope of the articles is broad, ranging from international comparisons to regional analyses, both overall and for specific industrial sectors. There are papers that address issues from a macroeconomic view and others that consider narrow microeconomic issues at the level of the firm.

Readers will find papers that address specific decision models within the firm regarding employment matters and at the level of households. In addition, this issue contains papers that consider financial regulatory change in financial markets. Finally we have papers that address the impact of regulations on the private enterprises as well as one directed toward the challenge of using accounting data to predict innovative efforts.

These scholarly works reflect the journal’s consistent focus on economic activity and resource allocation along with the diverse areas to which that focus can be directed. You are encouraged to review this issue of *Periodica Oeconomica* and share in the rich research of our authors.

Respectfully,

J. Markham Collins  
Edward E. and Helen T. Bartlett Foundation  
Professor of Business and Associate Dean  
Collins College of Business  
University of Tulsa



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# National Characteristics and Sector Impacts of the Global Financial Crisis

**J. MARKHAM COLLINS<sup>a</sup> – ERZSÉBET H. KACSÓ<sup>b</sup>**

*<sup>a</sup>College of Business, the University of Tulsa  
Tulsa, Oklahoma, USA  
mark-collins@utulsa.edu*

*<sup>b</sup>Department of Business Economics, Institute of Economic Science  
Eszterházy Károly College, Egészégház u. 4, Eger 3300, Hungary  
hollone@ektf.hu*

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**T**his paper examines the financial crisis in the United States of America and the Republic of Hungary. The essential aim of this paper is to show the financial impact of the global crisis through examples of the strongly different developed countries, primarily to coordinate the educational contents. We make an attempt to explain the initial impact of the financial crisis in our two countries given institutional and economic structures; discuss specific national fiscal stimulus initiatives and why those tools were selected; and discuss initial effects on key financial and industry sectors.

*Keywords:* global financial crisis, bank failures, subprime crisis, monetary regulation, financial markets

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## **1. The “characteristics” of the crisis**

We can find numerous references to the current crisis in the everyday and professional language with several key terms and phrases, depending on the aspect and relevant period. These include: crisis in the real estate market; the crisis of the loan market, of the debt service, payment crisis, or in general, the crisis of the money-market; liquidity crisis; crisis of trust; and overproduction and realization crisis. In place of the above we will use the following more extensive titles: financial or economical crisis.

Actually, the crisis began in a determined geographical and economical area, namely the housing market, the subprime credit market, and the money markets of the U.S. While the first signs of the crisis appeared in the summer of 2007 (although the antecedents can be taken to the early 2000s), Europe at first avoided the recession (this can be confirmed by personal observations: in the first semester of 2008, J. M. Collins served as a Fulbright Professor at the Eszterházy Károly College in Eger. At this time in the Hungarian broadcasting, press, and in personal communication, terms such as “determination of the crisis’ and the European Continent’s “protection against the crisis” dominated.

However in some vocational papers one saw contrary opinions based on analysis and facts.)

Today we understand the *global nature* of the crisis. It is not just a horizontal expansion—it reaches all of the countries, through a vertical expansion, an escalation of interdependency. This fact is very important in the handling of and finding solutions to the crisis.

The world remains in a financial crisis and in the global recession brought about by the breakdowns in the financial sector that mark that crisis. The negative impact of this recession on employment and output has been significantly large and felt in almost every region of the world. However, even though the crisis spread across the world and led to a truly worldwide recession, the financial and economic impacts have been different across countries; and national circumstances and economic policies led to those differences.

## 2. The crisis begins

There are several contenders for the event and date that set off the financial crisis. Most analysts point to the United States housing market and especially the securitization of its subprime mortgage sector. Between 2000 and mid-year 2006, U.S. housing prices increased by about 126 percent (*S&P/Case-Shiller* [2009]). A number of factors led to this housing bubble—among them were high inflows of foreign savings, low interest rates, increasing government encouragement of the home ownership movement, relaxed standards for receiving credit, and lax enforcement of the industry regulations. Housing prices peaked in mid-2006 and then began a decline that had approached 18 percent by March 2008 and was over 32 percent at the most recent reading (*S&P/Case-Shiller* [2009]).

During this period of high housing demand and rising home prices, the market was fueled by the expectation that prices would continue to climb. Buyers with lower credit ratings (Alt-A and subprime borrowers) took increasingly larger shares of the total housing loans created. Many borrowers, especially those with lower credit ratings, were able to obtain loans only by using *adjustable-rate mortgages* (ARMs) with lower interest rates for the first year(s) of the loan (*Amromin and Paulson* [2009], see Table 1, p. 22). These adjustable-rate mortgages were programmed to change with an index of market interest rates, either up or down. However, since rates already were at an historic low, the only likely changes were up.

In mid-2004, the central bank of the United States, the Federal Reserve (Fed), began to react to inflationary pressures by increasing the interest rate at which reserves are loaned to commercial banks (the Fed Funds rate). Between June 2004 and July 2006, it had increased from 1.03 percent to 5.24 percent, and home mortgage rates moved with it (*Federal Reserve Bank of New York* [2009]).

Even so-called prime borrowers were affected by the rising loan rates, but the less credit-worthy sectors were more strongly affected and in two ways. First, they had a much higher percentage of ARMs and so their mortgage payments, which had been based on low, introductory interest rates, increased dramatically. As an example, the monthly payment on a \$150,000 mortgage at 3 percent per year is \$632. The same loan requires a \$948 monthly payment at 6.5 percent. Second, with a declining housing market, the option to sell the house for enough to repay the loan was no longer guaranteed. Federal Reserve Chairman Ben Bernanke reported that 16 percent of all subprime adjustable-rate mortgages were in default by August 2007 (*Bernanke* [2007]).

Even more dramatic data comes from Amromin and Paulson ([2009], p. 23, Table 1), and is presented in Table 1, Data on Subprime Mortgages. Using data from Lender Processing Services (LPS) Applied Analytics, they report the following information for 2004-2006.

Table 1  
Data on subprime mortgages

	2004	2005	2006
Default in first 12 months (%)	11.19	16.22	23.79
Default in first 21 months (%)	23.35	31.72	43.75
Within 12 months of origination:			
Loans sold to government-sponsored enterprise (%)	4.09	5.76	8.63
Loans sold to private securitizer (%)	90.92	91.89	88.59
Loans held in portfolio (%)	4.99	2.35	2.78
Adjustable-rate mortgages (%)	73.31	69.49	61.78

While data from LPS reflects larger banks and lenders, there is no reason to claim that the data presented in Table 1 is not representative of the entire U.S. mortgage industry population (with one exception). The exception is portfolios sold into securitization or held in the originator's portfolio. Smaller banks would be expected to hold a larger percentage of loans in their own portfolios. Still, even with any reasonable adjustment, the percentage of securitized subprime loans is quite high.

Increases in average loan size and the role of the American subprime market is shown by the following data: in 2001 the subprime mortgages gave 5% of total mortgage value, but this ratio exceeded 15% in 2007. (*Fed Flow of Funds Statistics 2008*) These "second rating" (subprime) securities meant higher risk and lower liquidity for their investors, than the securities based on good quality credits. Excellent quality loan papers could hardly be distinguished from the

inferior quality papers. The following figure summarizes the above: how could a housing market crisis become a financial crisis?

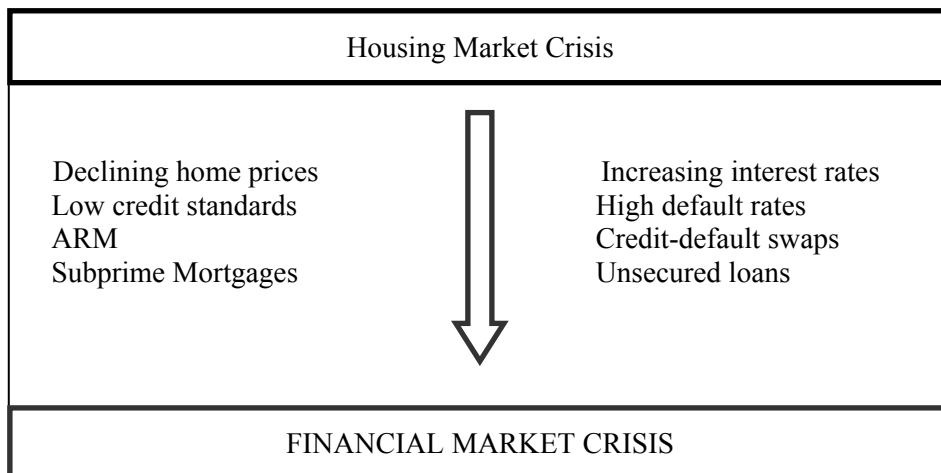


Figure 1. The housing market crisis turns into a financial crisis

The securitization process is one category of intermediation: the process of moving liquidity from the savers of funds to the users of funds, in exchange for claims on the users. Rather than a direct process, intermediation adds value through an indirect channel, as illustrated in Figure 2.

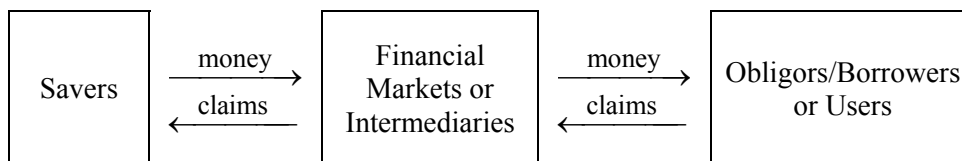


Figure 2. The process of intermediation

Among other services, intermediaries perform risk analysis, administrative tasks, and repackaging in various ways, including giving borrowers long-term use of money while issuing short-term claims to savers. The results should benefit both borrowers and lenders; otherwise, the process will cease.

Securitization facilitates the movement of money from lenders to borrowers. In the real estate industry, it can be characterized as a three-step process: an intermediary financial institution creates, services, and manages relations (see Figure 3, The Securitization Process).

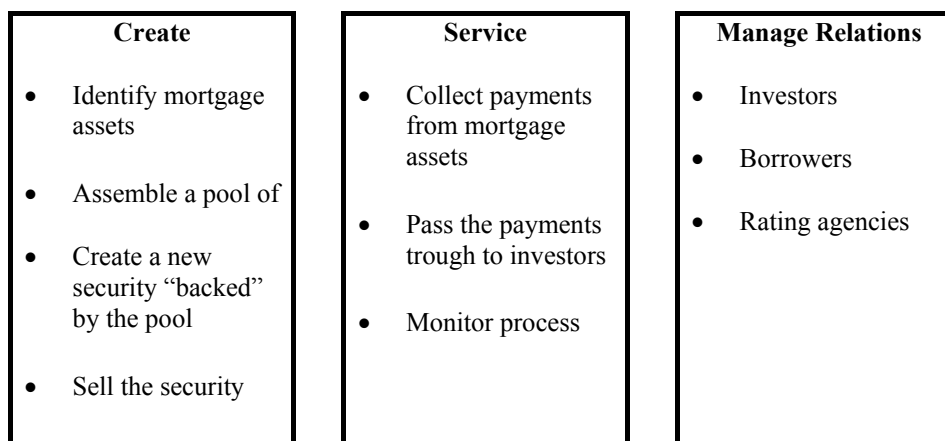


Figure 3. The securitization process

In the creation phase, financial institutions identified the mortgage payments as forecastable cash flows, assembled pools of loans with what they believed to be appropriate risk characteristics, and issued bonds against the pool. The security of a large portfolio of individual mortgages was thought to be stronger due to the diversified portfolio of loans in the pool. While each subprime mortgage might be considered fairly risky, the portfolio of subprime loans would be much less risky. For example, in 2002–2003, less than 2.2 percent of subprime mortgages defaulted within one year of origination and 7 percent within three. This innovation and the integration of both intermediaries and financial markets brought the global banking industry into the U.S. mortgage market. Mortgage backed securities, underwritten by the largest investment banks of the U.S., were held by the major banks worldwide.

When interest rates began to rise in the latter half of 2004, subprime borrowers began to face rising interest rates and rising monthly house payments. For many, this increase, paired with declining housing prices, led to default. These high default rates were unexpected. Risk-return analysis on the securitized bonds backed by these mortgages reflected the earlier lower default rates. In 2006, the default rate was over 25 percent within a year and 34 percent within 18 months of loan origination. (*Amromin & Paulson [2009]*)

Large U.S. banks, including investment banks such as Bear Stearns, Lehman Brothers, and Merrill Lynch, created billions of dollars worth of securitized bonds. They held some and distributed others. To reduce risk during the period that the pools were being assembled the investment banking firms purchased credit-default swaps for the securities held in the pools. The connections could not be made clear between the institutions that organized the creation of securitized mortgage bonds, those financial intermediaries that purchased the bonds, and finally their default insurance written by other financial

intermediaries. Institutions could not be sure who held claims on whom and the extent to which one institution would be affected by another institution's default.

This lack of transparency created uncertainty in several of the short-term financial markets and led to conditions where the institutions were afraid to lend to one another. In effect, the credit crisis in the securitized mortgage market led to a liquidity crisis in global financial markets. Savers moved their funds to government securities—a move to quality. The spread between U.S. government treasury bills and the LIBOR Rate (London Inter-Bank Offer Rate), which is a private market rate generally felt to be the most risk-free non-government rate, moved from an average of .17 percent in May 2004 to over 1.3 percent in August 2007. It spiked at over 4.6 percent in September 2008 (calculated from monthly data, Federal Reserve, [2009]).

The effects of firms' unwillingness to lend to one another at all—or at only high spreads—reduced the effectiveness of intermediation, not only in the U.S. but worldwide. As the velocity of money declined, there was an impact on the solvency of financial intermediaries and on the real sector as well.

Let us stress, among the root causes of the mortgage crisis are two elements locking into each other tightly. These elements are: the expansive and deteriorating quality mortgage credits, and the so called “originate and distribute model” (OAD model) based on securitization. The main performers of the securitization process are the units who are doing the slicing and repackaging, standing between the originator and the final investor illustrated in Exhibit V. These associations may be called *special purpose vehicle (SPV)*. These companies spread their risk with the help of the different financial innovations, including derivatives, in the financial system. This is a most important new feature of the current crisis. This is what we have presented with examples from the American market. (We note here, that there is a prominent Hungarian essay with utilization of American professional materials that gives a summary on the special series of events that anticipated the crisis, among others the OAD model. (Király *at al* [2008])

### 3. The liquidity crisis

The liquidity crisis placed stress on commercial banks. Difficulties in obtaining short-term loans and reductions in deposits, along with reduced interbank lending and then only with a high liquidity premium, raised the issue of bank solvency. Initially, banks resisted the funding pressures with help from the Fed and the sale of assets in an attempt to reduce the leverage on their balance sheets. Ultimately, the combination of default write-offs and loss of value in “fire-sale” liquidations led to a flood of bank failures. Table 2, U.S. Bank Failures by Year, contrasts more normal periods such as 2000–2006 with the crisis years of 2008 and 2009 to date.

Table 2  
U.S. Bank failures by year

Year	Number of Failures	Year	Number of Failures
2000	2	2005	0
2001	4	2006	0
2002	10	2007	3
2003	1	2008	26
2004	4	2009 to date*	115

Source: *Federal Deposit Insurance Corporation* [2009]

According to the *Economic Report of the President (Council of Economic Advisors* [2009]), about 50 percent of all mortgage-backed securities is held by domestic and international banks. Twenty-five percent is held by insurance companies. Other key intermediaries, such as pension funds and hedge funds, hold a significant part of the balance. During the current crisis and as of the end of 2008, these financial institutions reported over \$1 trillion in losses in mortgage-backed investments.

The liquidity crisis affected intermediaries as the high risk premium increased their costs of funds. However, financial intermediaries also play an important role in adjusting the desire of savers to loan or invest small amounts on a short-term basis to the needs of borrowers for large sums for extended periods of time. Intermediaries do this by borrowing short-term from many lenders (or depositors, in the case of banks) and lending large amounts to their clients for much longer periods. This practice requires the intermediaries to replace their short-term loans and deposits as they come due. Usually, they “roll-over” the loans and deposits of current customers. The uncertainty surrounding the loan portfolios and obligations of intermediaries resulted in contractions in the credit markets, including asset-backed commercial paper (one of the key short-term financing tools for investment banks), which fell over 35 percent from August 2007 to the end of the year (*Board of Governors*, [2009]).

While commercial banks have been affected and the failure rate is high, an equally significant impact has been felt by the investment banking sector. In fact, there is considerable debate over the future of U.S. investment banking. Bear Stearns went into bankruptcy because its creditors would not roll over its asset-backed short-term loans. With the help of the Federal Reserve Bank of New York, JP Morgan Chase acquired Bear Stearns in March 2008.

In September 2008, the Federal Housing Finance Authority (FHFA), a U.S. government agency, placed both the Federal National Mortgage Association, (FNMA– Fannie Mae) and the Federal Home Loan Mortgage Corporation (FHLMC– Freddie Mac), the two privately owned but government-guaranteed mortgage giants, in conservatorship, replacing their officers with those of FHFA.

Major investment banking firm Lehman Brothers filed for bankruptcy and Merrill Lynch was acquired by Bank of America. Both Lehman and Merrill Lynch had experienced losses in the billions on mortgage-backed assets. Other financial markets were affected—including virtually every sector of the private money market—and subsequently the equities markets fell over 50 percent between the summer of 2007 and the spring of 2009, as measured by Standard and Poor's 500 Index (*Yahoo Finance* [2009]). The restrictions on capital mobility affected more than the financial sector.

#### **4. The “characteristic” of the crisis of the most developed and rising countries**

The subprime credit crisis spread quickly through the financial system. The main steps of process:

- *The declining liquidity situation.* Because of the downgrading of the structural products, the recalculation of risks led to sales difficulties. Therefore the lending abilities of the banks fell.
- *Trust crisis* in the interbank markets. Because of the growing partner hazard and a lack of transparency, interbank loans were reduced significantly.
- Evolving of “limited credit”. Because of the decline in their risk taking inclination, banks reduced their lending business drastically. This led to recession. At the same time we have to say, that “limited credit”—and after it the lack of liquidity—can be significant, even in those countries where stock market financing plays an important role.

The mortgage-market crisis spread to other credit markets; to stockmarkets, to foreign exchange markets, other regions, and to other countries.

We must note, the current crisis has some distinctive differences from the previous crises:

- It is compared to the 1929–33's crisis regarding its size and the consequences, but the 1929–33's crisis had a bigger property loss (although we have estimating difficulties because of the depth and diversification.)
- There are differences in the place of the crisis: for the current crisis not the developing but the developed countries make the epicentre of the crisis.
- There are differences in the nature of the crisis in the most developed and in the rising markets. The different marks of “the centre and the periphery” can be summarized by the following.
- “The crisis starts right there in the Central-European region where it ends in the developed regions”—it starts with lack of liquidity. The process is exactly the image reflected, inverse of the developed markets’



crisis mechanism. The top of the process is the lack of liquidity, lack of credit. The lack of liquidity on the developed markets spread quickly to the less developed regions, leading to reductions in credit in the latter. In Hungary the crisis started with a lack of liquidity.

- There was no subprime crisis in Hungary (no asset, no bubble of real estate prices), mostly because of these financial innovations are not present in Hungarian markets. Local banks have been quite conservative, so risky lending practices were minimal. In the following table we summarized some main data comparisons for the lending practice and risk management of the different regions.

Table 3  
Examples for the lending parameters, risk management

Parameters	Developed markets (~USA)	Rising markets (~Hungary)
Credit rate	<b>100–120 %</b> of the asset's value	<b>70 %</b> of the asset's value
Average duration	<b>35–40 years</b>	<b>15–16 years</b>
Dept service	more than <b>50%</b> of the debts' income	<b>25–30%</b> of the debts' income

Source: *Surányi* [2008]

In the European region the crisis became obvious in September 2008, after the bankruptcy of Lehman Brothers. As the liquidity became worse on the developed markets, and the safekeeping of liquidity became a prime motivation, the stream of liquidity stopped in the European region. In addition, the European bank saving package handicapped the rising European countries, mostly the new European Union members. (Namely, the guarantees of the governments of Western-European countries for the deposits and interbank credits.)

## 5. Hungarian specialities

A short explanation to the initial misleading communication of the crisis: “The crisis doesn't affect Hungary.” Why?

- The ownership of the Hungarian and overseas mother banks held little American debenture-bonds.
- In Hungary there are no subprime debenture-bonds like in America. The banks that gave mortgages followed a more prudent practice)

It is a fact, that the global credit crisis had its effect on Hungary directly through an extremely tight range. The proportion of *risky tools* are minimal on the Hungarian banks' balance sheets, it is around 1.5%. (But there is no difficulty in that private person and enterprises are taking the risk in the Hungarian liberalized monetary system!)

The indirect effects of the global credit crisis are bigger and more significant than it is assumed. The direct effects have come through on two channels: through the monetary system and through the decline in external demand, through the real economy's fall in the Hungarian economy.

Through the monetary system, affected areas include:

- Stock market, where in general the effects of the crisis are the most spectacular. This impact is not as significant because the role of the Stock Exchange in Budapest is smaller in the funding and the financing of the Hungarian enterprises than in the USA and the majority of the developed countries.
- Bank system, where the loans are getting more expensive and the credit conditions are getting more strict. This mostly handicaps the small and middle enterprises, the SME's (the 98% of the Hungarian enterprises)
- Besides this the financing of the Hungarian budget deficit has become more difficult crowding out private borrowers.
- Reduced the inflow of the foreign operating funds, because the economic growth is falling.

The real sector—because of limited credit and the export markets' decline—has fallen into recession or crisis. In the Hungarian economy problems appeared not only in the financial areas, but also with another Hungarian speciality: its strong dependence from other markets. A determining factor in the recession was the growing trend of declining demand in external markets. In Hungary, two-thirds of industry production is exported directly, another ten-fifteen percent of export industrial goods are exported indirectly, as transport. The European Union is the main export market, within is the GMU (the countries of The Economical and Monetary Union).

The crisis—as in the other EU countries—began in October 2008, and the root cause was limited liquidity of the markets. At this time the Hungarian procedures are separating from the regional. In February - March of 2009, in the stage of the trust crisis, the national impact was consistent with the regional impact.

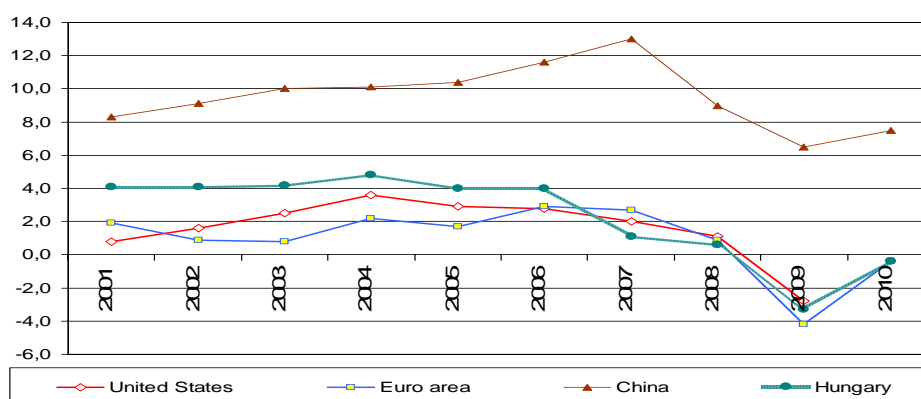
## 6. Summary—ensemble movement—common features

USA vs. Europe? Alike or different?

We can see differences in the aspect of how and from which sphere the financial crisis started, what spreaded to the whole world, to the economy of all countries. The special series of events that we saw in the US was just the spark. After the fact, the common liability is obvious in that the creators of the international regulation believed in the facility of diversification and modern risk assessment too much. The lack of required transparency naturally led to limited credit, a reduction in the velocity of money, and economic recession.

The money market of the European continent is different from the U.S. as well: the role of the stock market in the economies and the build-up the financial institutes differs. The economical philosophy, the business approach, is also dissimilar. The US has a risk-taking attitude while Europe is risk-avoiding. In this regard, it serves no purpose to rank, because these different economy development models always lived side by side with all of the advantages and disadvantages.

A joint movement of some countries of the world in the economical performance can be seen on the following chart, represented as Real GDP.



Source: *General Government Data*, EUROSTAT, Spring 2009

Figure 4. Real GDP 2001 - 2010

It can be seen, that in every country there was a decline in 2009, but in 2010 some increase is expected. (Until now we analysed the economical events of US and Europe—including Hungary, but on the chart we can see China's changing weight in the world's economy, because of its high-level growth.)

The US and Europe along with the Mid-Eastern region is fighting with the same three, interconnected problem (*Nemény* [2009]): demand outage, leverage cutback in the financial sector and the man-trap of the national debt. The problem is, if you solve one of them, it won't support the other two. (E.g.: the packages that subsidy the financial sector will enlarge the national debt.) It is very important for the countries to find the balance. (The decisions made at the G-20 meeting in April 2009 suggest complex problem maintenance.)

There is an opinion on the outcome of the crisis, that "in the global world the USA is the engine which can pull Europe out of the hole". (the German export's 20-30 % and the French output's 15% take a direction to the US.) (*Almási* [2009] p. 39)

### **7. Conclusion and notes relevant for teaching**

Will the present crisis (characteristics and existence) reverse, until now, available and valid economic coherences? What lessons/questions do we have for our students?

- We can query the role of the models, and respond to the criticism of the economic models. For example an inconsistency of the rising price—rising demand on the American housing market is sensible, or in case of the OAD model: there is a dissonance in decreasing risk—and getting constant or higher earnings.

The interpretation (simplifying, set up the essence in a defined case maps) and the development (to answer realistical, relevant questions) of the models is an important task.

We can question the significance of the indicators: they are registering the past. The endless dilemma of speed or the accuracy became actual.

We can notify in advance how the scope and the content of the data acquisition concerning the financial institutions will change.

There are new accents regarding the crisis on our professional field: financial education.

- To understand the innovation-content and pricing of the non-traditional financial products—the derivatives—has great importance. (Many people argue that the derivatives are responsible for the crisis.)
- The measurement of risks, the consequence of excessive risk-taking and the methods of restriction need more emphasis
- We must direct attention to the main tasks of the financial system, transferring value in time, assuring the stability of savings over time. (The time value transfer does not always work: for example in case of environmental problems and in economic judiciary uncertainty.)

We agree with the statement of those specialists who insist on the importance for education and the upgrading of knowledge in connection with the solution of the global crisis.

- Models that allow transparent access to the financial risks of intermediaries must be forthcoming.

And finally, it is obvious that markets cannot be regulated in isolation; the systematic connections within countries and across borders require joint regulations as well as educated managers and analysts who understand these transparent records and the relationships between financial markets both globally and locally.

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# The Effects of the Financial Crisis in the Northern Great Plain Region of Hungary

**FERENC MEZŐ**

*Department of Tourism, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
ferenc.mezo@ektf.hu  
Észak-Alföld Regional Development Agency  
Simonyi u. 14 Debrecen 4028, Hungary  
ferenc.mezo@eszakalfold.hu*

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The structure of crisis has always been in the focus of interest of researchers, therefore it has attracted me too. In 2007 the Political Science Observer published some studies concerning this topic and I have also elaborated a theoretical study on the ideological crisis and its symptoms of capitalism. However I thought that we shall not stop at here, and I wanted to carry out a more practically oriented research. The whole country as a research area would have been too wide for me and my local experience and knowledge has inspired me to start the research in Észak-Alföld Region. The objectives of the study are to elaborate the negative effects of the crisis on the entrepreneur sector furthermore to identify their solution practices and needs in Észak-Alföld Region with the help of statistical data and survey with questionnaire, which could help to articulate the suggestions to handling problem. What has happened and what help could the entrepreneur sector expect in Észak-Alföld Region?

*Keywords:* Észak-Alföld Region, aid programmers, spatial planning, depressed region, structural unemployment, regional imbalance, incentive measures

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## 1. Introduction

The structure of crisis has always been in the focus of interest of researchers, therefore it has attracted me too. In 2007 the Political Science Observer published some studies concerning this topic and I have also elaborated a theoretical study on the ideological crisis and its symptoms of capitalism (Mező [2007]). However I thought that we shall not stop at here, and I wanted to carry out a more practically oriented research. The whole country as a research area would have been too wide for me and my local experience and knowledge has inspired me to start the research in Észak-Alföld Region. The objectives of the study are to elaborate the negative effects of the crisis on the entrepreneur sector furthermore to identify their solution practices and needs in Észak-Alföld Region with the help of statistical data and survey with questionnaire, which could help to articulate the suggestions to handling problem. What has happened and what help could the entrepreneur sector expect in Észak-Alföld Region?

## 2. The research methodology

All research should begin with the collection, structuring and comparison of statistical data. In accordance to this we have asked with my colleagues the Chamber of Commerce and Industry, the Regional Labour Centre, and the Regional Directorate of the Hungarian Central Statistical Office to provide us data on the effects of crisis on the region's economy. Obviously we had to group the data in time and space in order to draw tendencies and conclusions.

Numbers alone are dead figures if we do not add something very important to it. Life and the voice of the community is what make it alive, beautiful and realistic. Thus the analysis of the limited statistical data was followed by the preparation of a survey on the effects treatment of the economical crisis on institutional and enterprise level. The questions were addressed to the local economic actors of the region to find out more about their observations and experiences.

What were our objectives by all these? The objective is always the better understanding of a segment of reality; the same applies to our case. We were interested in two segments of reality:

On the one hand in the direct effects of the crisis: what has it resulted in the everyday life of the given enterprise. Was it turnover decrease, market loss or on the other way around? On the other hand we were interested in the actions taken to survive: weather they reduce working hours, announce lay-offs, postpone developments, or run ahead by new products and by exploring new market segments?

Furthermore what solution options are expected to be taken from the economic actors and from the government?

We have visited 5 companies per micro-regions and 10 per county seats. In the end, 170 filled questionnaires were returned. After processing them we have ended up with a very exciting although sad material, which raises several problems.

## 3. The effects of crisis in the light of statistics

The economic crisis starting in the autumn of 2008 has already had its negative effects on the labour market in the 1<sup>st</sup> quarter of 2009. The number of employed people (Table 1) and its rate has remarkably decreased, whereas the number of unemployed people has increased dramatically compared to the previous quarter year and to the same period in the previous year.



Table 1  
Number of employees (in thousand people)

Area	2007.				2008.				2009.
	1 <sup>st</sup> quarter year	2 <sup>nd</sup> quarter year	3 <sup>rd</sup> quarter year	4 <sup>th</sup> quarter year	1 <sup>st</sup> quarter year	2 <sup>nd</sup> quarter year	3 <sup>rd</sup> quarter year	4 <sup>th</sup> quarter year	1 <sup>st</sup> quarter year
Hajdú- Bihar County	188,2	<b>192,5</b>	191,8	189,3	185,2	189,1	193,2	183,9	<b>174,7</b>
Jász- Nagykun Szolnok County	<b>151,7</b>	149,7	146,7	146,6	145,7	147,6	151,1	152,9	<b>138,7</b>
Szabolcs Szatmár Bereg County	178,2	185,6	<b>188,0</b>	178,9	176,4	175,5	178,0	173,6	<b>165,3</b>
Észak- Alföld Region	518,0	<b>527,8</b>	526,5	514,8	507,3	512,2	522,3	510,4	<b>478,7</b>

Source: *Hungarian Central Statistical Office* [2009]

The decrease of the number of employed has effected Szabolcs-Szatmár-Bereg and Hajdú-Bihar Counties nearly the same rate: the number of employed in the 4<sup>th</sup> quarter of 2007 has decreased by five-five thousand in the same period of 2008 in the two counties, whereas in Jász-Nagykun-Szolnok the number of employed people has increased by more than six thousand. Resulting from this by the 4<sup>th</sup> quarter of 2008, the total number of employed has decreased by 400-400 people in the region. Since the beginning of the crisis, since the 4<sup>th</sup> quarter of 2008, the number of employed people shows a significant decrease by some 32 thousand people in all three counties of the region.

In parallel to the decrease of the employed increases the number of unemployed in the region (Table 2): as in the 4<sup>th</sup> quarter of 2008 there were 74 thousand unemployed people, in the 1<sup>st</sup> quarter of 2009 this number has increased by 13 thousand, and resulted in 87 thousand unemployed in total. If we study the distribution of unemployed in the region, it can be clearly seen that the greatest increase has been suffered by Szabolcs-Szatmár-Bereg County, where the unemployment rate has been already high. In one and a half year's time the number of unemployed has been increased by 18 thousand people in Szabolcs-Szatmár-Bereg County, however there was a 5 and a half thousand significant increase in Jász-Nagykun-Szolnok County as well. Although the analysis of the tables on the change of the number of employed and unemployed people shows that the number of employed has mostly decreased in Jász-Nagykun-Szolnok,

the number of unemployed has increased in Szabolcs-Szatmár-Bereg County to the greater extent.

Table 2  
Number of unemployed (in thousand people)

Area	2007.				2008.				2009.
	1 <sup>st</sup> quarter year	2 <sup>nd</sup> quarter year	3 <sup>rd</sup> quarter year	4 <sup>th</sup> quarter year	1 <sup>st</sup> quarter year	2 <sup>nd</sup> quarter year	3 <sup>rd</sup> quarter year	4 <sup>th</sup> quarter year	1 <sup>st</sup> quarter year
Hajdú-Bihar County	17,6	15,8	<b>15,3</b>	16,7	17,4	16,5	18,5	21,3	<b>22,5</b>
Jász-Nagykun Szolnok County	15,0	<b>14,2</b>	15,9	16,1	15,1	13,6	14,1	12,8	<b>18,3</b>
Szabolcs Szatmár Bereg County	33,6	30,4	<b>28,6</b>	33,5	35,9	35,8	37,8	40,0	<b>46,2</b>
Észak- Alföld Region	66,2	60,4	<b>59,8</b>	66,3	68,4	65,9	70,4	74,1	<b>87,0</b>

Source: *Hungarian Central Statistical Office* [2009]

One possible reason could be that the dismissed people in Jász-Nagykun-Szolnok County try to find job by themselves without the assistance of the employment centres, therefore they do not get registered as unemployed.

Table 3  
Announced numbers of group lay-offs between June 2008 and June 2009

	Hajdú-Bihar County	Jász-Nagykun- Szolnok County	Szabolcs-Szatmár- Bereg County	Észak-Alföld Region
<b>3<sup>rd</sup> quarter of 2008</b>	208	54	51	313
<b>4<sup>th</sup> quarter of 2008</b>	806	562	522	1890
<b>1<sup>st</sup> quarter of 2009</b>	318	290	142	750
<b>2<sup>nd</sup> quarter of 2009</b>	955	569	228	1752

Source: *Észak-Alföld Regional Labour Centre* [2009]

According to section 94/D point 1 of the Work Law Book the employer shall announce its intention of group lay-offs, furthermore the data and circumstances of the parties concerned in writing to the national employment authorities. The

representatives of the employees shall be informed about the announcement at the same time when the announcement is sent to the national employment authorities and a copy shall be given to the representatives of the employees.

Group lay-offs for 2.237 people in the second half of 2008, for 750 people in the 1<sup>st</sup> quarter of 2009, for 1752 people in the 2<sup>nd</sup> quarter of 2009 were announced in Észak-Alföld region in accordance with the Work Law Book (Table 3).

According to the County Statistical Prospectus of the Hungarian Central Statistical Office the data available from the 1<sup>st</sup> quarter of 2009 in Hajdú-Bihar County shows the regional effects of the economic recession. The production of industry and construction industry declines, the tourist arrivals of public accommodation falls behind the figures of same period of previous year. The investment and housing of economic organizations with headquarter in the county has also regressed. Beside the reduction of the number of employed people, the purchasing power of salaries has also decreased. The effect of the economic crisis is strengthened by the unfavourable spring weather conditions in agriculture which forecast a moderate yield in crop production.

The negative effects of the economic crisis starting in autumn 2008 were tangible in all areas in the 1<sup>st</sup> quarter of 2009, as opposed to the politicians' opinion; the negative tendency will probably not stop in the near future.

#### **4. The effects of crisis in the light of the survey**

As I have already mentioned although 170 filled questionnaires were returned from 28 micro-regions, the research cannot be regarded to be representative. As previously explained we have enquired at least 5 employers per micro regions and at least 10 employers in the micro-regions of the county seats about the effect of crisis, the measures taken to reduce the effects of the crisis and their expected solutions. Most cooperative enterprises operate in the Jászberény (12), in the Nyíregyháza (12) and in the Szolnok (11) micro-regions as we have received the highest amount of questionnaires from these micro-regions. The least cooperative enterprises are situated in the Nyírbátor micro-regions, as we have received only one single filled questionnaire from this area.

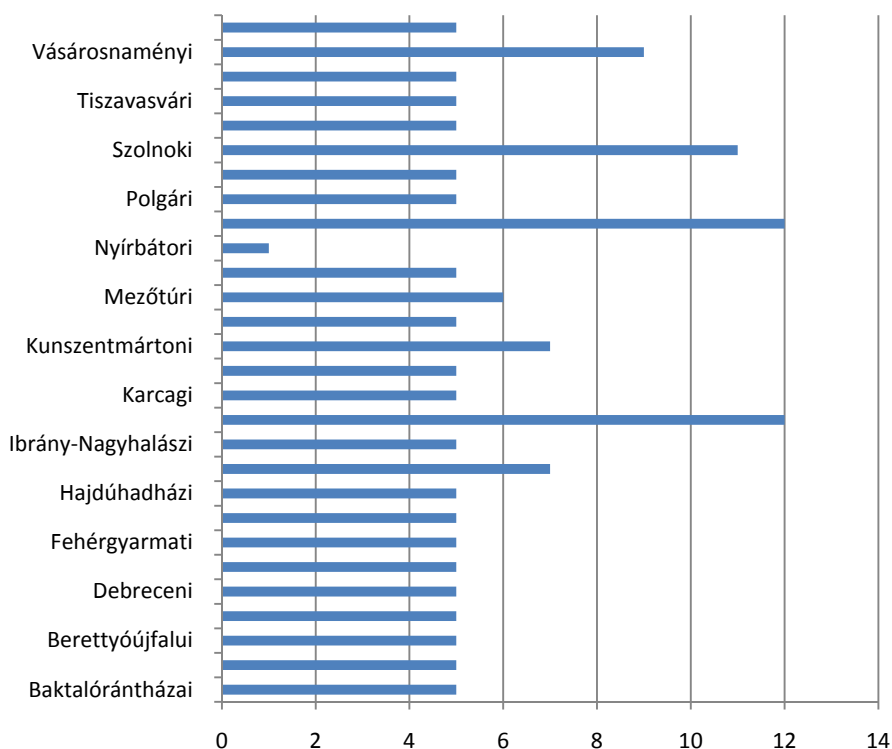


Figure 1. Distribution of enterprises by micro-region

64% of the questionnaires have arrived from limited companies (LTD), 15% of them have arrived from limited partnerships (LP) (7%) and from joint-stock companies (JSC) (8%), but the rate of sole entrepreneurs is 8%. One tenth of the companies who have filled out the questionnaire have not wished to indicate neither their names nor the legal form of the company. The number and rate of cooperatives and non-profit organization taking part in the survey is insignificant. It is important to state that the rate of participants of the survey does not correspond to the distribution of registered companies in these six categories in the region.

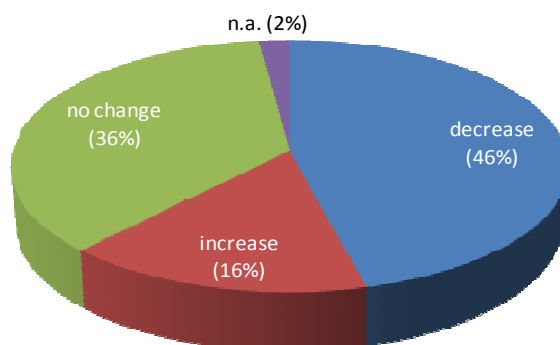


Figure 2. Changes in the number of employees between January 2008 and April 2009

The LTD's are overrepresented in the research (64% in the survey) as they only represent 15% of total registered enterprises in the above six categories at the end of 2007 in the region. Although the rates of LP's and JSC's together (15%) in the research equals to their rate of their presence in the region (15.5%) but the presence of the JSC's are quite low (0.2%) in the region. There is a significant difference in the rate of sole entrepreneurs, as their rate in the region is 62%, they are represented only by 8% in the research. These differences can be explained by the basic objectives of the research: we have asked our colleagues of the Micro-regional Coordination Network to contact the most significant employers of their area. That is the reason why sole entrepreneurs employing few people are underrepresented in the research in terms of their presence in the region. Their activity for applying for funding and sending back the questionnaires is also low.

Deriving from the unfavourable statistical data it is not surprising that between 1<sup>st</sup> of January 2008 and 1<sup>st</sup> of April 2009 the number of employees has changed in case of 62% of the 170 companies taking part in the survey. In the studied period almost half of the companies (46%) have carried out lay-offs. Three fourth of the companies applying lay-offs have performed lay-offs by 10% to 30%. The change is not always negative; in case of 16% of studied companies some increase of employment could be also observed.

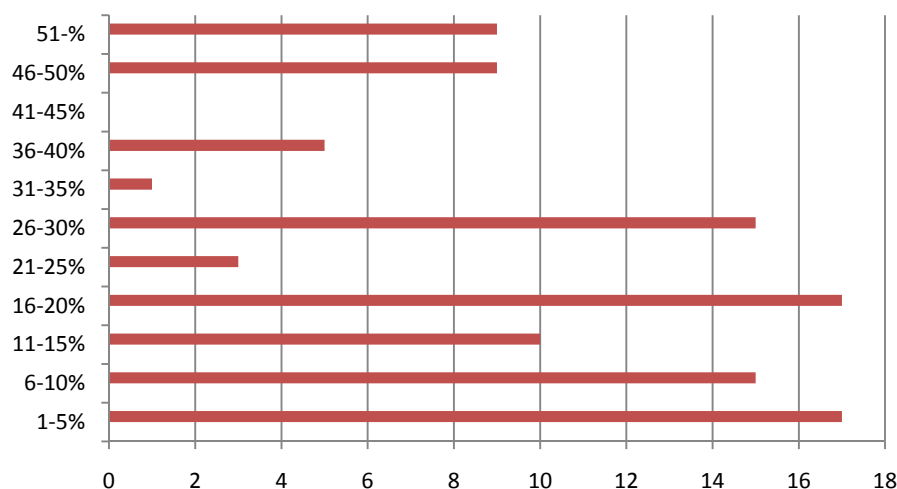


Figure 3. Degree of market loss (N=101)

More than three fourth (77%) of the 170 participating companies have experienced turnover decrease to a certain extent as the effect of crisis. 16% of the companies with turnover decrease have experienced less than 20% decline. A high number of companies, near 60% of studied companies have experienced market loss as the effect of crisis. 39% of enterprises have lost one fourth of their market, which made their situation literally tragic.

The participating enterprises have also listed some other negative effects of crisis: there is frequent accumulation of goods on stock resulting in the increase of expenses, decrease of income and profit, increase of outstanding claim, and suspended orders as the negative effects of the crisis. The followings have been also mentioned: withdrawal of the intentions to settle in industrial parks, price rise due to the increase of exchange rate and the fewer credit possibilities due to higher covers.

The majority (82%) of the entrepreneurs have already applied some crisis prevention or treatment measures. Almost 40% of the participating enterprises have already reviewed and reduced their expenses due to the recession. After the reduction of expenses, the modification of market orientation, change of product or structure was the most widely used measures (21% of total references). 35% of the enterprises try to prevent the effect of the crisis by entering new markets. A high number of companies (26%) open towards new market segments and try to introduce their products and services to new markets. Companies applying crisis prevention measures used investments, developments and reorganizations to the same extent (11%).

Apart from the four large areas (reduction of expenses, market orientation, measures affecting investment, reorganization) the painful action of lay-offs have also been used. Some enterprises have tried to avoid necessary lay-offs by applying successfully for workplace preserving support managed by the National Employment Service (AFSz) and the National Employment Foundation (OFA). On the other hand some other companies could not take the necessary lay-off measures due to their previous workplace preserving commitments. In these cases the financial support has become a disadvantage and an extra burden to keep up with the increasing competition in the market.

### 5. Expected crisis prevention and crisis treatment measures

Almost all the enterprises (95%) articulated such measures, demands which are expected to be realised by local and/or governmental organizations, furthermore by the European Union immediately or in a long term as to mitigate or overcome the negative effects of the economic crisis.

Table 4  
Crisis prevention measures expected by the analysed companies

	Distribution of responses
Reduction of fees and taxes	38%
More funding possibilities, simplification of procedures, and eligibility criteria	26%
Favourable credit possibilities	17%
Creation of jobs, investment promotion	6%
Reduction of bureaucracy and administrative burdens	5%
Preferring Hungarian products	4%
Launching of entrepreneurs support schemes	2%
Adopting measures against circular debt	2%
<i>Total:</i>	<i>100%</i>

Concerning the crisis prevention measures expected to be taken, the organizations taken part in the survey could openly articulate their needs and expectations toward the local / governmental organizations and the European Union, which expectations were thought to be able to overcome the negative

effects of crisis. Unsurprisingly, the elements listed below were the most frequently mentioned:

- 38% of them mentioned the reduction of taxes and contributions;
- 26% of them mentioned the need for more tendering possibilities;
- 17% of them mentioned the credit possibilities with favourable conditions.

In the course of the survey, many respondents accentuated that these measures should be really implemented independently from the crisis as they would contribute to decrease the burden of enterprises, to increase their possibilities, thus strengthen their diversification strategy.

Describing the measures needed in details, the next points can be identified:

- Reduction of contributions, tax reduction / abolishment
  - e.g. abolishment or reduction of local business tax, company car tax, building tax, weight tax, separate tax, healthcare contribution,
  - decreasing the rate of fees,
  - moratorium in tax payment, mainly in the most disadvantageous micro-regions,
  - enlargement of tax benefits.

As Észak-Alföld Regional Development Agency, who is responsible for the implementation of call for proposals (publishing the calls, managing the project proposals etc.) under Észak-Alföld Operational Programme, carried out this survey, special attention could be put on expectations connected to calls for proposals, procedures:

- Widening tendering possibilities, simplification of procedures, modification of selection criteria to be less strict.

Within the field of tendering possibilities, numerous points were identified by the enterprises, among which both general and specific needs were represented.

By expressing a general needs for wider participation possibilities in calls, enterprises, as potential project holders, indicated that they would like to implement their development projects by using financial supports via calls fitting to their real development needs. Apparently, it was not the small or medium sized enterprises who expressed a need that the calls for proposals should be open for large sized enterprises too. Furthermore, a need for enabling the participation of companies in trading and food industry in tendering procedures has been also addressed. Such special, but not individual, demand has also been mentioned that the companies subjected to EVA (Simplified Entrepreneurial Tax - SET) should be allowed to take part more effectively in tendering possibilities. As today both the own contribution and support are taxable what depreciates the tendering possibilities of the tendering systems.

Apart from the needs on size and types of enterprises, further recommendations were accentuated concerning the area of supports during the survey.



Accordingly, financing possibilities for developing the technology and expanding the equipment fleet of their enterprises would be a great help for the companies, thereby they could

- change their obsolete, old-fashioned machines and equipments with the contribution of supports. They expect more tendering possibilities in the field of
- promotion of renewable energy use, and
- development in logistics and of company sites.
- There is a great demand for
- employment supports
- among the companies surveyed. Calls would be appreciated by the enterprises which favour applicants who aim or undertake to maintain employment capacity.

Those enterprises who previously received job protection support, also expect more efficient help. According to the examples described, the companies which already got support for maintaining jobs are to be excluded from call for proposals no. 2.3.3. of TÁMOP (Social Renewal Operational Programme) managed by the OFA (National Employment Foundation). They suggested a selection criterion to be built in the project selection process, i.e the amount of wage subsidies for 12 months should be taken into consideration in the process of project evaluation.

According to their opinion, their effectual and productive participation in tendering process and their successful development can only be secured if: advance payment possibilities are extended beside the current reimbursement procedures (it is already possible in the field of economy and tourism development the advanced payment is 40%, in other fields 35%), obligation for giving security is eased (this facilitation is already built in procedures, if the payment is scheduled, the beneficiary is obliged to give security only for the scheduled part; before the facilitation security must have covered the whole project), parallel with decreasing the own contribution, the support intensity is to be increased.

A special need was also emphasized among the answers: in the course of project evaluation a certain advantage should be taken in case the income of the enterprise shows an increasing tendency, furthermore the achievable intensity of support should also be increased. These facts would really inspire the enterprises to participate in the tendering process. By using this possibility enterprises shall pre-finance their investments to a smaller extent from their own resources until they receive the awarded support after a long call procedure.

Beyond the facts above, fastening the decision-making process is also regarded by the enterprises to be necessary, as well as the: speeding up the reimbursement and administration processes, as these bureaucratic elements highly retard the successful and effective tendering procedures and implementa-

tion. The need for: special calls for proposals providing small amount of support was also accentuated.

These calls would allow enterprises with small amount of capital, capable of providing only small own resources to have a greater chance for implementing their development projects with EU co-financing. In the answers of the enterprises concerning the amount of supports available, a special need for supports with the value of 1 or 2 million HUF (appr. 3500-7000 EUR) was clearly outlined. Such important measures contributing to overcoming the crisis was also urged by the enterprises, however the solutions—even partial—are unlikely to be implemented by the intermediate bodies. Such kind of solutions can be:

- the extension of *de minimis* limit,
- exclusion of consultant companies keeping up corruption processes from the tendering procedures, or
- review and facilitation of public procurements.

Such element was also mentioned, by which: the amendment of demarcation between sectoral and regional operational programmes would be necessary. The amendment preferred by them would affect the GOP (Economic Development OP) and the ROP (Regional Development OP) in order to increase the amount of support obtainable for the enterprises questioned. They complained that the financial budget of ÚMVP (New Hungary Rural Development Plan) is much smaller than that of ÚMFT (New Hungary Development Plan) whereas the number of micro-enterprises is much larger than the number of SMEs. Consequently, a high number of viable micro-enterprises are left without subsidies.

Among general solutions—even independently from the crisis—the following steps can be listed: favourable credit conditions. Almost one fifth (17%) of the respondents expect this measure. Under favourable conditions they mean more favourable rate of interest, longer durations and tolerance time, working-capital loans with more favourable conditions, furthermore governmental guarantee. An important fact to be added: in case of tourism development (development of accommodation facilities) 13 projects were granted in the Észak-Alföld Region, but 6 of them (nearly 50%) indicated at the time of binding the subsidy contract that the available own resource and bank guarantee is now past time and they asked delay for signing the subsidy contracts. Finally 3 of them have receded from subsidy contract.

6% of the respondents regards:

- the job creation and investment promotion, as crisis management tool to be a very important measure.

The enterprises questioned expect some special conditions to be provided such as positive discrimination, e.g. local enterprises should be preferred in the project implementation. Concerning the project implementation, other recommendations urge the government and the local authorities to limit the number of subcontractors' level (maximum 2 levels are suggested to be allowed). Under the frame of job creation and investment promotion category other elements was also mentioned such as:

- measures inspiring inactive population to enter the labour market, and
- more emphasis on providing support for atypical ways of employment.

5% of the respondents regard: the reduction of bureaucratic and administrative burden as an important measure. Many of them expect the facilitation in authority requirements and provision of data, the simplification of the legal environment of enterprise operation, total modernization of related regulations, furthermore, the reorganization of governmental institutions' management.

Responders have mentioned the following expectations from the Hungarian government in the same portion (4%): Preference of Hungarian product, markets and producers, also introducing export promotion and import restriction measures to protect national markets and producers.

Concerning national development funds the following preference was mentioned: tendering possibilities for entrepreneurs with preferences for start-ups or for companies employing disadvantaged workforce.

Last but not least the following preferences were mentioned: need for effective measures against circular debt, which cannot be quickly and successfully adopted without the central level. An asset management plan was elaborated to avoid circular debt and to ensure that entrepreneurs and subcontractors will receive their money, the investment funds. In case of national investments the Treasury would manage assets, or one's own bank in other cases, however own resource would be still needed. After the announcement of restriction for municipalities there will be few of them who will be able to provide own resource for it. This plan will not speed up the processes rather it will occur as an extra step.

## **6. Conclusion**

The most important conclusion is that although the entrepreneurs of the region do all they can to save themselves, they are expecting effective help of the central bodies. They are not interested in political eye-wash, but in real measures. Furthermore they wish to have a unified yet complex package comprising governmental organizations, EU institutions and bank structure instead of separate constrained actions. Such a package is not yet formulated, some elements have been developed others have not. More than a year has passed; the entrepreneurs and people are desperately looking for some positive actions. They are not open for empty words anymore; unfortunately the adjective

‘politician’ itself has become a swear-word by today. It seems that the central level cannot accept the necessary diminution of taxes and contributions and we have no idea how and with whom they want to carry out the vitalization of economy. At EU institutions certain elements have appeared in traces: advance payment (up to 40%) 40% of the scores can be given to creation of workplaces (used to be 10%), assuming 4% VAT as additional burden etc., but these measure have not yet brought smashing success. There is a great expectation for new OP modification that Brussels has approved in these weeks. However, let us add that experts from Brussels have already criticized the bad allocation structure of EU money, namely that only small portion of it is spent on the revitalization of economy, innovation and creating new structures, but on the other hand too much was spent on temporal investments used for preservation, appearance or prestige which has to be redone in 7–10 years time.

In case of banks nothing has happened. Situation gets worse, we take loan from banks in order to help them, in return the banks take the money out from the country to the parent bank while high interest rates remain for a year in spite of the stronger HUF. Charges will be paid by impoverished entrepreneurs and citizens in form of increased taxes. It is hard to understand what happened last year, why so many precious days, week, month were wasted without the collaboration of the political elite to develop a homogenous treatment package. Naturally this package has to involve different sectors and shall not only contain taxation measures. Furthermore in such package entrepreneurs shall be treated separately: agrarian entrepreneurs shall be differentiated from entrepreneurs operating in the construction industry. At the moment there is no such package that can handle regional disparities: Budapest, Bihar area or LHH (most disadvantaged micro-regions). In the meanwhile entrepreneurs go bankrupt, the demand decrease. There is a growing mistrust, powerlessness and also disappointment in our times that will be very difficult to stop.

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# The Phenomenon of Socio-economic Shrinking in the Example of the Nagykunság Region

**TIBOR KOVÁCS**

*Department of Tourism, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, 3300 Eger, Hungary  
kovacstibor@ektf.hu*

*Motto:*

*“This is the key to the slothfulness of Hungarians, especially in the Tisza Valley:  
there is bread, wine, gammon; pants in the summer, coat in the winter,  
and a pair of boots and a hat, squailer in hand  
and sometimes a wringing gloomy ditty,  
and ‘sweet dreams’, as much as needed ...  
Why work therewith?”  
(István Széchenyi: Fragments of Ideas)*

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**T**he social-economic changes, which took place in the Great Cumania from the change of the regime, are strongly Janus-faced. The necessary and often dynamic catching up steps (such as induction of gas system, channelling, building of roads and pathways etc.) which are mainly financed by external sources, do not generate “automatically” further development. The default of the local economy’s expected recovery can be even less due to the infrastructural deficiency (as the functional supply of the settlements improved a lot from 1990) but are more due to the lack of the local society’s ability to reformation and due to the lack of the adaptive skills. Improvement of this deficiency is a task much more difficult and long term than that of the replacement of the functional defects. The settlements’ relatively good functional supply will not be maintained for a long time near the local society’s weakening and decaying situation. The contradiction between the maintenance (development) of the central functions and between the social degradation, instability and decadence is more and more sharpened.

*Keywords:* human resources, shrinking cities, development vs. decadence, Nagykunság

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## 1. Introduction<sup>1</sup>

Worsening *demographic problems*<sup>2</sup> represent specific challenges to all responsible members of the society both in the post-fordist Europe and in Hungary being a member of the EU since 2004 and struggling to find its way in order to achieve prosperity.

The problems indicated can be deduced to a rather complex and manifold system of subjects whose main nodes are as follows:

The decline in the willingness to have children of the majority impassioned to obtain pecuniary goods, the ageing of the society, the declining production of the national economy, the enlarged regeneration of the underclass masses, the increase of the rate of inactives, classes living settled to be supported by others (today, ca. *3 millions Hungarians* of working age *stand off*, do not generate incomes, moreover, make their living on state benefits, i.e. the population of almost 10 million is sustained by 3.6 million taxpayers (among them, 800,000 are public servants) (*Róna* [2007]).

Summarised, the social-economic spiral deduced to the above reasons and continuously descending will determine social, economic, political and environmental processes for several decades in Hungary, too—and, having all aspects taken into account, in a negative way.

These large-scale demographic changes will obviously impact mankind's most endurable creations, i.e. *cities*. Western European urbanists and decision-makers have been involved in studying the topic of *shrinking city* for long years (or even for decades): they claim that these demographic changes require *an unprecedented transition of cities*<sup>3</sup> (*Böhmer* [2005]). But yet, what is the definition of the shrinking city<sup>4</sup>? “From the point of view of urban development,

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<sup>1</sup> It is good news that in the 21<sup>st</sup> century's geography the recognition according to which any process of changes is the case, first and foremost the focus has to be on the movements of the *society* is resurged and becoming predominant. Smaller or larger social units (groups, classes, folk, nation) built up of individuals are the ones establishing culture, develop their institutions, manage the economy, use the environment, construct and demolish. With the absolute predominance of the social processes owned, the author gives an overview of the issue indicated from this approach.

<sup>2</sup> Hungary has been experiencing a decline in the number of its population since 1981 with the figure going down to as low as under 10 millions. And the changes taking place in the quality of human resources are not even mentioned here...

<sup>3</sup> The physical transformation of the city body is only, although fundamental, a part of this; however, making the mental city image changed, the mental reconsideration of the city is at least equally important – and this is the real challenge...

<sup>4</sup> Apparently, it is important to note that regarding the efficient causes (and of course, the consequences, too), in addition to the similarities, relevant differences are found between the process of shrinking of cities with several hundreds of thousands of inhabitants and small or middle-sized towns with some thousand or tens of thousand citizens.

a shrinking city can be described by two main processes: on the one hand, by the *loss of population* and, on the other, by a *declining economic dynamics*. This process of demographic or economic shrinking entails the specific consequences of urban development processes at all fields. The resultant processes can be characterised by quantitative and qualitative changes, whose intensity and impacts depend on the extent and temporal proceeding of the provocative processes. Due to the two main (demographic and economic) reasons for shrinking, the usage-specific density of the shrinking city declines. Depending on the intensity of processes, the physical shrinking of the city body is also conceivable.” (Lang–Tenz [2003], p. 130)

Hungary also experiences the bulk of problems featured above with no comprehensive proposals for resolution available.

This paper will provide a brief overview on a study of the Nagykunság Region in Hungary severely impacted by the socio-economic shrinking: it intends to give a short introduction to the region’s social situation, the resultant possibilities for the economy as well as the impacts of their consequences on towns.

## 2. The study area

The Nagykunság Region (officially non-existing neither administratively nor in the development policy today as its settlements were brought into various micro-regions) is difficult to be distinguished from a physical geographical point of view from the surrounding landscapes (Hortobágy, Tiszai Loess Terrain), as it crosses over to them without sharp border-lines. In a historical sense, the Nagykunság is interpreted as the so-called Hatkunság formed following the redemption<sup>5</sup> (1745), i.e. the settlements of Kunhegyes, Kunmadaras, Karcag, Kisújszállás, Túrkeve and Kunszentmárton (Bellon [1979]) (In 1992, Berekfürdő became separated from Karcag, with this the number of Nagykun settlements having increased to seven).

## 3. The socio-economic development of the Nagykunság region until the redemption

Cumans had settled in the 13<sup>th</sup> century, later dislodged then resettled, in Hungary represented a special socio-economic group at that time (ethnic society, nomadization); their integration to the Medieval Hungarian state order commenced after the devastation by the Mongols (Bellon [1979]), and basically concluded by the 16<sup>th</sup> century.

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<sup>5</sup> ‘Release, salvation’ (Latin)

According to sources, during the era of Turkish occupation, the Nagykunság—with the exception of the settlements of Karcag and Madaras—was virtually destroyed. At the time of thralldom, only the so-called *khász-towns* receiving feudal snuggness guaranteed by the sultan could developed into extensive *market towns* with large outskirts and with a high number of inhabitants (e.g. the towns of Karcag, Kisújszállás), however, in terms of the occupation of citizens and settlement functions, they were not different from the villages (*Baranyi, B.* [2004]). As claimed by researchers from the period between the two world wars, in some of the towns of the Great Hungarian Plain that had become basically independent from the manorial power, “community life, the economic efforts and the whole tendency of the society were civil-rural” (*Erdei* [1937], *Féja* [no date]), as at these times, nobility was not decisively the governing and leading class of market-towns.

To the area, sometimes basically left merely abandoned as a consequence of wartime devastations and the later multitudinous escapes, peasants from other regions were called as early as the beginning of the 17<sup>th</sup> century: many settlers came to the Kunság as well as land was given here to the descendants of foreign folks. This was also supported by the Turks, for their own economic interests, with securing the freedom of religion; during the time of counter-reformation, it was especially favourable to those disturbed at their original domiciles, at the ‘catholic sea’ due to the otherness of their religion. Cumans originally had not become catholic, moreover, much had been retained from their old pagan faith and, in the first half of the 16<sup>th</sup> century, *the entire population of the Nagykunság Region got protestant*. At the time of the Turkish occupation, this religion became inveterated and could never be overcome by the counter-reformation (*Bellon* [1979]).

At the late 17<sup>th</sup> century, after the Turks were expelled from the area of the Kunság and the areas re-conquered were regarded by the Habsburgs as domains obtained through war<sup>6</sup>: certain areas were traded in order to cover military expenses, this is how e.g. the Hármaskerület (Nagy- and Kiskunság, Jászság) was obtained by the Teutonic Order (*Bellon* [1979]). The Order started to make use of the Jászkunság Region after the subjugation of the Rákóczi War of Independence in 1711: in connection to this, no data is available on whether the Order would have sustained private manors cultivated through socage in the region. *It is important to note*: the later, specific socio-economic settlement in

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<sup>6</sup> At the time of Turkish thralldom, significant population changes took place: many fled and were often replaced by foreign ethnic groups. Referring to the altered ethnic composition, the Habsburgs, after having the Turks expelled, considered the former Jászkun privileges cancelled. Within his rights, in 1702, Leopold I. sold the Hármaskerület (Three District) to the Teutonic Order in the meantime, also abolishing the ‘eternal privileges’ of the Cumans and Jász with this, having them come down to villeinage. The Order sold their rights to the area in 1731 to the Physical Monastery of Pest.



the Nagykunság Region was partly based on the fact that the region's inhabitants were villeins, imbursing 'only' manorial roll, who lived in a self-defined order and opposed to their landlords not as individuals but as *community*. This *community*, i.e. the region's special internal autonomy emerged in the first half of the 18<sup>th</sup> century represented a special formula of the Nagykunság Region; their self-dependence seemed to be obvious and their self-defence functioned also adequately against the lords (*Bellon* [1979]).

With peace coming around, along with the resettling native inhabitants, *immigrants* also came as more rational conditions and better possibilities for living attracted those living as villeins somewhere else. Those newly arrived—who, according to their names were mostly Calvinists from the *very surroundings* of the Nagykunság Region—received support from both the native inhabitants and lords urging settling and not intervening into religious issues. At that time, abundant pasture-lands to be parcelled were available that represented an opportunity for ascension: the basis of property here was *grazing animal husbandry*. Economic developments, social consolidation and, together, the establishment of the later redemptus identity were advanced by the use of pasture-lands not being restricted in the Nagykun settlements during the decades of villeinage.

The possibilities of economy were promising to all residents in the first half of the 18<sup>th</sup> century, thus basically all were participants of the redemptus efforts. This—initial—uniformity of economic interests also advanced conjugation processes taking place at other sectors. Traditions and the value orders were established by the native residents and the incomers together which later became the internal laws of the community. The years of villein dependence, in the meantime, also represented the accomplishment of economic development and community development (*Bellon* [1979]).

During this half a decade (the early and mid-18<sup>th</sup> century), in the Nagykunság Region, productive forces underwent a significant level of developments: an *economic development* based on animal husbandry was experienced on which the repossession of old (political) privileges could be built upon. The *social background for redemption* was also established: the inhabitants now financially consolidated, with the absence of control by their lords and the free status resultant from the rental system could become the beholders of the initiatives for independence. In order to have their public affairs administrated in the most effective way, a body responsible for the governance of the community was elected from among themselves—obviously always of the wealthiest citizens (*Bellon* [1979]).

The possibility for development was given for the society of the entire Nagykunság Region when *privileges were returned*. In 1744, the precedent initiatives for redemption proved to be successful at last: a petition was send in the Council of Procurators in order to have a sum of pledge settled. Apparently,

some conditions were also imposed by the residents of the Nagykunság Region in which it was ascertained that the sum of pledge for them would only be paid off when these terms accomplished: a palatine should have jurisdiction over them, they should never be traded, the three districts should remain to make up one administrative unit and they should have full power to handle their own affairs.

At last in 1745, their rights were given (back) to them: no customs are paid, they choose adjudicator, captain, anyone could be settled here and all residents received equal privileges in the region. Although the struggle to redeem privileges provisionally unified the society (*Bellon* [1979]), the ulterior balk of the Nagykunság Region was forecasted by the fact that the social basis of preparation was greater than the number of those later enjoying the benefits of the struggle.

#### 4. The socio-economic consequences of the redemption of 1745

After 1745, ordinance of the entire proprietary community predominated the council; actions taken in organising farming, production and marketing and observing the community regulations (or having them observed) were democratic. After having the old-new freedom obtained, however, negative tendencies also began from the middle of the century: dispossession of the irredemptus<sup>7</sup> began. In the meantime, differentiation in property status, inner conflicts for tenure possession or retaining those already obtained also started to take place among the redemptus. Then, by the end of the 19<sup>th</sup> century, local power was obtained by the *rich redemptus*, and during the 19<sup>th</sup> century their interests were conceptualised in the local regulations, too (*Bellon* [1979]).

Despite the disadvantageous processes commenced, *the development of the Nagykunság Region's society peaked* during the turning of the 18<sup>th</sup> and 19<sup>th</sup> centuries: sitting tenants became unified, the 'Nagykun' (or rather redemptus) identity consolidated and consummated (*Bellon* [1979]). The life of irredemptus, by then, conformed to that of servants.

As *the most important social consequence* of the redemption, residents were now divided into two groups, i.e. redemptus and irredemptus. The redemptus soon realised the threat would have been resulted in the increase of number of those remained without property, thus relegated *foreign servants* after having their work accomplished even if married here, in the region. This was also a typical attitude toward *craftsmen and merchants*, therefore—*causing, negative socio-economic and impacts in the region in long-term, with consequences probably ere now*—their wealthier class producing for the market had not

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<sup>7</sup> They were a segment of inhabitants who did not absorb paying their (theoretic) part of the fee of redemption.

evolved. As due to the rigidity (blindness) mentioned above, craftsmen and merchants could only satisfy the direct demands of the inhabitants, consequently no centres of trading and industry producing for the market could be developed in the Nagykunság Region, thus nor their stimulative-generative power on the development of a later modern civil society could predominated here.

By the end of the 19<sup>th</sup> century, an increase of the number of smallholders and of those without propriety, however just due to the relative backwardness, at least compared to the more developed parts of Hungary, of farming, farms stood this period out without major concussions. 'This sound economic structure secured the peasant-civil manner to the holder's society in the Nagykunság until the late 19<sup>th</sup> century.' (Bellon [1979], p. 191)

The 19<sup>th</sup> century, in comparison, was already the time of introversion and fallback: the society became *ossified*. The initially positive self-defence mentality, scale of values and norms by then rather represented an obstacle (Bellon [1979]). This stiff system was slightly deflected only in 1876, with the abolishment of the Jászkun privileges, however not really effective socio-economic changes took place even then (Bellon [1979]).

*Summarized:* one of the essential factors preserved for centuries of this above-mentioned phenomena as particular socio-economic interrelationship was the specific duality represented by 'the inadequacy of the social and economic level of development', by the relative high level of development of the society's structure compared to the economy (Beluszky [1992]).

## 5. The first shock of the 20<sup>th</sup> century and the Nagykunság region

As a result of the border alterations due to the Treaty of Trianon in 1920, significantly more areas lost their centres of catchment areas on the Great Hungarian Plain than at the Northern or Western part of Hungary. Consequently, the integration of the centreless Great Hungarian Plain regions into these new frameworks proved to be rather difficult (Hajdú [2001]). Actually, this was primarily experienced directly and intensively at the new cross-border areas, the events mentioned above mainly had 'only' indirect impacts.

## 6. The socio-economic-spatial movements in the socialist era

After having an analysis carried out, by complex socio-economic indicators, for the towns of the Nagykunság Region, the general conclusion can be made according to which *the 1970s were characterised by 'the particular urbanisation of rural areas'*. One of its main features was the relatively rapid urbanisation of middle-sized and small towns under the hierarchic level of the county seat that, along with the settlement of the rural (so-called *divisional*) industry in the

economy reduced migration, however in the meantime, *commutation* became admitted. Due to some planned interventions, the institutional system of (small) towns with central role required to regional supply function broadened, too (Csatári [2005]).

Mainly the same essential processes of settlement formation continued and predominated during the 1980s. The introduction of *normativity* (per capita subsidy, settlement development contribution, etc.) proved to be a crucial step in the system of settlement development and management (Csatári [2005]).

### **7. The proceeds of the changes of regimes**

Reactions to the radical socio-economic changes taken place *after the changes of regimes*, the towns of the Nagykovácság were (are) like from a whole, quasi ‘living organism’ in a strongly determined way as resultant from their positions. It is nearly impossible to characterise the settlement-transformation of the transition taking place in Hungary now for two decades, however it is certain: the former system of centralized plans abolished, and the local governments of the settlements intended to start their new ‘independent’ lives. These great changes of settlements and regions were accompanied by the fact that *the large-scale decentralisation of decision-making competencies was not or hardly followed by the task-proportional expansion of sources for settlement management and development* required. Such problems were further worsened by the fact that some kind of ‘market economy conform’ viability of the settlements did not imbibed the changes in an adequate way (Csatári [2005]). Alterations already taken place in the Nagykovácság Region are rather Janus visaged. It was well-proved that the required and often intensive *steps of reinforcement*—mostly *financed from external sources*—(installation of gas, canalisation, road and pavement constructions, etc.) do not induce further development ‘automatically’. *The failure of the expected development of the local economy can be less interpreted* by the lack of infrastructure (as the functional supply of settlements has basically improved since 1990), but rather by *the lack of potentials of the local society for renewal and adaptation*. Improving these is more complicated and long-term task than replacing the lack of settlement functions (Csatári [2005]).

### **8. Socio-economic problems in today’s Nagykovácság region**

Local society, in the past two decades, failed to give real and actual answers to the changes resultant from the changes of regimes. Not a strong local structure has evolved but, on the contrary, processes indicate toward the consolidation of an abnormal ‘wrecked society’—with such processes becoming even more

intensive in character during the past years. Two characteristic groups fundamentally influencing the social processes in the Nagykunság Region were classified by a researcher of the region, Julianna Örsi in her study of 2004:

- *Slowly advancers*: this group includes those who were mostly able to retain their jobs or moreover, during the compensation, possessed some pecuniary increment (e.g. certain workmen, merchants, the more extroverted representatives of the local black-coated class). They (at least, partly) put the family fortune into active use, and among them, some bias towards innovation can be traced (however as this does not attain the critical mass, no real innovation is found in the region as the Nagykun society as a whole is not capable of handling this). This class and its representatives are not capital-abundant, nor has any external injection of capital of a significant extent. As foregoers, there are still family traditions remaining as well as agriculture and folk art represent some kind of prosperity.
- *Laggers*: they represent the larger (and, unfortunately ever increasing) group that includes those having their jobs, prestige and faith after the changes of regimes. Previously most of them were trained men and underworkers, for whom today, the ambiguous undeclared work means a narrow living with also a dramatic decline in health among them (Örsi, [2004]). It can really be claimed for them that they feel, their future has already gone ...

With the above considered, it can be concluded that due to the economic transformation during the decades following the changes of regimes, the difficulties for adaptation, the emigration of a segment of the population with mobility as well as the negative demographic processes, the number of qualified (youth) men who, with their skills and work could contribute to the development of their settlement is ever decreasing. Nor represents a promising forwardness that a decisive part of full-time producers at the settlements examined works at the agriculture exhibiting only minor signs of modernisation so far (mainly in large-scale maize and heat growing or piggery). The provision of quality devices promoting production is inadequate; however the majority of farmers have received some kind of, especially not refundable, subsidies (Krizsán [2004]).

It stands for the Nagykunság Region, moreover for the whole Great Hungarian Plain that the historically developed specific ‘Great Plain way’ of social development described above with carrying the features of both the backwardness and a relative level of development, has stagnated during the historical-economic-social changes of the past 50-60 years. The bases for the former dual development, the ‘dissimilarity’ of the society of the Great Plain and, above all, the favourable impacts of the most valuable facts of the ‘historical syndromes of the Great

Hungarian Plain<sup>8</sup> has been abolished during the past somewhat more than half a century whereas new ones, that would bring development have not yet evolved ... As a summary for the above-described facts, it can be claimed, unfortunately as the sad truth that having the opportunities offered by the changes of political regimes forfeited, the (re)civilisation of the Great Plain regions has not come off.

### 9. The cloudy horizon of the future

It is a great threat that settlements or regions with an unstable or declining society<sup>9</sup>, without an improvement of the economic renewal and revenue generating potential on the merits, will give up more and more of their central functions under the conditions of the market economy that would cause enormous deficiencies to the country, too (*Csatári* [2005]). In the region, in addition to the weakening, declining situation of the local society, the relatively rich functional supply of settlements seems to be sustainable in long-term; among the sustenance (development) of central functions and social erosion, lumpenisation, lability and decline, there is an apprehensibly ever harsh contradiction.

In addition to these, the identity disorder or loss of image of the historical-ethnographical group of the Nagykunság Region divided into micro-regions can also eventuate. Of this formerly characteristic group, the towns of Törökszentmiklós, Tiszafüred and Mezőtúr are gaining a higher share with playing a greater role in the micro-region and thus weakening the Nagykunság Region whereas 'one of the keys to the development potentials of the Nagykun settlements could be... maintaining an independent image preserving the cultural heritage' (*Órsi* [2004] p. 357). But will this succeed and will there ever be a Nagykun resurrection?

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<sup>8</sup> The functioning of the peasant-civil-market town development, the presence of a relatively developed market town network of institutions and the progressive-civil wings of the reformed church, the large-scale social mobility, 'innovative' rural mentality, etc.

<sup>9</sup> Their fundamental features are that a great number of youth tend to leave their settlements, those participating at the higher education do not return here, the local society is ageing and requires social help.

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# The Testing of Williamson's Hypothesis in View of the Social and Economic Development of Microregions in Hungary

TAMÁS TÁNCZOS<sup>a</sup> – ZOLTÁN EGRI<sup>b</sup>

<sup>a</sup>*Department of Economics and Law, Institute of Economic Sciences  
Eszterházy Károly College, Egézség ház u. 4, Eger 3300, Hungary  
kistancos@ektf.hu*

<sup>b</sup>*Environmental and Water Management Directorate of  
the Tiszántúl Region Engineering Unit of Hajdúszoboszló  
Rákóczi u. 161, 4200 Hajdúszoboszló, Hungary  
egrized@gmail.com*

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**T**his study aims at testing a hypothesis published by Jeffrey G. Williamson in 1965, according to which the correlation between the state of development and inner differentiation of individual area units can be described with an inverse U-shape curve. For the purpose of measurements, we have worked out a complex relative development index to perform, in space and time, a comparative analysis of the social and economic development of the area units under review. We have tested the practical applicability of the hypothesis through time and cross-sectional examinations, compared our results with the findings of others and provided an overall assessment.

*Keywords:* Williamson's hypothesis, regional development, development differences, complex development index, microregion

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## 1. Background and objectives of the study

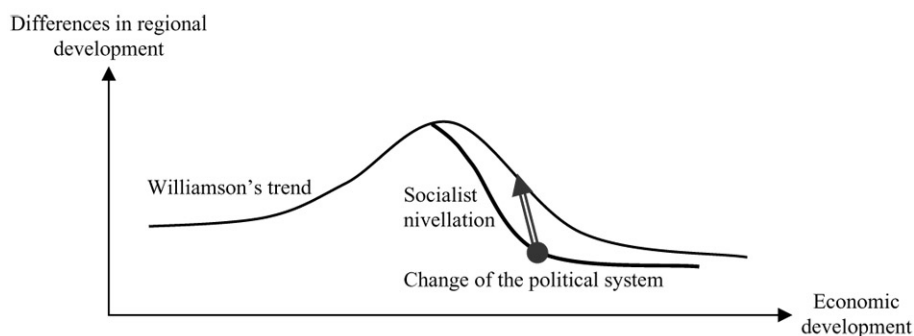
According to Williamson's hypothesis<sup>10</sup>, the relationship between the state of development and the inner differentiation of area units can be described with an inverse U-shape curve. Consequently, the more developed area units tend to display higher and lower inner differentiation, respectively, in the lower and higher development range. When examining the process in time dimension the same inverse U-shape curve can be seen, which means that in the initial stage of development the inner differentiation increases, while after a certain level of development the inner differentiation decreases parallel with the development process. (Nemes Nagy [2005<sub>a</sub>]) The development path of the ex socialist

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<sup>10</sup> Williamson [1965] examined the internal area inequalities of 30 countries on the basis of time-series and cross-sectional data, where development was characterized with per capita income and differentiation was shown with the weighted average deviation of income.



countries shows a special approach to the above described system of relationships of Williamson's hypothesis (*Figure 1*).



Source: own editing work on the basis of *Nemes Nagy* [2009], p. 327.

Figure 1. Application of Williamson's hypothesis to ex socialist countries

These countries were outside the classical model before the change of the political system as they were characterized by a strongly downward state of nivellation<sup>11</sup> resulting in a diversion from the trend determined by the model. After the change of the political system the ex socialist countries introduced market economy. With this move the relationship between their state of development and inner differentiation shifted to the trend determined by Williamson's hypothesis. As before the change of the political system these countries were characterized with a relative inequality, manifested in the above mentioned downward state of nivellation, this process meant an increase in development differences. (*Nemes Nagy* [2009])

This testing of the hypothesis under domestic conditions is not the first attempt. The most recent and complete study available currently in this field is a work by *Németh-Kiss* [2007] in which the authors used personal income tax base earnings to analyze the internal income differentiation of Hungarian counties and microregions and the main determinant factors. Based on deviation and distribution type indicators, the authors performed a time-series analysis of the period between 1990 and 2004 to find that the differentiation of municipalities within Hungary follows a relationship determined through Williamson's hypothesis. The income differences between the municipalities displayed a quick and substantial rise during the years after the change of the political system, and then came a stagnation of several years, followed by a clear but slight nivellation after 2000. As the extent of nivellation was much lower

<sup>11</sup> It means a relatively balanced development arising from a strongly centralized political and economic administration and from the state subsidies paid to maintain loss-making economic sectors even at the expense of foreign indebtedness.

than that of the differentiation taking place at the start of the period, the income differences between Hungarian municipalities showed an aggregate growth during the period from 1990 to 2004. According to the results of the cross-sectional analyses performed at the level of microregions, most of the area units under study can be found on the downhill section of the inverse U-shape curve because there is a negative correlation between the state of development and the inner differentiation, which means that the inner differentiation of the more developed microregions tends to be lower and this relationship tends to become stronger during the study period.

As far as the analyses performed in the time dimension, there are findings similar to the above ones in the study of *Nemes Nagy–Németh* [2005] where the authors confirm, based on their time-series analyses performed from 1988 to 2003, that the income differentiation of Hungarian microregions shows a quick rise after the change of the political system, a high-level stagnation from the mid 1990s and then a slow mitigation after 2000. According to the authors, the slight income convergence found at the end of the period is due to a drop in the income generating capacity of certain export-driven regions and the substantial and regionally distributed rise in the wage of civil servants. It should be noted also in connection with this study that the end-of-period nivellation was unable to compensate the strong initial differentiation and thus the income differences between the microregions displayed a continuous growth during the entire study period.

As it is clear from the above studies, the process-based analyses typically identify development with a major factor i.e. income. An ever growing group of researchers (*Ayres* [1998], *Dabóczy* [1998], *Heltai* [1998] *Pataki* [1998], *Sen* [1998], *Daly* [2001]) disputes this approach by saying that development cannot be identified only with material wealth. Greater income is not the objective but only one of several tools of development. In this regard *Nemes Nagy* [1998] says that the state and pace of regional development is a complex multi-dimensional phenomenon that can be described only with many indicators. That is why in our study we attempt to measure the state and pace of social and economic development in the area units under review with the help of a complex relative development index created by us and use it to examine the practical implementation of Williamson's hypothesis. Although certain other Hungarian authors have already used complex indicators to measure social and economic development (*Csatári* [1996], [1999], *Dobosi* [2003], *Faluvégi* [2000], [2003], *Hahn* [2004], *Csatári–Farkas* [2006], *Kovacsicsné* [2006], *Nagy* [2006], *Faluvégi–Tibold* [2007], [2009]), these studies have either produced results for a particular year or analyzed social and economic development for two—distant—years and given an assessment for the interim period on the basis of the results of such two years. It is clear from the foregoing that Hungarian literature lacks

complex time-series studies involving multiple indicators<sup>12</sup> and that is why we have conducted our study.

With regard to the foregoing, we are trying to answer the following questions in our study:

- What changes took place in the social and economic development of Hungarian microregions in the period between 1996 and 2007?
- What correlations can be seen between the state of development and the inner differentiation of the area units under study?

As it has already been mentioned above in connection with *Nemes Nagy* [1998], the state and pace of development is a multidimensional phenomenon that is hard to measure and define. Nevertheless, a research study must always clarify the essence of the studied phenomenon. Accordingly, in line with the development approach of *Németh* [2008], we consider more developed, in social and economic terms, the area unit which is better positioned—along the dimensions specified by the study indicators—in space than the other area units or in time than itself.

## 2. Frameworks of the study

With due regard to the time limits of the information available in the data collection period, the analysis covers the period between 1996 and 2007.

For the purpose of setting up an information base for the study, we read not only the authors referred to above but also some other studies that were somehow connected to our work (*Fazekas* [1997], *Molnár et al.* [2002], *VÁTI* [2002], *Lengyel* [2003], *Bíró et al.* [2004], *Barna–Molnár–Juhász* [2005], *Beluszky–Sikos* [2007], *Lukovics* [2007], *Lőcsei–Szalkai* [2008]). Based on the studies and our own technical considerations, we collected for each of the twelve years under study a total of 140 municipality-level and microregion-level base data<sup>13</sup> that were used to generate for each area unit of each study year a total of 220 ratios<sup>14</sup>, which were then considered the base indicators of our study.

Based on our previous studies and the practice applied by other authors (*Csatári* [1996], [1999], *Faluvégi* [2000], *Molnár et al.* [2002], *ifj. Lőkös–Lőkös* [2003], *Obádovics* [2004], *Ritter* [2008], *Németh–Kiss* [2007]), we have

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<sup>12</sup> This is what *Nemes Nagy* [2005<sub>b</sub>] means by saying that “domestic research does not go beyond the static assessment of area structures” (p. 12).

<sup>13</sup> Data from the National System for Regional Development and Physical Planning were used for the study.

<sup>14</sup> The 220 study ratios described the following fields: demographics (15), business potential (38), income (23), capital investments (6), unemployment (14), tourism (48), infrastructure (16), human infrastructure and human capital (35), municipality budget (11), environmental load (14).

excluded Budapest from the study due to its dominant position in the country and the resulting distortion impact on the findings. Therefore our study involved a total of 173 microregions and—in view of data availability—3124 municipalities<sup>15</sup>.

### 3. Determining the level and pace of social and economic development

The large number of initial indicators enabled us to pick the indicators from several similar ones for the final study that were most suitable in terms of technical and mathematical aspects.

As to technical aspects, the following considerations were thought important:

- the indicators must provide the widest possible, yet detailed and transparent coverage for the dimensions of social and economic development;
- in cases where a dimension is characterized in a detailed manner, not a single part of the entire picture must be left out as it would entail loss of information;
- each dimension must be characterized with about the same number of indicators in order to avoid any extreme under- or overrepresentation of certain dimensions;
- the indicators must measure the same impact only once in the model.

As to mathematical aspects, main component analysis<sup>16</sup> parameters were considered<sup>17</sup>, according to which:

- the communality value of the indicators must be the highest possible but minimum 0.25
- the main components having an eigenvalue above one must retain the highest possible share but minimum 60% of the total deviation of the standardized indicators<sup>18</sup>
- the KMO value of the study indicator structure must be the highest possible but minimum 0.5

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<sup>15</sup> Consequently, a total of 3297 area units were involved in the study.

<sup>16</sup> It should be noted that the purpose of main component analysis was not to capture the dimensions (main components) of the process under study but to identify an indicator structure that is a source of time and area information, suitable for statistical weighting and, at the same time, that represents a continuous system.

<sup>17</sup> See the referred parameters in the publications of *Szelényi* [2004], *Székelyi–Barna* [2005], *Ketskemény–Izsó* (2005), *Sajtos–Mitev* [2007].

<sup>18</sup> As to retained variance, it should be noted that according to *Székelyi–Barna* [2005], 33% is an acceptable level.

- the number of area units involved in the main component analysis must be at least five times the number of indicators that make up the final indicator structure

As a first step, we performed a selection of indicators for the first and last year of the study period at the level of microregions by conducting a main component analysis of the initial set of indicators and, after the exclusion of the indicator with the lowest communality and MSA value, by performing another analysis. This procedure was repeated until we arrived to a perfect structure in terms of mathematical criteria. Then we made a technical assessment of the filtered indicators and performed the required adjustments with a view to causing the least possible damage to the already achieved mathematical criteria. As a next step, we conducted the main component analysis, with the already established indicator structure, for each year of the study period at the level of microregions and municipalities. Then, strictly in line with the already fulfilled technical criteria, we replaced the indicators to perform some minor but absolutely necessary adjustments that were needed in order to improve compliance with the mathematical criteria without damaging the already fulfilled technical criteria. As a result, we have identified the following 34 indicators<sup>19</sup> for each year of the study period and for each area unit under study:

1. Population density (persons/km<sup>2</sup>)
2. Resident population aged below 15 years/resident population aged above 60 years
3. Balance of migration/1,000 inhabitants
4. Natural reproduction /1,000 inhabitants
5. Number of enterprises in the building industry/1,000 inhabitants
6. Number of enterprises in mining, processing industry, electricity, gas, heat and water supply/1,000 inhabitants
7. Number of enterprises in agriculture, forestry, game management and fishing/1,000 inhabitants
8. Number of enterprises in the services sector/1,000 inhabitants
9. Corporate income tax payable/inhabitant
10. Net export sales/inhabitant
11. Total domestic income/inhabitant
12. Number of persons receiving regular social aid from municipality/population, %

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<sup>19</sup> Demographics 1–4.; Business potential 5–8.; Income and aids 9–12.; Unemployment and human capital 13–17.; Tourism and trade 18–21.; Infrastructure 22–27.; Human infrastructure and human capital 28–34. Nevertheless, although certain initial dimensions were not included in the final indicator structure for mathematical reasons, their impact could be substantially felt in the above 34 indicators.

13. Number of registered unemployed without primary school education/working-age population, %
14. Number of registered unemployed with primary school education/working-age population, %
15. Number of registered unemployed with secondary school education/working-age population, %
16. Number of registered unemployed with higher education/working-age population, %
17. Number of long-term (over 180 days) registered unemployed/registered unemployed, %
18. Number of restaurants, patisseries, bars and wineries/1,000 inhabitants
19. Number of retail shops (excluding pharmacies)/1,000 inhabitants
20. Foreign guest nights spent at places of accommodation/1,000 inhabitants
21. Domestic guest nights spent at places of accommodation/1,000 inhabitants
22. Number of residential units built during the year (excluding resort places)/housing stock, %
23. Housing stock/1,000 inhabitants
24. Sewer length/water conduit km
25. Number of gas consuming households/housing stock, %
26. Number of cars at year end/1,000 inhabitants
27. Number of main telephone lines/1,000 inhabitants
28. Number of qualified nursery attendants/1,000 nursery-age inhabitants
29. Number of kindergarten teachers/1,000 kindergarten-age inhabitants
30. Number of full-time primary school teachers/1,000 primary school-age inhabitants
31. Number of full-time secondary school teachers/1,000 secondary school-age inhabitants
32. Number of family physicians/1,000 inhabitants
33. Number of mother and infant care nurses/1,000 nursery-age inhabitants
34. Number of cinema visits/ 1,000 inhabitants

In view of the established technical criteria, the above indicator structure is considered suitable for the description of the phenomenon under study. The human field may seem a bit overemphasized but it is evident that business potential, income, tourism and trade are all economic fields. Also, unemployment is again, at least partly, an economic field in this breakdown. In addition, infrastructure is also not independent of the economy, so the overemphasis is not relevant at all.

At the level of microregions our indicators fully satisfy the required mathematical criteria<sup>20</sup>. Compliance at the level of municipalities<sup>21</sup> is 100% for

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<sup>20</sup> Minimum values: communality 0.30; retained variance 71.9%; KMO 0.869

KMO, 98% for communality and 33% for retained variance. At the level of municipalities our indicator structure fails to reach the established statistical threshold in certain cases but given that the sewers indicator having a lower than expected communality is the sole factor to represent environmental load, it was allowed to remain in the study for technical reasons. As far as retained variance is concerned, it should be noted that, according to *Székelyi-Barna* [2005], 33% is already acceptable. Furthermore, *Molnár et al.* [2002] produce their aggregate indicator—to measure the complex development of domestic municipalities—from the linear combination of such main components which have a total retained information content of 48.7%. In view of the foregoing, the identified set of indicators is considered suitable, also in terms of mathematical considerations, for the implementation of the study at the level of municipalities and microregions.

The promising KMO values obtained for the indicator structure prove that the identified set of indicators forms a closely integrated system with a strong latent structure being in the background (*Székelyi-Barna* [2005], *Ketskemény-Izsó* [2005]). Therefore it is suitable for describing social and economic development in the form of an aggregate index. As it has been already mentioned above, some other Hungarian authors also used aggregate indicators in order to assess the development differences among domestic microregions. In addition, the regions eligible for area development support are also identified through the use of a complex indicator based on a scoring procedure (67/2007 (VI. 28.)). However, in the above cases it is not an objective to perform time-series analyses or to consider the study indicators with different weights. In this study the indicators were weighted with the communalities determined during the main component analysis. As the communality of the indicator simply means how close is the relationships between such indicator and the indicator structure, if the indicators are weighted with their own communality then the bigger weight will be assigned to the indicator that forms a more integral part of the indicator structure and thus provides a bigger part of its own information content to the system consisting of the indicators. For similar reasons, *Lukovics Miklós* [2007] uses the square root of communalities for weighting in his doctoral thesis<sup>22</sup>.

For the purpose of aggregation, after the determination of the weights the indicator values were normalized with the help of the formula used also for HDI creation (see for example: *Husz* [2001], *Obádovics-Kulcsár* [2003], *Rechnitzer-*

<sup>21</sup> Minimum values: communality 0.188; retained variance 55.1%; KMO 0.829

<sup>22</sup> In this case no square root was taken of the communalities as in this manner the weight values vary in a wider range and the weighting of indicators becomes more differentiated. It should be noted here that *Veres Lajos* [2001] also uses main component analysis in his doctoral thesis to create the TRANS indicator. Furthermore, *Molnár et al.* [2002] and *Biró et al.* [2004] use the main components' retained variance to weight their own indicators in order to arrive at the complex relative development index.

*Smahó* [2005], *Csıte–Németh* [2007], *Józan* [2008], *Egri–Ménes–Tánczos–Törőcsik* [2009]<sup>23</sup>. When assessing the base formula of HDI, *Trabold–Nübler* [1991] point out that the normalized value of the relevant indicator of an area unit will change from one year to another also in the case when the actual indicator value does not change but the extreme values are modified. It means that the time-series comparison of normalized values is impossible. This problem can be eliminated if the extreme values are fixed. If the extreme values of the given indicator are identified with the highest and lowest values measured in time and space then the area units under study will become comparable in both time and space from zero to one along the given indicator. As to the given normalized indicator the area unit found in the worst position for the entire period in any year in terms of such indicator will be assigned 0, while 1 will be assigned to the area unit that is best positioned in terms of the given indicator. It is summarized in formula (1).

$$N_{ijk} = \frac{X_{ijk} - X_{j_{\min}}}{X_{j_{\max}} - X_{j_{\min}}} \quad (1) \quad FI_{ik} = \frac{\sum_{j=1}^{34} c_{jk} * N_{ijk}}{\sum_{j=1}^{34} c_{jk}} \quad (2)$$

where:

- $X_{ijk}$  means the value of indicator  $j$  of area unit  $i$  in year  $k$
- $X_{j_{\min}}$  and  $X_{j_{\max}}$  mean the min. and max. value of indicator  $j$  in space and time
- $c_{jk}$  means the communality of indicator  $j$  in year  $k$
- $N_{ijk}$  means the normalized value of indicator  $j$  of area unit  $i$  in year  $k$
- $FI_{ik}$  means the complex relative development index of area unit  $i$  in year  $k$
- $1 \leq i \leq 3297 \quad 1 \leq j \leq 34 \quad 1 \leq k \leq 12$

It is clear from the foregoing that the value of an indicator normalized according to formula (1) will show the relative position of the given area unit compared to itself in the function of time and compared to the other area units in the function of space and time. This enables us to aggregate thirty-four indicators by area unit and to position each area unit on the basis of aggregate indicators. For such purpose we used formula (2) to calculate the weighted mathematical mean value of the normalized indicators for each year of each area

<sup>23</sup> It should be noted that the values of the unemployment and social aids indicators were distracted from 100% during normalization to ensure that the higher values mean better positions also in the case of these indicators (*Nemes Nagy* [2005<sub>a</sub>]).



unit. The aggregate indicator obtained this way was called complex relative development index.

#### 4. The testing of Williamson's hypothesis in time dimension

As it is clear from various publications cited in connection with the hypothesis tested in this study, deviation type indicators can be efficiently used to measure changes in development differences. *Nemes Nagy* [1998] also notes that following the normalization of indicators their deviation and relative deviation will change. Therefore, prior to determining the deviation type indicators of the complex relative development index, we examined the time-series correlation between the deviation and relative deviation of the original and normalized indicators. According to the obtained results, there is a function-like positive correlation between the deviation of each original and normalized indicator. It means that a rise in the deviation of the original indicator is coupled with a linear rise in the deviation of the normalized indicator. According to the results regarding the relative deviation, there is a function-like correlation between the original and the normalized values in the case of twenty-eight indicators. Four indicators showed a correlation above 0.99, while two indicators<sup>24</sup> displayed only poor or average correlation. Our results confirm that analyses based on deviation type indicators can be efficiently performed. However, it should be noted that no conclusions can be drawn from individual indicator values given that they always change during the normalization process. It means that only the change of such values in the function of time can be evaluated. In view of the foregoing, the widespread use of the indicator and the easy interpretation of the results, we used relative deviation to measure the changes in the state of development between microregions, which is shown in the function of time in *Figure 2*.

The data show that the development differences between microregions increased during the study period. However, based on the extremely stable regression function, it is also clear that the differentiation of microregions had a decreasing trend all through the study period. It means that although the development differences increased in the average of the study period, the rate of such increase gradually reduced. When evaluating the results together with the findings of *Nemes Nagy-Németh* [2005] it can be seen that the differentiation process measured on the basis of complex development shows a time shift in comparison with the income-based differentiation process. While the issue of income shows a stagnation at a high level of differentiation from the mid 1990s until 2000, complex development starts to display a stagnating tendency only after 2003. The slight nivellation detected for the income processes cannot be

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<sup>24</sup> Balance of migration/1,000 inhabitants; Natural reproduction/1,000 inhabitants.

seen in the pattern of complex development differences. The change in complex development differences after 2000 means—in line with the findings regarding the income processes—that the pace of differentiation decreases slowly but firmly from 2001, followed by a nivellation between 2003 and 2005. However, it is only temporary and therefore such nivellation does not represent a trend.

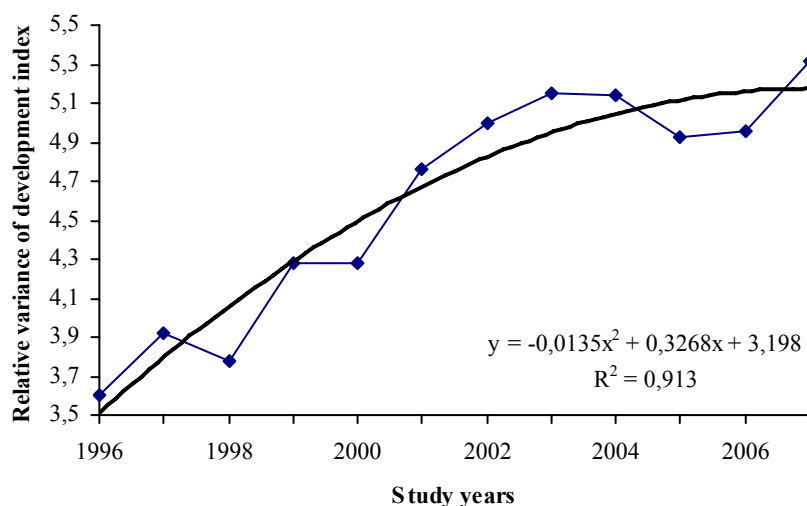


Figure 2. The process of differentiation in Hungarian microregions on the basis of complex development<sup>25</sup>

The time shift between the income-based and complex development differentiation processes probably comes from the fact that, on one hand, the changes of income conditions become visible much faster in the differentiation processes and, on the other hand, that complex development is obviously influenced by several factors, which means that the factors of differentiation were more numerous and powerful than the factors of nivellation during the period that followed the change of the political system. As far as the comments made with regard to *Figure 1 and 2* are concerned, it can be stated that, although showing some delay in comparison with the income processes, Williamson's hypothesis seems to be valid in the time dimension also for the complex development of Hungarian microregions.

<sup>25</sup> The complex development index was determined also for the entire country. Its value of 0.22 in 1996 increased to 0.25 in 2007, which means that with the passing of time a development also took place at national level.

### 5. The cross-sectional testing of Williamson's hypothesis

In order to answer our second study question, for each year under review a linear regression function was placed over the point diagram generated from the complex development index of microregions and from the relative deviation of municipality-level complex development indexes within the microregions. The slope of the regression functions clearly shows the direction and intensity of correlation between the state of development and inner differentiation of the microregions for a given year. By plotting the annual slope of such functions in the function of time it is possible to see the direction of processes that took place in the field of microregion-level development and inner differentiation during the study period.

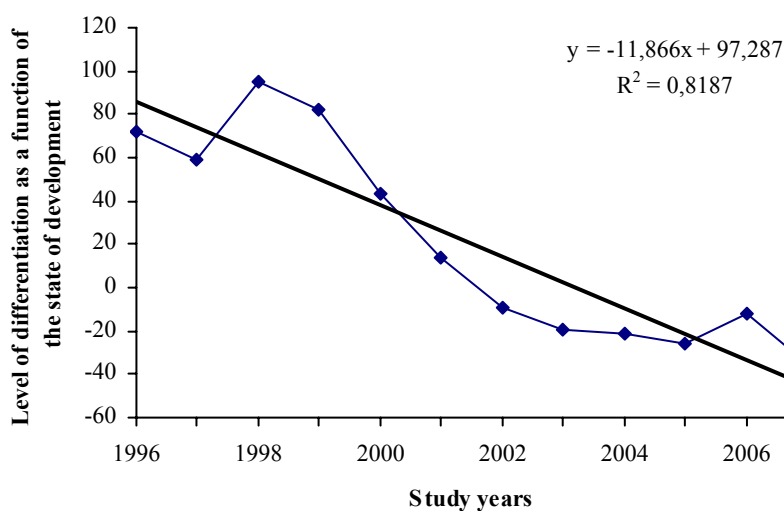


Figure 3. Correlation between the state of development and inner differentiation of microregions in the function of time

The diagram and regression function in *Figure 3* show that the inner differentiation of the more developed microregions tended to be higher from 1996 until 2001. However, the differences in the inner differentiation of such area units tended to level. As from 2002 the correlations became just the opposite: the less developed microregions became more differentiated. This tendency continued until the end of the study period i.e. the differentiation of the less developed microregions tended to increase in comparison with that of the more developed microregions. The direction of the revealed processes is the same as the direction expected under Williamson's hypothesis. According to the

correlations, before 2002 most microregions were found on the uphill section of the inverse U-shape curve but after 2002 most of them slipped to the downhill section. It means that during the study period they gradually shifted from the uphill section to the downhill section. When evaluating the results together with the findings of *Németh–Kiss* [2007] it is clear, as seen during the time dimension analysis, that there is a shift (delay) of the complex development process in comparison with the income-based differentiation. When examined on income basis, most microregions are found on the downhill section of the inverse U-shape curve as early as from 1990, which means that the more developed area units tend to be less differentiated. However, when examined on the basis of complex development, most microregions are found on the downhill section of the inverse U-shape curve only after 2001, which means that the more developed area units tend to become less differentiated only in this period. As to the time difference between the two processes, the description given above for the time dimension analysis may be held applicable.

The fact that the direction of the revealed processes is in line with the expectations attached to Williamson's hypothesis does not automatically mean that the hypothesis fully holds true also for the cross-sectional examinations. Actually, direction says nothing about the shape of processes. Thus, as a next step, we tried to confirm whether the complex relative development and the inner differentiation of Hungarian microregions can be described with an inverse U-shape curve. In order to answer the question, for each year under review a second-degree polynomial regression function was placed over the point diagram generated from the complex development index of microregions and from the relative deviation of municipality-level complex development indexes within the microregions. Under our assumption, if the inverse U-shape does exist in the above system of correlations then the second-degree polynomial regression function must be a negative parabola in at least one of the years of 2001 and 2002. We expect a negative parabola in one of these two years because, as it is clear in *Figure 3*, the slope of the regression line turns from positive into negative exactly in this period, which means that most microregions must change position from the uphill section to the downhill section of the inverse U-shape in this period. In view of the parameters of the generated regression functions (*Table 1.*), it is clear that a convex curve is obtained in each year of the study period<sup>26</sup>, which means that none of the years under review produced the inverse U-shape in the cross-sectional examinations.

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<sup>26</sup> It should be noted here that both the shape and direction of the regression function obtained by *Németh–Kiss* [2007] for year 2004 are identical with the shape and direction of our function.

Table 1  
Main parameters of the second-degree regression correlation for the complex development and inner differentiation of Hungarian microregions

Year	a*	b**	c***	min. point	R <sup>2</sup>
1996	4108.42	-1764.48	192.72	0.215	0.230
1997	4791.92	-2099.19	232.51	0.219	0.303
1998	6486.64	-2861.86	319.10	0.221	0.356
1999	4658.80	-2007.18	219.72	0.215	0.309
2000	4129.52	-1934.14	229.70	0.234	0.253
2001	4222.51	-2004.62	241.40	0.237	0.210
2002	4953.00	-2380.30	289.75	0.240	0.253
2003	4190.17	-2004.31	243.62	0.239	0.214
2004	3385.26	-1640.85	202.60	0.242	0.171
2005	3293.35	-1705.76	224.58	0.259	0.157
2006	3828.46	-1926.86	246.26	0.252	0.097
2007	2594.93	-1349.16	179.21	0.260	0.143

\* a: determinant of second-degree term

\*\* b: determinant of first-degree term

\*\*\* c: constant

For the purposes of demonstration we have inserted *Figure 4* showing the shape of the regression functions obtained for 1996, 2002 and 2007<sup>27</sup>. Year 2002 was selected from the 2001/2002 period because, as it is clear in *Figure 3*, this is the year when the slope of the regression line is closest to zero<sup>28</sup> i.e. this year is closest to the peak of the inverse U-shape. *Figure 3 and 4* and *Table 1* clearly show that the correlation between the complex relative development and the inner differentiation of Hungarian microregions does not fully produce an inverse U-shape. In fact, only the uphill and downhill section can be detected, while the concave section expected between these two does not appear. Thus it can be concluded that in the study period the group of least differentiated microregions (range around the minimum value of the functions) is constantly moving from the least developed microregions towards the most developed ones as it is evidenced also by a rising trend of the minimum point of the functions (*Table 1*). This shifting process is probably not over yet given that, according to the regression function of 2007, the group of least differentiated microregions has not fully moved yet to the maximum point of the development scale. It is interesting to see that in 1996 the inner differentiation of the most developed

<sup>27</sup> For better visibility, the Figure omits the data points belonging to the microregions and shows only the regression functions.

<sup>28</sup> The slope is 13.4 in 2001 and -9.6 in 2002.

microregions was almost the same as that of the least developed microregions in 2007<sup>29</sup>. Actually, this level of differentiation represented the maximum level of inner differentiation in both years. The minimum level of inner differentiation displays a similar correlation at the opposite end of the development scales except that in this case the relative deviations show somewhat greater differences<sup>30</sup> and that in 1996 the minimum level of inner differentiation does not apply exactly to the least developed microregions, just as in 2007 it does not hold true only for the most developed ones.

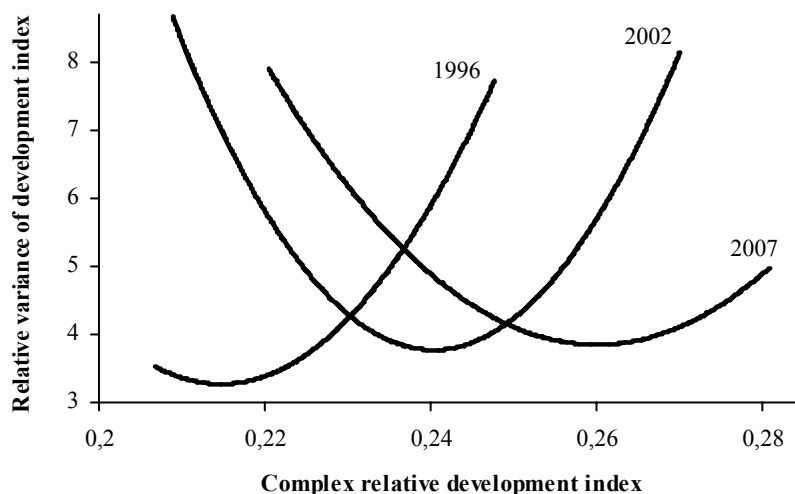


Figure 4. Correlation between the complex relative development and the inner differentiation of microregions in certain years

## 6. Conclusion

For the period between 1996 and 2007 a complex relative development index has been worked out to help the time and space analysis of the state and changes of social and economic development in Hungarian municipalities and microregions. Based on the said development index, the study aimed at testing Williamson's hypothesis so that we can answer two questions: what changes took place in the social and economic development of Hungarian microregions in the study period and what correlations can be seen between the state of

<sup>29</sup> Relative variance at the highest level of development in 1996: 7.718. Relative variance at the lowest level of development in 2007: 7.905.

<sup>30</sup> Minimum relative variance: 3.270 (1996) and 3.847 (2007).

development and the inner differentiation of the area units under study? According to our findings, the development differences between such area units increased during the study period and the differentiation process follows a trend assumed under Williamson's hypothesis. When our results were assessed together with the findings of studies that analyzed the development differences on income basis, it became clear that the differentiation process examined on the basis of complex development shows a shift (delay) in comparison with the income-based differentiation process. According to our cross-sectional examinations, the direction of the correlation between the state of development and the inner differentiation of microregions in the study period follows Williamson's hypothesis but the shape of processes does not follow the assumed inverse U-shape. In this case the issue is that during the study period the group of least differentiated microregions is constantly moving from the least developed microregions towards the most developed ones. Accordingly, in each of the years under review the correlation between the state of development and the inner differentiation is characterized by a normal U-shape. The uphill section dominates in the first half, while the downhill section is stronger in the second half of the period. When comparing our results with the findings of the income-based studies referred to above, we were able to see the already mentioned time lag and to observe the same shape and direction of the regression functions.

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- 67/2007. (VI. 28.) országgyűlési határozat a területfejlesztési támogatásokról és a decentralizáció elveiről, a kedvezményezett térségek besorolásának feltételrendszeréről.

# A Theoretical and Growth Accounting Approach of Jobless Growth

**DOMICIÁN MÁTÉ<sup>31</sup>**

*Department of Marketing and Management  
Faculty of Economics and Business Administration University of Debrecen  
Kassai út 26, Debrecen 4028, Hungary  
domician.mate@econ.unideb.hu*

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In the mid 1980s during the “Great Moderation” major economic variables such as GDP, monthly payroll employment and the unemployment rate etc. began to decline their volatility. This study focuses on the so-called jobless growth phenomenon, in the long run. In this paper it is also emphasised that the main theoretical explanations of this process are labour market imperfections, i.e. the sectoral-shifts and crowding-out effects, the loosening fiscal policy and wage pressure of public employment. Finally, components of economic growth in previous decades are estimated with a simple growth accounting method and the effects of activity, employment, participation and unemployment rates are also taken into account. Analysing the data on OECD countries, this paper concludes that the link between labour and output has changed.

*JEL Classification: J64, J24, O49.*

*Keywords: Unemployment, Economic Growth, Growth Accounting*

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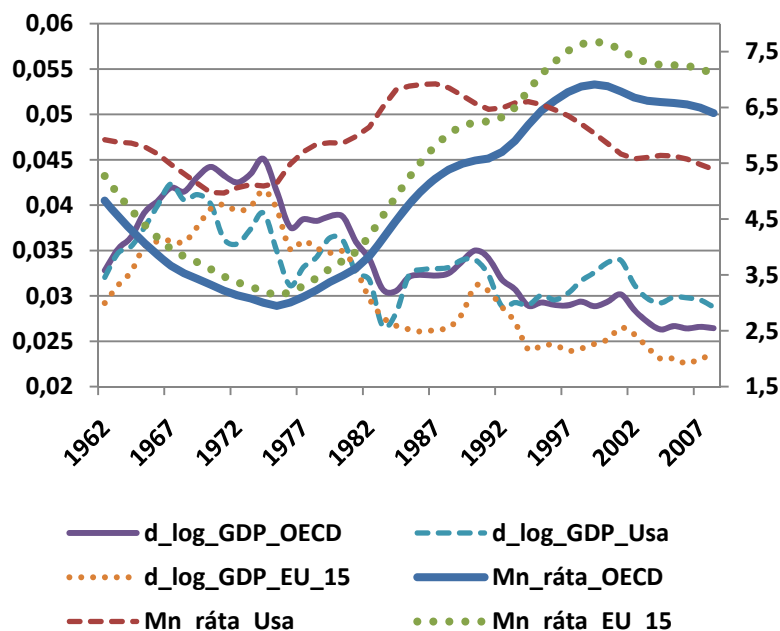
## 1. Introduction

During the last two centuries the developed world experienced steady and relatively stable economic growth, contributing to a constant improvement in living standards. Unemployment got into a primary focus of macroeconomics in the early 20<sup>th</sup> century, partly as a result of the Great Depression, and again came to the forefront of research in the 1970s when the economic boom of the 1950s and 60s were replaced by stagflation. The year 1984 identified as an important year in macroeconomics, as a start of what some economists called the “Great Moderation” (Summers, [2005]). The term comes from the features of U.S. economic activity, which suddenly and dramatically became less volatile and this also has persisted in other OECD countries to this day. In the mid 1980s the major economic variables such as GDP, the unemployment rate, the monthly payroll employment etc. began to decline their volatility (Figure 1.).

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Thanks to the low volatility and periods of “secure” economy, mainly households and companies were seen to advance a more stable employment environment. Serious debates have been occurred to explain this phenomenon. Essentially there is no consensus but generally three main types of theories have been suggested for this change, i.e. improved *macroeconomic policies*, the *structural changes* and only a “good luck” (McConnell–Perez-Quiroz, [2000]), (Stock–Watson, [2002]).



Source: own calculation based on data from GGDC and AMECO Databases.  
Notes: we used the logarithm of GDP in 2000 constant prices and the method of Exponential Moving Average (EMA)

Figure 1. Changes in economic growth (left axis) and unemployment rate, 1960-2008

One important common focus of these macroeconomic theories whether there is a policy that could achieve long-term sustainable economic growth, while also create jobs or decrease unemployment. Unfortunately, recent findings of the mainstream business cycles theories are still unclear in practice, and some questions also remain for decision makers (Mankiw, [1999]). Hence the author accepts the fundamental assumption of the neo-Keynesian economics school, which emphasised that the neoclassical market-clearing models could not give unambiguous and complete explanation for business cycles and changes in employment. Though, the other relevant theories and models of Real Business

Cycle (RBC) School have proven sometimes quite accurate in reproducing cycles (*Kydland–Prescott* [1982]).

The starting point of this study is that the labour market imperfections might be responsible for low employment and long-term unemployment. Although the relationship between economic growth and job creation seems to have loosened during last decades, this cannot be considered as a new phenomenon. The U.S. economy's activity has been examined by the institute of the National Bureau of Economic Research (NBER) and in the 1970s it was found that during recoveries, right after recessions, *unemployment decreased a lesser extent than one would expect based on the growth of output*. This phenomenon was determinate by economist as *jobless growth*.

This obviously contradicts the traditional *Okunian* postulate about the negative relation between output and unemployment (*Okun* [1962]). Okun's law has been checked empirically many times, and this negative correlation still seems to exist. This is also confirmed by *Knotek* [2007], who estimates the coefficient between growth of output and unemployment through several decades and finds that the current unemployment rates (from the middle 1980s on) respond less to the changes of output than they did (from the 1960s until 80s). These findings can be reconciled if we assume that the correspondence between these two factors have been changing over time.

Thus, the primary aim of this paper is to contribute to better understand the jobless growth phenomenon in the long run. In recent decades, apart from the fluctuations, employment, as well as unemployment and labour activity were seemed to less responsive to economic growth. The paper is organized as follows. In section 2, we provide the relevant theoretical framework of jobless growth - labour market imperfections such as distorted government policies and other institutional interactions being core elements of these explanations. In Section 3, we develop a simple growth accounting method to factorize the components of output growth based on this concept.

## 2. Theoretical approaches of jobless growth in the long run

The theme of jobless growth is not a purely macroeconomic problem, so it should be examined from an institutional perspective as well. Nevertheless, according to the traditional neo-Keynesian perception, the different types of market failures are essential to understand labour market imperfections. Hence, economic fluctuations do not reflect Pareto-efficient solutions in the choices of consumers and technology changes, but these could be much easier explained by market failure phenomena (*Mankiw* [1990]). Following this assumption, the labour market imperfections may be responsible for jobless growth, as well as the operation of market barriers might affect the long-term economic relationship between economic growth and employment. There are several

assumptions which emphasize the role of the state in labour market imperfections. These are partly based on the traditional *Hayekian* coercion perspective (*Hayek*, [1960]), wherein the general aim of the state is to survive permanently. This interest manifests itself in the maintenance of bureaucracy, which was consequently reflected by an increasing share of public employment. Some theories of jobless growth are based on role of state distortions. So what are these relevant approaches?

The phenomenon of jobless growth can be caused by loosening fiscal policy in several ways (*Boeri–Garibaldi* [2004]). First, higher government expenditure leads to the classic crowding-out effect via increasing real interest. The high interest rates will reduce the demand for private investments, also causing less demand for labour. In addition, fiscal policy changes alter the expectations of individuals and their perception of the government's credibility. However, in the future, a loosening of fiscal policy might increase the tax burden. In other words firms perceive this as an ominous sign to reduce their future investments and employment.

The second crowding-out channel has effect on public employment. Naturally, the main objectives of public and private employment are very different. Whereas private employment is aimed to maximize firms' profits, the objectives of public employment are similar to the politicians (*Borland–Gregory* [1999]). Following this explanation, only public employment could provide certain public goods (i.e. the court of judicature, public safety etc.), or institutions that private sector cannot afford (unemployment benefits, health care and public education systems etc.). Public employment is often considered to crowd out private jobs by increasing wage pressures and by competing for products which could substitute those produced by the private sector. All in all, the impact of public on private jobs depends on three key features:

(1) The degree of substitutability between the production of the public and private sector. Obviously, the public goods created in sectors i.e. police, justice, army etc. are not substitutable by private production and *cause smaller crowding out effect* on private jobs than transportation, education and health care, where private activities can play an important role (*Algan et al.* [2002]).

(2) The creation of public jobs may improve the expected gains of unemployed workers and also the size of the rents received by employees, which increase wage pressure and decrease private employment (*Holmlund* [1997]). In other words the higher wages, fringe benefits, job security and lower effort than in the private sector is likely to attract many individuals into the public sector, and to crowd out many private jobs. 'Bad' public jobs with low wages, high insecurity and hard working conditions, on the other hand, are not likely to attract many workers. Nevertheless the disproportionate increase in real wages in public sector deteriorates the fiscal balance even more.

(3) The cost of public jobs generally implies an increase of public expenditure. It could reduce the profitability of firms after taxation and also future investments. In both cases, the direct effect is negative on the demand and productivity of the private sector (*Boeri–Garibaldi* [2006]).

The empirical literature confirms unambiguous impact of public employment on labour market performance. Algan et al. [2002] estimate that the creation of one public job in some OECD countries destroys about 1.5 jobs and adds 0.3 unemployed. Moreover the crowding out effect of public jobs does not seem to be a matter of size. It heavily depends on the features of public jobs created, degree of substitutability with private production, and the size of rents in the public sector (differences in wages, working conditions, and the extent of misuse) etc. *Boeri et al.*, [2000] examine the correlation between non-agricultural and public employment rates, and estimate that one public job crowds out approximately 0.3 private jobs.

Thus, the literature is quite divided about the role of structural-shift effects in jobless growth. Some of them are fairly sceptical (*Abraham-Katz* [1984]), while others like *Sakata* [2002] finds evidence that short-term shifts of employment in certain sectors affect economic growth. Indeed, *Groshen and Potter* [2003] emphasize that after various major economic crises, during recovery, structural effects play increasingly greater role in economic changes. Others, like *Loo* [1998] test the relevance of different monetary and fiscal variables to explain changes in unemployment in the long-run. *Onaran* [2008] mainly focuses on the new Central and Eastern European EU-member countries and especially the changes in manufacturing sectors using static and dynamic panel regression models. He concludes that in a number of countries and industrial sectors the employment and wage changes are less responsive to the effects of economic growth. Others (*Li et al.* [2007]) examined the effects of the so-called *Schumpeterian* creative destruction in the Irish manufacturing sectors. In this concept the role of industry is to generate the maximum possible output and wealth in highly productive enterprises, while the main employment benefits are generated and captured outside the manufacturing entities.

The author's earlier research (*Máté*, [2008]) dealt with the effects of sectoral shifts in the sense of productivity and employment changes. According to the results there are significant structural employment shifts in certain sectors, but these changes play a decreasing role in some OECD countries<sup>32</sup>. In other words, the structure of employment adapts very slowly to changes in productivity. Furthermore, this study was pointed out that the *structural losses* hypothesis of

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<sup>32</sup> These findings are essentially consistent with the results of *Timer and Szirmai* [2000], and *Fagerberg* [2000].

Baumol (*Baumol* [1967])<sup>33</sup> was mainly significant in branches dominated by less-qualified workforce. Hence, these factors could affect aggregate productivity negatively, but these sectors cannot quickly adapt to structural changes.

Some theoretical approaches emphasize the indirect effects of labour market institutions and their interactions, which might influence the impact of economic growth on employment. The question is only how institutions matter. Labour market institutions are a system of laws, norms, or conventions resulting from a collective choice and providing constraints or incentives that alter individual choices over labour (*Boeri–van Ours* [2008]). The perspective of endogenous growth theories (*Barro–Sala-i-Martin* [1999]) points out that the most important mechanisms by which labour market institutions may affect productivity growth are mainly through physical and human capital accumulation and technological innovations. In addition *Layard and Nickel* [1999] conclude that under certain conditions trade unions, and other institutions systems have a plausible impact on equilibrium unemployment and on long-term productivity as well.

### 3. Economic growth accounting approach in OECD countries

As a result of physical or human capital accumulation, or simply technological changes, the GDP would apparently grow in the long run. Because of this we have to examine and factorize the components of GDP growth with a growth accounting method. The results reflect that economic growth cannot be only explained by an increase of capital stock, and changes of population or labour force rates. It is expected that either the process of technological development or the different interactions of labour market institutions could play a key role in economic growth.

Let us choose a simple neoclassical aggregate production function:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha} \quad (1)$$

where [Y] is the GDP, [K] and [L] are physical and labour capital in the period [t], and [A] naturally represents a ‘catch all’ factor for technology, role of institutions and other relevant forces which measures how productively capital and labour are used in production. Thus, assume a constant return to scale.

Denote the active to total population rate by  $[a_t] = N_t/P_t$  where [N] and [P] are the active and total population. Similarly define the employment ratio<sup>34</sup>  $[e_t] =$

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<sup>33</sup> According to the *Baumol’s* theoretical structural changes hypothesis of productivity the employee are directed from the mainly progressive industrial branches to the weaker productivity service sectors, hence the aggregated productivity could decrease.

<sup>34</sup> Definition of OECD and EUROSTAT.



$L_t/N_t$ . These allow us to express labour as follows:  $[L_t] = e_t * N_t = e_t * a_t * P_t$ . Hence, the production function yields:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha} = A_t K_t^\alpha (e_t a_t P_t)^{1-\alpha} \quad (2)$$

Taking both sides of equation their logarithm leads to the following log-linear form:

$$\ln Y_t = \ln A_t + \alpha \ln K_t + (1 - \alpha) \ln e_t + (1 - \alpha) \ln a_t + (1 - \alpha) \ln P_t \quad (3)$$

Introduce unemployment to the equation as follows. Let us denote the unemployment rate as  $[u]$  where  $[u_t] = U_t/LF_t$ . Thus, the labour force  $[LF]$  equals to the sum of labour  $[L]$  and unemployed  $[U]$ , so  $[LF_t] = U_t + L_t$ . Hence  $[L_t] = [LF_t] - u_t * [LF_t] = [LF_t] * (1 - u_t)$ . We also know that the economic activity (participation) rate  $[p]$  is estimated as  $[p_t] = LF_t/N_t$ . Hence the equation of labour can be substituted as  $[L_t] = p_t * a_t * P_t * (1 - u_t)$ .

Since the rate of unemployment is generally not very high (8.6 percent in OECD average), use the approximation that  $[\ln(1 - u_t)] \approx -u_t$ . Hence, replace the labour by the active to total population rate, the economic activity and unemployment rate as the previous (3) equation.

$$\ln Y_t = \ln A_t + \alpha \ln K_t + (1 - \alpha) \ln p_t + (1 - \alpha) \ln a_t + (1 - \alpha) \ln P_t - (1 - \alpha) u_t \quad (4)$$

The differentiation of equations (3) and (4) with respect to time express the growth rate of GDP as a function of the growth rate of its *components* (physical capital, activity, employment and unemployment rates). The residual, that is the part not explained by these factors, is labelled the Total Factor Productivity or TFP, denoted by  $A$ .

Using the time series (1980-2004) of some OECD countries from Groningen University's Growth Accounting Database [GGDC] and European Commission's Annual Macroeconomic Database [AMECO], the accounting results are reported in Table 1. The results are in accordance with the expectations; economic growth after the millennium reduced, the effects of physical capital have been steady at 0.6 and 0.9 per annum. Thus physical capital could have a continually greater weight in equations. Meanwhile the role of the unemployment rate, with the exception of the period 1980-90, had a marginal effect.

Changes in the employment rate or equivalently that of the participation rate contributed to economic growth with a magnitude similar to that of physical capital accumulation. The sign is however not always positive (or negative) in case of the unemployment rate, which resulted in quite significant slowdown of economic growth. Hence, some labour components, according to the theory, played a key and lesser role in economic growth besides the technological shocks (TFP).

Table 1  
Results from growth accounting components, 1980-2004

Average years	$\Delta Y/Y$	$\Delta A/A$	$\alpha \cdot \Delta K/K$	(1- $\alpha$ ) $\Delta a/a$	(1- $\alpha$ ) $\Delta e/e$	(1- $\alpha$ ) $\Delta p/p$	-(1- $\alpha$ ) $\Delta u$	(1- $\alpha$ ) $\Delta P/P$	(1- $\alpha$ )
1980-1990	2,61	1,17	0,72	0,24	0,24			0,25	0,72
1990-2000	2,75	1,37	0,68	0,01	0,22			0,47	0,69
2000-2004	2,51	0,83	0,83	0,01	0,43			0,41	0,66
1980-1990	2,61	0,91	0,72	0,24		0,58	-0,09	0,25	0,72
1990-2000	2,75	1,37	0,68	0,01		0,23	-0,01	0,47	0,69
2000-2004	2,51	0,84	0,83	0,01		0,40	0,02	0,41	0,66

Source: own calculation based on data from GGDC and AMECO Databases.

Notes: we used the Gross Fixed Capital Stock (GFCS) and GDP in constant prices.

Apart from these links with the cycles, it is worth mentioning that the decline in productivity growth as observed in some OECD countries contests the long-run sustainability of high employment growth (EC, [2005]). These doubts are reinforced by possible risks of a decline in labour supply. Indeed, lower labour supply with an increase in labour demand may cause labour shortage sooner than otherwise, implying that the recovery will be jobless or *job-low* growth. A possible interpretation is that companies will not hire new employees in periods of recoveries but rather opt for different strategies to improve their productivity.

### 3. Conclusion

This paper was concerned with the phenomenon of jobless growth. It concludes that the relationship between economic growth and changes in labour market transformed through the last few decades. The author was pointed out that the theme is not a purely macroeconomic problem. Hence, this paper shed light on the main approaches of jobless growth theories. The role of structural-shifts, the crowding-out effects of loosening fiscal policy and public employment, the interactions of labour market institutions were seemed to be essential to understand this phenomenon.

According to the growth accounting results, the employment and participation rates played key role in economic growth beside the TFP, with a

change of magnitude similar to that of physical capital accumulation. Nevertheless, some other—i.e. unemployment—rates less influenced economic growth. Hence, further and more relevant research should aim to reveal the main features and effects of jobless growth phenomenon.

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# The Role of Cultural Tourism in the North-Hungarian Region

ZSUZSANNA T. IGÓ

*Department of Tourism, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
igozs@ektf.hu*

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**T**hematic tours based on cultural values and heritage offer brilliant possibilities for sustainable cooperation based on culture-tourism relationship. This branch of tourism requires relatively low investment and offers excellent possibilities for the diversification of tourist demand and offer both in time and space. The North-Eastern Region of Hungary possesses famous religious and secular vestiges and so thematic tours can also concentrate on the presentation of monuments representing both secular and religious spirituality. It is also important to note that tourist activity in its turn can contribute to the better conservation of the above values in the region. Thematic tours have a considerable impact on the sustainability of tourism and forster joint developments in the region. It is also important to mention that the tourist activity of the region can be integrated into the larger context of European tourist activity through thematic tours (e.g. Paloc Tour, Maria Tour, Wining Tour). In my paper I intend to examine some relevant aspects of the demand for cultural thematic offer and some elements of the competitiveness of the above alternative tourist activity with special emphasis on the fact that 2009 is the year of cultural tourism.

*Keywords:* culture, tourism, thematic tours, regionalism, sustainability

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## 1. Introduction

The many variants of tourism can be rendered into different groups: organised, family, active, passive, eco, rural, sports and cultural tourism. There is plenty of literature discussing the above plurality. Since this has been a recent tendency it makes possible the examination of new terminology as well: to day we can speak about catastrophe, drugs, or sex tourism as well. (2004 tsunami, Amsterdam, Thailand)

Yet, the term cultural tourism seems to be difficult to grasp, probably because of the too many attempts to define it. We can state from the very beginning that culture and tourism are interrelated categories and there is no tourism without culture. I think we should assess cultural tourism from the host's side, and we should take into account the natural values, the architecture and the cultural events when analysing the situation.

I my paper I intend to offer a brief account of contemporary theoretical approaches to cultural tourism as 2009 is considered to be the year of cultural tourism. I hope to offer a comprehensive survey of the structure of the

attractions of the North Hungarian Region and the place it occupies among the other attractions.

Nowadays cultural tourism plays a very important role in the decision making of both native and foreign tourists. Cultural tourism is a branch of tourism in which the cultural motivation of the client is decisive. Cultural tourism is important as it prolongs the tourism season and thus contributes to the reduction of geographical concentration. It reveals local cultural values, preserves and sustains traditions and makes possible a better understanding of world/global and local culture. As the services offered by tourism need constant refreshing it contributes to the diversification of cultural products, and fosters the creation of new values with the possible result that it creates an exclusive alternative to common tourist activity.

The last decades of the 20th century witnessed the multiplication of research projects dedicated to the study and development of tourism. National and international projects alike develop new approaches to major issues. Researchers consider the evaluation of social, economic, and cultural aspects effects to be of major importance. Actually tourism became part of everyday life; it reshapes the rhythm of weekdays as weekends, holydays, make possible shorter or longer journeys more and more often.

From an anthropological point of view it is essential to examine the personality of the tourist, who leaves his/her permanent location and visits national or international urban or rural scapes driven by individual urge. Research has been pursued with regards to the interrelationship, patterns of communication, and durable contacts between tourists and local inhabitants.

Anthropology refers to tourism as a kind of modern rite. (*Graburn*, [1983]) The tourist travels, flees from the monotonous world of everyday work into the world of leisure and pleasure. This process can be divided into three parts on the basis of its structure. The prospective client makes the necessary arrangements, travels to the target destination, and in the second phase he or she gathers first-hand experience, be they positive or negative, he or she makes friends with locals, returns to his or her place of origin, to his or her work and everyday routine.

We can participate in a number of 'rites' due to the possibilities offered by modern tourism. Traditional holydays like Christmas or Easter invite to recreation while other journeys are motivated by random or individual elements connected to a variety of occasions related to the client's life like, reaching maturity, wedding, divorce or mourning.

Tourism is a rite that frees us from the monotony of the daily routine partly through the process of the journey itself. The rite of tourism involves categories like health, holiday, nature, or self-realisation.

In its 1980 Manila Declaration the World Tourism Organisation worked out the new, desirable trends of world tourism and stated the relevant influence of tourism on various aspects of progress with respect to political, social,

economic, cultural and environmental sectors. Tourism plays a relevant role in developing the cultural awareness of contemporary societies and creates ever new possibilities. Journeys can help us understand the culture of other nations and can contribute to the emergence of due respect for intellectual heritage in general. The Manila Declaration was accepted by the World Tourism Conference organised by the WTO on the Philippines in 1980. The Declaration states that tourism should be handled as an essential cultural and economic activity of all nations. It emphasizes the rich texture of tourism, and stresses the important role of internal national tourism. The Declaration surveys the economic relevance of internal tourism and reaches relevant statements with regards to its effects onto cultural, political, social, and environmental issues. The Manila Declaration served as a relevant incentive for the research organised and closely monitored by the WTO in the 1980s.

From among the most influential organisations aiming at research concerning tourism we should mention the Aiest (International Association of Scientific Experts in Tourism), the IAST (International Academy for the Study of Tourism) and the TTRA (Travel and Tourism Research Association). They are organised on membership basis, and differences regarding the orientation and direction of research are relevant. While the Aiest and the IAST gathers experts interested in academic research, the TTRA is rather marketing-oriented, and its members pay greater emphasis to themes directly applicable in tourism.

The research team functioning within IGU (International Geographical Union) also should be remembered due to its theoretical and practical results. The group starts from the platform of geography and its aim is to investigate the questions regarding the development and sustainability of tourism on this basis. The IIPT- t (International Institute for Peace through Tourism), starts from the premises that tourism is a potential source of global peace, and starts from this optimistic vision when it sets to investigate the capacity of tourism to help cope with conflicts, and contribute to the reduction of social differences that might lead to conflicts.

Research of travelling, accommodation and accompanying phenomena is still victim of prejudices and doubts. Many specialists consider tourism to be a frivolous area which is not worth investigating for serious scientists, due to its direct links with mass-culture and leisure time activities (*Dann - Nash - Pearce* [1988]).

Fortunately the tenet that tourism is simply a leisure time activity pursued by people equipped with rucksacks and tents is slowly transforming and a number of experts are trying to elucidate the dilemmas and worth of tourism as a complex and rather complicated activity. In spite of the fact that more and more Institutions of Higher Education are doing their best to address the question with training programmes and expertise, international academic research and science is not equivocal in its assessment of tourism as an independent discipline. As there is plenty of uncertainty regarding the role and place of tourism among

other sciences even those who are in charge of organising tourist activities are confused and certainly cannot document the relevance of the profession.

One of the leading trends of contemporary tourism is meeting the increased demand for high quality cultural values and related events, studying, acquiring first hand experience, entertainment, or rather a complex 'tourist product' involving the above. National heritage illustrates the soul, the intellectual, emotional values and adequate value-systems related to different historical, cultural and intellectual periods. Popular art is part and parcel of the cultural heritage of a nation or ethnic group all over the world. Tourists have shown increasing interest for these vestiges of cultural heritage and their contemporary patterns or exhibits. As cultural tourism is primarily interested in the reinterpretation, the contemporary re-interpretation of values of past periods relies heavily on the aesthetic, moral, ethical and artistic power of cultural heritage.

By the end of the 20th century people are determined to find new ways to communicate with their past and tourism manages to establish a weird relationship in this sense and enables tourists to acquire, and experience past, its traditional value systems, styles and tastes. This is a phenomenon which highlights the relevance of contemporary man's search for originality and identity. Globalisation makes it possible for us to travel and communicate with groups of people who are visibly different from us. A reverse tradition is established and sophisticated intercourse among different cultures is made possible by this increased trend of mobility in time and space. (*Kalocsai* [1998] p. 197)

European Integration is a process which imposes the responsibility of local communities to preserve their centuries old individual cultural identity and heritage. The above responsibility also imposes an inventory of the values involved and requires that the worth of these traditions be interpreted with respect to the local and global factors involved. This tenet also demonstrates the fact that local cultures are relevant for both the global and local definitions of identity.

We can evaluate the vitality of cultural tourism on the basis of the pragmatic and theoretical analyses of demand and offer. The above methodological dichotomy is essential as statistics fail to distinguish between those who visit a target destination for cultural purposes from other groups. Theoretical assessments concentrate on the cultural aspects involved and usually ignore the results of statistics. Their greatest merit seems to be their accurate attempt to define their respective cultural sources when describing individual approaches. This also results in a plurality of valuable conclusions.

Natural and architectural environment, works of art, archaeological findings, various vestiges of intellectual heritage construct, what we define as local culture. Some of these might be of international relevance, others are relevant on



a national or local, communal scale. Cultural tourism concentrates on those aspects of cultural history which contribute to a better understanding of our identity in positive terms. This also means that cultural tourism is supposed to the preservation of local identity and traditions. (*Puczkó-Rátz [1999]*)

It also should be note that preservation of cultural values old and new requires sacrifices on behalf of all the members of the respective community and imposes the responsible support of state, regional institutions, families, and individuals alike. This sacrifice should be, and is more and more often handled as a long term investment leading to harmony between human and natural factors.

## **2. Brief survey of the cultural reserves of the Northern Hungarian Region**

The offers of the region are varied and numerous but the limits of the present paper do not allow a detailed interpretation of this aspect. Natural values, architectural beauties (castles, places, museums), and various events, and festivals organised in the three counties of the region constitute quite a valuable scale of offers for the tourist industry. The Zemplen Cultural Days, Hegyalja Festival, the Miskolc International Opera Festival, the Agria Summer Festival, the Salgotarjan International Dixieland Festival offer excellent opportunities for those interested in cultural events of local and international relevance.

The North Hungarian Region is one of the most varied and colourful regions of the country due to its natural characteristics. The region disposes of a remarkable ecological potential and its natural resources are further increased in value by the thermal, spa, and mineral water springs. 13% of its territory is protected local and national area and it amounts to 22% of the national protected area. The region has geographical, historical and cultural ties with Slovakia. The economic structure of the region has been shaped by its natural resources with its heavy industry and mining. The restructuring of national economy has greatly affected the region as these branches of industry are in decline.

From among its greatest attractions Holloko and its natural environment (1987), Aggtelek Cave System (1995), and the Tokaj historic wining area (2002) became part of the World Patrimony.

The fact that these centres gained the status of World Patrimony led to a considerable increase of tourist visits to the area. This increased demand imposed the elaboration and implementation of complex development plans.

The centres of World Patrimony impose impeccable basics conditions like accessibility, quality services, and all year long rich and high quality programmes on the offer.

The thematic tours organised in the region are a good example of how cultural tourism and other braches of alternative tourism complement one

another. Heritage tourism gains a larger significance than visiting specific monuments as it also involves the emphatic presence of geo-cultural assets. Tours offered as targeting cultural heritage quite often include adjacent themes like tournaments in local castles, feasts, or thematic routes devised by local wine tourism centres.

It is in the interest of the North Hungarian Region to attract the attention of prospective visitors and investors to its cultural diversity. From among the thematic routes concentrating on cultural themes it is worth to mention the Iron-Culture Tour and the Baroque Route, which concentrate on the history of mining and iron and steel production and art history respectively.

In Nograd County there are tours which present the local traditions, folklore, folk music, national costumes, gastronomy, and architecture of the area. One of the most relevant examples of the interrelationship between traditional and contemporary thematic branches of tourism in the North Hungarian Region is the Paloc tour thematic tour. The tour concentrates on the idea of the preservation of the values of folk-art through the presentation of rural lifestyle characteristic for the region.

The cooperation between Heves and Nograd Counties greatly contributed to the success of the Paloc Route. The story reaches back to the nineties. The basic concepts of the Heves County board (1997) formulated the principles which later contributed to economic growth. One of the most important principles was that the seasonal character of tourist activity should be diversified so as to allow a four-seasons activity instead. As smaller settlements also joined the programme it became possible to diminish the concentration in time and space of the tourist activity in the region and the increase of tourist arrivals and nights. (*Kiss J. Paloc Road*, [2005])

The INTERREG programme supported crossing political borders, at the expense of cultural boundaries and the joint activity with Slovakia resulted in the expansion of the Paloc Road. (Fulek, Losonc, Kalonda)

The natural resources of the Zemplen to Cserhat, from Hollohaza to Holloko, from Telkibanya to Ipolytarnoc offer us a varied view of the region. Telkibanya became famous for its gold mine in the Middle Ages. Ipolytarnóc became famous for its 23-17 million years old caves and minerals. The volcanic catastrophe destroyed it, but the ashes preserved the ancient findings in good condition.

The Matra offers varied scenery and unique atmosphere to its visitors. Sacral places and shrines abound in this region. Not only church buildings, chapels, crosses, sculptures of saints and other traditional sacral places enter this category as the locals conferred this status to natural phenomena which have challenged the imagination of their ancestors and became sacral in folk tales, legends or myths. The list includes mountains, rocks, springs, rivulets, and targets visited by thousands of pilgrims. One of the best known sacral place of this kind is

Szentkút (Saint's well) situated in Matraverebely. According to popular belief water sprang from under the rock following St. Laszlo's visit. Anybody who drinks from the water of the spring might be cured by its magic power.

Shrines attract visitors from other parts of the country as well. One of the most relevant motifs of the Palóc faith is the cult of Mary: these people consider Jesus to be of an identical quality which means that they elevate Mary to a divine status. The relevant emergence of the cult of Mary as a Jesus figure is undoubtedly a Palóc characteristic. (*Lengyel-Limbacher* [1997])

I intend to explain and illustrate through the example of Kozárd what can be done in a really small village to preserve and revitalize cultural heritage. In my attempt to prepare the present case study I obtained relevant help from Dr. Hajas Pal Professor Emeritus and his wife Dr. Mrs Hajas, Marta Banos, the Mayor of the village.

Following the 1989 changes Kozárd was also threatened by the ageing of its population, many of its inhabitants moved to other places, job opportunities were decreasing with the result that the youth were searching for job opportunities elsewhere. The turning point was marked by the creation in 1996 of small family enterprises for cultivation of orchards, managing the centre for storing fruits and vegetables, a mangalica farm to replace the local cooperative in Kozárd, and initiating programs to start rural tourism and finally the creation of the local rural development office. It was followed by the election of the new mayor and his administration in 2002 who decided to rescue the settlement which seemed to have been doomed to die out.

Kozárd witnessed dynamic development in 2004 when the SAPARD and AVOP applications helped the village build its own sewage system, renovate the local chapel and build a new house of the village.

This marked the start of planned development of rural tourism in the village. There are six guest-houses in the village with capacity to accommodate 50 tourists. From among them two (Napfeny, and Csipke Guesthouses) offer tourists farming, hunting and rural holiday programmes as well.

Kozárd joined the South Cserhat LEADER + Action Team in 2005 as a founding member and handed it numerous successful applications to the LEADER+ centre e.g., to develop the sty system for the indigenous domestic animals, playing field, open air stage, designing and creating the Chapel Anna and geological training paths systems. A Vadvirág Restaurant and Guest House was opened in 2005. The constant development of rural tourism contributed to the creation of new jobs and unemployment ceased to threaten the population of Kozárd, young people started moving to Kozárd and the prices of real estate tripled. In the period between 2002–2006 thirty new jobs were created and this small village offers jobs to people living in the neighbouring villages like Paszto, Salgotarjan, Ecseg, Csecse, Holloko, Matraszolos, Alsotold and Bujak. There is

a general hope that further developments might create job opportunities for 10 to 15 families in Kozárd in the near future.

They planted apple, pear, cherry, and peach trees in a new 120 hectare orchard. They are also planning the construction of a factory that would produce bio apple juice as they meet difficulties in selling the apples they produce.

They started the mangalica breeding farm in 2000 with 20 bitches and they have been expanding production ever since. Mangalica became the best advertisement for both the local rural tourism and gastronomy. The excellent fruits harvested in the Kozárd orchards are used to produce pálinka of superior quality. The jams produced at the Kozárd Jam Manufacturing Company are well known under the “Paloc Izek” “Paloc Gastronomy” name. As part of the Slow Food movement there is a joint venture called Paloc Gastronomy in Kozárd and its neighbouring villages. This is a member of the world food-processing small entrepreneurial movement. The products made from mangalica pigs like ham, smoked bacon, sausages, salami, crispy fat are more and more popular. They are trying to find investors for the mangalica salami and sausages making factory and for the game products factory they are planning to start in the near future. They are also planning to build a pálinka processing factory as part of the Hungaricum movement.

They also organize festivals and special programmes for the visitors to Kozárd. Every last April Saturday or first Saturday on May they organize an Apple-blooming festival with music, dance local specialities. Local farmers, craftsmen, artists, cook meet visitors to Kozárd in Apple Valley. Early July marks the concert called „Muzsikál az Erdő” (The forest is singing), and mid-September marks the beginning of the festival called “Hungarian flavours-Hungarian Colours” where gastronomy and fruits play a central role. Visitors can buy from the delicious local cherry, plum, apple, jams and honey, genuine mangalica sausages, salami, and bacon bokri curd cheese, Kozárd hunter’ wines, home made pálinka and other local products.

The successful development of this little village Kozárd sets an excellent example for other villages which face similar problems. In 2005 it was granted the OMEK Prize, in 2007 it was elected by Radio Kossuth the most frequented rural tourism unit of the year. In 2006 Kozárd, and its farmers were invited to Rome to participate at the exhibition entitled the Tastes of Europe, in Kozárd had the opportunity to present its progress in Sicily in 2007 as a participant in the Euro citizen programme. In 2008 Kozárd was a guest settlement in Vara, Swedish at the Conference dedicated to the renewal of the rural area, and in the same year it was given the prize entitled “Flowery Village”.

The Kozárd-Bokor-Holloko joint tourism programme was listed second in the competition for the title of the best protector of traditions by EDEN in 2008. (European Destinations of Excellence) (<http://eden.itthon.hu>) One of the

restaurants of the village Vadvirág Restaurant won the exquisite quality award in the same year.

Kozárd joined the Paloc Route, as member of the programme for the development of the rural area. The village was registered as one of the stations of the pilgrims pursuing the Maria pilgrimage in 2009. In August the Statue of Mary was blessed and thus it came to be registered as a statue which is situated on the pilgrimage route between Mariazell and Csiksomlyó. The Statue of Mary is the work of István Demeter (Székelyudvarhely) and László Koltay (Püspökhatvan).

The excellent results of the village were rewarded by the Ministry of Local Authorities, as it was offered the possibility to participate in the programme Best Examples of European Practices, which means that mayors from other Hungarian settlements come to study the activity of Kozárd's mayor and its population. The village is visited by ministerial delegations, European experts who would like to find out more about their activity.

The Euragro Office of Rural Development and the Debrecen Agrarian centre are present in Brussels where together with some international partners they monitor the activity of the European Rural Networks the specialists of Euragro take part in other EU joint ventures and also delegate specialists to organize aids programmes outside Europe as well. (*Agricultural News*, October[2009])

Besides the delegates of Debrecen Agrarian Centre, the students of Szent István University of Gödöllő, Károly Robert College of Gyöngyös and Eszterházy Károly College, the students of Pannon University in Keszthely also pursue their practice as regional development experts in Kozárd.

Kozárd was the host of the European LEADER Meeting in autumn of 2009, but it also welcomed the conference of European national parks, the meeting of Carpathian Basin Euro region, a delegation interested in the village reconstruction program from Japan, and they are expecting a delegation from Turkmenistan soon.

### 3. Conclusion

The North Hungarian Region is rich in themes which can support thematic tours like heritage tours or cultural tours which in their turn can be integrated into already functioning European tours. If we join already established tours with ones that present less known ones we can reduce the time and space concentration of tourist activity. Suitable marketing activity can provide suitably structured information for prospective native and foreign tourists and may result in longer time spent at desired tourist destinations.

In the North Hungarian Region rural tourism, wine tours, or fortress, or palace tours offer excellent prospects and should be developed. These forms of tourist activity have a number of advantages. First visitors do not arrive in

masses. Second the client's motivation is centered upon the respect and longing for natural resources, cultural values, respect for traditions, admiration for folk architecture, good wine, good food, peace and quiet, fresh air characteristic of the target destination. This also means that quantity is replaced by quality which in turn increases the value of the offers of the host region. (*Buzafalvi* [2009])

Artificial, primarily outdoor activity centered tourism activities are gaining greater importance nowadays.

In this region the number of cultural thematic tours, and of the projects aiming development of such tours, have increased considerably in accordance with the international trends. Planning and running programmes under the heading "cultural heritage" requires high professional accuracy. This is a responsible task which involves the inventory, analysis, and evaluation of the treasures of local culture.

The economic strategy of our country imposes a more emphatic role attributed to tourism as a possible means of supporting redevelopment of the handicapped regions. The EU considers regional and rural development, strengthening of social cohesion, improving the standard of people living in the country, creating the alternative income scheme of small entrepreneurs an unquestionable priority. The above priorities are relevant, for the whole country, but they are acutely important for underdeveloped regions where eco, agro or rural tourism might create job opportunities and thus could ease the existential pains caused by unemployment.

According to the National Board of Statistics in the January-August period 4.9 million guests spent 13.3 million nights at the registered commercial accommodations the average amounted to 2.7 nights and there is an estimated drop of 8.4% in the number of tourists and of 8.7% in the number of tourist nights as compared to the same period of 2008.

The number of tourist nights decreased in all the regions of the country. In the North Hungarian Region the decline was of 7.8%. In the Western part of the Transdanubian Region there was a small increase in tourist nights spent there by foreigners (0.6%), while in the central part of the Transdanubian domestic tourist nights increased by 3.3%. The results of the central part of the Transdanubian Region were relatively good. The number of foreign visitors increased by 2.1%, the number of Hungarian visitors increased by 3.1%, which means that we can speak of an average increase of 2.7%. Similarly there was some increase in the number of visitors to Lake Tisza; the number of foreign tourists improved by 1.9%, that of Hungarians by +1.2% compared to the same period of the previous year. (*Hungarian Tourism Ltd.* [2009])

The North Hungarian Region was hit by deep crisis in the last decades. The only way out from this situation could be provided by the transformation of the economic structure.

The chambers of trade and industry evaluate the state of economy on a regular basis and formulate suggestions for sustainable development.

Economic crises influences all the sectors of Hungarian economy, tourism industry is no exception either. On the basis of the data provided by Tourinform the number of clients decreased in the region, but in Salgótarján and Gyöngyös in June, in Eger in July there was a slight increase in the number of visitors.

To support sustainability further development of infrastructure is planned in the region. The counties and settlements of the region have to appear on the market with joint projects. (*GtM* [2009])

The UNESCO and the European Commission stresses the importance of local, regional, minority cultures and their preservation in an attempt to preserve the multicultural character of the world. They stress the importance of traditional cultural values and declare that all human communities have the right to preserve their own culture. (*European Folklore Institute* [2005])

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# Health Tourism Endowments and the Economic Implications of Tourism in Northern Hungary, with Special Regard to Heves County

**RÓBERT SZABÓ**

*Department of Tourism, Institute of Economic Science  
Eszterházy Károly College, Egészség ház u. 4, Eger 3300, Hungary  
szabo.robort@ektf.hu*

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**D**uring the last decades health, body and soul control have become important issues. In the modern world these values are closely connected with the term of success, because we can be successful in every aspect of life: work and personal life, if we can maintain our health and fitness in the long run. From that comes that modern people are willing to spend money and time on taking an active part in sporty but relaxing activities in a healthy environment in order to keep their fitness or just feel themselves good. The study represents the Northern Hungarian region's main health touristic attractions and endowments and shows the economic performance of public accommodation establishments (especially in Heves County) in the period of 2000-2008 in the context of basic touristic indicators like the number of public accommodation establishments, capacity, arrivals, bednights, average length of stay, revenue (structure of revenue), and the role of local tourism tax revenues.

*Keywords:* wellness and health tourism, public accommodation establishments, tourism indicators, tourism tax

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## **1. Hungary as a “spa power”**

Hungary's natural values are given specific attention by the curative springs and thermal waters. In international context, our country is in the first five richest countries in thermal water bases, after Japan, Iceland, Italy and France. More than 80% of the territory of our country have thermal water wells. Among the total 1372 pieces of thermal wells, 197 are acknowledged thermal water, as well as Hungary's 385 settlements operate with thermal and curative water bath, 66 of which received qualification, so that is why they are considered only spas. In our days Hungary's curative and thermal water treasure exploitation has wide variety: 187 were registered as curative and thermal spas, 203 in public utilities, 175 in agriculture, and 66 in industrial exploitation.

The above rates evidently shifted in favour of the spas, although sustainable development has been formulated in a standard claim, that the necessity of



greater usage of renewable and alternative energy sources are needed, thermal water in Hungary could be one of the possibilities. Additionally, taking into account that the water resource bases are threatened by such things as waterpollution, other unnecessary water usage, resource overproductions, or the amateurish well drilling and operating errors, that is why the water base can be damaged. (*Szabó [2008]*)

To run the health tourism business successfully, it is necessary to base the supply on suitable natural endowments, natural curative factors. In case the region has these features, the operational success of health touristic supply element providing touristic enterprises (public accommodation establishments, spas) lays on steady foundation.

Table 1  
Natural curative factors in the regions of Hungary (in pieces)

Region	Curative water	Mineral water	Curative cave	Curative mud	Mofetta (dry bath)	Health resort (climatic)
Western Transdanubia	35	29	0	2	0	4 (1)
Southern Transdanubia	22	25	1	0	0	1
Central Transdanubia	11	32	1	0	0	1
Bp.-Central Danube R.	28	42	1	0	0	0
Northern Hungary	17	17	2	0	1	4 (2)
Northern Great Plain	47	34	0	2	0	2
Southern Great Plain	37	40	0	1	0	1
<i>Total</i>	197	219	5	5	1	13

Source: *Aquaprofit [2007]* p. 32

According to the number of spas in Hungary it can be concluded that the Northern Great Plain's region has the most preferential endowments of curative factors, because of its curative and mineral water springs. In the second place we have to mention the Southern Great Plain region with the number of its curative features. The Western Transdanubian and Southern Great Plain regions can also boast with numerous curative and mineral water springs. Nevertheless, the Northern Hungarian region has the most colourful natural curative facilities: curative caves can also be found, the only mofetta, and some high hill climatic health resorts. (*Aquaprofit [2007]*)

Northern Hungary is an attractive destination for those tourists who during their stay would like to enjoy physical and mental relaxation. The region's climatic health resorts, caves, carbon dioxide dry bath (mofetta) are unique in the country, as well as the spa and thermal baths rightly enthralls the followers of wellness lifestyle. These wide range of elements means the main strengths of the region. The supply is enriched by the local existing unique elements, like the Turkish Bath of Eger, the Cave bath at Miskolctaploca, the mofetta at Mátraderecske, the thermal spa at Egerszalók, having special natural surroundings. The touristic supply is further strengthened by the complementary services, like wine-gastronomic, cultural, etc. services, those cannot be found in such a complexity in other parts of the country. The healing effects of thermal waters in the region have long been known, the bathing culture is based on century long traditions, but in the XX. century, during the hydro-carbon researches, new thermal water bases have been revealed. There is strong diversity among the region's thermal water springs, having different mineral combinations, characteristics, so they are able to cure wide range of different diseases. The situation of the region's most important medical and thermal baths has changed a lot in the past few years, the baths renewed, their services expanded. (RMC [2006])

## **2. The economic role of tourism**

The tourism sector has important economic and social embedding, the sector has complex effects on the national economy's development. It plays partial role in the shaping of market situation of several other national economy sectors (like transportation, telecommunication, trade, financial services, health care, cultural and sport services), while the demand of tourism sector is just indirect in case of the products or services of other sectors (in agriculture, industry, building industry, environment protection). According to tourism organizations and experts, in the third millennium's first decade the health tourism travels (within the tourism travels) shows the most dynamic development. The preservation of health, relaxation and beauty care, body and soul maintenance in healthy environment has become an increasingly important motivation, so the demand for wellness tourism will grow. In the field of traditional medicinal tourism, the increase of the aging European population could grow the demand. The health tourism is the most desirable tourism form: predictable, not seasonal, it has long average stay, generates high income (guest spendings), generates workplaces, can easily be placed with the principles of sustainable tourism.

In practice convergence can be observed between the two main branches of health tourism: in the medicinal tourism complexity is increasingly important, the high level of service and the wellness items. Wellness tourism also highlights

the health references and the scientific grounding. Overall, health tourism is a fast growing tourism segment throughout the country.

The economic impacts of tourism can be analyzed from the sending- and the hosting area's correlation. In both cases it is an important condition to have regular and reliable data (statistical database and standard interviews) from the field of tourism, for the researchers to define the real impacts of tourism.

The following factors play an important role in the variations of economic impacts of tourism:

- Economic level of the sending- and hosting area
- Life cycle of the touristic destination
- Touristic capacity of the hosting area
- Quantity and structure of tourists' spending
- Seasonality of tourism
- The use of revenues from tourism (tourism taxes)
- Legal and economic regulations of local tourism (*Mundruczó–Stone* [1996])

The target groups of health tourism:

- Traditionally, (especially but not only) elderly patients who basically use the medicinal services;
- The middle class (health-conscious, with high-income) with attention to prevention;
- Families with children, in spas and swimming pools, (enjoy experience elements);
- Youth preferring sports, swimming, fitness and wellness programs, services;
- "Self-healer" guests, holiday makers from elderly age groups (*RMC* [2006])

In the following I will define (according to specific rules of law) the terminology of public accommodation establishment, spa hotel and wellness hotel.

Public accommodation establishment: an establishment built or converted and used for that (accommodation) purpose, if the number of used rooms are over five, and the beds over ten (in case of camp sites, the number of used place units are over five) the establishment of business, on year-round or seasonal basis, continuous daily operations without interruption, providing accommodation and services. The accommodation capacity of less than that indicated in the business of tourism activity must be carried out only in accordance with Government Edict No. 110/1997. (Jun 25th) (*KSH* [2004])

According to the No. 45/1998. (VI. 24) IKIM regulation, and its corrective regulation, the No. 54/2003 (VIII.29) GKM regulation: a spa hotel is a hotel which meets the requirements of the hotel, in addition, mostly uses natural

curative factors in their own medical department, independently or involved in with complementary services of other medical institutions, besides doctor's supervision, provides therapeutic services for their guests. Also meets requirements with the terms of No. 74/1999. (XII. 25.) Ministry of Health regulations. (*KSH* [2004])

A wellness hotel is a hotel which meets the minimum requirements of a three star hotel, each professional activities and services are provided by the hotel, done by professional trained employees. It provides services from the field of gastronomy, sport, relaxation, wellness, public programmes, necessary for healthy life style. It also meets the requirements with the terms of I/F point of No. 54/2003 (VIII. 29.) Ministry of Economy and Transport regulation. (*KSH* [2004])

I have divided the public accommodation establishments into two different types under my hypotheses and the analysis, such as "hotel type public accommodation establishments" and "other type of public accommodation establishments". The different levelled hotels come in the first group (from 1 to 5 star hotels), including spa, wellness and apartment hotels. To the second group "other" accommodation types were rated like: boarding houses, tourist hostels, youth hostels, bungalows and camp sites.

### **3. The economic performance of public accommodation establishments in Heves County**

The quantity and quality of accommodations play determining roles in how effectively the basic supply elements of tourism can be sold. There are several high levelled public accommodation establishments in Heves county, those added to the basic services, also providing wellness services.

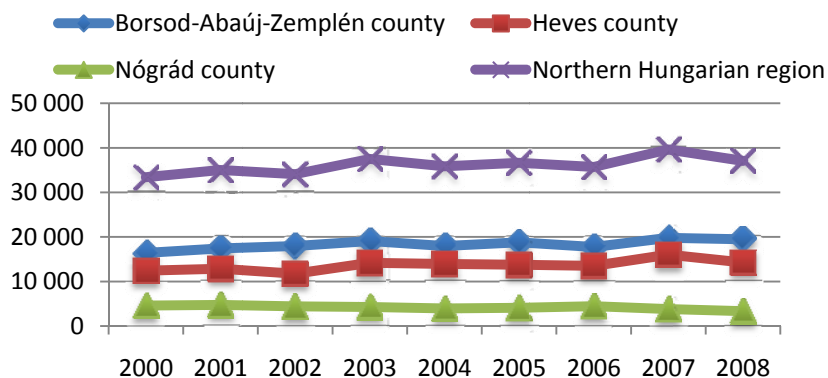
#### **Hypotheses**

Before I begin to analyse the data of the analysed period, I take the following assumptions:

- The capacity, the arrivals, the bednights and the average length of stay are almost the same (during the analysed period) in Borsod-Abaúj-Zemplén County and Heves County.
- At the structure of revenues at public accommodation establishments (in Heves County) the role of room revenues are significantly higher than the other revenue types.
- The tourism tax revenues from "hotel type" accommodations are significantly higher than the tax revenues from "other type" accommodations.

### Accommodation supply in Heves County as compared to other counties of the region

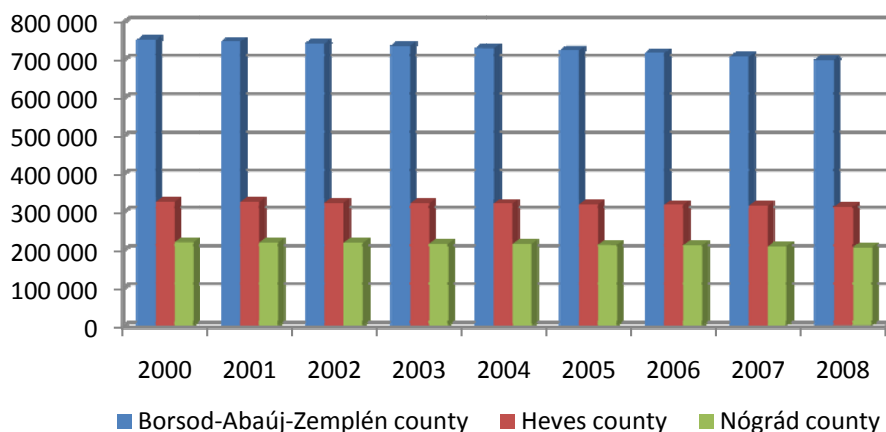
The accommodation supply (capacity—bed place for tourists) of the counties in the region assigns the region's potential touristic arrivals. The figure below represents public accommodation establishment capacity of the counties in the region.



Source: own design based on *KSH* [2009]

Figure 1. Capacity of Public Accommodation Establishments (in bed places)

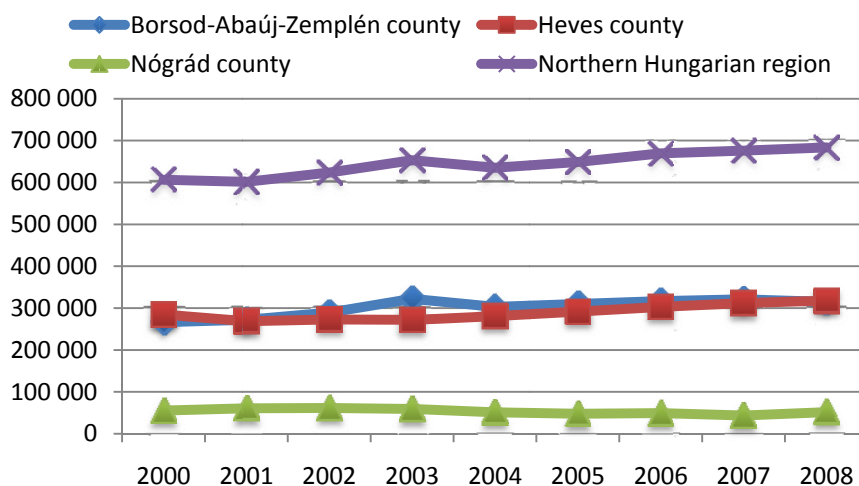
In Figure 1 it can be seen that the capacity of Borsod-Abaúj-Zemplén county is much higher than the capacity of Heves county. But if we compare it to the place (in km<sup>2</sup>) of the county, or to the population of the county (see at Figure 2), it can be seen that the bed place capacity per inhabitant is much higher in Heves county than in Borsod-Abaúj-Zemplén county.



Source: own design based on *KSH* [2009]

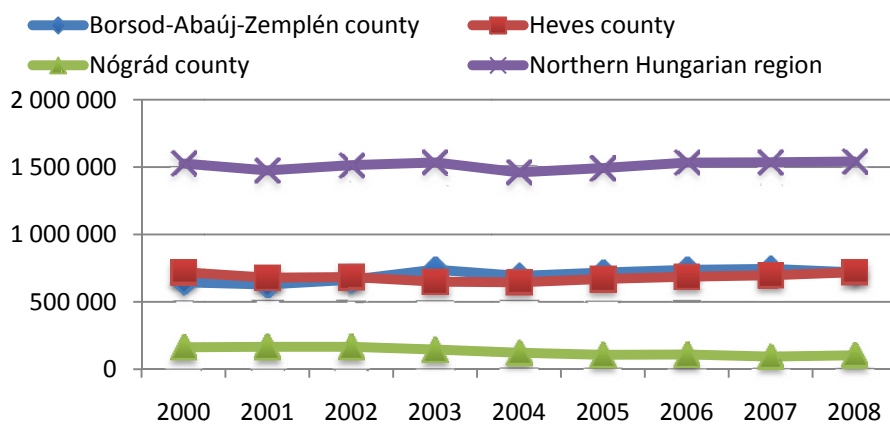
Figure 2. Population of the Northern Hungarian Region (in persons)

Across the public accommodation establishment business, analysing the indicators of local tourism, the capacity (number of the bed place for tourists), the tourist arrivals, and the number of tourist night (nights spend by the guests) are significant data. From those data other indicators can be calculated, like room capacity utilization, bed place capacity utilization, revenue capacity utilization, average length of stay, average revenue per guest, etc. (*Fazekas* [2005])



Source: own design based on *KSH* [2009]

Figure 3. Arrivals at Public Accommodation Establishments— number of tourist arrivals (in persons)

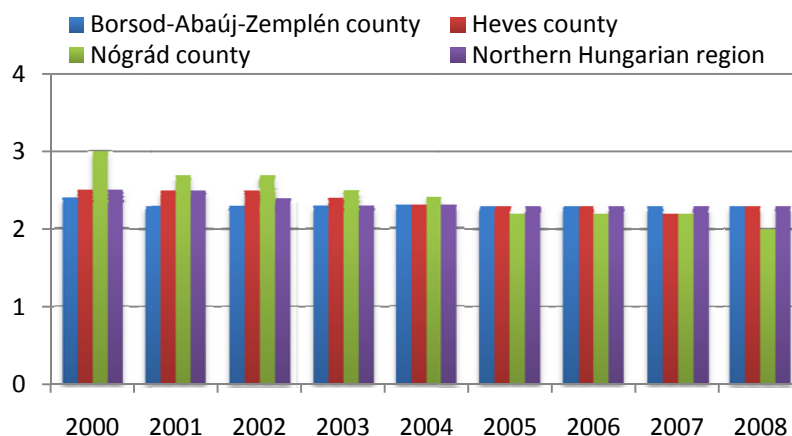


Source: own design based on *KSH* [2009]

Figure 4. Arrivals at Public Accommodation Establishments – number of bednights (in nights)

According to Figure 3 and 4 we can find out that although Borsod-Abaúj-Zemplén county has better position than Heves County in bed place capacity, in

the number of tourist arrivals and in the number of bednights, their performance were nearly the same during the observed period.



Source: own design based on *KSH* [2009]

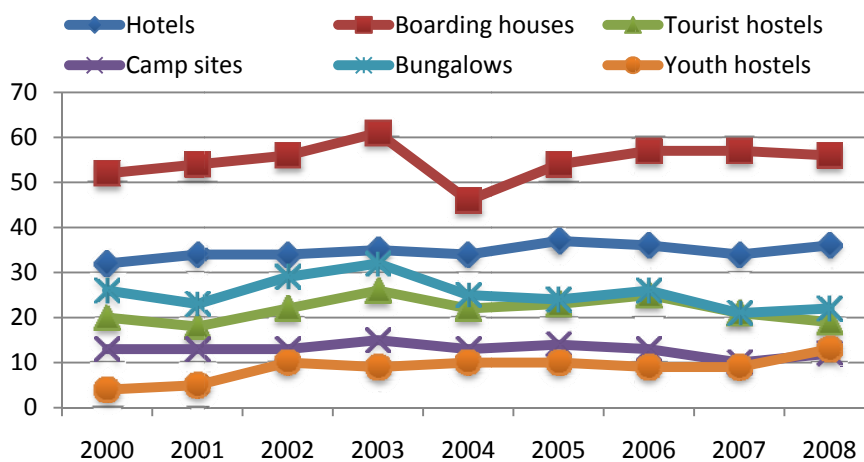
Figure 5. Average length of stay at Public Accommodation Establishments (in nights)

The average stay indicator can be calculated easily, we simply have to divide the number of total tourist nights by the number of total tourist arrivals. The average length of stay is one of the indicator of success of the destination, which shows how long the guests would stay at the destination (and so, how long they will spend money there). At Figure 5 it can be seen that the average length of stay at the region's public accommodation establishments changes between 2,2 to 2,4 bednights, which is true for the average of the region, too.

### Revenues of public accommodation establishments in Heves County

Figure 6 shows below the number of units of different public accommodation establishments and how it changed between the period of 2000 and 2008. It can be mentioned that in the unit number of the hotel type accommodations there were not any significant changes. In 2004 there was a little increase, but to 2007 it fell back to the level of 2004. Dramatic decrease happened in case of the boarding houses from 2003, and they could not reach that level during the analysed period again.

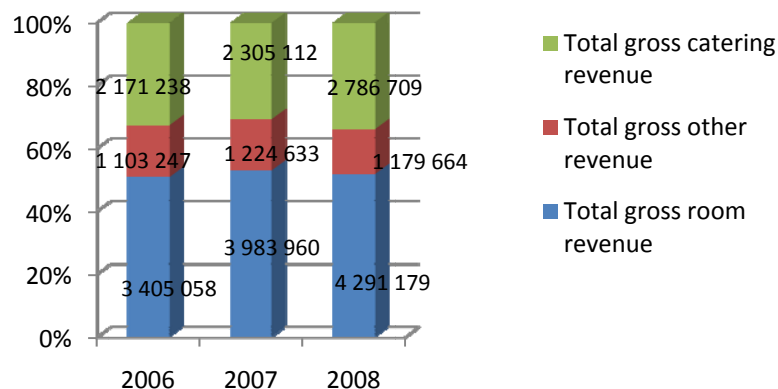




Source: own design based on *KSH* [2009]

Figure 6. Number of the different Public Accommodation Establishments in Heves County (in units)

The number of public accommodation establishment units influences the created revenues in the county. Figure 7 represents the revenues of the county's public accommodation establishment, and also shows the structure of revenue compositions.



Source: own design based on *KSH* [2009]

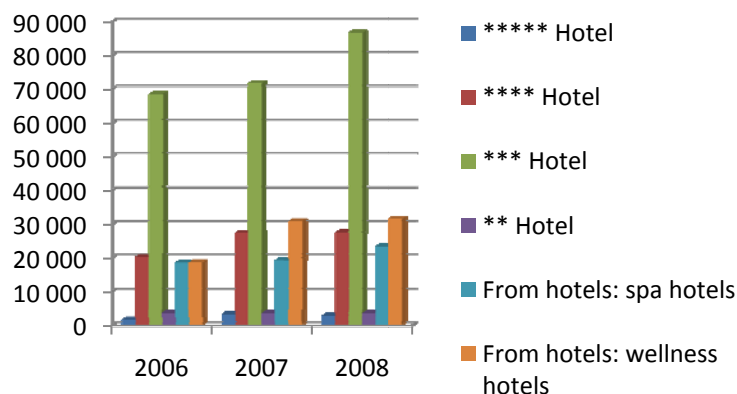
Figure 7. Structure of revenues at Public accommodation Establishments in Heves County (in thousand HUF)

According to Figure 7 it can be mentioned that little more than 50% of the revenues came from the room prices, an important amount came from the catering services, but the “other” revenue division takes half of the revenues average from catering.

### The role of tourism tax in tourism economy

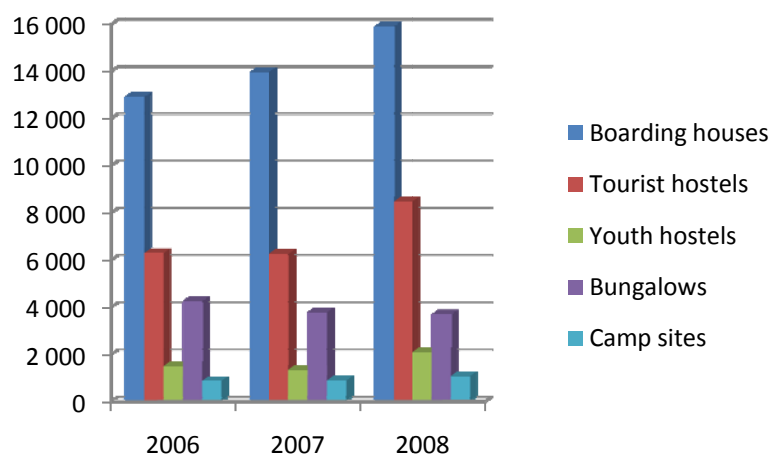
In order to ensure the positive effects of tourism at the hosting area, and decrease the negative effects of those retarding the development and growth of tourism at the same time, it is necessary to determine the state level frames. Among these the most important ones are the following: natural, legal, and economic and financial conditions (taxes). The financial disponibility significantly determines the possible directions and enforces the different effects of tourism development (*Kaspar [1997]*).

To provide the financial frames is also necessary to come in for a share in revenues in indirect ways (as positive economic effect) for the local government, local touristic enterprises and entrepreneurs, employees in tourism and those inhabitants and enterprises who are not concerned in tourism. It is necessary to create the qualitative tourism, so the revenues from the tourism have to revolve back, and in that way we have to finance the new developments. This way, the development of tourism would influence positively the quality of life of most inhabitants, enterprises and tourists (*Jandala [1992]*). In Hungary such financial frame is provided by the tourism tax, which belongs to the group of local taxes and the year 1990 Act C. ensures its legitimacy terms (*Kaspar [1997]*).



Source: own design based on *KSH [2009]*

Figure 8. Tourism tax revenues from Public Accommodation Establishments (hotels) in Heves County (in thousand HUF)



Source: own design based on *KSH* [2009]

Figure 9. Tourism tax revenues from Public Accommodation Establishments (other accommodations) in Heves County (in thousand HUF)

The Figures above demonstrate the tourism tax revenues from the hotel type (Figure 8) and the other type (Figure 9) public accommodation establishments. We can observe that during the period the 3 star hotels, the boarding houses and the tourist hostels paid the highest (ranking the first three places) tourism tax amount to the local government. The amount of paid tax has grown year by year. It is important to mention that the tourism tax revenue from the spa and wellness hotels is also significant.

#### 4. Conclusion

According to the above demonstrated results, I received the following answers to the hypotheses:

- Despite the smaller capacity of public accommodation establishments in Heves County, the arrivals, bednights and average length of stay are almost the same in Heves and Borsod-Abaúj-Zemplén County. Heves County is thus a more attractive destination than Borsod-Abaúj-Zemplén County.
- As in Heves County, more than 50 percent of the revenue earned by public accommodation establishments comes from room charges, development plans should concentrate on improving their quality and increasing their capacity in order to maximize profit.

- As a significant amount of tourism tax revenue derives from “hotel type” accommodations, and especially from three star hotels, public and private investors should prioritize the development of this type of accommodations.

Finally, we can conclude that on the basis of the capacity, number of guests and number of bednights of public accommodation establishments, Heves County (as compared to other counties of the region) played a pivotal role in the tourism of Northern Hungary in the studied period. Knowing these facts, it is worthwhile to make further investments and developments in health tourism in the county.

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# The Reaction of Corporate Human Resources Management to the Economic Crisis

## Finding the ways-out in HR

**KINGA ILONA BÁRDOS<sup>a</sup> - ERIKA VARGA<sup>b</sup>**

*<sup>a</sup>Dobó István Grammar School  
Széchenyi út 19, Eger 3300, Hungary  
cetebe@hotmail.com*

*<sup>b</sup>Károly Róbert College  
Mátrai út 36, Gyöngyös 3200, Hungary  
evarga@karolyrobert.hu*

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The cyclical movement of the economy is a natural process but, fortunately, a global economic crisis is a rare phenomenon. The credit crunch starting in September 2008 has grown into a global one primarily affecting car manufacturing and then it has its repercussions in the whole economy-gradually reaching all the players. The crisis management in human resources implies layoffs, redundancies or shorter working hours and weeks. In many cases there were not well-thought corporate strategies for crisis management as managers as well as employees had to face a problem they had never experienced before. One of the corporate operative steps is to examine and realise how deeply the organisation itself is affected in the crisis. Our objective is to present what theoretical and practical solutions were or are invented besides the ones already mentioned.

*Keywords:* crisis management, human resources management, atypical employment

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### 1. About the crisis in general

About a year ago the credit crunch became widespread primarily hitting the financial institutions worldwide and had its impacts felt in the motor industry reaching all players of the economic life. There were no companies that could escape its impact and most organisations lived through the recession negatively.

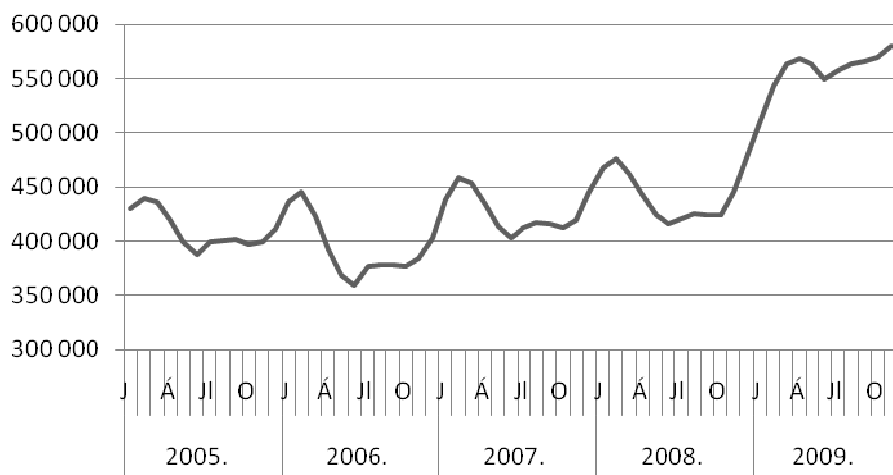
The fluctuation of the economy is a natural phenomenon. However, the constant and worldwide crisis is rare to be experienced, fortunately. The economic players who had been following the fluctuations of the market for a longer period could experience its signs beforehand but it was impossible to predict when they would take place.

That is why the crisis hit most companies when they were not prepared for it. In many cases they did not have carefully planned corporate strategies for the

crisis and both the management and the labour force had to face a problem suddenly that had not been experienced before. Although crisis management is taught at schools, it is not the same to face it in real life and to make the proper decisions.

The companies had two types: one that was prepared for the crisis with its uninterrupted types of investment and another that missed it. The previous ones are the so-called investing entrepreneurs who were able to keep their competitiveness such as Szikrai Winery Kft., which had acquired Szobi syrup. The less prepared ones will lag behind while most of them become followers. (Boda [2009] p. 9)

Since the worldwide crisis the most influential states have been increasing their intervention while its opposite holds true for Hungary. “Such Keynesian views have come forward according to which the role of the state will be appreciated in the present situation and there will be a need for state subsidies and support in certain sectors.” (Lantai [2009], p.12) The objective of the Hungarian state is not the creation of new workplaces, rather, the preservation of the existing ones by means of decreasing the working hours, state compensation for lower wages and avoiding corporate layoffs.(Figure 1)



Source: KSH [2009]

Figure 1. The proportion of job seekers between January 2005 and November 2009 in Hungary

### Facing the problem: the Strategic Thinking

What is the first step that a manager should take in case of a crisis? Although it can be painful but important to see clearly in what situation our organisation is. The first step of the corporate operative ones is to analyse and realise the

extent to which the organisation is affected by the crisis "... we have to realise the situation of our company and ourselves as well as to acknowledge that it is the organisation itself- and not the world, country, society or others- is in this situation exclusively". (*Dara et al*, [2009] p. 98) Of course, it always surveys a condition so the economic changes must be monitored and the measures must be adapted to the changing situation.

To get to know the exact situation and being aware of it is the first step leading to the solution. If the company knows and surveys its current and future market position, it can also plan ahead. At the time of a crisis, the management strongly depends on the HR manager, often exclusively, but it cannot transfer responsibility to him. After the situation has been analysed and the company is aware of its real and expected market position, the next period can be started. It has to decide what steps to take. This is strategic thinking, which requires the utmost attention and experience of the senior management. It is the financial resources that can be mobilised first and in the easiest way. It has to be analysed what opportunities re-groupings, the inclusion of liabilities, banking credits etc. bring about for the company. Of course, the expected profits and losses must be analysed in relation to all corporate resources. (*Szilás*, [2007] p.12) An important cornerstone of strategic planning is that in crisis not suddenly made decisions, rather, real, carefully planned short-and long-term measures must be created and realised consistently.

If the management brings the decision of changing its resources after having carefully analysed them, this will naturally have an impact on human resources, as well. A frequent problem is that the management makes the quick decision of layoffs to save the financial resources but its material consequences are transferred to the state.

### **Interference in human resources**

#### *When to send the workforce away?*

Making the employees redundant is a drastic step from the part of the company. Decreasing the resources can seem to be a favourable step at first sight as it is a medium-term step for the company which is preceded by more important steps with quicker reaction. That is why HR has the time to plan redundancies carefully. "21% of the companies taking part in the research made their labour force redundant till February since the outbreak of last year's crisis and a further 30% are considering layoffs within 6 months' time." (*Dara et al*. [2009], p. 96)

Redundancies must be consequent and the primary objective is to pay attention to productivity. The market position of the company is an important factor. The companies that can start developing after the crisis have to strive to keep their workforce and redundancies can only be carried out in emergency.

Instead of them, other alternatives of employment must be found, which are outlined later. For the companies that are stagnating or are in the position of a dead dog, it is an uncomfortable but necessary opportunity of leaving the market without pain, i.e. they can escape the long and painful agony.

But what is a “good” layoff like? Of course, there are neither good layoffs nor terminations. It is a necessary step from the part of both the employers and the employees. The company can take the measures of enhancing efficiency and decreasing costs it had missed earlier. It can revise its performance management, promotion and compensation strategy so that it can create a more effective incentive system for the remaining employees.

Everybody is aware of the corporate crisis: the subordinates and the superiors alike so avoiding the problem is a great mistake from the part of the manager that generates a great tension in the employees unnecessarily. Communication and facing the problems help making further steps. After the management has decided to interfere with human resources, the next thing to do is to decide who must be sent away. If it is an efficient, effective enterprise, there is no extra labour force to be made redundant.

The strategy of the crisis management: to protect your capital raised maximally and to look for supplementary investment in the meantime (*Boda*, [2009] p. 9) “as the most precious parts of the accumulated corporate assets are decisively people, in case of crisis an important task of the HR apparatus is<...> to make at least the people who only serve the real depositaries of the non-material assets redundant.” (*Boda* [2009] p. 10)

Of course, it is only an idealised state. There are employees who are less productive and cannot acquire corporate culture or they cannot fulfil the high hopes of the managerial assessment. Communication is also the most important managerial tool here. Downsizing is a reaction of mourning, which is a painful process not only for those leaving but it also creates some doubt in those who stay.

#### *Downsizing without pain*

According to *Tompa* ([2009] p. 20) the company has to strive to create a winning-winning position. In such a situation the company has to consider internal reorganisation. In the meantime, outplacement, outsourcing and positions to be terminated are identified so the number and the position of jobs that have to be ceased are clarified.

We have to mention the harmful consequences of downsizing here: organisational Alzheimer disease (the disappearance of experts with huge experience e.g. due to retirement), organisational anorexia (too intensive layoff), revolving door syndrome (when you are downsized but it turns out that you are needed anyway and taken on again), narrow-mindedness (when the management exclusively regards downsizing as the only solution) (*Tompa* [2009], p.21) The



“stay-on” programme is directed to keep the key figures whose dismissal is a great mistake as their expertise and professional knowledge is an asset for the company. Moreover, they will find a new job in the labour market in the easiest way. The management has to strengthen their position and acknowledge their importance in corporate life thus enhancing their commitment to the organisation.

The survivor programme is to take care of the remaining workforce. Creating confidence, participation in restructuring, taking an active part in the new teamwork generates a new community, for which the ability to put up with the changes also has to be developed.

Both the survivors and the leaving colleagues have to be aware of the fairness of redundancy. The best method of it is outplacement. i.e. the process of downsizing is not over simply with “passing on the papers to the employees”. On the contrary, they are taken care of by the organisation with the inclusion of a service provider from outside. They help to come over the stress of losing the job and make it easier to find and fulfil a new position.

The technical part of downsizing itself is a strictly regulated legal process starting from the trade union negotiations through the registrations with the unemployment offices and paying severance to the final leave. These should not sound too mechanical and each leaving employee must be treated in a humane way as it is also part of the company profile towards the outside world.

#### *Looking for other ways*

Redundancy is the least desirable method and if there are other possibilities, both the management and the government want to avoid it. The positions terminated during the crisis incur some extra costs to the state budget as the unemployment benefit, the costs of re- and further trainings are a burden to the tight budget and can also be the barrier to the prosperity following the recession. That is why the state itself is more willing to support the employment alternatives that make it possible for the workforce not to appear on the market of the unemployed in great masses (*Farkas et al*, [2008] p.28–29). From the part of the state it means the forms of direct and indirect support. The direct one is when companies receive a certain amount of money or the state cuts back on wage expenditures. The indirect one is when the state introduces such measures that favour further employment such as supporting the idea of a four-day working week or the decrease of the compulsory working hours.

What are the alternative employment possibilities of the company? Of course, the companies are not charity organisations. They can exclusively take any measures till their resources are balanced. There are more humanistic and autocrat management styles where the judgement of the human factor is changeable but we must accept that a person is such a resource in corporate life than another.

## **Atypical labour organisation**

### *Restructuring the working hours*

The company's diversion from the typical labour organisation is a kind of reaction to the environmental changes. The state budget in Hungary supports the companies by preferring restructuring of working hours to redundancies as a reaction to the crisis. There are companies where the working hours themselves differ from the others such as in the case of dm-drogeriemarkt where the 4-5-6-7-hour shifts are preferred (Sándor [2007] p. 65).

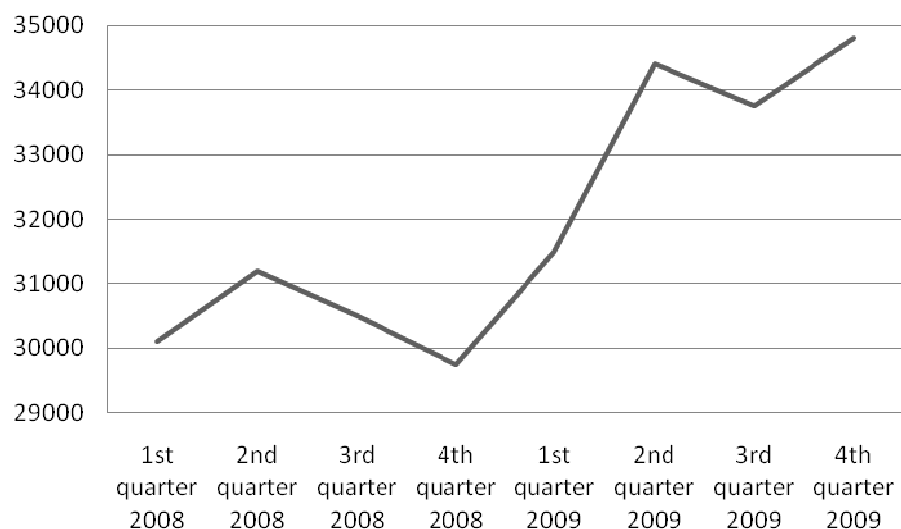
Another way of decreasing the working hours is the shift to the 4+1 day-working week from the 5-day one. Such a company is Rába and a similar one is Leroy- Somer IMI Kft. Manufacturing electric motors, which stops work on two Fridays each month. Of course, there are many variations of this kind of restructuring [Somfai, [2008] p. 51).

### *Restructuring working hours by means of training*

In this case the working hours are shortened but during the stoppage the employees are not given compulsory days off, rather, they utilize the time to carry out compulsory re-trainings or ones that were pushed in the background. Such a company is Malév where the objective of the management is to keep the workforce with special knowledge and expertise as redundancies and teaching the new ones require longer time and more money and this way time can be used for organised trainings. Of course, it also means some extra money at first for the company but it also appears in the longer-term training programme so the company can meet the requirements beforehand by "escaping forward".

### *Part-time employment*

If it comes to downsizing, it is worth considering what is more economical from the point of view of the company: to make the employees redundant or employ them part-time. It is worth it for the organisation financially as not a full-time job must be shed and it does not have to say goodbye to the skilled labour force, either. It is also worth it for the employees as it gives them a kind of financial and ethical safety besides supporting the transition (They experience the importance of their job and have a lower but permanent salary). Its disadvantage is that the employees move harder and find employment later and also it is an instable possibility for the part of the company, so if the employees come across with a full-time job, they will leave. (Figure 2)



Source: KSH [2009]

Figure 2. The number of those employed part-time (persons)

#### *Measures to save on expenses*

Freezing the wages and stopping performance-related payment can be a solution. Although they do not send the employees away, the planned wage-type expenditures are restricted or withdrawn. Again, the workforce with great expertise must be taken special care of as they can easily leave in the hope of a higher salary.

#### *Management-type measures*

They are the processes not carried out due to the lack of time or their execution lasts longer. They apparently do not decrease the working hours but the time to execute the task is shorter. Such measures can be the introduction of the performance-related payment system, the revision of quality assurance, the implementation of efficiency organisation, making up for the HR tasks, building special managerial and HR networks or implementing the pending investments.

#### *Outsourcing*

Outsourcing is one of the most debated tools of crisis management in HR. This stop-gap solution only works if the company does not want to employ the staff but needs it. In such cases it will make a company outside, an affiliate or a division take the staff over and thus employ them. Another form of outsourcing

is when labour is rented and due to implementation, they borrow their own manpower.

#### *Manpower hire/ manpower hiring companies*

It differs from the previous one that in this case it makes the employees redundant and then hires them from a manpower agency outside. It serves as a solution if the company does not at all want to employ the staff later on or the volume of production varies day by day so the risks are taken by the manpower agency and not by the company. It is an established strategy of the companies in the construction business.

#### *Teleworking*

Teleworking with full of hidden possibilities has not gained much ground in our country. According to some calculations there are 160 000 people employed here. It is one of the forms of outsourcing. The principles of the European Union support this kind of work but its weak points are the lack of infrastructure, the unpreparedness of HR and the restructuring of corporate work. The volume of the initial investment, the transformation of work organisation, the creation of the special managerial and HR systems require more time and money than it could be afforded in a crisis.

#### *Taking a year off*

In case of the intellectual workers there is the possibility of granting a year off without payment. In this case the employee may ask for suspending his labour relation for a fixed period of time.

#### *Early retirement/ making the pensioners redundant*

These are guaranteed by law and it was possible to take an early retirement in 2009 but after that it will be stopped. Employing pensioners is a convenient solution due to their huge professional experience and their relatively cheap labour but their removal can also be a form of cost-efficiency.

## **2. Conclusion: What else can an HR representative do in the crisis?**

The task of the personnel department is to stay rational, to assist the communication between the management and the workforce and to make a financial use of the value added in time of a crisis (*Takács*, [2008]p. 14–16). It has to find the forms of investment that incur less expenditure in the short run regarding the future of the company and more profit in the long run. The role of controlling, plans and facts are expected to be increasing and adjusting them needs constant work. If redundancies are necessary, we have to clarify it is not the task of the HR although the opinion and help of the personnel department

might be needed, it is basically the management that decides on layoffs. Like recruitment, the technical part of redundancies is also the responsibility of HR. Communication within the company must be highlighted together with the effective relations with the trade unions, councils, outplacement organisations and manpower agencies. We must not forget those who stay, either. They have to take over some jobs left and even the nature of their employment changes in some cases. The process of planning and feedback also has to be restructured.

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# Selection Methods Used in Recruiting Sales Team Members

**ISTVÁN JUHÁSZ**

*Department of Economics and Law, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
juhasz.istvan@ektf.hu*

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This paper scrutinizes the present-day methods of selecting employees, while paying special attention to the different tests and techniques used for appraising salespeople's personality, future performance, and potential for success or failure. Besides Hungarian sources, the author presents the results of some relevant foreign studies as well. The paper concludes that the best results can be achieved if organizations apply more than one selection technique at the same time, as hiring the right person for the right position will earn them a higher return in the long run.

*Keywords:* hiring, selection methods, salespeople

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## 1. Introduction

An organisation is most likely to achieve its goals, solve the various tasks that occur during its operation, if it hires the right employees for the right positions. This is the case in the private sphere, where companies aim at maximizing profit and also in the public sector, where organizations are expected to perform tasks at the highest professional level. People who make up an organisation need a paid job to achieve their goals, to provide for themselves, for their families, and even to make their dreams come true.

In order to achieve the goals of both parties, we need a process that reconciles the needs of the company with that of its employees. Most selection methods try to meet these dual goals. Organisations intend to select the most productive employees, while employees wish to find a job and an organization that best meets their demand and suits their personality. Employees will appreciate a workplace where they can use and develop their skills and abilities, while being acknowledged both financially and morally.

As organizations are usually stronger agents in labour markets than individuals, so it is them who select among employees and not *vice versa*. If individuals were more dominant, they would choose the most suitable companies for their personal needs and purposes. Although it is less typical, the selection process in labour markets with excess demand is different from those with excess supply (*Klein–Klein* [2006]).

The idea of “the right person for the right position” was already present among Fayol’s (1916) management principles. The various selection methods are applied mostly by private organizations. Successful companies spare no effort and time to carefully select colleagues, and use various tests and tasks to sort out applicants before signing a contract, making further investments into their human capital by education and training, and fitting them into the organization. The public sphere in Hungary has also begun to realize the significance of selection methods: the national tax office (APEH) for example accepts employees only if they achieve a certain rating on an IQ test.

Although public organizations such as the army, public administration or educational institutions do not measure their success in terms of economic profit, efficiency has a crucial importance in their case as well. Interestingly, perhaps due to the large number of people working for them, public organizations played an important role in the development of today’s selection techniques. In what follows, I examine the techniques applied in sales, a field of business notorious of much overtime and stress.

## 2. Present day’s selection methods

There are a plenty of psychological and non-psychological evaluation techniques and test materials used in recruitment today. Some methods are not accepted by experts universally, or are not recommended for personality tests in the hiring process.

Selection methods can be evaluated in several ways. One possible approach is to compare hiring techniques on the basis of their *validity*, *impartiality*, *scope of usage*, and *cost* (see Table 1).

*Validity* refers to the accuracy of the method in anticipating a given criterion, i.e. it refers to the level of the statistical relation (correlation) between the test score and the employee’s performance. Performance is defined here as a concept that encompasses everything that derives from the relationship between the employee and the job (e.g. satisfaction, commitment, fluctuation, absenteeism, etc.). There is no agreement among experts considering the validity of different methods, and especially in the case of the most popular techniques. Moreover, within validity we can differentiate between *content*, *face*, and *construct* validity (Atkinson [1995], [1999]).

*Impartiality* means the ability of the technique to evaluate employees objectively, i.e. without bias to their sex, ethnicity, religion, etc. *Scope of usage* shows the method’s potential for application in various trades and jobs, i.e. its “production surface”. Some evaluation techniques can only be used for a specific group of tasks, while others are applied for projections in a wide array of jobs (Schmitt [1989], Pearn [1989]).

Table 1  
Validity, impartiality, scope of usage and cost of some selection methods

Method	Validity	Impartiality	Scope of usage	Cost
Intelligence test	moderate	moderate	high	low
Ability test	moderate	high	moderate	low
Personality questionnaire	moderate	high	low	moderate
Interview	low	moderate	high	moderate
Work probation test	high	high	low	high
Situation practice	moderate	unknown	low	moderate
Biodata questionnaire	high	moderate	high	low
Mutual evaluation	high	moderate	low	low
Self-evaluation	low	high	moderate	low
Appraisal centres	high	high	low	high
Reference letter	low	unknown	high	low

Source: *Schmitt [1989], Pearn [1989]*

Table 1 shows that the work probation test and the appraisal centre have a high value in the dimensions of validity and impartiality, while their relatively high cost level places some limit on their usability. In spite of the higher costs of these methods, organizations are recommended to make use of them more frequently, if they want to hire the right employee for the right position.

*Klein and Klein [2006]* reject graphology as a scientific tool used in recruitment. The authors do not recommend the Thematic Apperception Test (TAT), the Rorschach test and the Minnesota Multiphasic Personality Inventory (MMPI) in work psychology either; these can be applied in clinical practice. Instead, they prioritize the California Psychological Inventory (CPI) and the Myers-Briggs Type Indicator (MBTI).

### 3. Selecting salespeople

Many experts believe it is impossible to tell those criteria by which salespeople should be selected, as there are many different positions that require many different types of personalities, thus the hiring process should be industry and company specific:

One of the most important findings on the performance of sales team members is that the factors that determine sales performance always depend on the nature of the given job. Different positions have different requirements, which denote a huge difficulty in selecting sales representatives. (...) The methods of selecting potential salespersons are industry, company and job specific, thus companies



have to study their own situation first, and then define the combination of methods that eventuates the best possible outcome. (*Bauer–Mitev* [2008], p. 163)

The rules of thumb in selecting sales force are as follows (*Bauer–Mitev* [2008] p. 163):

- using only one criterion in the hiring process is usually not enough for selecting the right person for the right position
- before starting the selection process, the position to be filled should be analyzed on the basis of job description, the hiring process and company trainings; the key tasks, knowledge, skills and abilities should be determined to avoid dropouts
- the basic abilities of successful salespeople and the techniques to identify them should be determined
- selection methods should be tested on the best and the worst performing salespersons in order to detect the personality traits, skills and abilities that can possibly lead to success or failure
- companies should use more than one selection technique at the same time, and define the qualities to be measured during the analysis of the given position

According to experts, the validity of selection methods that build on a single technique (and thus thought to be relatively fast) is very low. Headhunting employees from another company also seems to be an easy alternative, however, it can turn to be a bad tactic as workers carry their bad habits acquired at previous workplaces with them. (...) The combination of different techniques can give a decent result only. Although it requires more time and energy, the profound planning of the selection process will result in higher rates of return. (*Bauer–Mitev* [2008], p. 165)

A comparison of selection methods and their dimensions are presented in Table 2. The results of this study show that the largest amount of information about candidates can be gathered by tests, while the smallest by handwriting analysis (graphology). Most of the methods presented give information on the dimensions of decision making (except for demography) and sociability (except for demography and graphology). The table confirms what has been pointed out earlier: the simultaneous use of various methods give the most accurate outcome.

Table 2  
A comparison of selection techniques

Examined dimension	Inter- view	Test	Bio	Appraisal centre	Reference letter	Graphology
Age	X		X			
Sex	X		X			
Physical appearance	X			X		
Blood type	X		X			
Background and experience						
Personal history and family background	X		X		X	
Qualification	X		X		X	
Experience in sales	X		X		X	
Other experience	X		X		X	
Present stance and lifestyle						
Marital status	X		X			
Financial situation	X		X		X	
Activities / lifestyle	X		X			
Intelligence		X				
Intellectual ability		X				
Verbal intelligence		X				
Mathematical skills		X				
Selling skills		X				
Responsibility		X			X	X
Dominance		X		X	X	
Compliance		X		X		
Agressivity		X		X	X	
Sociability	X	X		X	X	
Self-assessment		X				X
Creativity / flexibility		X				X
Lust for power / premium		X				X
Confidence	X	X		X		X
Decisiveness	X	X		X	X	X
Sincerity		X			X	X
Loyalty		X			X	X
Professional skill	X		X			
Selling presentation	X	X		X		
Closing-up	X	X		X		
Handling critique	X	X		X		
General management		X		X		
Respect for the profession	X	X		X		
Communication skills	X			X		

Source: Bauer–Mitev [2008] p. 164

There are several other studies published on the success factors of salespeople. It appears to be relatively “easy” to measure the performance of sales representatives, by looking at how much profit they make for the company. But the question is what factors determine their ability to make profit?

One study (*Ramaswami–Jagdip* [2003]) examines the honesty of sales representatives towards their customers. Besides some extrinsic factors such as premium and potential awards (as ways of recognition), it also puts emphasis on trust as a key success factor. The study that was conducted among sales representatives of Fortune 500 industrial companies found honesty to be the most important success factor.

The importance of salespeople’s emotional intelligence (EQ) is emphasized by numerous authors. One of them (*Liu–Comer* [2007]) demonstrates that those sales team members are the most successful who can get into the “trusted zone” of customers, where they can gain access to confidential information as well. Only employees with a high level of empathy and EQ are able to obtain such information.

Scientists examine EQ from different angles. *Mulligan* [2004] for example found positive correlation between salespeople’s EQ and company profit, and underlined the importance of self-esteem and assertiveness. He also found that salespeople with less ability to handle stress had less profit-making capacity as well. A study on the development of salespeople concluded that EQ is an accurate predictor of sales team members’ performance (*Deeter–Schmelz–Dawn–Sojka* [2003]).

EQ as a key competence of salespersons has been widely studied by *Sojka et al.* [2002]. The authors reckon that in parallel with the changes in the sales environment, requirements to salespeople have changed too. Today’s successful salespersons need skills and competences that provide comparative advantage against competitors. EQ, i.e. the ability to identify, assess, manage and control the emotions of one's self and of others, is a key competence that helps sales team members in improving their performance (*Sojka–Deeter–Schmelz–Dawn* [2002]).

#### 4. Conclusion

The goal of this paper was to review the most important studies on the selection methods of sales team members. Accordingly, I scrutinized the available techniques of evaluating sales representatives, predicting their potential for success and failure.

The collective use of several methods makes it possible to map salespeople psychologically at the very first personal meeting (interview), where we can come to know their habits, attitude, motivation and competences. On the basis of these methods, the heads of HR and sales departments can decide whether it is

worth employing a candidate or not. Possible conflicts and disappointments can be preceded by hiring the right person for the right position, and by taking all the key characteristics into account besides personal sympathy.

The methods presented in the paper help employers to avoid excessive subjectivity. They are useful not only in revealing the qualities of applicants, but also to identify the weaknesses of present employees, their competences to develop: they can help the existing sales force to become more successful and the company to become more profitable.

The financial sector was the starting-point of the crisis that initiated in 2008. This was also one of the sectors where the highest number of employees has been dismissed. So it is high time business organizations (including banks and insurance companies) hired and retained talented salespeople, for which the selection methods presented in this paper provide a good basis.

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# Neuralgic Aspects of Environmental Regulation of Vanishing SMEs

**RÓBERT ROMÁN**

*Department of Economics and Law, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
romanr@ektf.hu*

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According to the legal definition of small and medium-sized enterprises (SMEs), it is not the form of the company that determines whether it is regulated by the Act XXXIV of 2004 on SMEs, but some other features, such as the number of employees or annual net income. There are two fundamental acts giving guidelines to the termination of companies: the Act XLXIX of 1991 on bankruptcy and liquidation procedure, and the Act V of 2006 on public company information, company registration and winding-up proceedings. Relating to termination, norms of environmental protection can also be found among legal regulations, however, their implementation is cumbersome as they are easy to circumvent. Therefore the universal regulations of the Act LIII of 1995 on the general rules of environmental protection can hardly take effect.

*Keywords:* SMEs, liquidation, final settlement

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## 1. The determination of the small-and medium enterprises

The business organisations, which operate in some joint form, are classified in various ways by corporate law. There are partnerships- and limited liability companies, incorporated companies, and not incorporated companies (*Miskolczi-Bodnár* [2001]). Besides this traditional dual corporate law, firstly economics makes difference between the companies according to the bigness of the enterprise.

The large company is the base type of the legislation, the juridical regulation of the small-and medium enterprises are specific, because some requirements do not relate to them to make these smaller enterprises in a more favourable situation.

The jurisprudence adopted the distinction, which happens by virtue of this size of enterprises, whose prime reason was that over the creation and maintenance of workplaces; it can make the entering of the small enterprises into the labour market easier and reduce their administrative charges.

According to the effective juridical regulations<sup>35</sup>, SME is deemed as the enterprise, whose all employees' member are less than 250 people, and its

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<sup>35</sup> Act XXXIV. of 2004 on the development and support of the small-and medium enterprises

annual net sales is at most due 50 million Euro for Forint, or its balance (sheet) total amount is at most due 43 million Euro for Forint.

Within SME category, small enterprise is deemed as the enterprise, whose all employees' member are less than 50 people, and the annual net sales or its balance sheet (total) amount is at most due 10 million Euro for Forint.

Within SME category, micro enterprise is deemed as the enterprise, whose all employees' member are less than 10 people, and its annual net sales or its balance (sheet) total amount is at most due 2 million Euro for Forint.

SME is not deemed as the enterprise, in which the government or the local-government's direct or indirect partnership share –by virtue of capital or voting right- exceeds 25 per- cent separate or collectively.

According to the above-mentioned date, it can be determined that in Hungary SME-s are the most important subjects of the economic sector. Now 94,7 per-cent of the domestic enterprises are micro enterprises, 4,4 per-cent are small enterprises and 0,7 per-cent are medium enterprises.<sup>36</sup>

## **2. The vanishing of the small-and medium enterprises in the way of liquidation and final settlement**

### **Liquidation proceedings**

According to the legal documentation<sup>37</sup>, which disposes of the effective liquidation, the liquidation proceedings is such a proceedings, whose goal is that, the creditors get satisfaction according to the way determined in bankruptcy law, during the vanishing of the insolvent debtor without successor.

The liquidation proceedings, in case of the insolvent debtor, the failure of the bankruptcy pact or being illegal, happens of office or the petition of the debtor, of the creditor, or of the liquidator or by the notification of the Registry Court, moreover it can be conducted by the notification of the court, which arranges in the criminal proceedings.

The court notifies -among others- the environment protection authority about the ordainment of the liquidation, so the authority knows about the started liquidation proceedings. In addition, within 15 days from the beginning of the liquidation, the leader of the liquidated business organisation is obliged to – besides his/her other work- make a declaration to the competent environment protection board of supervisors and to the liquidator about remaining environment damages, charges, which caused punishment payment or other payment obligation, whose payment can make disbursement.

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<sup>36</sup> www.ksh.hu - 09.10.2009. Additionally: Statistical Mirror (Statisztikai Tükör) - 09.2009.

<sup>37</sup> Act XLIX of 1991 on the bankruptcy and liquidation proceedings

According to the other ordinance of the bankruptcy law, the liquidator- in the name of the debtor—or the creditor- can demand with a petition from the court during the liquidation period to determine that, who were the leaders of the business organisation in the previous three years before the beginning of the liquidation proceedings, after happening the treat of insolvency, they did not supply their management duties by the primary interests of the creditors, so the property of the business organisation is decreased, or they frustrated the satisfaction of the creditors' total demands or failed the arrangement of environment charges. If they, more, together caused damage, their responsibility was joint and several. The happening of the treat of insolvency is the time, from when the leaders of the business organisation predicted or could logically predict that the business organisation would not be able to satisfy the existing debts until the day of maturity.

Harmony with the corporate law ordinance, the law creates, for the leaders of the business organisation, the civil law responsibility expanded also their own property, opposite the creditors, in case after happening the treat of insolvency, they did not supply their management duties by the primary interests of the creditors or they did not supply it by the obligation of the arrangement of the environment charges, so the property of the corporate is decreased (wrongful trading).

In case of the business organisations signed in the bankruptcy law, according to the special-rule of law; the natural people and the legal people owing context-liability cannot be regarded as the successors of the vanished business organisations. Because of this, following the interruption statement there is not any possibility that the claimant sues these people as successors and demands the conduction of the procedure. There is not any possibility to determine the legal succession by the limited liability, or rather, the surety liability, because in given case, it is not about that the defendant's obligation of the vanished without successor devolves to other by rule of law, but it is about by special rule of law, in case of vanishing the debtor without successor, the enforceability of the claim is decreasing against those, who have surety residual liability or limited residual liability, which arising concurrently and existing parallel with the defendant's obligation. The authorized can enforce his/her demands in a special action opposite these people.

Another question, how it can be excepted from a leader of a liquidated company is that he/she reports himself/herself, that at the given company will occur punishment payment, even if this person is the liquidator himself/herself in the given situation. Indeed, an unfounded statutory ordinance is that the leaders of the business organisations are obliged to take note of the creditor-interests in a way, when there is not uniform creditor- interest, but these are also classified.



In other cases, the liquidator bounds to ensure the protection of the debtor's property during the liquidation proceedings, especially the observation of the requirements of the environment protection, nature conservation and protection of the historical buildings, and satisfies the proved environmental damages, charges, which are arising from before the beginning time of the liquidation period, that means averting of the damages and the charges, vanishing of the charges or the sales of the chattels with environment charges.

In case of the areas under environmental protection, or in case of the sale of the historical buildings, the minister, who is responsible for the environment protection prior to anybody else, is entitled to the right of pre-emption. The entitled for the pre-emption can practice his/her right at a public sale in a way that he/she can declare his/her purchasing intent knowing the definitive established purchase price.

Among the cost of the liquidation, after its beginning time, with the logical vanishing of the debtor's economic activity, moreover the related cost of retaining his/her property—including the cost of the arrangement of the environment damage and charges— they exist on the same level with the raised expenses connection with the civil law legal, or the debtor's credit, or debt items, tax payment and payment of contribution (including the health care contribution and the membership fees for the private pension fund), with its obligation to compensate. During the liquidation proceedings, the cost arising from the environment condition-examination by the order of delivering of the liquidator is deemed as a liquidation cost, and it has to be registered such a requirement that has to satisfy at the day of maturity.<sup>38</sup>

The Supreme Court construes in connection with the liquidation proceedings<sup>39</sup> that in the liquidation proceedings, the environmental supervisory authorities can not participate as a client; the courts, which conduct the liquidation proceedings, only have to order the arrangement of the official decision about the environment protection in connection with the violate of the environmental protection, nature conservation or protection of the historical building requirements if the behaviour or default, serves as the basis of the declaration, can write on the part of the debtor, on his/her charge. Similarly result of judicial law-construction<sup>40</sup> that, in case of the debtor's property does not give a cover for the arrangement of the environment charges, the liquidator has to initiate simplified proceedings at the court. The lack of the debtor's property, there is not the obligation for the liquidator to satisfy the arrangement of the environment charges by his/her own cost.<sup>41</sup>

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<sup>38</sup> EBH 2002.778

<sup>39</sup> BH 2001.337

<sup>40</sup> BH 2000.560

<sup>41</sup> EBH 2001.549

### **Simplified liquidation**

While the liquidation proceedings' notable percent goes as a simplified proceedings, the bankruptcy law rather laconic, only disposes, if the debtor's property is not sufficient for the cover of the expected liquidation cost, or because of the lack of the bookkeeping or rather the registration, the liquidation proceedings can not be conducted technically by the general rules, the liquidator informs the creditors, who notified creditors' claims (the board) that he/she demands to initiate a petition of simplified liquidation to the court. At the same time, he/she asks the creditors if they have any knowledge of the debtor's propriety finding anywhere, or rather they can help for conducting the proceedings according to the given rule, note it. The liquidator—in case of the lack of the bookkeeping, of the registration of the debtor- economic organisation- notes the leader of the debtor- economic organisation that in case he/she will not replace the lack of bookkeeping, of the registration, he/she will initiate a simplified liquidation.

In case when the warning is fruitless and the proceedings can not be conducted by the general rules of the liquidation proceedings, the liquidator makes a written report of it, and he/she initiates a petition, or a suggestion to the court for the distribution of the debtor's property, just as the contribution of the uncollected demands among the creditors. The court, by the report, and arrived observations, reserves; orders with a decree the distribution of the debtor's property, or rather the distribution of the uncollected demands among the creditors, and the debtor's vanish.

### **Final settlement proceedings**

According to the commercial code,<sup>42</sup> in case of vanishing the company without successor—if the company is not insolvent, and the rule of law related to the company does not contain different ordinance- happens the final settlement proceedings. If the final settlement proceedings comes, it can happen only by the decision of the main organ of the company or the decree of the Registry Court ordered in legality supervision procedure (compulsion- final settlement proceeding). The final settlement proceedings can not be decided after the delivery of the decree about determining the company insolvent, the current final settlement proceeding is vanished with the ordinance of the liquidation proceedings.

The main organ of the company can choose anybody as a final settlement person, if the leader is suitable for the requirements (of chief office) and accepts it. Legal person/entity or not incorporated company can be chosen for final

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<sup>42</sup> Act V. of 2006 on the public company and on the company procedure of court and on the final settlement proceedings

settlement person, if he/she is suitable for the commission. The company, which decides the vanishing without successor, orders the fee of the final settlement person or the free supplying, when it chooses the final settlement person. If the final settlement person is not a natural person, who was appointed by the organisation for the arrangement of the final settlement tasks, has to be suitable for the written conditions of ability and incompatibility according to the bankruptcy law. The final settlement person, from the person who is on this position, with expected high care, he/she is obliged to arrange keeping eye on the creditor's interests, or rather the company under final settlement proceedings. He/she answers the caused damage, which made with the violation obligation according to the general rules of the civil law responsibility. If the company under final settlement proceeding gets into liquidation proceedings and it can be determined that the final settlement person delayed with the initiation of the liquidation proceedings without good cause or he/she did not do everything to decrease the loss of the creditors, or rather in the interest of decreasing of the environment damages and the exemption of loss or he/she gave preference some creditors to the other creditors' damages; the court obliges the final settlement person by the creditors' or liquidator's petition to supply a capital-contribution with the company property in measure of the damage. In this case the court cuts off the fee of the final settlement person partly or totally. The Registry Court orders a decree about the institution of the final settlement proceedings, which is published in 'Cégekzlöny' by it.

The final settlement person gives notice about the initiation of the final settlement proceedings within 15 days from the claimed beginning of the final settlement proceedings –among others- to the competent environment protective inspectorate and about remaining or not environment damages, environment charges, which can cause punishment payment or other payment to avert the damages, or rather, can cause needed disbursement for the arrangement of the charges.

Considering that the decree is optional, moreover, the previous company leaders themselves are the final settlement people in a main part, in spite of the responsibility terms the initiation cannot be occurred and all of these can be controlled difficulty.

### **Simplified final settlement proceedings**

The company registration of the final settlement proceedings of the not incorporated company can happen in a simplified way, if the company finishes the final settlement proceedings within 120 days from the beginning of the final settlement proceedings. The company reports the liquidator together with the end of the procedure and with the cancellation petition to the Registry Court, which orders the cancellation registration and its announcement, presented the

liquidator and his/her address (headquarters) within the scope of this, related to the final settlement proceedings conducted in a simplified way.

### **3. The environment protective and nature conservation requirements of the liquidation proceedings and of the final settlement proceedings**

According to the regulation of the related decree<sup>43</sup> the leader (who declares) of the business organization under liquidation gives his/her declaration related to the business organisation settling area and headquarters, by bankruptcy law, to the competent environment protective- nature conservation and water authority by the settling area and headquarters. The form and content requirements of the declaration are contained by the first appendix of the decree.

If on the given headquarters, before the liquidation or during the liquidation proceedings, from operated activities resulting environment damage, environment charge out of the headquarters, too; or only out of it is created, can be created, he /she also has to mention it in the declaration. The declaration has to give a cost estimate as a part of the declaration about the needed disbursement of arrangement of the mentioned environment damages and charges.

The blemish of the regulation is that the decree does not take into consideration that besides the settling area and headquarters there can be enterprise branches. According to the commercial code, the headquarters of the company is the registered office of the company. The registered office is the mailing address of the company, the place where the receipt, guarding and making available of the business and official documents of the company happen, just as the arrangement of the requirements happens, which is related to headquarters, how it is determined in a special rule of law. The company has to sign the headquarters with a signboard. The deed of company formation can order that the headquarters of the company is the place of the central administration, too. In case when the headquarters of the company is not the same like the place of the central administration, then it must be given the place of the central administration in the deed of company formation and in the company register.

From the aspect of the registration procedure the branch in Hungary of foreign enterprises, direct trade representations of the foreigners, and the headquarters of the European Economic Union are deemed as a headquarters. The headquarters of the company for the practice of the activities in the articles of association, in the deed of company formation, in standing order, such a place with permanent, independent business settlement place, which can be found in a separate place from the headquarters of the company; the branch of the company is such a

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<sup>43</sup> 106/1995. Government decree on Environment protective- and nature conservation- consequences of the liquidation proceedings and of the final settlement proceedings

branch, which is in another city (location) - in case of a branch of a Hungarian company being abroad, in another country- is as the headquarters of the company. This rule is prevailing in case of a branch of a foreign company in Hungary and the direct trade representations of the foreigners. A branch of a Hungarian company being abroad needs the following documents for noting into the register of firms: the foreign register extract (from the register of the company), or other document, just as the authentic translation of these, it has to justify with these that the branch was registered into the register in the state of the branch. The headquarters, settling area and branch of the company can be such an immovable property, which creates the property of the company or the company is authorized its use.

It can be registered the headquarters of the lawyer (his/her office) as the headquarters of the company into the register of firms, which is ensuring, according to the commission of the company, receipt, guarding and making available of the business and official document of the company, and just as is supplying the arrangement of the requirements, which is related to the headquarters, how it is determined in a special rule of law, so, especially it is about the bearing of the official coercive measures, which is connected to the headquarters of the company and to the company documents. According to the commercial code the company, which is registered into the register of firms is authorized its activity primary prosecution in another country of the European Union, or rather it can remove the primary place of practice of its activity in other member state of the European Union. This decision of the company—the lack of a special law of different disposition- does not demand the modification of the register of firms related to the headquarters.

On basis on the above-mentioned information, it can be registered that the decree does not count with the branch definition by the commercial code, additionally the changed circumstances, so it does not follow the change of the corporate law legislation.

The authority examines according to the declaration that, how much exist, or rather how much can be stated such environment effects, environment charges going with the use of environment, whose vanishing, whose arrangement connected to rights and duties during the liquidation proceedings.

The authority, which adjudges the declaration, can oblige the business organisation for an environment condition-examination, if in its headquarters, such an activity has run at least for 20 years with that was needed environment permission, or unified environment utilisation licence or waste management permission according to the effective law in the beginning time of the liquidation or rather it can be determined significant environment damage or environmental treat from the declaration or from other document. The condition- examined must be done by branches, which can be completely or partly. In case of obliged of partly condition- examination, the authority decides in the declaration about

which measure of environment damage, which measure of environment charge must be ensured. The authority reports the court, which ordered the liquidation proceedings about the order of the condition-examination. In case when the authority will not make steps by the declaration within 60 days, or rather will not initiate, the liquidator is absolved from his/her obligation.

They have to determine the time of the performance of the ordinance of the environment condition-examination in the way that it can be considered its results at the intermediate- or closing liquidation balance sheet preparation, or rather closing simplified balance sheet preparation. The deadline, which is ordered for the arrangement of the ordinance cannot be less than 60 days and cannot exceed 150 days. In case of the ordinance of the environment condition-examination, the liquidator might not prepare the intermediate- or closing liquidation balance sheet without the approved condition-examination.

The business organisation has to carry out the environment condition-examination by an expert. The expert cannot be identical with the business organisation under liquidation proceedings. The expert, or the member, leader, employee of the expert organisation, just as their close relatives cannot be a member, leader, or employee of the business organisation under liquidation proceedings.

In case he/she does not observe totally the environment protective orders during his/her operation- or it can be found debt, attributable insufficiency to the enterprise in the date-base of the competent environment protection authority, or the controlling of the headquarters, or of the environment condition – examination discovers insufficiencies, the environment protection authority obliges him/her to arrange his/her debt, restoring of the damage caused by him/her. The arrangement of the debts, or rather restoring the damages will be paid from the enterprise's propriety as a liquidation cost during the liquidation proceedings, during the final settlement proceedings. In the official decision, which adjudged the declaration, or rather environment condition-examination, the authority obliges the debtor-business organisation to satisfy the proved environment damages, charges with the observation of the special rule of law. In case of the soil and groundwater endangering and in case of its pollution, the authority has to arrange by the special rule of law about the groundwater protection. The liquidator ensures about the execution of the ordinance. Within a 2- year deadline, but at most until the end of the liquidation proceedings, the business organisation has to arrange the obligations, whose goals are blocking the growth of environment damages and are blocking the spreading of the environment pollution to another environment element; additionally, which being in somebody else's property, received wastes for storage , aiming the handling or returning of dangerous goods, or rather, the vanishing of the business organisation without successor under liquidation proceedings would make its arrangement more difficult.

In case, when, according the official declaration, the prescribed deadline for the arrangement of the tasks exceeds the end (time) of the liquidation proceedings and the arrangement is not happened until the end of the proceedings, then about the liquidation, the liquidator

- ensures by an external contractor in a contractual formation or,
- in a contractual formation, ensures the sales of the chattels in a way when the buyer undertakes the environmental charges connected to it, or,
- in case of the environmental charges connected to the chattels—in a contractual formation –ensures in a way that connecting the dispersal of assets suggestion of the closing balance sheet, proving a proportional cost cover and besides this that creditor or determined person (organisation) undertakes the environment charge, which will be the owner of the mentioned chattels with the end of the liquidation.

The financial conditions of the contract- first the time of the payment, or rather by the use of financial security- have to secure that the cost-cover, which is proportional to the environmental charge serves merely the arrangement of the tasks, which are prescribed in the official decision. The contractor takes the responsibility for the arrangement of the tasks ordered in the official declaration. The authority can oblige the contractor (with the liquidator) for the arrangement of these tasks in an official declaration. The contract, before coming into force, is sent for the opinion to the authority by the liquidator. The deadline of the opinion is 30 days. In case, the authority does not tell its opinion within 30 days from date of delivery, it has to considered, that it does not want to tell opinion.

The self-revision makes stand an expectation obligatory by right in front of the person who runs activities, which are damage for the environment, demanded that the activity operating by him/her to examine, measure, register by certain aspects and report to the administrative organization time by time about it. In case of self-revision in a direct and concrete form we have to sign the fields, where is obligation of self-revision and determine the other obligations, which are connected with it, especially the obligation of registration and of reporting.

In case of the change of the immovable (property) owner, when the environment charge connects to the immovable and about its arrangement is ordered by an official declaration, the authority sends this declaration to the Land Office, which is competent by area. The Land Office registers assumption of the environment charge on the page of titles in the Land Register by the absolute declaration. The charge-cancellation registered in the land register—in case of the arrangement of the decision—the authority has to order.

Before the initiation of the intermediate-balance sheet to the court, the liquidator informs the authority, which amount, - which environment charges' arrangement are aimed from the created reserve. The arrangement of the

environment charges connected to the property, which is still not sold, we have to take into consideration the necessary amount of money, as the expected liquidation amount at the formation of reverse.

In case of the arrangement of the prescribed environment condition-examination, or the arrangement of environment damages, of environment charges, the property does not give cover and the liquidator has to initiate simplified liquidation at court. The liquidator has to take note of the declaration during the written preparation of the simplified liquidation, or rather, if the environment condition-examination happened, its official confiscation, just as tune with it during the creation of the distribution of the property suggestion, environment charges connected to the chattels.

If the debtor-business organisation during its activity, which conducted during the liquidation proceedings, infringes the environmental protection, nature conservation and protection of the historical building requirements determined in the rule of law, then the environmental-, nature conservation- or cultural heritage authority can oblige the observation of the regulations with official decision by the related rule of law in any period of the liquidation proceedings.

It cannot be let without consideration, that both the environment protection law,<sup>44</sup> as by<sup>45</sup> the regulations of the European Union: (only) social organisation can initiate a petition, if it is suitable for the following terms and at the same time it also justifies their existences with the suitable documents. A non-government organisation is authorized to initiate a petition of internal verification if:

- According to national law of the member-state or according to its exercise of rights it is an independent, non-profit legal person;
- Primary claimed goal of the environment protection is the support in the point of the environment protection law
- It is existed more than two years and acts for the sake of the goal of the point b) in an active way
- The subject of the internal verification of the petition belongs to its goals and objects

#### **4. Conclusion**

Whereas, the SME-s make up an important part of the economic sector; therefore, their environment protection regulation is also a very important area. The base fault of the final settlement instructions is that the simplified final

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<sup>44</sup> Act LIII. of 1995. on the general rules of the environment protection

<sup>45</sup> 1367/2006/EK decree of the European Parliament and Council



settlement is ensured for merely not incorporated companies, while there is not any possibility for it in case of the micro Ltd. operating like a family enterprise.

Similarly problematic, it is not obliged for the final settlement person that reports the activities, which cause environment damage, in connection with the text of public act mentions 'in case of need'. Logical, the final settlement person, who is the previous leader of the company in a main part, strives not to have to make a report. The authority can not be convinced of having been the environment damages or not in case of the lack of the notification. The final settlement person is not been interested in revealing the real situation in a decisive part, additionally the statutory wording- according to it, he/she makes a report if it can cause punishment payment- is not too advantageous.

Obvious, the rule of law should make obligatory the notification, in case of every vanishing company, towards the environmental supervisory authority not to be able to happen to cancel a company from the register of firms, as in given case it can not be determined the responsibility in the future, because of the final settlement person's default. In addition, the rules of limitation; furthermore, post-responsibility of the one-time owners, leaders of the vanished company is more problematical and the passing time can create situations, which can be proved difficultly.

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# The Role of Subventioned Micro Credit in Financing Small and Medium-sized Enterprises in Hungary

LÁSZLÓ DEMETER

*Department of Business Economics, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
demeterl@ektf.hu*

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The economic role of small and medium-sized enterprises<sup>46</sup> (SMEs) is pivotal: they create new jobs and economic growth. At the same time SMEs are at a disadvantage in getting various financial funds, in relation to both equity and foreign capital, as compared to large enterprises. Therefore they need collective or national subvention. Much research prove that bank loans play the most important role in foreign capital financing: at the end of the 1990's Hungarian banks were open to SMEs, which increased the ratio of the SME's credits in bank loan portfolio. This paper studies the characteristics of subventioned micro credits in Hungary, the impact of micro credits on enterprise loan portfolio and on the competitiveness of the Hungarian SME sector.

*Keywords:* SMEs, financing, supported credit

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## 1. Introduction

The economic role of the small and medium-sized enterprises changed radically in the last decades. Today they are the most important inducement of the economic growth and the workplace creation, and play role in sustainment of the competitiveness and economic adaptiveness and in the development of the regional and the national economy.

Today the importance of SME's policy is confirmed both in European Union and in Hungary by their role in economy and labour market. At the end of 2007 more than 19,6 million enterprises were in the EU 27 countries: 91,9 % of all enterprises are micro enterprises from one to nine person, 6,8 % are small, 1,1% are medium sized, and hardly more than 0,2 % fall into the category of large companies. In Hungary 95,5% of the 740000 enterprises were micro enterprises in 2007, and this ratio is larger with 0,5 % than in 2005, the medium sized enterprises' rate decreased from 4,2% in 2005 to 3,6% in 2007.

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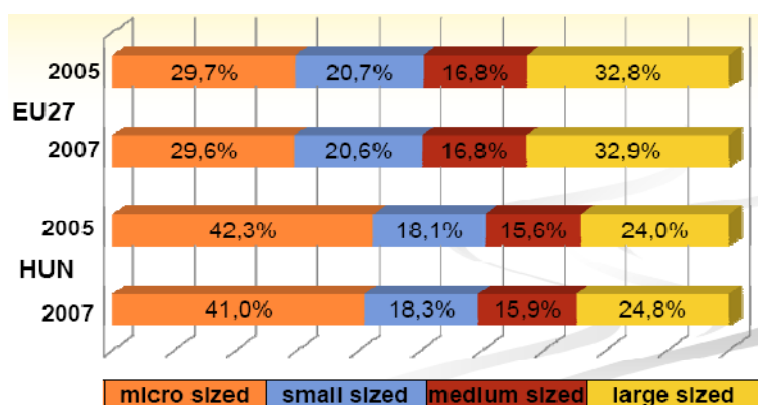
<sup>46</sup> The category of micro, small and medium sized enterprises consists of enterprises which employ fewer than 250 people and which have either an annual turnover not exceeding 50 million euro, or an annual balance sheet total not exceeding 43 million euro.

Table 1  
Number of enterprises in Europe and Hungary in 2005 and 2007

Number of enterprises		SME's				LSE's	total
		micro-sized	small-sized	medium-sized	total		
EU-27 (million)	2005	18,04	1,35	0,21	19,60	0,04	19,64
		91,9%	6,9%	1,1%	99,8%	0,2%	100,0%
	2007	18,79	1,40	0,22	20,41	0,04	20,45
		91,9%	6,8%	1,1%	99,8%	0,2%	100,0%
Hungary (thousand)	2005	672	30	5	707	1	708
		95,0%	4,2%	0,7%	99,9%	0,1%	100,0%
	2007	708	27	5	740	1	741
		95,5%	3,6%	0,7%	99,9%	0,1%	100,0%

Source: Edited from EUROSTAT and Hungarian Central Statistical Office data [2010]

The distribution of their numbers and company headcount categories show scarce about contribution of SMEs to the economic growth. Examining their role in labour market 67,2% of 131 million employers were employed in 2007 in the EU 27 countries by SMEs, but this rate is larger with about 9% in Hungary.



Source: Edited from EUROSTAT and Hungarian Central Statistical Office data [2010]

Figure 1. Proportion of employments in Europe and Hungary in 2005 and in 2007

The difference was generated by the employment's rate of the Hungarian micro sized enterprises: the 41% rate in Hungary was more than 11% larger, than in the EU 27 countries, but the employment's rate of small and medium sized enterprises was 2% smaller and 1% in Hungary.

Economic importance of this sector is also confirmed by data of the gross added value: in 2005 the 50,2% proportion of the gross added value was produced in the economy of Hungary by SMEs, and this rate was 7,4% larger in the EU 27 countries. So with respect to component of the business output the role of small and medium-sized enterprises is determinant in employment and in growing of the gross domestic product, but at the same time an important problem of the competitiveness is the financing. (Ministry for National Development and Economy [2008])

## 2. Credit financing of SMEs

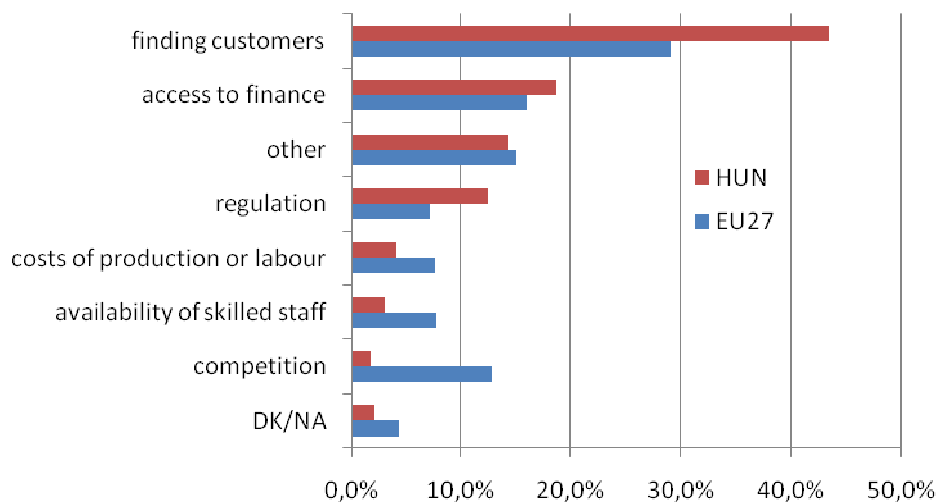
The internal finance (e.g. the operating cash-flow) have an important part in financing of SME's, at the same time numerous studies have confirmed, that the enterprises have resorted to external finance when they can't satisfy their own financing requirements with internal finance. In the case of external finance the enterprises draw on cash from external organizations and investors. Examining the external finance the public offering and the bond issue is not characteristic to this sector, because of its high cost and big time-consumption, and the trade debt and trade credit are applied occasionally depending on the deal position of the enterprise. In the case of external debt the role of the bank loan and overdraft, the leasing and the factoring (and forfeiting) can be emphasized, but this enterprises can get loan and overdraft just by higher interest and collateral because of the relatively high cost of the credit assessment and higher operating risks. To sum it up it can be declared, that "the SME's are in more disadvantageous situation than the large size enterprises on the admittance of financing sources with respect to both equity and debt". (*Csubák*, [2003b], p. 34.).

The typical financing source is different in countries, at the same time numerous paper prove, that the bank loans and overdrafts bear the most important part in SME's financing in Europe. In the research of Flash Eurobarometer<sup>47</sup> emphasizes that the problem of the competitiveness is the financing and the importance of bank financing. In all other countries in this study, the 16% of respondents said that access to finance was the most pressing problem for their company (Figure 2.), assigned this second. At the same time this rate was 3% larger in Hungary. Examining the characteristics of the company, access to finance was more often selected as the most pressing

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<sup>47</sup>This Flash Eurobarometer Access to finance (No. 271) was commissioned by the European Commission's DG Enterprise and Industry, in cooperation with the European Central Bank (ECB). More than 9.000 managers of SME's in the 27 Member States (in between 228 in Hungary) were interviewed between 17 June and 23 July 2009, using a fixed-line telephone methodology.

problem of companies with a turnover of less than 2 and 2-10 million EUR (16,9% and 16,4% vs. 9,2% for companies with a turnover above 10 million EUR). Analysing loans as external source of financing, the proportion of use of loans (past two years) per all companies was 20% larger in the EU 27 countries, than in Hungary. This—and the third worst place of the EU 27 countries—indicate the low credit financing of domestic micro, small and medium sized enterprises. (*Flash Eurobarometer*, [2009])



Source: Edited from Flash Eurobarometer [2009]

Figure 2. Companies' most pressing problem

### 3. Financing SME's by bankloans

From the changing of regime until 1995 the number of the enterprises heightened and many banks came into the market, therefore the total credit amount of this sector increased. In 1993 the proportion of credit amount of small per all companies was 11,2%, but from 1994 it was reduced, the ratio was just 3,6% in 1998.

This phenomenon could be eventuated by the next causes (*Csubák*, [2003a]):

- the small companies were characterised by low capital,
- the high costs and risks of low creditamount, and
- the low information of activity of enterprises caused by the simpler accountant regulations.

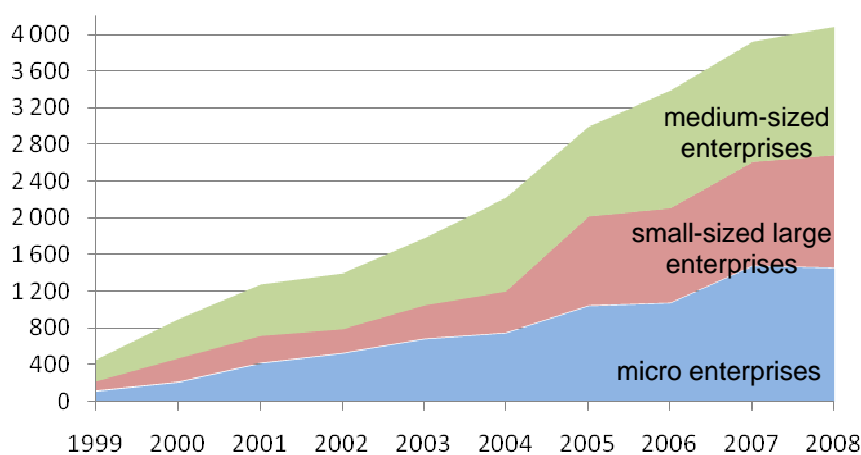
Table 2  
Credit amount of small companies in Hungary between 1993 and 1998

	1993	1994	1995	1996	1997	1998
credit amount of small companies (1)*	85,7	89,2	71,1	62,9	64,7	63,8
credit amount of all companies (2)*	761,9	875,5	982,6	1 260,1	1 766,3	1 773,1
proportion of (1) per (2)	11,2%	10,2%	7,2%	5,0%	3,7%	3,6%

\* data in milliard HUF

Source: *Institute for Small Business Development* [1999]

From the 2000s this field shows signs of improvement. The creditmarket of large scale enterprises has been filled, several banks have been opened towards the unexploited SME's sector on account of open competition. The risks of this sector have been decreased through improvement of credit assessment, and improvement of bankservice has reduced the costs of rating and riskmanagement (*Csubák*, [2003a]). Therewith the development policy of the government for SME's can be promotive of credituse with the state supported credits (see next part) and guarantee schemes (which support the creditusing with solving the collateralproblems).



Source: Edited from Hungarian Financial Supervisory Authority data

Figure 3. Credit amount of SMEs in Hungary between 1999 and 2008.

Bankloans of SME's were increased from 461 billion HUF at the end of 1999 to 4.090 billion HUF till the end of 2008, this means ninefold expansion (Figure 3.). The total credit amount of this sector has been augmented in all category more considerably than the LSE's, and it's percentage has been grown from

19,3% in 1999 to 57% at the end of 2008 in conformity with total credit amount of enterprises.

In 1999 from the total credit amount of the SMEs the medium-sized enterprises were 52%, the micro and the small enterprises were 24-24%, but at the end of 2008 the medium-sized enterprises was 34%, the micro enterprises were 36% and the small enterprises were 30%. The total credit amount of the micro and the small enterprises were thirteenfold and elevenfold separately during the tested period, and the amount of the medium-sized were increased sextuple. Therewith the ratio of the micro enterprises credits and the total credit amount increased continuously, from 12,9% in 2001 to 20,3% in 2008.

Notwithstanding the dynamic expansion, the domestic enterprises in proportion to developed countries can draw on fewer loan and overdraft sources by the ratio of the nonfinancial enterprises credits per GDP. In European countries the SME's credits per GDP ratio is high, correspondently to the distinctiveness of the financial systems, but in Hungary it was only 14% in 2008 (at the same time this was higher, than the 4% in 1999).

#### **4. State supported credits for SME's in Hungary**

The state support for SME financing will be presented through the analysis of the Microcredit Program, the Széchenyi Card, the Loan Programmes for SMEs by Hungarian Development Bank and the New Hungary Enterprise Micro Credit.

##### **Microcredit Program**

The several modified programmes in regard to conditions have been run since 1992 in maintenance of the Hungarian Foundation for Enterprise Promotion. Its target group are the micro enterprises. In 2003-2004 the amount of accommodation was decreased through sharpening the conditions, the program generated in 2002 just scarcely 2% of the total credit amount of micro enterprises, and this meant only 0,13% at the end of 2008. So this program granted financing source just for small part of the micro enterprises, but several studies made an inference of the improvement and sustainably (Kállay, [2002]; Kállay-Imreh, [2004]; Ministry of Economy and Transport, [2005a]).

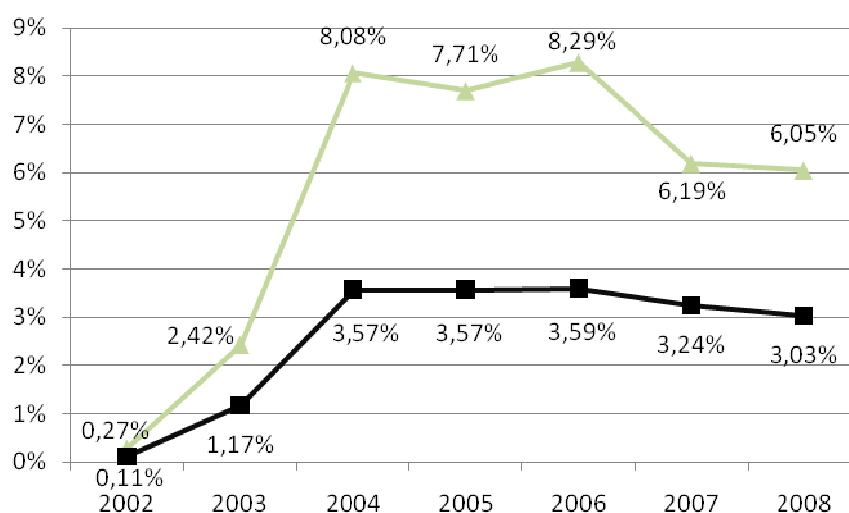
Table 3  
Microcredit disbursement between 1999-2008 (in million HUF).

	2001	2002	2003	2004	2005	2006	2007	2008
microcredits	6 792	9 023	3 559	1 416	4 154	4 824	1 677	1 662
ratio*	1,63%	1,72%	0,52%	0,19%	0,46%	0,53%	0,13%	0,13%

\* microcredits by Microcredit Program per the total credit amount of micro enterprises  
Source: Edited from Hungarian Foundation for Enterprise Promotion data [2010]

### Széchenyi Card

Széchenyi Card is a credit-card based, low-interest loan for SME's on state supported preferential terms. Its aim is to provide enterprises with a minimum business history of one year with unrestricted-use credit managing liquidity risks. The attraction of this financial source is that it provides quick access to funds and it is not necessary to demonstrate own contribution.



Comment: green line (with triangle) is the ratio of the micro enterprises allocated credit portfolio of Széchenyi Cards per the total credit amount of micro enterprises, black line (with square) the ratio of the allocated credit portfolio of Széchenyi Cards per the total credit amount of SMEs.

Source: edited from KA-VOSZ Financial Services Trading Close Co. and Hungarian Financial Supervisory Authority data. [2010]

Figure 4. Successfulness of Széchenyi Cards between 2002 and 2008.



Enlargement was enabled by the improvement of credit conditions in 2004-2005, the credits meant more than 124 billion HUF in 2008, additionally more than 105.000 cards were issued during seven year with assistance of this in the summer of 2002 starting program and in the aggregate 582 billion HUF. Examining the distribution of the credit amount of micro, small and medium-sized enterprises, it can be traced, that the sharing of the micro enterprises was steadily more than 70%.

Confirming the successfulness of this program, it was generated between 2004 and 2006 3,6% of the total credit amount of SMEs and for the micro enterprises allocated credit portfolio of Széchenyi Cards was about 8% of the total credit amount of micro enterprises. The ratios slightly decreased in 2007 and 2008, but even they were 3,03% and 6,05%. Therewith the international approbation is indicated by the first prize at the European Enterprise Award 2007.

### **Loan Programmes for SMEs by Hungarian Development Bank**

The New Hungary Enterprise Promotion Programme by Hungarian Development Bank (MFB) was started in the summer of 2005. It provides financial assistance to support the investment and development goals of companies in the SME sector. This loan programme was extended in 2008 with a new sub-programme referred to as the New Hungary Small and Medium-sized Enterprise Loan Programme, which thanks to equal funding from the EU and MFB constitutes another preferential loan opportunity for SMEs investing outside the Central Hungary region. The loans were primarily offered under refinancing schemes, at the end of 2008 the MFB had refinancing agreements with roughly 40 credit institutions. The ratio of the credit amount of these programmes and the total credit amount of SMEs (data for micro enterprises is not available) was 4-5% between 2006 and 2008. In 2008 the credit amount of SMEs was 202 billion HUF by 3.630 agreed contract, which means 4,94% share.

In a similar manner, the MBF responded positively to market trends by restructuring the loan programmes to expand the opportunities for micro and small enterprises to draw small development loans. In this context the New Hungary Small Enterprise Loan was introduced alongside the Micro-Credit Plus Programme in 2006. This direct financing scheme is available to micro enterprises that are offered by the Bank through agent networks. (Hungarian Development Bank, [2008]) The program was generated in 2008 just scarcely 0,3% of the total credit amount of micro enterprises, demonstrating the resultlessness so far.

### **New Hungary Enterprise Micro Credit (NHEP Micro Credit)**

The aim of the this programme is to develop micro enterprises with seat in Hungary that cannot be, or cannot sufficiently be financed with commercial banking methods, by improving their credit options. Within NHEP Micro Credit, Venture Finance Hungary Plc. relays refinancing credit and guarantee options to the contracted financial intermediaries, thus it provides the micro enterprises reimbursable funds with favorable interest rates, and it eases the collateral expectations faced by the SMEs by giving them guarantee.

The funds (JEREMIE initiative, 85% EU and 15% Hungary) that can be invested for this purpose amount to 58,5 billion HUF between 2008 and 2013. Credit institutions and specialized micro-financing organizations could become financial intermediaries following selection by open tendering, from the end of 2007. Contracts have been signed by 43 financial organizations so far, and 870 enterprises with 4,4 billion HUF credit amount (this means 0,3% of the total credit amount of micro enterprises) was became beneficiary in 2008.

## **5. Conclusion**

In this paper credit instruments for SME's were examined. The credit financing of the sector has changed for the better as a result of the strengthening competition on the bankmarket in the recent years. The subventioned programmes discussed in the paper, and especially the Széchenyi Card, have stimulated the prevalence of micro credits and quick credits without collateral, and in response to the government initiative banks have also launched similar market-based products. These developments of the Hungarian capital market have fostered both bank loan portfolios and the SME sector.

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# Accounting Problems of Research and Development

**KATA T. SZILÁGYI**

*Department of Business Economics, Institute of Economic Science  
Eszterházy Károly College, Egészségház u. 4, Eger 3300, Hungary  
szkata@ektf.hu*

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**R**esearch and development costs can be presented in the financial statements in several ways. The law, the different interests and the given features of the company (like size and ownership) influence which way of accounting will be prioritized. In this lecture the accounting of research and development will be analysed according to the national (Hungarian, German, French) and the international standards. Regarding the various accounting methods I make an attempt to reveal the different reasons behind choosing a certain way depending on the interests and features of the company. As a result we can get an picture how advisable is to use the data of a financial statement in survey of innovation expenses at companies.

*Keywords:* accounting, R&D, experimental development, matching concept

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## 1. Introduction

The most important part of the innovation activity is the R&D (research and development). “The specific innovation activities that firms can use to develop or acquire innovations include R&D and/or many other activities.” (*OECD* [2005] p. 35) The non-R&D activities according to the Oslo Manual for example: new concepts for products, processes, marketing methods or organisational changes, technical information, human skills, invest in equipment, software, etc. The term R&D covers in the Frascati Manual (*OECD* [2002]) three activities: basic research, applied research and experimental development.

In the above mentioned innovation activities the most problematic field is accounting of experimental development, because research costs must be exclusively written off as incurred. Costs of experimental development can be presented in the financial statements in several ways. Therefore only accounting problems of experimental development is analysed.

The Frascati Manual was written by and for the national experts in OECD member countries who collect and issue national R&D data and submit responses to OECD R&D surveys, which definition is very similar to the accounting definition of the experimental development: “systematic work, drawing on knowledge gained from research and practical experience, that is directed to producing new materials, products and devices; to installing new

processes, systems and services; or to improving substantially those already produced or installed.” (OECD [2002] p. 79)

The definition of the experimental development is in the Hungarian accounting law the translation of definition from Frascati Manual.

## **2. Expenditure on experimental development**

Expenditure on experimental development can be assaying from an accounting perspective and according to the recommendation of OECD.

### **From an accounting perspective**

In the income statement where the expenses are classified by nature, expenditure on experimental development could be presented in the following lines:

- Materials and external services:
  - costs of materials used for development (for example: the costs of test tube)
  - external services incurred for development purposes (for example: services closely related to development activities or rents for research facilities)
- Staff costs: salaries, wages and other employee related costs of workers involved on development
- Depreciation and amortisation expense: depreciation of equipment and buildings, which are strictly connected to development activities.

### **According to the recommendations of OECD**

According to the Frascati Manual (OECD [2002]) the expenditures devoted to R&D as intramural expenditures comprise current costs and capital expenditures.

- Current costs:
  - labour costs of R&D personnel: annual wages, salaries and all associated costs
  - other current costs: purchases of materials, supplies and equipment to support R&D in a given year
  - indirectly paid current costs (for example: rents for research facilities)
- Capital expenditures: annual gross expenditures on fixed assets

- land acquired for R&D and buildings constructed or purchased, including major improvements, modifications, renovations and repairs)
- instruments and equipments acquired for use in the performance of R&D
- acquisition of separately identifiable computer software for R&D

### Comparison

Current costs are shown as accounting costs in the income statement, but the depreciation for building and equipment should be excluded from the measurement of intramural R&D expenditures as per Frascati Manual (OECD [2002]).

The entire expenditures on the fixed assets used in the R&D programmes should be reported as development expenditures (namely: capital expenditures) in the period when they took place. However from an accounting perspective these assets are presented as non-current assets in the balance sheet of the enterprise, and depreciation of these assets are shown as costs in the income statement.

Table 1  
Expenditures devoted to R&D/development from an accounting perspective and according to the recommendations of OECD

Expenditures devoted to R&D/development:	Accounting	Frascati Manual
– Materials and external services	costs in income statement	currents costs
– Staff costs		
– Depreciation and amortisation expense		–
– Expenditures on fixed assets	assets in balance sheet	capital expenditures

Although the accounting standards and OECD recommendations relating to the definition of experimental development are the same, expenditures devoted to R&D are handled differently. The financial statements can only be used for the measurement of the R&D expenditures if they are presented in the Notes separately in detail.

### 3. Two methods of accounting development expenditures

Development expenditures can be presented in the financial statements in two several ways:

- Development expenditures can be regarded as part of the continuing cost of running the business and these can be written off as incurred.
- Development expenditures can be also capitalised as intangible asset, when it is probable that the future economic benefits that attributable to the result of experimental development will flow to the enterprise.

#### Writing off development expenditure as it is incurred

In case the development expenditures are written off as incurred, these costs reduce profit of the enterprise in the accounting period during the experimental development. In upcoming years when incomes from the project will flow to the enterprise, these incomes can be reduced only by the actual production and general costs but not development expenditures.

#### *Example*

An enterprise has development expenditure of \$100 000, relating to the development of a new product. It is expected that the demand for the product will stay at a high level for the next four years. Annual revenues of \$500 000 and fabrication costs of \$300 000 are expected in every years over this period. The enterprise decides to write off development expenditure.

Revenues and costs in reference to the development, fabrication and distribution of the new product are the followings:

Table 2  
Revenues and costs in case of writing off development expenditure

	0. years	1. years	2. years	3. years	4. years
Revenue	0	500	500	500	500
Work performed by the entity and capitalised	0	0	0	0	0
Costs:					
– Materials and external services	100	300	300	300	300
– Staff costs					
– Depreciation and amortisation expense					
Profit before tax	-100	200	200	200	200

#### Capitalising development expenditure

In several countries development costs can be capitalised if specific conditions apply. In this case, the development expenditure does not reduce

profit of the enterprise in the year, when experimental development takes place. In the future years when incomes can be realised from the result of the experimental development the costs (as depreciation) can be matched with these incomes.

*Example*

The data are the same as in the previous example, but the enterprise decides to capitalise development expenditure.

Revenues and costs in reference to the development, fabrication and distribution of the new product are the followings:

Table 3  
Revenues and costs in case of capitalising development expenditure

	0. years	1. years	2. years	3. years	4. years
Revenue	0	500	500	500	500
Work performed by the entity and capitalised	100	0	0	0	0
Costs:					
– Materials and external services	100	300	300	300	300
– Staff costs		+25	+25	+25	+25
– Depreciation and amortisation expense					
Profit before tax	0	175	175	175	175

The costs incurred in the 0. year is expected to be recovered from the future sales of the new product. The development expenditure is a work performed by the entity and can be capitalised as intangible asset under certain conditions. In following four years, the development expenditures will be presented in the income statement as depreciation of the intangible asset.

#### 4. Theoretical reasons of different accounting of experimental development

The problems in accounting for experimental development revolve around the following accounting concepts: realization, accruals, matching and prudence.

##### Reasons: Realization, accruals, matching concept

The realization concept: A profit is made at the time when goods are actually given to the customer, not when the customer orders the goods or pays for them.

The accruals concept: “Under accruals accounting it is the time an expense is incurred or revenue is earned that determines the accounting period in which the



transaction is accounted for.” (*Groves – Pendlebury* [2001] p. 13) The accruals concept is often also referred to as the matching concept.

The matching concept: “...the accountant measures profit by comparing or ‘matching’ the total cost of the many trading transactions undertaken during an accounting period with the total revenues arising from the trading activity.” (*Marriot – Edwards – Mellett* [2002] p. 50)

Before start to produce a product developed by the enterprise it is necessary to recognise development expenditure. That is why the costs of this product include not only the production costs but the development expenditures as well. In the financial statements all income and related expenditure should be presented. In this case the development expenditures are also related expenditure.

Income and expenses should be matched with one another, when development expenditure is capitalising as intangible asset. In fact an instrument or equipment for production will enable revenues over several accounting periods. Also in this case a company must match the appropriate costs against revenue in the same accounting period. These assets should be presented as a non-current asset in the balance sheet and charged to the income statement as depreciation to each period that will benefit.

A company with R&D activity must match the appropriate costs against benefits and the development expenditure is recommended to carry forward to future periods providing it is likely that future benefits can be directly attributable to the costs. Benefit of a development project can be in the form of revenue from the sale of the new product or of reduced costs from improved production processes.

According to these concepts (especially the matching concept) development expenditure should be deferred to the extent that its recovery can reasonably be regarded as assured. In another way: in case of capitalising development expenditure as intangible asset the realization, accruals and matching concepts dominate.

### **Reason: The prudence concept**

The prudence concept: “Accountants should be cautious in the valuation of assets or the measurement of profit. The lowest reasonable estimate of an asset’s value should be taken, whilst a forecast loss would be included but not a forecast profit.” (*Black* [2005] p. 4)

Prudence dictates that it is impossible to determine whether future revenue will arise from the development activity, thus development expenditure should be written off as incurred.

We can say in case of writing off development expenditure the prudence concept dominates, while the matching concept prefers capitalising this expenditure.

**Reason: The principle cost-benefit comparison**

The principle cost-benefit comparison: According to this principle declared in the Hungarian accounting law the collection costs of the accounting information can't exceed the benefit of the usage this information.

To an enterprise with low R&D activity the writing off development expenditures is much more simple than capitalising these expenditures.

**Conflict between concepts**

The prudence concept proposes writing off so expensing the development expenditure, but according to the matching concept it is recommended to capitalise it.

Table 4  
Profit measurement in case of conflict between principles

	<b>Prudence</b>	<b>Matching</b>
Revenue recognition	Realization by form	Realization by substance
Cost reporting	Expensing	Capitalising

Source: *Walton – Haller – Raffournier* [2003] p. 322

**5. Accounting laws and standards  
in relation to experimental development**

The accounting of experimental development is analysed according to the national (Hungarian, German, French) and the international standards (IFRS, US-GAAP).

**National laws**

The Hungarian accounting law allows capitalising only the development expenditure devoted to experimental development immediately. The enterprises have to declare their choice (expensing or capitalising) in the accounting policy and apply to this choice consistently. Though value of capitalised experimental development costs cannot exceed the prospective revenues of the development project.

It was not permitted by the German Handelsgesetzbuch (HGB – German Commercial Code) that firms recognize research or development expenditures as assets on the balance sheet till 29/05/2009 because only bought intangible asset could be presented in the balance sheet, so own-produced intangible assets could

only be expensed. Because of law changes expenditures of experimental development after 31/12/2009 can be capitalised in Germany as well.

According to the French regulation Plan Comptable General (PCG – General Accounting Plan) capitalising of development expenditure is highly recommended under certain conditions. So capitalising is preferred from the two methods of accounting development expenditures.

### **International Standards**

According to IFRS (International Financial Reporting Standards) research costs must be written off as incurred and development costs must be capitalised but IAS 38 requires these costs meeting the six criteria to be capitalised: technical feasibility (1), intention (2), ability (3) to complete and use or sell the intangible asset, probable future economic benefits (4), availability of adequate technical, financial and other resources to complete (5) and ability to measure the expenditure (6).

Under US-GAAP (United States Generally Accepted Accounting Standards) all R&D expenditures are charged to expense when incurred, because prudence principle should be clearly predominant, so in the case of conceptual conflicts, prudence concept should apply.

“In the short run, the differences in requirements between US-GAAP and IAS in respect of the accounting for R&D costs can lead to differences in earnings, assets, equity, and EPS that impact decisions of users of financial statements.” (*Ampofo–Sellani* [2005] p. 226)

## **6. Conclusions**

Different interests and given features of the company (like size and ownership) influence which way of accounting will be prioritized. Regarding the various accounting methods I make an attempt to reveal the different reasons behind choosing a certain way depending on the interests and features of the company.

Capitalising of development expenditures is prevalent principally by

- large and international companies because of interests of management
- starting enterprises because of deficits of the first several years and
- enterprises that have significant and sustained development activity.

Writing off development expenditure is prevalent principally by

- small and medium enterprises because of taxation aspects and
- enterprises that have minimal development activity.

“The change in emphasis from the prudence principle to the matching principle, (...), is most often accepted if it does not influence tax, as in the group accounts.” (*Walton at al.* [2003] p. 322)

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# Willingness-to-Pay Results for Stormwater Fees: A Case Study

MICHAEL H. SLOTKIN<sup>a</sup> – ALEXANDER R. VAMOSI<sup>b</sup>

<sup>a</sup>*College of Business, Florida Institute of Technology, USA  
150 West University Boulevard, Melbourne, Florida 32901 USA  
mslotkin@fit.edu*

<sup>b</sup>*College of Business, Florida Institute of Technology, USA  
150 West University Boulevard, Melbourne, Florida 32901 USA  
avamosi@fit.edu*

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**A** Stormwater Management Program was established in a Florida Coastal County via an ordinance adopted in 1990. The current base fee for single family homeowners, \$36 per year or \$3 per month, was the original levy first instituted almost two decades ago. Due to the effects of inflation, the purchasing power of the utility fee has experienced substantial erosion since its inception. More specifically, over the past nine years receipts collected through the stormwater utility have declined by over \$1.1 million adjusted for inflation. An analysis to assess whether County residents would be willing to pay additional stormwater utility fees above the current base rate of \$36 per year was conducted in autumn 2008. This paper provides results from that study.

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## 1. Background and scope

In September 1990 a coastal Florida County (hereafter “The County”),<sup>48</sup> established a stormwater management program via the adoption of a stormwater utility ordinance. The fee structure provided for a base maximal levy of \$36 per year for single family homeowners, with discount factors available for mitigation. Additionally, other land use categories were assessed based on formulas utilizing the base maximal rate (i.e., \$36 per year), a residential unit equivalency standard (ERU) of 2,500 square feet of impervious area, and various mitigation and adjustment factors.

Initial stormwater utility billings were levied in 1991; in the ensuing 18 years, the \$36 per year rate which forms the basis of all land use category assessments has remained unchanged. This constitutes substantial erosion in utility fee purchasing power with potential implications for program effectiveness. This study assesses whether County residents would be willing to pay additional stormwater utility fees above and beyond the current base rate of \$36 per year.

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<sup>48</sup> The County is so named for reasons of confidentiality.

### **Background on the program**

The genesis of stormwater management derives from land alteration. To illustrate, the clearing of a lot for the purpose of residential home construction creates impervious surfaces (e.g., driveways and roofs) which reduce the ability of rainwater to penetrate the ground. Accordingly, this reduction in pervious land facilitates the movement of stormwater into surface streams, with the inevitable deposit of fertilizers, oils, pesticides, and other pollutants associated with development. While regulations passed in the late 1970s required stormwater treatment as part of commercial and residential (subdivision) development in The County, the legacy of growth prior to that period, and the implications for runoff, remain.

Beyond the combating of water pollution, which in The County includes the protection of both the St. Johns River and Indian River Lagoon ecosystems, effective stormwater management abates other negative impacts associated with the loss of impervious surface area. For example, flooding is exacerbated by the loss of pervious ground, providing a direct link between development and the need for stormwater control. Moreover, the movement of stormwater runoff precipitates land erosion which contributes to the sedimentation of water bodies. If the nutrient accumulation in lakes and streams reaches the *eutrophic* state, aesthetic issues as well as fish kills can occur.

Detention and treatment of stormwater runoff facilitated by capital projects and funded by stormwater utility fees, has been one centerpiece of The County's Stormwater Management Program. Educational programs and outreach complement this effort. Utility fees supporting stormwater management projects and administration are derived from a non-ad valorem assessment on land parcels.

Effectuating stormwater management must be examined with a cognizance of program mandates, and in particular, the broadening scope of regulatory responsibility. The Clean Water Act required EPA to establish Total Maximum Daily Loads (TMDL's);<sup>49</sup> in Florida, EPA delegated this task to the Florida Department of Environmental Protection (FDEP). In short, states must determine how much pollution each water body can assimilate, while still meeting designated use. Pollution emanating from stormwater runoff is a present concern.

### **Assessment of receipts collected**

Data on receipts collected via the stormwater utility tax are available dating back to fiscal year (FY) 1999–2000 through FY 2007–08 (see Table 1).<sup>50</sup> During

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<sup>49</sup> Federal Water Pollution Control Act Amendments of 1972, Title III, Section 303(d).

<sup>50</sup> Data on tax collections is available through The County Stormwater Management Program.

that nine year period the number of parcels subject to the levy increased by about 13.6 percent. Overall, yearly tax collections (in nominal dollars) increased by approximately 4.95 percent, with an average levy collected per parcel decreasing by about 7.6 percent. In terms of both the number of parcels and total collections there are year-to-year decreases observed, which seems paradoxical given the pace of development during the first half of this decade.

Table 1  
Stormwater Fee Collections, 1999-2008, Current \$

Fiscal Year	Parcels Billed	Actual Collections Current Year \$	Actual Collections Per Parcel
FY99/00	91,000	\$3,057,229	\$33.60
FY00/01	91,215	\$3,134,994	\$34.37
FY01/02	92,777	\$3,160,756	\$34.07
FY02/03	93,457	\$3,088,095	\$33.04
FY03/04	96,000	\$3,145,051	\$32.76
FY04/05	99,785	\$3,173,398	\$31.80
FY05/06	101,585	\$3,207,395	\$31.57
FY06/07	103,570	\$3,212,788	\$31.02
FY07/08	103,389	\$3,208,693	\$31.04

Source: *PRÆCIPPIO EFS & The County Stormwater Program*

To explain this inconsistency, note that parcels, collections, and tax receipts per parcel are a more complex function of development and annexation. The County Stormwater Program covers primarily unincorporated areas, although a few municipalities have their stormwater assessments and programs operated by The County through an inter-local arrangement. So on a yearly basis development combined with annexation of county land by municipalities may precipitate the substitution of new subdivisions receiving larger mitigation allowances for older single family residences which typically receive smaller, if any, mitigation credit. In the case of a one-to-one substitution of a newer for an older home, the number of parcels remains unchanged while the dollars collected per parcel declines.

The issue of collections becomes even more profound when the purchasing power of the revenues collected is assessed. Dollars collected in 1999–2000 are less valuable than dollars collected in 2007–2008 due to the erosive effects of inflation. The proper method of assessing the value of stormwater tax collections is to deflate the nominal dollars into “inflation adjusted” or *real* dollars, which can be accomplished by utilizing a price index. Due to the nature of the “basket” of goods and services purchased by government (e.g., personnel compensation, fuel and raw materials, capital equipment, etc.), the price deflator for state and

local government expenditures (State & Local Government Price Deflator) in the National Income and Products Accounts (NIPA) is employed.<sup>51</sup>

In table 2, the deflator is indexed to a value of 100 in the base year (i.e., the fiscal year 07–08). Adjusted for inflation, County Stormwater Program tax collections have declined every year since FY 99–00. More specifically, the level of real tax collections has decreased by about \$1.125 million (FY 07–08 dollars) since the beginning of the decade, which amounts to about a 26 percent erosion in purchasing power. Unquestionably the funding base of this program has not kept pace with inflation.

Table 2  
Stormwater Fee Collections, 1999-2008, Inflation Adjusted

Fiscal Year	Parcels Billed	Actual Collections Current Year \$	State & Local Govt Price Deflator	Value of Collections Inflation Adjusted
FY99/00	91,000	\$3,057,229	70.317	\$4,347,777
FY00/01	91,215	\$3,134,994	72.334	\$4,334,068
FY01/02	92,777	\$3,160,756	74.139	\$4,263,296
FY02/03	93,457	\$3,088,095	77.146	\$4,002,910
FY03/04	96,000	\$3,145,051	80.465	\$3,908,619
FY04/05	99,785	\$3,173,398	85.690	\$3,703,357
FY05/06	101,585	\$3,207,395	90.082	\$3,560,509
FY06/07	103,570	\$3,212,788	94.697	\$3,392,714
FY07/08	103,389	\$3,208,693	100.000	\$3,208,693

Source: *PRÆCIPIO EFS, The County Stormwater Program, BEA NIPA Data*

## 2. Study methodology & demographics

The reliability of any survey-based analysis is in great measure predicated upon the survey sample being a representative sample of the population under study. For example, this study involves the County Stormwater Program (CSP), which by definition covers residents outside the municipal areas of The County. A representative sample would therefore be composed of unincorporated residents.

### Demographics of the county and unincorporated areas

As stated above, the CSP covers residents lying in the unincorporated areas of The County. Accordingly, the unincorporated populations of The County's five commission districts should form the bounds of this study. In actuality, three municipalities "opt-in" or piggy-back on the CSP, and thus the study

<sup>51</sup> See Department of Commerce, Bureau of Economic Analysis ([www.bea.gov](http://www.bea.gov)).



population includes all unincorporated households/parcels as well as households/parcels in these three municipalities.

Commission districts are drawn every ten years in the aftermath of the decennial census. In 2000, The County’s census registered 476,230 individuals, establishing commission districts of approximately 95,000 residents. Data from the Research Section of the County Planning & Zoning demarcates district populations between incorporated and unincorporated residents, and the unincorporated populations, by district, are provided in Table 3.<sup>52</sup> Overall, the unincorporated population of The County in the year 2000 was 188,918, which for purposes addressed in this analysis must be augmented by 12,446 individuals, the aggregate population of the opt-in municipalities.

Table 3  
Willingness-to-Pay Sample Population Distributions

County Commission District Population Census 2000	Unincorporated Population	Incorporated Opt-Ins	Relevant Population Share	Actual Sample Distribution
<b>District 1</b>	55,565		27.6%	26.0%
<b>District 2</b>	56,707		28.2%	27.7%
<b>District 3</b>	21,764	2,622	12.1%	13.4%
<b>District 4</b>	44,774		22.2%	21.8%
<b>District 5</b>	10,108	9,824	9.9%	11.0%
<i>Total</i>	201,364			

Source: Census Bureau & PRÆCIPPIO EFS

The relevant population shares, by district, are provided in Table 3. District 1 (27.6%) and District 2 (28.2%) collectively account for about 56 percent of the population falling under the CSP. District 4, centered on the mid-county areas, is responsible for about 22 percent of the study population, as are, collectively, the two south county districts, 3 and 5. To facilitate comparison the actual distribution of the sampled survey population, by commission district, is also provided in Table 3, and indicates strong conformity.

**Survey & data gathering**

A survey instrument was constructed by PRÆCIPPIO EFS and administered to a focus group in autumn 2008. A few background demographic questions as well

<sup>52</sup> See The County Population by Commission Districts, Census 2000 Population, The County Planning & Zoning Office.

as the willingness-to-pay question which ended the questionnaire were rewritten after consultation with the group. A consensus was formed that the questionnaire posed little in the way of processing difficulty on the part of the reader with the exception of the question which asked if the respondent lived in an incorporated area. As surveying transpired, this indeed was the question which posed the most difficulty.

Surveying County residents occurred along two primary tacks: 1) targeted neighborhoods were canvassed within areas known to fall under the CSP (60 percent of the sample); and, 2) a high-volume commercial location servicing the critical north and central locations of the county was utilized for survey intercept (40 percent of the sample). Under the former approach, candidate neighborhoods or subdivisions were ascertained by their relative price congruity with median home values within their zip code. Canvassing offered the benefit of eliminating any ambiguity with respect to the incorporation question, which was known by the surveyor a priori. It did, however, pose risks to the surveyors, who were moving door-to-door in an unfamiliar area. Surveyor safety was a primary concern, and surveyors worked in pairs and maintained clean sightlines with one another.

The use of a high-volume commercial locale was also valuable. Primarily, the mall's importance ensured that a large, cross-section of residents was available for surveying purposes. As stated earlier, the north and central portions of the county dominate the unincorporated population, and with the decline in shopping opportunities in the north, the draw of the mall was an almost ideal focal point for this study. The chief drawback to the mall was the lack of certainty with respect to surveying unincorporated residents, and in fact, a small number of incorporated residents were surveyed. Overall, the ratio of unincorporated residents in this survey sample is 75 percent; however, it should be noted that some of the incorporated respondents surveyed live in municipalities that are part of the inter-local stormwater arrangement. When the incorporated opt-in respondents are included, about 81 percent of the overall sample is serviced through the CSP.

### **Statistical tests reported**

The statistics reported in this document fall into two primary groups; those dealing with the *proportion* of households who are willing to pay additional stormwater fees, and those concerned with the *average* or *median* additional stormwater fees that households are willing to pay. For each population group a point estimate of the "true" population value along with its corresponding margin of error is presented. The latter allows the construct of an interval estimate that has a 95% probability of containing the "true" population value. Statisticians refer to these interval estimates as *confidence intervals*.

The study also reports on the outcomes of *hypothesis tests* which were implemented to determine whether the "true" population value is significantly

larger (in a statistical sense) from some predetermined value, or whether there is a significant difference in population values between two independent groups.

#### *Hypothesis Tests*

This study centers on the formulation and testing of hypotheses to answer three sets of research questions:

- Does the population proportion of respondents who are willing to pay additional storm water fees differ from 50%?
- Does the proportion of respondents who are willing to pay additional stormwater fees differ between two independent population groups?
- Does the average incremental willingness to pay stormwater fees differ between two independent population groups?
  - The overall averages of all respondents
  - The averages of only the respondents who did indicate that they would be willing to pay additional stormwater fees

The first question concerns the parameters for a single population group, while the latter questions focus on differences between two independent population groups. For each hypothesis test a test statistic along with its corresponding *P-value* is calculated. The test statistic summarizes the sample evidence in a single numerical measure, while the *P-value* assesses the strength of the sample evidence.

Confidence intervals can be used to test hypotheses for a single population parameter such as the proportion or mean, and provide the same conclusion as the method described above. Consider the null hypothesis that the proportion of households willing to pay additional stormwater fees is 50%. If the hypothesized value falls inside the interval the study would be unable to reject the null hypothesis; if the hypothesized value falls outside the interval the null hypothesis could be rejected and a conclusion could be reached that the population proportion differs from 50%.

### **3. Willingness-to-pay results**

Approximately 922 surveys were collected over a 16 week period beginning in mid-October 2008 and ending in early February 2009. Of the 922 surveys, 17 were deemed unusable due to the omission of answers with respect to the willingness-to-pay question or inconsistent responses; thus, a maximum of 905 surveys were utilized for at least one research question.

### The county overall

Table 4 reports the overall results for the broad canvass of all five commission districts comprising The County. Of the 905 respondents who answered the “yes” or “no” question with respect to their willingness to pay additional stormwater fees above and beyond the current rate, 53.9 percent indicated that they would be willing to pay additional fees, with a margin of error of +/-3.25 percent. Consider the null hypothesis that the proportion of respondents willing to pay additional stormwater fees is 50 percent. Since the hypothesized value (50%) falls outside the margin of error, the null hypothesis could be rejected and a conclusion could be reached that the population proportion differs from 50%. The closeness of the result, however, indicates a roughly even divide between respondents who would and would not support additional stormwater fees.

Table 4  
Willingness-to-Pay Results: The County Overall

Category	The County Overall
Research Question	Would you be willing to pay additional stormwater fees above the \$36 yearly assessment that you currently pay?
Number of Respondents	905
Percentage answering "Yes"	53.9%
Percentage answering "No"	46.1%
Margin of Error	+/- 3.25%
Research Question	What is the average willingness-to-pay of surveyed respondents?
Number of Respondents	887
Mean Value	\$10.39
95% Confidence Interval	\$9.32 to \$11.46
Research Question	What is the average willingness-to-pay of respondents who answered "Yes"?
Number of Respondents	470
Mean Value	\$19.61
95% Confidence Interval	\$18.32 to \$21.22
Median Value	\$15

Source: *PRÆCIPPIO EFS*

Approximately 18 respondents who indicated that they would be willing to pay additional stormwater fees did not indicate a specific dollar amount; accordingly, no interpretation is made for them and the assessment of the

average willingness to pay by householder is based on 887 respondents. The 887 respondents are comprised of 417 householders who indicated via a “no” answer they would be willing to pay \$0 additional dollars along with 470 “yes” responses of various dollar amounts.

Table 4 reports a mean value of \$10.39 with a 95% confidence interval ranging from \$9.32 to \$11.46; moreover, the average willingness to pay of those respondents who indicated that they would be willing to pay additional fees is also provided. Of the 470 “yes” responses, the mean value estimate amounted to \$19.61, with a 95% confidence interval ranging from \$18.32 to \$21.22. The median “yes” response indicated an additional willingness to pay of approximately \$15.

In sum, a little more than half the respondents indicated that they would be willing to pay additional stormwater fees, and of those that did indicate an affirmative response, the average additional willingness to pay was roughly \$20, yielding an overall mean estimate of \$10.39. Results obtained in this study indicate a 95% likelihood that the interval ranging from \$9.32 to \$11.46 captures the “true” average willingness to pay of the population in question. Further insights are provided by examining various population sub-groupings afforded by demographic questions included in the survey.

#### **Summary: willingness-to-pay results**

Table 5 reports summary results for the proportion of respondents expressing a willingness to pay additional stormwater fees. Areas highlighted indicate sub-groups with statistically significant differences in proportion; thus, recreational usage, the presence of children in one’s household, gender, and relative age are determinative factors, and all reveal proportions significantly above 50 percent. Home ownership and incorporation status were not significantly different from 50 percent.

The overall result, 53.9% willing to pay more plus or minus a 3.25% margin of error, indicates a relatively even distribution within the population sample of those willing and unwilling to pay additional stormwater fees.

Table 6 reports summary results for the average willingness to pay additional stormwater fees of all respondents. Areas highlighted indicate sub-groups with statistically significant differences in willingness to pay; thus, recreational usage, having children in one’s household, being female, living in an unincorporated area, and relatively younger age are associated with higher average willingness to pay.

Table 7 reports summary results for the average willingness to pay of only those respondents indicating that they would be willing to pay additional stormwater fees. Areas highlighted indicate sub-groups with statistically significant differences in willingness to pay; thus, recreational usage and unincorporated status are associated with higher average willingness to pay.

Table 5  
Summary Results: Proportion of Respondents Indicating Willingness to Pay

Category	Sub-Category	Number	Ratio	YES Responses	Percentage YES	MoE +/-
<i>Overall</i>		905	100%	488	53.9%	3.25%
<i>Recreational User</i> <i>n = 885</i>	Yes	489	55.3%	299	<b>61.1%</b>	4.32%
	No	396	44.7%	169	<b>42.7%</b>	4.87%
<i>Children in Household</i> <i>n = 876</i>	Yes	345	39.3%	200	<b>58.0%</b>	5.21%
	No	532	60.7%	266	<b>50.0%</b>	4.25%
<i>Gender</i> <i>n = 884</i>	Females	431	48.8%	246	<b>57.1%</b>	4.67%
	Males	453	51.2%	221	<b>48.8%</b>	4.60%
<i>Home Ownership</i> <i>n = 879</i>	Owners	718	81.7%	382	53.2%	3.65%
	Renter	161	18.3%	85	52.8%	7.71%
<i>Incorporation</i> <i>n = 876</i>	Yes	221	25.2%	122	55.2%	6.56%
	No	655	74.8%	342	52.2%	3.83%
<i>Age</i> <i>n = 878</i>	18-55	546	62.2%	323	<b>59.2%</b>	4.12%
	Above 55	332	37.8%	144	<b>43.4%</b>	5.33%

Source: PRÆCIPPIO EFS

Table 6  
Summary Results: Average Willingness to Pay of ALL Respondents

Category	Sub-Category	Average WTP All Respondents	MoE +/-	95% C.I.
<i>Overall</i>		\$10.39	\$1.07	\$9.32 - \$11.46
<i>Recreational User</i> <i>n = 885</i>	Yes	<b>\$12.95</b>	\$1.57	\$11.37 - \$14.52
	No	<b>\$7.24</b>	\$1.33	\$5.91 - \$8.58
<i>Children in Household</i> <i>n = 876</i>	Yes	<b>\$12.36</b>	\$2.01	\$10.35 - \$14.36
	No	<b>\$9.25</b>	\$1.20	\$8.05 - \$10.45
<i>Gender</i> <i>n = 884</i>	Females	<b>\$11.48</b>	\$1.60	\$9.88 - \$13.07
	Males	<b>\$9.31</b>	\$1.43	\$7.88 - \$10.74
<i>Home Ownership</i> <i>n = 879</i>	Owners	\$10.59	\$1.18	\$9.41 - \$11.78
	Renter	\$9.62	\$2.57	\$7.05 - \$12.19
<i>Incorporation</i> <i>n = 876</i>	Yes	<b>\$8.73</b>	\$1.66	\$7.07 - \$10.39
	No	<b>\$10.97</b>	\$1.33	\$9.64 - \$12.30
<i>Age</i> <i>n = 878</i>	18-55	<b>\$11.94</b>	\$1.49	\$10.44 - \$13.43
	Above 55	<b>\$7.97</b>	\$1.40	\$6.57 - \$9.37

Source: PRÆCIPPIO EFS

Table 7  
Summary Results: Average Willingness to Pay of YES Respondents

Category	Sub-Category	Average WTP YES Respondents	MoE +/-	95% C.I.
<i>Overall</i>		\$19.61	\$1.61	\$18.32 - \$21.22
<i>Recreational User</i> <i>n = 885</i>	Yes	<b>\$21.18</b>	\$2.10	\$19.08 - \$23.27
	No	<b>\$16.97</b>	\$2.46	\$14.51 - \$19.43
<i>Children in Household</i> <i>n = 876</i>	Yes	\$21.32	\$2.88	\$18.44- \$24.20
	No	\$18.50	\$1.83	\$16.67 - \$20.33
<i>Gender</i> <i>n = 884</i>	Females	\$20.11	\$2.26	\$17.84- \$22.37
	Males	\$19.09	\$2.32	\$16.77- \$21.41
<i>Home Ownership</i> <i>n = 879</i>	Owners	\$19.91	\$1.76	\$18.15- \$21.67
	Renter	\$18.22	\$4.10	\$14.13- \$22.32
<i>Incorporation</i> <i>n = 876</i>	Yes	<b>\$15.81</b>	\$2.34	\$13.47- \$18.16
	No	<b>\$21.01</b>	\$2.02	\$18.99- \$23.04
<i>Age</i> <i>n = 878</i>	18-55	\$20.18	\$2.10	\$18.08- \$22.28
	Above 55	\$18.38	\$2.31	\$16.07- \$20.69

Source: PRÆCIPPIO EFS

#### 4. Conclusions

In this study the overall result, an additional \$10.39 plus or minus \$1.07, is predicated on two factors: 1. The proportion willing to pay additional stormwater fees (Table 5); and, 2. The average amount that that proportion is willing to pay (Table 7). One demographic factor, recreational usage (REC), appears determinative with respect to both factors. REC users, as opposed to Non-REC users, exhibit a significantly higher proportion of individuals willing to pay more stormwater fees (61.1% vs. 42.7%), and additionally, REC users who are willing to pay more indicate a significantly higher contribution margin than non-REC users who are willing to pay more (\$21.18 vs. \$16.97). While other sub-groupings reveal significant differences in either factor 1 or 2 cited above, REC usage is the only sub-grouping where both factors are significant.

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