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# COMPETITIVENESS ANALYSIS OF THE FOOD PROCESSING SMES IN ONE OF THE MOST DISADVANTAGED EU REGIONS

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## -Abstract-

Competitiveness, sustainability and cooperation on regional integration are considered as basis for growth in economies, therefore its longer term perspectives are in the focus of interest at regional, EU, as well as global level. The competitiveness of the Hungarian economy falls behind the average of the EU members. Four Hungarian regions are among the poorest regions of the EU20 in the recent years. This study examines primer research data in one of these regions, North Hungary.

The food industry is traditionally an important sector in Hungary, within which the SMEs suffered significant loss of markets in the recent decade. In order to improve competitiveness of the food industry it is vital to identify and exploit the growth potential of SMEs. This study explores the competitiveness of SMEs in food processing industry in the North Hungary region based on primary and secondary data.

**Key Words:** competitiveness, regions, food industry, SMEs, Hungary,

**JEL Classification:** D24, F61, L66, R12, Q13

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## 1. INTRODUCTION

These days the power of states and companies are determined more and more by the economic power, which gives governments incentives to put emphasis on improving their competitiveness. It is a great problem for the European Union (EU), too, because in the last decade the EU lost from its competitiveness in comparison with some large economies such as the US or China. Improving competitiveness requires difficult and complex measures for the EU, for its nations, as well as for the players of economic landscape with influence on the economic performance. It is widely agreed that governments can only improve competitiveness through involving enterprises, identifying long term sustainable strategy, rather than isolated steps or political actions. (Porter, 2012)

In order to improve its competitiveness, the EU emphasizes the importance of the economic power of companies, and especially **highlights the potential of small and medium sized enterprises (SMEs) to stimulate the economy**.

In the last decade government aim to help the strengthening of small and medium sized enterprises (SMEs). It is important, because SMEs play an important role in the employment and regional development, and they have an impact on the performance of the national economies, contributing to the improvement of competitiveness. In Hungary 99.9% of all enterprise are SMEs, the ratio is similar to those in the EU, where in average SMEs account for 99.8% of all enterprises. SMEs produce more than 53.8% of the GDP produced by enterprises and account for more than two third of the workplaces (72.7%) (SBA, 2012). On the other hand, SMEs take much smaller share of the export than large companies. Most of the European SMEs (90%) are successful on the local market, typically within their own region. (UEAPME, 2006). Therefore it is important to investigate and utilize the potential of this segment in the context of regions in order to improve its competitiveness.

It is not only in the interest of the companies to conduct studies at a regional level. In the past decades competition among companies with determining influence in a specific region or city gained more importance. Regions became not only a geographical area within a country but also became the basic element of the global competition (Horváth, 2001). Enterprises are able to vitalize the regional development through instruments, such as supporting basic and vocational education, creating industrial parks, co-operating with other institutions, etc. They have unutilized potential to improve the competitiveness of local communities, and participation in this process is advantageaus for the enterprises, too. (Porter, 2012). Because **the SME segment impacts mainly the**

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**internal markets, governments could support them in utilizing their opportunities within their own regions**.

Our study focuses on one of the most underdeveloped EU region, North Hungary. After reviewing the structure of the economy in this region, we investigate the competitiveness of the SMEs in the food industry in the light of their economic and financial performance. The research aims to find out how the SMEs in the food industry may contribute to the improvement of the overall competitiveness of the region.

## 2. COMPETITIVENESS OF THE NORTH-HUNGARY REGION

Regional policy of the EU gives strategic importance to the improvement of the competitiveness of the regions. However, achievement of this goal is difficult to be measured. The comparison of the maturity of region is most often based on the gross domestic product (GDP). More adequate measure for comparison could be made based on measures which reflect the efficiency of the regions, e.g. GDP/capita, productivity or employment rate. (Eurostat, 2011) To understand competitiveness even more in depth requires a more complex set of indicators which reflect the direct and indirect factors related to the operating conditions and business environment. The set of indicators often could be interpreted only in a larger territory, therefore the EU considers the NUTS2[1] level measures when analysing competitiveness.

Eurostat has published the latest report on inequalities in regional development in March 2012 (based on 2009 data), in which out of the 271 regions of 27 member states the 20 most underdeveloped regions includes 6 in Romania, 5 in Bulgaria, 5 in Poland and 4 in Hungary. (Eurostat, 2012) The fall-back of these Hungarian regions is considerable, their GDP per capita is less than 60% of the EU average. Out of the 7 Hungarian NUT2 regions only one (Central Hungary) belongs to the more developed regions. The reason behind the outstanding performance of this region compared to the others is the economic power of Budapest, which produces 38% of the GDP of the country. The other Hungarian regions are less developed, and require continuous cohesion support.

North Hungary is the least developed region within Hungary, and it is the 9$^{th}$ in rank among the 20 least developed EU regions. Its GDP per capita is 39.6% of the EU average (Eurostat, 2013). Therefore our research focuses on the North Hungary region. According to Horváth (2011) the main barrier of growth in the underdeveloped regions is the disadvantageous economic structure. We will review the current state, capacity

[1] Nomenclature of Territorial Units for Statistics: developed by Eurostat covering the entire EU, defined by the 1059/2003/EC regulation, specifying 3 levels of territorial units. The NUTS 2 level is the most appropriate to investigate regional issues on a national level.

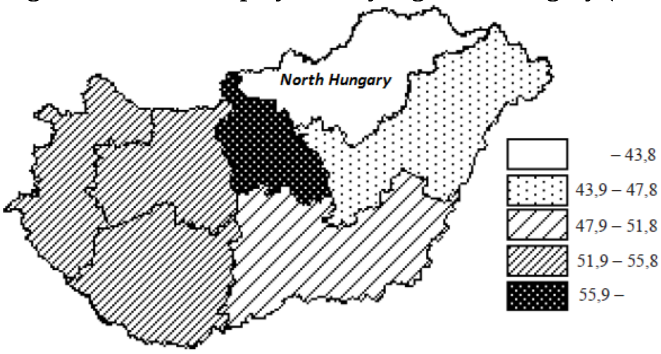
and economic structure of this region in the light of this assumption. When analysing the economic structure of North Hungary we will focus on the food industry, because it is a strategic sector on a national level, and has potential to improve competitiveness in this specific region.

### 2.1. Review of the Structure of the Economy in the North Hungary region

The region is located on the North-East part of Hungary. It is bordered by Slovakia on the North, and its south and south-east border is provided naturally by the Tisza River. The territory of the region is 13 433 km$^2$, accounting for 14.4% of the territory of Hungary, and being the fourth largest regions in the country. North Hungary has outstanding ecological potential due to its natural resources such as thermal water, mineral water sources, 8 million years old unique flora in the area of Bükkábrány, and fossils at Ipolytarnóc. (KSH, 2012) In North Hungary small villages prevail, and despite the rich natural resources the region has low employment and high unemployment rate (Figure-1) leads to intense migration (52 thousand people between 200-2009).

Among the industries of the region the share of the service sector is low relative to the national average, and the production is overrepresented. Agriculture is also has an importance beyond the average, which typically is observed in case of regions with lower GDP per capita. Most companies operate in the processing industry, and within this segment food processing is one of the most prevalent activities. (KSH, 2012) In terms of size the proportion of the different enterprises is similar to the national or the EU average. 8.6% of the Hungarian companies are in the region, majority (99.9%) of these are SMEs. (KSH, 2010) Within the SMEs 76% are individual entrepreneur and 35% of the SMEs work in the agriculture. The reason behind this is that a large number of individual agricultural producers registered some form of enterprise due to the change of regulation, and this contributed to the increase of the number of enterprises (from 5% to 36% between 2006 and 2010). (KSH, 2012 a, b)

**Figure-1: Rate of employment by region in Hungary (2008)**



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Source: Employment survey 2008, KSH (Homola, 2009)

The presence of foreign capital in the region is low compared to the national average and the rate of investment also low. 65% of the investments were made in the production sector, mostly aimed to modernize the processing industry through purchasing import machinery. Within the processing sector the output of the food, drinks and tobacco industries grew by 8.5% by utilizing mainly national and some export opportunities. (KSH, 2012b)

Although the SME segment has lower share of the industrial production, it is worth to consider the potential growth opportunities within the food industry, because the improved performance of the food industry, together with the development of agriculture, may contribute to the growth of other industries such as industrial production or services, co-operates with government institutions, and it is a significant contributor to the national budget. (Budai, 2012) Local markets also are strengthened by the urge to reduce "food mileage", undsage of energy and improve environment protection, and the expected increase in localization and regionalization is advantageous for the food industry (Polereczki, 2010), therefore it has a potential to become a key contributor to the improvement of competitiveness of the region.

## 3. STATUS AND OPPORTUNITES OF THE FOOD PROCESSING SMEs IN NORTH HUNGARY

The favourable location and natural conditions of the North Hungary region provide opportunities to develop the food industry. Until the change to market economy (1990) crops and livestock production were in balance. Later the agriculture gained even more weight, however in the past two decades the deteriorating cooperative system was an obstacle for the development of the food processing industry. The largest buyer of agricultural products is the food industry, and its shrinkage in the region also lead to the reduction of producers. In the recent years the industry started to grow its revenues. Apart from the local sales the export volumes also increased, especially with grains and grain products, but also with milk, dairy products, eggs, fruits and vegetables. At the same time import of the same products decreased. (KSH, 2012a)

12.6% of the total Hungarian food industry SMEs operate in the region, 71% of these are family or individual (41%) businesses, providing employment to 1-4 persons. (KSH, 2013) (Figure-2) The loss of share of the industry was significant in the past decade. In the lack of development of larger operations the industry lost competitive advantage, and the smaller organizations face challenges for their survival.

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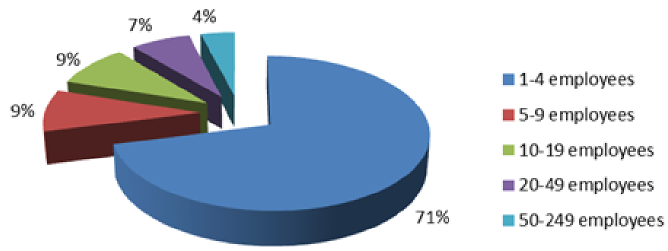
**Figure-2: Distribution of SMEs by number of employees in the North Hungary Region (n=828) (2010)**




Source: authors'' compilation based on KSH, 2013

These SMEs, however, are more flexible to react to market changes and have more positive vision of their future. Despite this, the food industry in the region faces major challenges, similarly to what we see at a national level. (AKI, 2009) Food processing has its challenges in the region, too. The appearance of the multinational retail chains put pressure on their suppliers to accept their terms and conditions. At the same time, producers also can force unfavourable terms (grain price increase, seasonal variation of supply, etc.). Consumer expectations are continuously raising, food producers must meet these expectations (quality, brand). Within this environment it is difficult for the food processing companies to maintain a sustainable operation. There is also a delay in government actions, which could contribute to the improvement of competitiveness: the bureaucratic regulatory environment, high taxes and contributions, complexity of the administration and presence of corruption. (Csath, 2011) Those food processing SMEs which are adequately financed still lack qualified professional staff (e.g. only half of the SMEs prepare a business plan, a quarter of them does not even have a vision in writing, there is no brand building or marketing strategy). (AKI, 2009) The lack of financing and professional staff limits the opportunities of SMEs and the implementation of the ideas often becomes unsuccessful (Kiss, 2009). There are solutions to eliminate the problem of lack of technology and qualified staff, such as co-operation, clusters, etc.), however, in the region's food industry these are not typical, and rather isolated. A good example for this is the co-operation between the grape producers and vineries. Out of the four wine regions in one, the Eger wine region, oenologists and the Eszterházy Károly Collage created an oenology cluster to strengthen the competitiveness of their businesses in a sector which is crucial in the region. The efforts lead to results. In 2012 the Polish oenology periodical chose the Eger wine region for the wine region of the year and it also became the most preferred wine region within Hungary.

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The need for extensional co-operation is also supported by the research conducted in 2009 by the Research Institute of Agricultural Economics[2]. The study concluded that the smaller companies sell 58% of their products within a radius of 50 km, medium sized companies sell only 30% of their products in the same range. Geographical, cultural and institutional conditions required for the co-operation are available in the region. A number of educational institutions, including 7 higher education institutions with 17 faculties, 191 research sites (both government owned and private), 29 industrial parks, two theatres, professional consultation and co-ordination offices or the chamber of commerce are part of the knowledge- and technology foundation of the region. It facilitates unique access to information, relationships, and other opportunities improving productivity or competitive advantage which – due to the distance – can be utilized only locally. (Porter, 1996)

In terms of innovation the region is last on the national rank, the R&D spend of 0.63% of the GDP is way behind the national average of 1.17% (KSH, 2012a). The degree of innovation in the Hungarian food industry is below an adequate level as well as the willingness of companies to innovate or the R&D spend of the companies or the government (MNÉP, 2009). SMEs in the food industry could improve their competitiveness through improving their innovation activity co-operating with other SMEs or other organizations, institutions in order to increase their own capacity for innovation (NKTH, 2010; Csath, 2011, InCoDeSME, 2010).

We have analysed the 2010 financial reports of 248 (30%) of companies in order to assess the debt exposure and liquidity and make conclusions how these impact the competitiveness of the sector.

### 3.1. Analysis of the debt exposure and liquidity of SMEs

In North Hungary about 828 enterprises operate in the food industry (12.6% of the total in Hungary), 825 of these are SMEs. In 2011 we collected the balance sheet and profit & loss statements of 248 food industry SMEs in the North Hungary region for the financial year of 2010. This sample accounted for the 30% of all SMEs in the region. The selection of sample was random, there was no criteria set for size or specialization of the analysed companies. The source of the data was the database of the National Tax and Customs Administration of Hungary (NTCA) which includes all food processing companies which prepared tax declaration for the year. The database does not include the individual entrepreneurs (41%).

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[2] Agrárgazdasági Kutató Intézet (AKI) Magyarország legjelentősebb agrárökonómiai szellemi bázisa.

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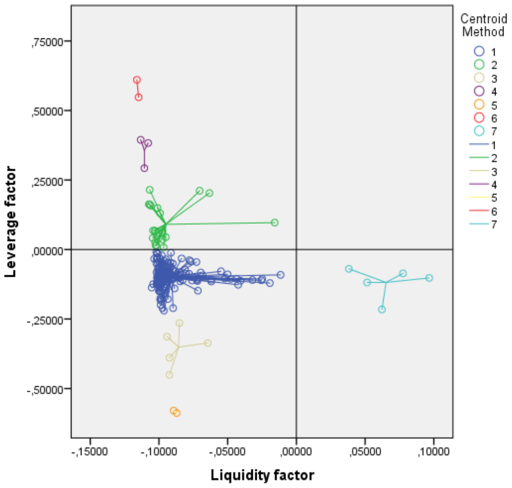
Based on the balance sheets we calculated various leverage and liquidity ratios. By applying factor analysis we created two factors (leverage and liquidity). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) confirmed that the variables can be organized into factors. The mathematical model also resulted these factors. We have plotted the companies based on these two factors, and applied cluster analysis to group the companies within the sample (Figure-3).

**Figure-3: Grouping of the food SMEs of the North Hungary region by cluster analysis**




Source: authors' own analysis, based on data form the public financial reports database (http://e-beszamolo.kim.gov.hu/)

Figure-3 illustrates that 72.88% of the SMEs fall into the group (Group 1 on Figure-3) of slightly overleveraged, these are not optimal i.e. they are moderately indebted. This group also has suboptimal liquidity, i.e. in addition to their debts their solvency is less stable. The second largest group (Group 2 on Figure-3) consists of SMEs which have liquidity issues but less debt exposure (9.75%of the sample). The companies without debts also have liquidity problems, thus they don't have the resource to finance their development. The other two groups includes companies which are in better or worse situation, however, their proportion of the sample is insignificant. The research confirms our assumption that the majority of food industry SMEs in the North Hungary region faces liquidity issues on a daily basis, and have no adequate resources for development and innovation.

Hungarian financial institutions have a variety of criteria for credit risk assessment, and these SMEs most often represent high risk, thus their access to bank loans is very limited and expensive. Unlike in the EU, that the most attractive target sector for banks in

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Hungary to offer loans is agriculture and the food industry (KPMG, 2012), however, SMEs are not benefiting from this.

## 4. CONCLUSION

Our research was based on publications, statistical data and financial analysis, and aimed to uncover the role of food industry SMEs in the improvement of competitiveness. We were looking for confirmation of our hypothesis: **the regional food industry SMEs have increasing importance, even if they can only maintain their own existence at this point in time**.

Currently food processing **SMEs don't have access to financial resources for development**, the sector can be more characterized by poor liquidity and debts. The majority of the SMEs operates as a micro enterprise, and **they have no access to adequate professional knowledge and management experience** to turn great ideas into marketable products.

The current macroeconomic environment (bureaucratic regulators, strong competition, dominance of large players, grey economy) also makes it difficult to utilize the potential of the food sector. However, eliminating their weaknesses (lack R&D, qualified staff or financial resources), through sectoral or government co-operation could help to increase their competitiveness. Such co-operation are for example **clusters, which provides great opportunity to facilitate the development of SMEs**. Relationships within the clusters (enterprises, technology centres, universities, financing institutions, consultants and public sector) may contribute to the increased competitiveness of the entire region.

The importance of the food industry and its competitiveness is larger than before, because the food industry might contribute to the Hungarian economy to overcome the crisis. In addition, successful operation of the SMEs in the food industry also ensures longer term stability and thus the social impact of the sector are positive.

The objective of our research was to prepare a preliminary study based on which we can identify areas of further research aiming to lead to effective action plans for the SMEs in the industry.

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