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Industrial subregions in the catchment area of Dunaferri

**PhD dissertation theses**

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## **I. Introduction**

Subregions, being characteristic of the economic dominance of only one corporation on the labour market, are in a unique situation as they are intensely specialized and strongly depend on the corporation. The present survey is extremely important as due to its region formation effect may change the region either in a positive or a negative direction. If economy relies only on one pillar or builds on one dominant centre the consequences of its downfall are incalculable and reach out to every point of the region. One of the most severe problems of developed market economies is the high unemployment rate and the high rate of those becoming long-term unemployed. This fact has a dramatic effect both on society and economy. Known from experiences, economic development does not directly result in a decrease in the number of unemployed as technical improvement may make complete professions or particular branches redundant. In monocultural milieu a very strong system of dependency can evolve as economy and society both gather around the same central point.

Proven by several surveys the statistical subregion of Dunaújváros and its actual catchment area are not congruent. The role of the city is significant in the region. Processes taking place here affect the Central and South-Transdanubia regions, in certain relations they even stretch over the line of the Danube. Therefore if we would like to think over the region's future development we most certainly have to take into account the geographic location of Dunaújváros and its region formational power.

Picture 1: The area of Dunaújváros



Up until recent times (mainly till the appearance of Hankook) Dunafer PLC was the driving force and almost exclusive controller of local development, where in the mid-1990s they decided not to send people to the streets for economic changes and further development but rather choose to reorganize labour force according to the company's needs. Dunafer bound itself to employment rate in its official human resources strategy and since its coming into existence the inner and outer relations have changed. A large scale staff work force reduction is continuously in the air but it is rather complex question having an effect on the city, moreover to the entire subregion. The topic is very much on the agenda, the company is aware of the fact that from the seeming labour shortage of earlier times they got to temporary redundancy in certain areas. It has been proved that in certain areas redundancy while in other areas labour shortage occurs.

Reorganization would be necessary but the country's training system and mobility habits do not allow that. The occurrence of hectic depression in steel industry and the change in the ownership further strengthened these impacts. The changes that happened in the past two years somewhat changed this partiality and helped to decrease the defencelessness coming from the dependence on only one corporation.

My choice of topic after all the facts mentioned above is also motivated by my personal relation to the area. I was born in Dunaújváros and all my family members for generations have worked in the Danube Ironworks and later on in Dunaferr. Just like in the life of the majority of the inhabitants many phases of my life so far was strongly connected to the fate of the main employee of the region.

In this fragile situation of this Subregion the role of communication gets upgraded, therefore in this dissertation the chapter related to social dialog is treated with a special emphasis.

## **II. Aims**

The aim of the researches described in the dissertation is to give a comprehensive picture about the subregion's main concern, the vulnerability arising from lack of diversification in employment. The unhidden aim of the dissertation is to provide a comprehensive, transparent basis for further research. I wish to show that to what extent the intensified regional differences influence the operation of the society and economy, their efficiency, and find the answers to the question of what effect economic differences have on societal development and vice versa. Therefore, I will approach the problem from two sides. On the one hand how regional processes influence economic differences, while on the other hand how economic differences affect the origination and formation of regional inequalities. The effect of urban spatial structure and economic situation on society in the past and present has also been examined.

In the focus of analyses there are questions researching the economic-societal problems of the region and searching the possible solutions. As a conclusion it can be said that drawing up an economic spatial-structure and framing spatial types that can characterize the regional structure of economic and social environment is justified.

The dissertation presents and analyzes the economic and social specifications of Dunaújváros subregion in a strong correlation to the development of Danube Ironworks. While dealing with the topic I will also present the composition of workers/expert of the company and the changes of its labour force.

The dissertation states that similarly to national processes, differentiation and segregation strengthened in the examined district as well. Both in the dimensions of economy and settlements I presumed the widening of relations. The relations, even if to a small extent, moved from the hierarchic state towards the horizontal.

The dissertation with regards to the details is willing to fulfil the following aims:

- Analysing the wider environment of the society and economy.
- Examining the demographic structure, the age composition of the inhabitants and analysing the educational level of the population.
- Revealing the possibilities and dangers through characterization of the strengths and weaknesses of the subregion.
- Answering the question of what changes the local economy went through and the effect they had on the economy.
- Introducing the changes in the employment policy of the Danube Ironworks.
- Describing the mode of actions of the changes Dunafer had on the subregion.
- The effects of recent investments (mainly the appearance of Hankook).
- Presenting the unemployment situation of the given subregion.

- Presenting the social communication – mainly based on questionnairing – of the subregion.

While studying the reference literature of the aforementioned subregion intensively I found that the interdisciplinary aspect characteristic of urban geography is not so frequently applies, therefore I concentrated on complexity in this respect as well.

### **III. Research methods**

From the point of view of the research aspect the preparations of the dissertation cannot be linked to any of the paradigm. The methods reflect both the aspect that wishes to certify the theory via statistics and the geographic mentality of individual questionnairing that searches for the general rules of individual decision making and behaviour.

When surveying regional units the biggest problem is the adequate choice of the regional unit. Researches so far have determined several subregions, from statistic subregion to educational subregion. The problem is that only in the smallest proportion of these cases do determinations coincide. They often overlap but almost never are identical. In Hungary a different subregion can be assigned to every process. Settlements are getting assigned to the processes and not the system adapts to the subregion. Since the topic area is being researched a complex survey was never carried out. Earlier data, research results connected to Subregional Research Team, HCSO<sup>1</sup> data, OFA<sup>2</sup> researches and data and thoughts of the Development Plan have never been summarized in one study. Statistical data can be found separately for given topic areas, but they are not systematized, they do not constitute to a complex whole.

To accomplish the aims of my dissertation survey of the subregion seemed the most appropriate as monocultural labour market specifications prove most effectual here and the application of space-perception may be the most resultful in this context. There are several lookouts throughout the dissertation for the comparison and interpretation as well as for the better understanding of the analysis.

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<sup>1</sup> Hungarian Central Statistical Office (KSH)

<sup>2</sup> National Employment Foundation (OFA)

The topic of the dissertation requires the use of statistical data. The published statistical data used as primer source comes from the databases of HCSO and the census of 2001, from the HCSO's 2002 database of Fejér county, from OFA researches and from the works of the Subregional Research Team.

In the framework of individual research besides statistical data analysis and data processing other methods were also applied such as document analysis, questionnairing the majors of the settlements in the subregions and interviews with local workers.

The unique features of the methods applied to the topics of the certain chapters:

Describing the regional structure those data could be processed the best which strongly reveal the regional differences. Thus among the economic indicators for example the number of enterprises per capita, among the societal indicators the number of divorces per a 1000 inhabitant and the number of secondary school students per a 1000 inhabitants were the most suitable. Among the societal and social indicators employment and unemployment rata play a highlighted role. These data and indicators were selected from county yearbooks published by HCSO and from the *Labour Market Mirror* and systematized them with spreadsheet application.

Besides the past demographic processes demographic data also reveal the attraction of a city, therefore provide reinforcement to the explanation of several processes. Analysing the composition of population according to several different aspects was effective in understanding regional processes and in the long-term outlook.

When analysing the documents I reviewed those laws and plan documentations – Development Plan, municipal law, decrees, Labour Law, National Spatial Development Concept – that bear some relations to economy and society.

Data of educational institutions well represent institutions of the subregion taking into account their local characteristics.



In case of the catchment area in the “commuter relations” I compared the relations between the residence and the workplace of commuter workers, for this analysis the employer provided the necessary data.

I made interviews with the leadership of the main employer as well as with the prominent leaders of higher education. I also visited the municipalities of the subregion, where usually the focus of conversation fell on the economic strategy of the settlement and the subregional social communication.

As a crucial element of the research a questionnaire analysis was carried out that included all majors of the subregion in order to aim at the tripartite principle (municipality – employer – representation of interest). In connection to this a focal point was the cooperation between employers and employees in a monocultural environment. The content of the questionnaire was about getting familiar with the characteristics of the representation of interest that are in social communication with the municipalities and employers, analysing the framework and operational rules of this connection, revealing the demands on both individual and subregional levels. A significant novelty of the dissertation is the above described and applied, combined research method the help of which the occurring synergic combination of effects was exploited.

For the period of the survey I chose the time of the millennium ending in 2002 that was indicated from several aspects. On the one hand I relied on the data of the census of 2001 for comparative analyses, while on the other hand statistical subregional system was “intact” at this point, therefore data can be compared to earlier subregional data. The new regulations acknowledged in 2003, implemented 1 January 2004 reorganized the earlier structure of the subregion of Dunaújváros. The statistical subregion previously consisted of 17 settlements, now it disintegrated into smaller, multi-functional subregions. Besides Dunaújváros, the earlier chief town of the district Adony appeared as subregional centre, and another small

town, Ercsi (earlier belonging to Dunaújváros) has also received a new subregion.

The changes of 2003-2004 radically made it difficult to carry out the comparative analysis in subregional processes, and after that it would have only been possible to build it up from statistical data of the settlements, and it is impossible to follow certain economic and social processes this way. The statistical analysis and data of the short period that passed since the reformation of the subregional structure is not yet suitable to present an exact picture of the freshest social, economic and other processes of the subregion. However, I intended to support the changes happening in the subregion, the developments and real-economy processes with actual data and according to the present state.

Last but not least the preparatory phase of the privatization of Dunaferri membership group coincided with this period after which a new era started in the life of the corporation.

## **IV. Findings**

It is worth organizing the findings of the survey into certain groups.

The *first* set summarizes the results of those analyses based on which the conclusions of swot analysis revealing the situation of the subregion become ascertained. The *second* set includes the researches based on demographic relations, economic activity and unemployment characteristics connected to the subregion's human resources, the questionnairing and structured interviews and their conclusions. The *third* set marks the power centre that determines the commuter, entrepreneurial and educational catchment area of the surveyed subregion's urban spatial structural texture along the lines of the conclusion of the related analyses, in addition proves the special region-organizational role of the main employer by revealing the labour force marketing and the special labour force catchment area. The

above listed sets will be shown based on the research finding of the dissertation.

1. The most important statements of the swot analysis – carried out in the course of the dissertation – revealing the situation of the Subregion are the following:

Up until recently the economic development of the subregion was determined by Dunaferri in 65-70%. Besides Dunaferri significant investments except the Paper Factory of Dunaújváros (Dunapack JSC at present) were not present in the region. Partly due to the infrastructural development and the newly built M6 motorway-section Hankook Tire was established in 2007 and became active in the summer of 2008. Hankook Tire is the world's seventh biggest South Korean tire factory providing job for 1500 people up until 2008 in the first phase. Due to the shortage of this period it is impossible to picture the effect of the investment on the subregion in an exact way, but it is a fact that a new power-centre came into existence in the structure of the subregion, which both directly and indirectly, and in every indicator caused fundamental changes in the economic and social structure of the subregion.

It would be excellent to establish a logistic centre in the subregion as due to its geographic location and possibilities it would highly suit this need. Regarding water transport the limitations towards the South are dissolving, the subregional expansion is strongly influenced by the building of the Danube-bridge; furthermore it would allow the development of a public harbour.

After the building of motorway M6 Dunaújváros and its area has become and is becoming an attractive settlement for investors. Since the opening of the Budapest-Dunaújváros section of motorway M6 it is a great advantage for the region. M6 partly overtook the busy and less safe main road 6 and made it possible to reach the capital within a "long desired" hour. Motorway 6 is part of the huge European highway system (Corridor Vc) that connects the Baltic region with the South Adriatic region (Gdansk-Ploce). The

influence of the opening of this short, altogether 60 km long section of the motorway can already be felt, mainly in the appearance of international corporations and in the quicker and more efficient commuting of employees living in settlements along the motorway. However, the motorways will only reach its full effect when the entire Hungarian section of the motorway is finished, it reaches the borders and connects to the international networks. A small defect is the delay of the Budapest-Érd section which makes it impossible to reach M6 from M0 for now.

The Dunaújváros Bridge also called Pentele bridge was built after a long planning and preparation between 2005-2007 together with the roads connecting to it. For now the bridge only established local connection with Dunavecse on the opposite bank as the building works of the connecting roads and motorway M8 have not even started yet. However, the local effects of the bridge can already be felt in the increased number of commuter from the small settlements of the Great Hungarian Plain which actually coincided with the start of production in Hankook. The building of M8 and its being connected to motorway M4 may bring out the real value of the bridge, which at the same time may make Dunaújváros not only a North-South but also East-West point of junction.

Railway freight traffic is outstanding on a national level however railway development and expansion of track would be necessary. The service sector is present but strongly connected to the certain industrial companies (mainly to Dunafer). The subregion has trained, innovative labour force and its professional composition adapts to the employment demands of Dunafer.

The training spectrum of the region ensures the constant increase in the level of qualification of the labour force, its recurrence and adequate qualification for the demand of new labour force, the composition of qualification and furthermore in the future it may provide a possibility to keep young intellectuals in the region. The accessibility of public services in the industrial areas has improved, an industrial park and incubator house were established, that slowly got full of entrepreneurs, but they are not suitable for satisfying further large-scale demands. The basic public utilities vital for

operate enterprises are available (occupational health, water, electricity etc.) but further development is necessary. In the field of forming an informational society the subregion is underdeveloped however it fulfils the technical requirements. The regional institutional system is developed but does not show signs of bureaucratic and information economy. The small region has a well-developed bank system. In the energy sector on a national scale this area was amongst the firsts where wind power plant was introduced (small investment) and its significant expansion is planned. From the point of energy supply this subregion is suited to employ energy-intensive branches of industry. In the fields of telecommunication and communications the accessibility of mobile services, the landline telephone services can fulfil the demands. Public transportation satisfies the demands of the subregion both on intra and inter-town level moreover it would be suitable for further demands as well. In the subregion occupational health, general practitioner and health conditions are well-accessible, fulfilling the demand. Treating hazardous waste is taken care of on the level of present demands. The number of subregional enterprises stagnates and decreases, signalling the lack of increase in enterprising spirit and investment. The area is characteristic of small enterprises and their operationally in strongly connected to the bigger industrial companies to a great extent.

Due to the commercial and shopping demand of the inhabitants shopping centres got established but those do not fully cover all requirements of the shopping public. The cultural supplier system of the subregion can only partially uphold the effective demand. Complying with the strict environmental and other requirements arising from the joining to the EU assigns further tasks for the subregion.

2. In the course of analysing the different *demographic* data it was established that in the examined years compared to the county's increase in population the subregion experienced a decrease in the population. If we make this comparison with the rural settlements we can observe an even more disadvantageous deviation as in those rural areas a relatively intensive increase of population was registered. In the gap years a multidimensional

change was noticeable with respect to the number of inhabitants of the subregion, there were years (2000) when on the contrary to the trend even an increase could be registered. Taking into account the number of inhabitants per square km the density of population was much higher than the national rate. Examining the texture of the subregion with respect to the settlement network it is obvious that the distribution of the inhabitants is not uniform. The density of population in Dunaújváros due to the high number of blocks of flats can be considered relatively high even compared to other cities. One of the reasons for this is that the administrative area basically overlaps with the borders of Dunapentele where the majority of the population lives in multi-storey blocks of flats. In the change of the population migration also plays an important role, its origins can be traced back to the inadequate labour market background and to the uncertainty of existence arising from it. The natural decrease of population was proven both in Dunaújváros and the subregion. It is a result of the high mortality rate. The positive tendency in mortality rate on national level is minimal in the Dunaújváros subregion, however the number of birth rate grown from 1998. In the examined years in the number of inhabitants in the central settlement migratory movement was dominant. It was found that many people moved to settlements outside the catchment area. In case of migrants within the catchment area the most popular settlement Baracs, Kisapostag, Rácalmás and Nagyvenyim. The rate of population over 60 shows a constant aging tendency in the age distribution of the region population similarly to the national level. In recent times the growth rate of elderly age-group in the subregion is beyond the county and national average. It is an important change that previously based on the number of population over 60 the city belonged to the “younger” cities while now it is considered to be “elder”. This phenomenon is in connection with the uncertainty of existence which severely influence the migration rate of the mobile younger generation. With regards to the economic activity of the inhabitants it was established that between the years 1990 and 2001 the rate of employment in Dunaújváros dropped with 6 percent while the number of unemployed tripled. In case of

the inactive and the dependent a 7% increase and a 2% decrease is observable. These indicators show a rather negative change as compared to the county average. In 1998 it could be said that in the Dunaújváros subregion the wages of the population were better than the national average thanks mainly to DunaFERR as today it is only true if we also consider the fringe benefits as well, as the company can provide better earning possibilities than the national average. In 2001 besides the annual wages paid to the employees of the company the amount of fringe benefits was beyond a 1 billion HUF. The positive change in the unfavourable demographic and employment data is the outcome of the recent infrastructural developments (Bridge, M6) and as their result the arrival of grand investment (Hankook).

With regards to the size of taxable income per capita Gárdony subregion has caught up with while Mór subregion has overtaken the Dunaújváros subregion. Examining the significant centres it can be said that the town of Bicske closed up to Dunaújváros. The differences can be explained by the difference between the rates of taxpayers related to the population. The wages of the region's population between 1998 and 2001 were beyond the national average but its annual increase lagged behind.

Examining the regional data of unemployment rate it was established that comparing it to an earlier period the number of unemployed decreased in the Dunaújváros subregion. The rate of the decrease falls behind the county average which has good indicative in Hungary, however, comparing to earlier years data shows beneficial processes on the labour market. Concerning the registered unemployed, the Dunaújváros subregion is fifth amongst subregions constructing counties. Amongst unemployed, the rate of long term unemployed in Dunaújváros subregion is closer to Hungary's average than to the better off county average. Among subregions within the county, the Dunaújváros subregion is on fifth place both in 1996 and 2002 concerning long term unemployment in the proportion of working age population, while comparing long term unemployed to the sum of unemployed, it is on sixth. Examining the inside combination of unemployed

populace it shows an increase in the rate of woman. It can be established by examining the data in detail that on both the demand and supply side of the labour market the skilled labour exceeds, but because of the different vocation-structure they do not meet.

A further characteristic of the unemployment situation of the subregion is Outplacement system, which is a special system achieved by Dunaferri and the Dunaújváros Self-government. As a result of this system the reduction of factory employees or local office-holders does not mean unemployment directly. The imperfection of the Outplacement systems is that it only takes care of the working force belonging to these two groups only. The fact, that Hankook as a large employer appeared and that there were considerable investments in the other factories (Dunaferri Group, Dunapack Corp.) at the same time helped to stabilize the situation as it seems.

In the case of subregional social discourse, the in advanced outlined social, global connections, processes as it was assumed were verified by the questionnairing of subregional sociological research.

Trade unions in the subregions set roots at the employers of which escaped the drastic privatization. Their presence in the private sector is rare, it is more typical in the state sector and it is restricted to the cases of larger employers (employing over a hundred people, also in state control). Employers matching the above features only exist in Dunaújváros, thus trade unions only be present in very small number around employers of small settlements. However, both the trade unions and the employers gathered enough experience in connection to the discourse, which may be the ground of developing cooperation to a subregional level.

The actuality of the research is strengthened by results: both the trade unions and the employers are lacking applicable knowledge in connection to social discourse happening in the EU, but it become clear after the individual interviews and personal impressions that it extends to the general knowledge of the European Union. Subregional cooperation may be useful in that topic area as well.



The need for subregional conciliation of interests in the case of partners conveying social discourse is restricted to local problems, issues in most cases. However, a great number of interviewed showed great willingness to cooperation, and they would readily join any initiation that helps the subregional social discourse.

The partners conveying social discourse do not have strategies concerning their partner in all of the cases (rather trade unions have). The analysis points out that with the increasing number of members in a trade union it is more probable that the employer has a ready strategy concerning the trade union. Employer strategies mainly comprise of proper informing and information exchange. In case of trade union strategies it concentrates on pay raise and that trade union delegates are treated as partners by the employer. It is also an important state, where there is any kind of strategy the existence of a collective agreement is far more probable. Thus there is a strong connection between the organizational maturity and culture, and features of the social discourse.

The collective agreement restricts the clearance of the parties in the most cases of the questioned. The strength of the trade unions is estimated very differently. In connection to the orientation of the representation of interests, both trade unions and employers found keeping, extending the social allowances and wage harmonization the most important action of representing interests.

The channels of communication used by trade unions are not really various, they frequently apply the so called “shower-news” technique as a channel of communication, which gives more emphasis to informal messages. The frequency of the discourse is typically monthly as we established from the data analysed. The frame of the discourse is formal and regulated in most of the cases.

Naturally, there are conflicts between trade unions and employers however, there were examples of the opposite, where never occurred any conflict. The main reasons for conflicts are the different attitudes towards the demands. I believe the reason for that is the lack of communication, although

the parties did not indicated the need for developing communication, it is an actual task. It can be established using the results of questionnairing that conflicts never resulted in the loss of cooperation.

Parties of this social discourse would gladly tell their opinion about subregional issues. The will of cooperation and parties of social discourse with traditions in cooperation may be real inputs to an initiation of articulating a subregional social discourse.

3. Examining the ranking of the Hungarian town settlements, the central settlement of the subregion – being the subject of the research – Dunaújváros can be ranked according to different aspects (BELUSZKY P. 1999, CSEFKÓ F. 2000, LENGYEL RECHNITZER J. 2000, CSAPÓ T. 2002, RECHNITZER J. 2003).

As it can be seen from the above, it is not easy to set up a ranking that is acceptable to everyone. Measuring the development or competitiveness of a region or a settlement always encounters difficulties. A successful city is judged according to several aspects. These aspects may often be subjective. This is why research methods that try to rank cities with county rights with the help of aggregate indicators are more acceptable.

Based on the different approaches it is verified that the competitiveness of Dunaújváros continuously weakened recently. It has to be stated that Dunaújváros' "health state" and competitiveness as compared to other cities with county rights is not reassuring. The reasons for its weak performance are the declining demographic indicators, the families that are falling apart, and the low spirit of entrepreneurs joint with the main employer's unsure vision of the future in the region.

The educational level of the city's inhabitants increased along with the national average, the average of Dunaújváros is beyond the national average in all cases.

In the past 10 years among the active wage-earners the rate of labourers decreased as compared to the intellectuals. Among the intellectuals on average every fourth person works as leader/manager.

Among the labourers the rate of skilled workers in Dunaújváros is higher than the average.

After 1997 the composition of economic organizations of the city underwent a transformation, several small companies and enterprises came into existence but this transformation – unlike the processes in other cities – did not cause a radical change in the economic structure mainly because of the successful transformation and survival of the Ironworks. The role of this corporation belonging to Dunaferr Holding is still significant today. The role of heavy industry plays a determinative rule in the employment relations of the city. However, the decrease in the number of industrial work places is obvious.

It is well known that Dunaferr Corp and its associations are the biggest employers in Dunaújváros providing work for over a 1000 people which is more than one-third of the number of the employed in the city. At the same time one-third of all workers in the corporations are not residents of Dunaújváros. The examination of the region's commuter relations with specific regards to Dunaferr will be further discussed in Chapter 8.4.

In the course of my research I paid attention whether the *labour force catchment area* of the city overlaps with the area delimited by the settlements of the statistical subregion or not, whether it spreads across the county borders to Tolna county or through the Bridge of Dunaföldvár, and just recently through the Dunaújváros Bridge to Bács-Kiskun county. The address and the last registered workplace of the unemployed greatly helped to delimit the labour force catchment area. On this basis it is proved that from this aspect Dunaújváros qualifies as a central settlement taking the registered unemployed as a previous sample. As a new tendency I showed that every tenth inhabitant of Dunaújváros goes to work.

When examining the *entrepreneurial space* it was established that earlier the number of enterprises per 1000 inhabitant lagged behind the county average, by 2001 it was beyond it. Due to the administrative area and the infrastructure the concentration of enterprises is higher in the city

than in the subregion in general, but there are exceptions. In the subregion the number of enterprises per 1000 inhabitant is the highest in Kulcs, and it is followed by Rácalmás and Dunaújváros, Nagyvenyim, Kisapostag. The other settlements are way under the county and subregional average in respect to the number of enterprises per 1000 inhabitant. The most problematic are Ráckeresztúr, Besnyő, Perkáta and Előszállás, similarly low indicators can only be found in depressed regions.

From these conditions we can conclude that the subregion – on its present developmental level – cannot adapt to the shift of focal interest in economy and employment in case of the possible changes at Duna-ferr, as settlements belonging to the catchment area of the subregion also need development and cannot overtake any tasks from the city.

The aim of *educational* research is to carry out a future-oriented analysis of the Dunaújváros subregion by describing the borders of its geographic catchment area with special regards to the fact that the region is facing an economic structural adjustment. The educational structure is not incomplete, every element of the educational spectrum including higher education is present. It is still characteristic of the educational institutional system that is concentrated in Dunaújváros.

In delimiting the educational district the secondary education of the city is the most suitable. 80% of the students attending educational institutions of Dunaújváros are secondary school students. The catchment area of the city's secondary education institutions overstretch the statistical subregion as more than half of the students' permanent residence is further away. The rate of secondary school students in Dunaújváros as related to the total number of inhabitants is lower than the county average but with regards to other rural towns and the national average this rate is higher.

Examining the northern settlements of Dunaújváros subregion, the intensity of attraction is a lot less than to the neighbouring Tolna and Bács-Kiskun county settlements, situated in the broader surroundings belonging to Dunaújváros. It is observable, that the area of attraction and the border of

administration of the subregion do not fall together, settlements like Dunaföldvár, Bölcse, Solt, Dunaegyháza, Apostag, Dunavecse are more strongly related to Dunaújváros than Ercsi, Ráckeresztúr, Pusztaszabolcs or even Besnyő. Settlements belonging to the narrower attraction of Dunaújváros are: Adony, Apostag, Baracs, Dunaegyháza, Iváncsa, Kulcs, Nagyvenyim, Mezőfalva, Kisapostag, Nagykarácsony, Előszállás, Rácalmás, Dunaföldvár, Bölcse, Solt and Perkáta. Settlements belonging to the broader attraction of Dunaújváros are: Besnyő, Beloiannis, Ercsi, Pusztaszabolcs, Sárbogárd and Dunavecse. The role of the latter grows fast with the newly build bridge.

Researching the human resource management data of Dunafer, it can be established that the highest growth of employment was between 1958-1960, because it was the time when many productive equipment were put into operation. There were three main reasons to the growth (the settling in of professionals, people working at the building site stayed, many people were travelling to the town from 20-30 km already). After finishing the buildings the number of employees at the Danube Iron Mill stagnated around 12 500-13 000 heads. After the time period of expansion, there were labour force attracting effects, thus by 1984 the number of employees decreased to 11 500 person. Because of this loss of employee at some production lines, they had to borrow foreign labour force from Cuba and Poland.

The intensive fluctuation of workers emerged in the early eighties had a disadvantageous effect on the professional composition of labourers. The factory employed three quarters of skilled workmen finishing vocational training in town to help the situation.

After the change of regime in Hungary, the human resource management strategies of the factory changed as well, and to avoid high cut-backs of labour force in 1992 a new regulation came to effect on the number of newly employed workers, which regulation is still in effect showing, that after the privatization there is still the risk of over-full employment.

The role of Dunaferri within the subregion continuously strengthened, which can easily be proved by the fact that a great number of the working aged population are employed there. The economic system and the social structure and many operating systems of the town are not adapted but it is built on the iron mill.

Examining the human resource attraction area, keeping the Dunaferri-Group Corp. human resource management system in mind, I analysed the number and contribution of commuter workers travelling to town and I assumed the following. In Dunaújváros, the Dunaferri Corp. is the biggest employer, which gives work to the 40% of employees in the town. In opposition to that, almost the third of its employees are not Dunaújváros citizen. Naturally, the commuter intensity of different settlements is very different. 77% of the workers travelling to the town come from the closest ten settlements, from which Baracs, Nagyvenyim and Rácalmás circulation is the most intensive. The remaining 23% distributed amongst the rest of the settlements. It is important to mention that the labour-attraction force of the town do not really (or at all) expand to the northern settlements of the statistical subregion, while on the south, it expands to Tolna county or even to Bács-Kiskun county through the Dunaföldvár Bridge. Dunaföldvár and Bócske have the strongest labour force market connections from these settlements. On the other bank of the Danube, before the bridge was build the strength of the attraction going from south to north was less and less. The closest in bee-line opposite Dunaújváros in Szalkszentmárton was the lowest. However, the strength of the attraction is still bigger than in settlements north to Adony, which are in the statistical subregion of Dunaújváros. Thus these settlements (Beloianisz, Bócske, Ercsi, Iváncsa, Pusztaszabolcs, and Ráckeresztúr) cannot be considered as the part of Dunaújváros labour force area. The number of commuters using the Dunaföldvár Bridge is evanescent. It can be seen from the above that this attraction area was truncated from the east until recently.

During the exploratory research of the subregion, a broader environment of the society and economy, the combination of the population,

the state of the subregional social discourse and the change in the human resource management of Dunaferri were illustrated. Taking a perspective view, the employment problems induced by Dunaferri - the latent consequences of privatization, the effects of a possible change in technology - and the solutions to that problem is possible in the labour market connections of the region. Taking the answers and the results of the subregional social discourse research into account, it can be said that no uniform solutions are suitable, because the development of the economic organizational system in the case of monocultural features is unique, thus there is a need for diversified cooperation between parties responsible the development of the subregion.

## **V. Utilization possibilities of the research results and directions for further research**

The contexts of the regional processes of the subregion were analyzed in the dissertation from many aspects. The thesis can provide useful starting points to the specialists dealing with the position exploration of the region development and planning documents.

The leaders of the local government have positive expectations towards the consequences of the infrastructural investments in the subregion, which has been already occurred or which is still in progress. The effects of the area management, appearing after opening the Dunaújváros-Érd section of motorway M6 and the Danube Bridge, are the starting points of the researches which reveal the dynamics of the development in the subregion. The termination of the underprivileged east part and the effect of the motorway investments through the south deserve top priority during the work.

Following the privatization of Dunaferri the expected change in employment policy has not happened yet, however the danger of it is still in the air. The company still keeps its labour force excess but sooner or later rationalization will come that will result in new and complex social and

economic restructuring of the subregions and those processes will provide a ground to further research. This dissertation emphatically calls the attention to the diversifications desired in the employment policy of the subregion. The appearance of Hankook is a significant step to this direction.

In the course of the research of subregional communication it turned out that the representation of interest and the employers have relevant experience in these areas. These experiences can establish the strengthening of partnerships, the programmes for exchanging experiences for experts working in the subregion as well as professional support for local self-organizations and co-operations.

Further research can be carried out according to the human resources aspects of new the employers arriving to the town that became upgraded as a result of building Motorway 6. The completion of the Dunaújváros bridge proposes the demand of research in the widespread catchment area towards the direction of the Great Hungarian Plain.



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