

# Social Polarisation in Tatabánya and its Region

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## Introduction

Tatabánya is the Central Transdanubian region's second most populous town of county rank, with a population of 67,000 in 2013. The largest city in the region is Székesfehérvár with more than 100 thousand inhabitants (100,570 people). The location transportation geography of Tatabánya and its urban area is excellent. Its distance from the Slovakian and Austrian border is 50 and 100 kilometres, respectively. It lies 70 kilometres away from Budapest.

Tatabánya is situated along the Pan-European Transport corridor connecting Berlin with Istanbul and Venice with Lvov. Part of the corridor is the M1 motorway that links Vienna with Budapest. It is accessible not only through express road but also via rail, which is also an international line, namely an express line from Budapest to Vienna and Munich. Tatabánya's geographical location is unique among Hungarian new towns because Budapest's attraction can be strongly felt here (in terms of economy, labour market, and culture).

The town has tight functional connections with the capital. These ties appear in the commuting characteristics of Tatabánya residents, in economic relationships, and in the utilisation of the capital's cultural and commercial services. Tatabánya is an important sub-centre of the Budapest metropolitan area that has its

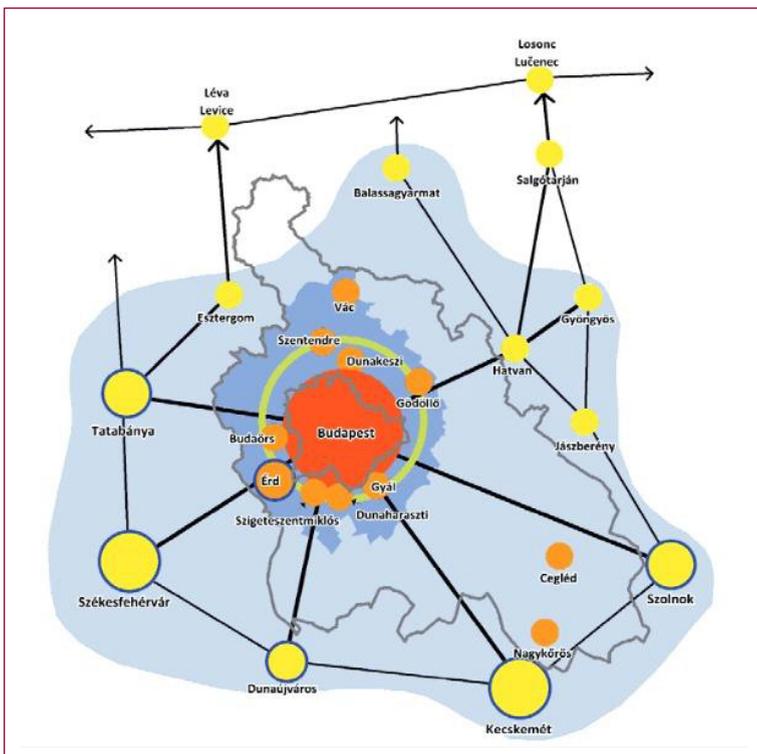
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The study has been realised within the confines of the research entitled "Social Polarisation in the Hungarian and Eastern-Central European 'New Town' Regions: Impacts of Transition and Globalisation" (K 106169), funded by the National Research, Development and Innovation Office.

own spatial organisation functions as well. According to the National Spatial Development Concept created for the development period between 2014 and 2020, Tatabánya is a member of the Budapest metropolitan area's urban network which transcends administrative boundaries (see Map 6).

According to development documents (such as the National Regional Development Plan, and the National Development Plan 2020), relations between the capital and its urban region (including Tatabánya) are no longer bilateral (existing between the capital and surrounding settlements), but are tending towards networking, which means an increase in economic, service and cooperative relationships among settlements surrounding the centre. In the light of this, the joint planning and development of the capital and its urban area is increasingly justified, especially in case of transportation and economic development issues. How successful this

Map 6: Tatabánya's relative location to Budapest



Source: National Development 2020 National Development Concept, p. 202.

will be in the future is going to be decisive for Tatabánya and its urban region, as currently its proximity to the capital often manifests as a disadvantage, especially with the brain drain it exerts on skilled workers; although that is also caused by local deficiencies, such as the low number and quality of local job opportunities.

The basis for the development of Tatabánya and its urban region was coal mining and the heavy industry (aluminium and steel production) built upon it. Of the factors supporting industrialisation we must highlight the area's abundance of minerals and natural resources (brown coal, bauxite, limestone). In addition to coal, an important factor in favour of industrialisation was the presence of underwater springs and water bodies (such as the Öreg-tó [”old lake”] in Tata). All of these conditions created a favourable basis for the establishment of heavy industry. The first mine was opened in 1896 (which involved English capital). Thanks to the profitability of coal extraction, by 1902 Tatabánya had already managed to transform from a mining site to an independent settlement. During World War II the mines and their associated facilities were spared from destruction (due in part to military and security reasons), leading to the former mining settlement becoming one of the country's largest centres for heavy industry. Tatabánya was elevated to town status in 1947, and to the status of town of county rank in 1950. With the prosperity of mining and cement production came the opening of new mining sites. By the mid-1950s Tatabánya's coal production satisfied two thirds of the country's demand for coal.

The 1960s and 70s brought another wave of the town's development. At this time new investments in heavy industry and the expansion of existing industrial capacities (such as the announcement of the Eocene Programme, and the 1965 opening of the Márkushegy mining operation) once again brought the town a strong demand for labour, which the government then solved with bringing people to Tatabánya from the country's other regions. The increase in population required housing and infrastructure. In the 1960s large housing estates were built for several thousand people using then-current prefabricated block technology. At that time the coal mines were employing nearly 17,000 people. While in 1950 the city had 40,000 residents in 1980 it was home to 75,000 people who lived here. Tatabánya and its urban region faced new challenges with the gradual depletion of carbon stocks

starting in the mid-1980s. The increasingly expensive and inefficient mining eventually led to the mine's closure in 1987. After the closure, the mines in Oroszlány and the ones still operating in Tatabánya (e.g. the Márkushegy mines) were incorporated into Vértési Erőmű Zrt<sup>1</sup>.

The sharp decline in coal mining and heavy industry activity, and the related social crisis (unemployment) stopped the town's development for a while. The previous population growth was halted and the number of inhabitants started to dwindle as the previously positive migration balance shifted to the negative. Halted construction projects and shrinking job opportunities forced many people to return their original place of residence which they originally left for the enticing prospects here.

## The specificities of the transition period

The years of the political transition, the adoption of market economy and global effects had a different impact on Central Eastern European post-socialist industrial towns. One reason for this is their unique history of social and economic development (*Szymanska, 2005*). Another one is the higher vulnerability of socialist industrial towns and their urban regions, since their economy of such a town was built almost completely on a state-owned large enterprise and was dependent on its performance and problems. Strong dependence on the public sector meant that a successful transition from a planned economy to a market-based one was dependent on the presence of the state.

In case of Hungarian new towns two models emerged. One was the “shock therapy” model, which involves the sudden and quick “retreat” of the state, mostly without a concept for handling the

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<sup>1</sup> Vértési Erőmű Zrt. is the most important power-generating thermal power plant of the Transdanubian Tatabánya and the nearby Oroszlány, which owes its existence to coal mining. The thermal power plant has both gas and coal-fuelled units. Coal was mined in the nearby Márkushegy coal mines owned by the power plant, which were operating until 2015. Due to tightening EU environmental standards, coal-based power generation had to be shut down, which led to the loss of 400 jobs in the area. Units fuelled by gas are planned to be built until 2020. The power plant currently has more than 1300 employees, making it one of the region's major employers.

economic and social tensions that were expected to arise after the privatisation of state-owned large enterprises. These towns (such as Ózd) have been struggling with severe structural problems ever since: high levels of unemployment and an increasingly accelerating exodus of the population. In new towns belonging to the other (successful) model the presence of the state and state property did not vanish but only gradually reduced, while state intervention still remained in some form (either during the privatisation process or when old business real estate was sold). Research shows that these new towns were able to successfully integrate into the global economy. (*Enyedi, 1998; Węctawowicz, 1998; Szirmai et al, 2013*). This other, more successful model also characterised Dunaújváros and Tatabánya, which towns are also analysed in this book.

In Tatabánya the disintegration of socialist heavy industry was gradual and only ended in the mid-2000s. For instance, coal production in the Márkushegy mines owned by the Vértes thermal power plant continued until 2015 when it was closed due to tightening EU environmental standards. Closing the mines and shutting down coal-based energy production ended the employment of 400 people from the area (including Tatabánya). Signs of the crisis were apparent in the early 1980s with mining becoming unprofitable and the cement plant being shut down in 1986. The crisis was further deepened by environmental pollution, decaying abandoned mining facilities,<sup>2</sup> a unilaterally skilled labour force, the complete lack of institutions of higher education, and the increasing costs of maintaining the institutional network and infrastructure built in welfare socialism, which fell on the local government.

Thanks to government subsidies (spent on the severance pay and equitable retirement of former miners and cement plant workers, and the rehabilitation of abandoned factory buildings) the town's economy did not collapse at once after the political transition, and social problems did not fall on the local government all at once. Nevertheless, damages were still considerable. The almost complete shutdown of heavy industry production led to the disappearance of more than 13 000 jobs until the mid-1990s. If we also include affected family members then the future

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<sup>2</sup> The utilisation of former mining buildings is still a problem for the town.

of approximately 40 thousand people became uncertain in the town. According to one urban professional, “the closure of the mines had an effect on nearly every family on some level. That is why we could not speak of a depression localised to certain neighbourhoods, since it affected the entirety of the town.” The most vulnerable groups were not the miners who lost their jobs in their retirement age, as they received reasonable severances and large miners’ pensions (due to which their monthly income is still often higher than that of private sector employees). The crisis and unemployment, and the risk of marginalisation mostly affected those who worked in so-called service industries related to the mines (such as repair shops). The latter experienced a significant drop in their monthly income.

Unemployed people were also at risk of not finding jobs at the mostly foreign-owned companies that were being established in the town from the mid-1990s onwards, as they required more modern, or more specialised skills, or even language skills, which these people did not possess, or were too old to be retrained or to further their education. However, a smaller group could benefit from the early years of the transition, especially those who started their own businesses (mechanicians and mechatronics specialists), providing special services required by the growing number of multinational companies that were establishing themselves here.

### *Features of economic restructuring*

Tatabánya and its region were relatively successful in their economic restructuring and quick integration into global economic processes. This was due to the simultaneous presence of several favourable factors. One of the most important of these was its favourable location. Since it was close to the capital, its excellent accessibility soon attracted the attention of foreign capital<sup>3</sup>. The town’s geographical location undoubtedly helped it to more quickly recover from the crisis emerging in the early 1990s but this alone

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<sup>3</sup> Of all post-socialist countries, in the early 1990s most foreign direct investment (FDI) flowed to Slovakia, the Czech Republic and Hungary. In the country, working capital was mostly concentrated in Budapest and its agglomeration, followed by some Transdanubian cities with strong traditional economic foundations, and into the towns of regions with good accessibility.

would have not been enough had it not been paired with conscious crisis management and economic development policies. A good counter-example here is the new town Várpalota in Western Transdanubia, which is also situated near a motorway but its economy was unable to restructure itself and it has since been struggling with a severe structural crisis (*Szirmai, 2013, p. 21.*)<sup>5</sup> In addition to the location's good accessibility, multinational companies are also attracted to the local pool of relatively cheap workers who nevertheless are highly skilled and have a good work ethic. Thanks to these characteristics, the Central Transdanubian Region realised the third largest per capita foreign investment (after the Central and Western Hungarian regions). In 2008 64% of incoming foreign direct investment was concentrated in the Central Hungarian Region with Budapest at its centre, 13% in the Western Transdanubian Region, and 11% in the Central Transdanubian Region. In 2013 the concentration of foreign capital continued to strengthen in Budapest and the western regions, with 18% directed to the Central Transdanubian Region (*CSO, 2013*).

Good accessibility alone would not have been enough for a structural change in the economy had it not been accompanied by an active development policy by the town's administration. Back then, instead of drifting along with current events, Tatabánya's administration, in cooperation with a Canadian crisis management company, created Tatabánya's long-term economic development strategy, a key element of which was the creation of a modern industrial park<sup>4</sup>. As a first step, the local government created an Organisation for Economic Development (which they still own), whose task is to make the town and its industrial park more attractive to foreign investors<sup>5</sup>.

So far the Industrial Park has created some 6,000 jobs for the town and its area. The first establishment in the Industrial Park was

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<sup>4</sup> Ipari park (Industrial Park): is an area zoned and planned for the purpose of industrial development. Industrial parks are usually located on the edges of, or outside the main residential area of a city, and normally have good transportation access, including road and rail. In 2011 179 industrial parks operated in Hungary.

<sup>5</sup> The town offered significant tax discounts and even tax exemption to companies with an annual income below 5 million HUF. Companies with a turnover of over 100 million HUF were granted a 5% tax discount.

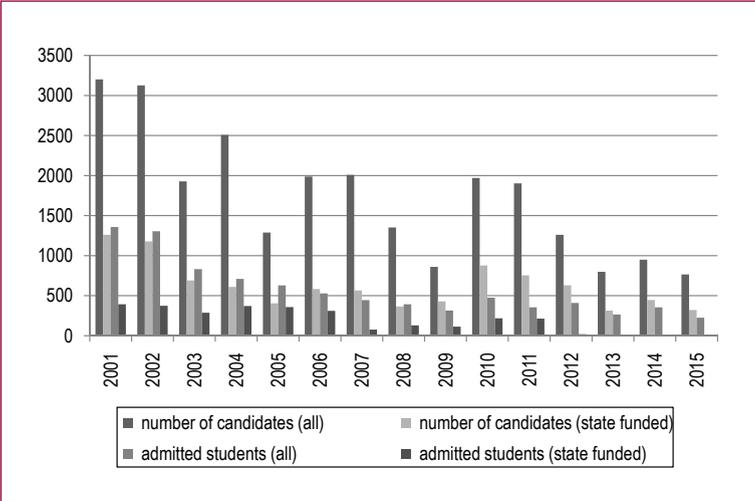
an American wheel rim manufacturer, followed by many others afterwards. Empirical research shows that the reason these companies chose Tatabánya and its area, in addition to the previously mentioned logistical advantages, infrastructural endowments, higher level public services and skilled labour force, there were also subjective reasons such as good relations with the local government and swift administration (*Szirmai et al, 2002, p.74.*). Currently there are companies from 25 different nationalities here (American, German, Japanese, Austrian, Hungarian) operating mostly in globally competitive market sectors (such as microelectronics, mechanics, medical devices, the chemical industry, etc.). One can also find here larger multinational companies such as Grundfos and Henkel. In 2001 the Industrial Park underwent an expansion to create additional capacity for further companies. The town consciously sought to attract companies that are competitive in the global market. Having learnt from the disadvantages of a mono-centric economic structure, they also sought to have the town's economy stand on multiple legs (*see Table 7*). Since the 2008 crisis no new company has come to the town, while there is still room for new ones. The town had applied for the establishment of the Mercedes factory which in the end was built in Kecskemét. Tatabánya puts great emphasis on developing the industrial park's infrastructure and make it most attractive to foreign investors.

In addition to the establishment of the industrial park in the city the foundation of the Modern Business Studies (today Edutus) College in 1992 was an important moment from the viewpoint of the town's development. It was hoped that the town will expand its regional role; its population retaining power will improve and will create a social environment and innovative milieu more attractive to economic operators.

Launching joint (dual) training programmes with local companies has been the college's priority for several years. However, the surveyed local entrepreneurs believe that the structure of the college's training programme still cannot match the labour demands of local entrepreneurs. There is a dominance of economics courses, even though more technical training is needed.

The college has been in a very strong competition for students with other higher education institutions (e.g. College of Dunajváros) in the region but it is mostly the capital city's supply of higher education is what it can hardly compete with. Over the past

Figure 7: The number of applicant and admitted college students at Edutus College (State funded and fee-paying) (2001-2015) (people)



Source: The author's own edition based on the data of Eduline

fifteen years, the number of college students steadily declined, and after 2010 and the termination of publicly-funded training courses this trend fell even further.

### *Employment, commuting, unemployment rate*

The employment rates of Tatabánya have changed over the last twenty-five years. On the one hand, following the economic restructuring and the development of market economy the employment rate fell temporarily, on the other hand, it has been restructured. The former mainly functional structure of an economy based on heavy industry and monofunctional economy – thanks to the town's economic development strategy – has been replaced by a diversified suburban zone economy. This is well illustrated by the fact that employment share in the industrial sector declined, while it increased in the service and commercial sectors. While the employment share in industry was 62% in 1980, this ratio by 1990 dropped to 5% (due to the mass termination of the heavy industrial companies). New industrial sectors appeared in the town, so the proportion of workers employed in electronics, manufacturing or in chemical industry is significant today.

Nonetheless, in 2011 the proportion of workers employed in industry in Tatabánya (38%) was still higher than the national average, which was 23%.

The improvement in employment between 2001 and 2011 is mainly due to the new multinational companies settling in the city. Between 2001 and 2011 a total of seven large, foreign-owned companies, employing hundreds of people, settled in the industrial park. Among them were large employers such as AGC, the Japanese automotive company or Samsung or Henkel (*see Table 7*).

Tatabánya's favourable employment indicators are due to the proximity of the capital city, because those who cannot find a job locally commute to Budapest. The residents of Tatabánya and its urban area have always been characterised by commuting as Tatabánya is located in the labour market catchment area of several regional scope cities (including the capital city, but also Győr and Komárom. The destination of commuting is Budapest, the capital city, in the highest proportion, Győr is the second in rank and Komárno, located on the Slovakian side, can also be mentioned.

The results of the previously mentioned empirical record show differences in the proportion of commuters commuting from the

Table 7: The most important companies of Tatabánya settled in the Industrial Park between 1995-2011

Company name	Activity	Nationality	Year of settlement
<b>OTTO FUCHS Hungary</b>	aluminium wheel rims manufacturing	German	1995
<b>Grundfos Magyarország Gyártó kft.</b>	pumps manufacturing	Danish	1999
<b>FCI Connector Kft</b>	electronic plugs and sockets manufacturing	French	1999
<b>Coloplast Hungary Kft</b>	car glass manufacturing	Japanese	2005
<b>AGC Autóipar Magyarország Kft.</b>	plasters	Danish	2005
<b>Samsung Chemical</b>	plastic raw material production	South-Korean	2006
<b>HENKEL</b>	adhesives production	German	2011

Source: Tatabánya Industrial Park (*iph.hu*)

different urban zones of Tatabánya. People living in the city centre (13%) and in the residential areas of higher status around the city centre (13.7%) do commute at above the city average (12%) ratio. The citizens living in gated communities commute in the highest proportion (15%). Presumably, the reason for this is that the higher professional status or higher job position and income groups in comparison to the average in Tatabánya live here (see more details on this later).

The surrounding communities also benefited from Tatabánya's attractiveness, especially Környe administratively bordered by the town, where the settling firms were also expected by favourable infrastructure and fiscal conditions (the Japanese Bristol glass factory for example, settled in Környe). This resulted in a competition and some conflict between the leaders of Tatabánya and Környe but finally, the two settlements have agreed in a compromise solution (proportional distribution of business tax).

One of the professionals living and working in the town who was interviewed said: "Today in Tatabánya it is just those people do not work, who do not want to." However, this does not mean that the problem of unemployment would have been eliminated in the town, especially among the less educated. Changes in the unemployment rate over the last twenty-five years followed the national trends, but always remained higher than that. The unemployment rate right after the transition (1990-1995) rose to its historical top (in the country as well), with a rate fluctuating between 12-14%. Then the unemployment rate dramatically dropped from 1996 onwards, which can clearly be linked to the establishment of the industrial park in 1996. The unemployment rate in the middle of the 2000s began to noticeably increase (as the effect of the 2008 economic crisis), and reached its peak (10%) in 2011. Then it began to decline again in 2011, which may be associated with the dynamic development of the local economy and the emergence of new companies, and company sites (e.g. Henkel, Samsung) (*see Figure 8*).

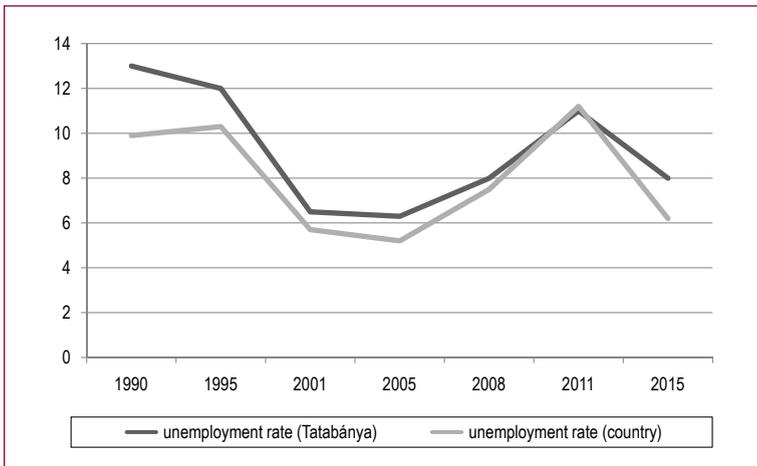
The stable operation of local economy is indicated by the fact that 14% of the total surveyed respondents living in Tatabánya urban area claimed to be very afraid of losing their jobs, but more than half of the respondents, 59%, were not afraid at all (32%) or only moderately (17%) of losing their job.

In the total sample the rate of those who are very much afraid of losing their jobs is higher, 16%. Comparing the level of public satis-

fraction with local job opportunities, it can be concluded that citizens living in Tatabánya urban region declared themselves to be more satisfied than the surveyed respondents living in other new towns.

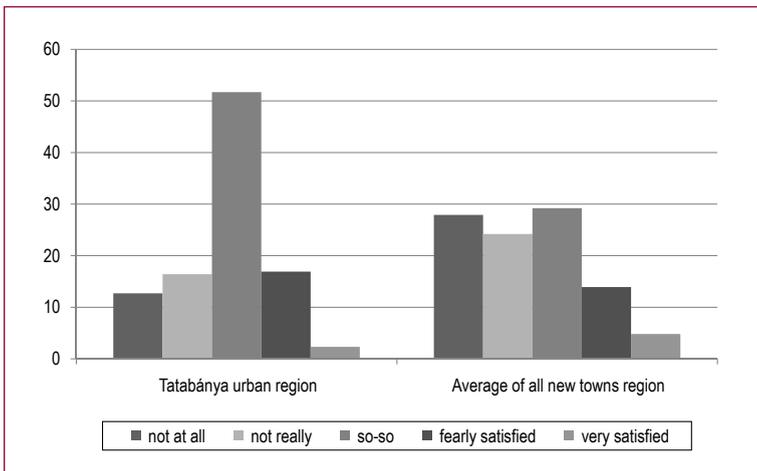
The proportion of those rather pleased with local employment opportunities is 17% in Tatabánya urban region, while the average

Figure 8: Changes in the unemployment rate in the country and Tatabánya between 1990 and 2015 (%)



Source: The author's own edition based on CSO data

Figure 9: The satisfaction rate with local employment opportunities in Tatabánya's region and other new towns regions, 2015 (%)



Source: Hungarian Scientific Research Fund survey results, 2015

of the sample in this matter is 13%. In Tatabánya urban area the rate of citizens moderately satisfied with local employment opportunities reached 51%, while the average of new towns urban regions is 29.2% (see Figure 9).

## The main trends of socio-spatial polarisation

### *Demographic and social characteristics*

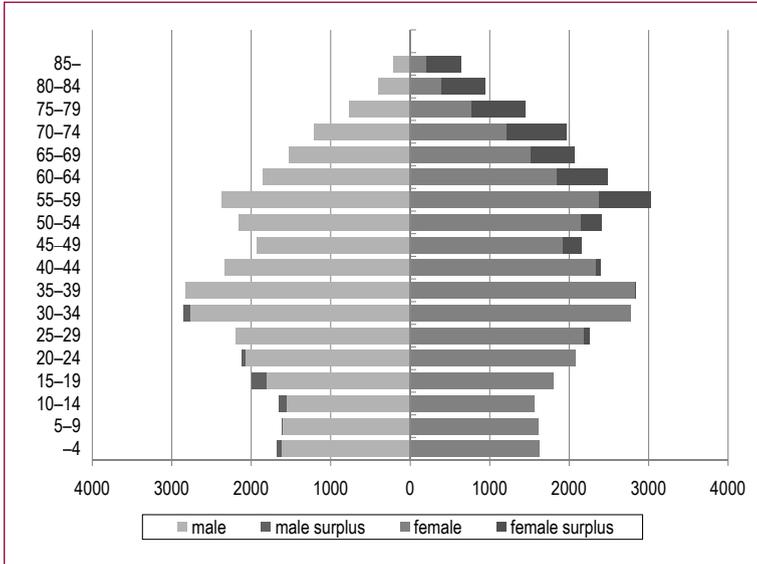
Over the past twenty-five years the demographic and social conditions of Tatabánya and its region have changed. The earlier demographic structure, typical of a socialist industrial town, namely the surplus of male population, the younger age structure and the positive migration balance has changed. Today Tatabánya hardly meets these formerly new town's criteria. The 2011 census data and Tatabánya city's population pyramid show a picture of an ageing local population, where the proportion of children and juvenile age people is significantly lower than the proportion of the elderly generation within the total population.

The regime change has brought a revolution in the number of urban population. While until 1990 the number of urban population steadily increased, after 1990, this growth turned into a decline. Between 1990 and 2013, the population of the town of Tatabánya decreased from 72 thousand to 67 thousand. At the same time, in the town's neighbourhood settlements the population decline was much more moderate (Figure 11).

The steady decline of birth rate also contributed to the decrease in the population. According to the last three censuses the ratio of 14-year olds in Tatabánya decreased, while the proportion of elderly people increased the most. The ageing index also confirms this. While in 2001, the number of elderly (over the age of 65 years) was 80 per 100 juvenile (under 14 years), this figure was 87 in 2011, and 118 (!) in 2014.

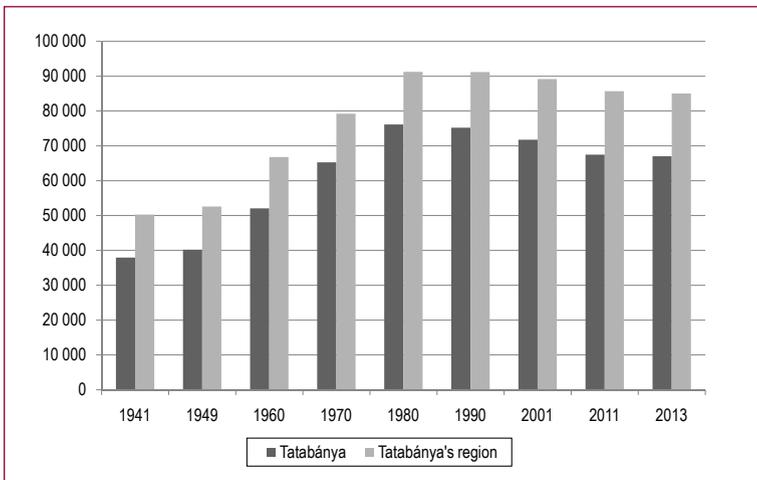
The population decline, is only partly to blame for the low birth rate level, it can rather be explained by the years of negative migration difference. Although in recent times, a number of multinational enterprises settled in the town and in the region creating new jobs and services, but this could not offset the continued population decline in the city and its surroundings.

Figure 10: The distribution of the population pyramid of Tatabánya by gender 2011 (people)



Source: The author's own edition on the basis of CSO data

Figure 11: Population change in Tatabánya and its region between 1941 and 2013 (people)



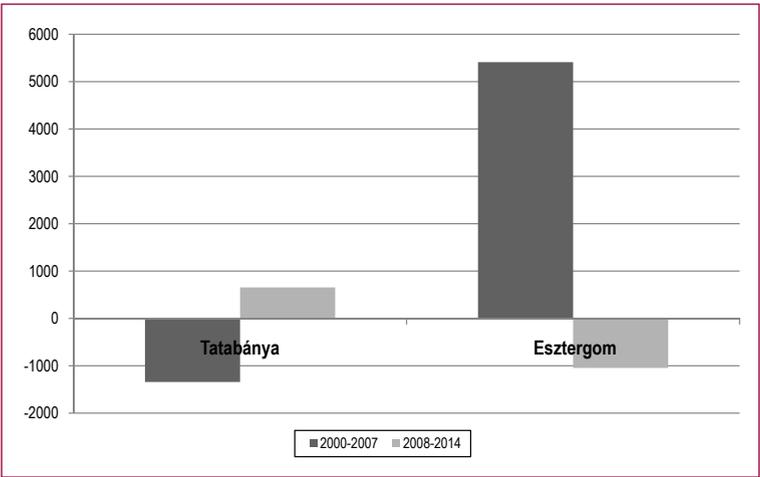
Source: The author's own edition on the basis of CSO data

However, if the process of migration balance is divided into two periods (pre- and post-economic crisis period) and compared to the county seat and at the same time a traditional town,

Esztergom<sup>6</sup>, the net migration data, the characteristics and the new trends can be observed (see Figure 12).

On the one hand it appears that in the pre-crisis years, 2000-2007, while there was a major exodus in Tatabánya, Esztergom had a positive migration balance. This trend since 2008 seems to turn around. After 2008 the dynamics of migration slowed down in Tatabánya and a positive migration balance was observed, while in Esztergom the previous positive migration balance turned into negative. Among the reasons may be mentioned that Suzuki Esztergom, one of Hungary’s largest car manufacturers, employed nearly 6,000 people in the city and the surrounding areas but it attracts labour even from the Slovak side of the border. The economic crisis particularly seriously hit the car industry and car companies such as Suzuki too. In 2008-2009, the factory was forced to lay off nearly 1200 of its workers. The town was hit by the crisis very heavily, because 30% of the town’s total business tax revenues came from Suzuki.

Figure 12: The migration balance of Tatabánya and of Esztergom, between 2000-2007 and 2008-2014 (people)



Source: The author’s own edition on the basis of CSO data

<sup>6</sup> After Esztergom, Tatabánya is the second most populous city of Komárom-Esztergom county, whose old county seat is a religious centre, the headquarters of Suzuki Hungary factory, the Japanese car manufacturer, has been operating here since 1998. According to 2011 census data, the population of Esztergom was 29,000 people.

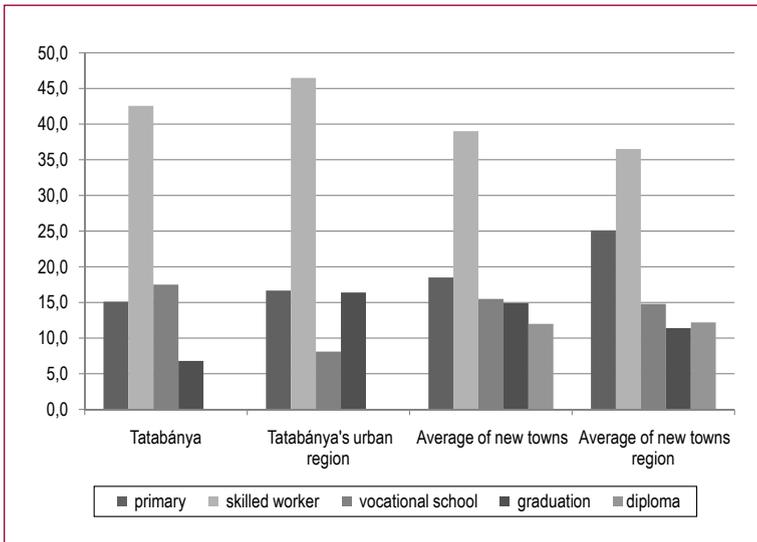
In Tatabánya there were no similar to Esztergom scale layoffs, in fact, after 2008 a new IT company settled in the industrial park, and of the existing companies some were developing and some expanded their capacity. Presumably, it also helped to slow down the dynamics of the outmigration from the town.

### Qualification characteristics

Tatabánya's industrial workers' town character even in the 21<sup>st</sup> century has survived in part, as it is reflected by the qualification characteristics of the population. Although the proportion of graduates – similarly to national trends – increased between the two censuses in the town (this is partly due to the operation of the local college as well) their share is still below the national or regional average.

In contrast, the ratio of people with professional qualifications is higher. According to the empirical results of a representative survey for 11 new Hungarian towns and their urban regions, the proportion of skilled workers in Tatabánya urban region (46.5%) is exceeding the average of the sample (36%) significantly.

Figure 13: The qualification data of the population in Tatabánya, and in the new towns' urban regions, 2015, (%)



Source: Hungarian Scientific Research Fund survey results, 2015

## *Socio-spatial inequalities*

As a consequence of global urbanisation, during the last two decades in East-Central European regions, including urban areas, social spatial inequalities increased: social disparities between cities and their surroundings became stronger (Szirmai *et al*, 2005; 2014; Kubes, 2013).

In Tatabánya and its urban region the spatial separation of the residential area of different social status groups was already typical even in the 1950s. One reason for this is that Tatabánya is a “mosaic” city. Tatabánya’s urban structure is different from the rest of the new towns, as it has grown into a town not from a village centre; housing estates were built not around it as in the case of Dunaújváros. But previously built housing estates, family home neighbourhoods or more recently built gated communities were built amidst physically separated settlement districts. All this had an impact on the town’s and its urban area’s territorial social inequalities. This is because different social status groups moved into the different parts of the municipality with different urban ecological conditions. The state-socialist housing allocation mechanisms resulted in intensified territorial separation; different studies found a correlation between the social structure of the housing estates’ population and the ecological conditions of residential neighbourhoods not only in Hungary but in Tatabánya as well. (Csanády *et al*, 2011).

This means that in better positioned housing estates higher proportion of apartments were given to higher status groups, while lower-status groups could move in their new home in lower quality housing estates. In Tatabánya’s housing estates built in different decades, positioned under different urban ecological conditions, people of different social status set their homes. The managers of the local municipality, the Board of Directors members of state enterprises and mines and their families were housed in the town centre built in the 1950s and 1960s, in the residential houses equipped by modern conveniences and highest technology by the standards of the contemporary architectural technology. Of the higher status citizens several had already had a rural family home or cottage at that time in the town’s suburban zone or at the foot of Vértes Mountains in villages with favourable natural and living environment or at the nearby Tatai Lake.

Parallel with the prestigious residential areas and suburban settlements, the urban neighbourhoods and housing estates inhabited by lower-status groups (the lower strata of miners' society) have always been present. A good example in Tatabánya is the neighbourhoods inhabited by cement workers and colliers that already at the time of their completion had been separated both physically and in their societies from the other parts of the town. These neighbourhoods were considered unhealthy even at the time of their construction, due to the close proximity of the cement plants. In Tatabánya due to a further deterioration of these parts of the town (e.g. Mésztelep, Hatos telep) segregated areas have evolved.

The extreme examples of social polarisation in Tatabánya can be observed in relatively easily definable small segregated areas inhabited by socially handicapped groups being in seriously disadvantaged position in every respect. The borders of the town's segregated areas were marked by the Hungarian Central Statistical Office for the first time in 2011, according to the 2011 census data. Based on the demarcation, those areas should be regarded as segregated, where the proportion of unemployed in the working-age population is more than 50% and the ratio of inhabitants with maximum primary school attainment also exceeds 50%.

On the basis of this definition, three smaller neighborhoods in the town can be regarded as segregated areas (see map). A common feature of these segregated areas is their relatively distant (approx. 7 km) location from to the city centre and their separation from the rest of the town by physical barriers (highway, railway). 2.6% of the town's total population live in the three segregated areas, this is 1800 people. Currently more than 60% of households living in segregated areas have no jobs. According to the CSO data the proportion of homes without comfort in Tatabánya's segregated areas is more than two-thirds, while their share in the whole town is 4%. Today's segregated areas are not the results of economic and social changes of the past twenty years; they had been formed much earlier.

The present run-down parts of the town have largely carried the risk of social and physical deterioration even during their build-up (the early 1930s) as they were far away from the city centre with poor access and in low housing quality.

Map 7: The segregated areas of Tatabánya



Source: *Integrated Urban Development Strategy of the City of Tatabánya, 2015*

These houses have been built typically for colliers in single-story no comfort buildings of six flats, with one room and a kitchen. Just because their unhealthy living environment their demolition was proposed even in the 1940s. However, when in the 1950s and 60s when the construction of new housing estates started in other parts of the town, the plan of the final liquidation of these slum quarters was finally given up.

Simultaneously, most of the wealthy mining families and working class families moved to one of the town's newly constructed residential areas, where they had been granted housing estate apartments that were modern and equipped with all the comforts of that time. These emptying and abandoned slum quarters in an increasing proportion were populated by low-status families and minorities coming from further parts of the country which were typically underdeveloped regions hit by social and economic problems.

After 1990 the segregated areas' social and physical degradation accelerated. The existing problems were exacerbated by the fact that the town's public utilities providers and the urban social welfare system gradually abandoned these parts of the town. With

this step the town has essentially postponed<sup>7</sup> and preserved the problem of segregated areas. The problem is so serious that the city administration has been trying for a decade to solve the problems of segregated areas.

At present, the town's municipal authorities are working together with the Maltese Charity Service<sup>8</sup> to mitigate poverty and exclusion (not only in segregated areas but in residential communities living in the most run-down multi-storey blocks of flats). Together with the local government with the help of social workers in the areas concerned, a continuous work is ongoing, with the active involvement of stakeholders for finding socially sustainable solutions. The government anti-segregation program covers the field of education as well, i.e. assistance in providing the conditions for educating the children of seriously disadvantaged families. The legal regulation of this issue was passed by the local municipality in 2010.

Over the years, the municipality worked out several "scenarios" to eliminate segregated areas. According to one version, these slum quarters should completely be terminated, the people who live there should be placed in residential apartments built at a fairer place. The other version suggests another liquidation possibility for the people living in segregated areas is placing them dispersedly into different parts of the town. Building rental apartments owned by the local government<sup>9</sup> of which approximately 20% would be allocated for social housing purposes could be another solution for the municipality for the future.

The third version would move these people to a concentrated place, such as a housing estate. But the reality is that so far, in this issue the town's management has never succeeded to find a solution, and as a municipal expert put it: "As we see the future deve-

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<sup>7</sup> The fact that the problems of these disadvantaged urban parts and of those living in extreme poverty still, has not been resolved, can partly be explained by the "less visibility" of their presence.

<sup>8</sup> The first concrete joint work of this type started in 2013. Its aim is to help families trapped in utility debt. As a part of this collaboration with the electricity power company itself, the so-called "pre-paid metering devices were placed for families with payment problems. The local government is transforming its aid program, which in this way will be more sensitive to debt problems. Respectively from its owned property the local government provided homes for the families in need of them.

<sup>9</sup> In Hungary, the proportion of homes owned by local governments is negligible, less than 5%, the same rate in Western Europe, in Germany is around 10%.

lopment plans of the present government, I do not think that any of these scenarios will come true. It is much more possible that these run-down slums will “wear out”. But it might take decades, which also means “the presence of unresolved problems”.

The interviewed local experts said that the town’s society clearly polarised in recent decades. The town’s mosaic social structure characterised by differing social composition in the different parts of the city has still been preserved, which seems to be maintained in the future as well. The results of the empirical survey also show a picture of a socially polarised town. The demographic and social conditions of local citizens living in the urban region of various urban ecological circumstances show diversity.

The town centre has a higher proportion of older age groups (over 65 years) (23%) as well as the family home zone of the formerly village area (18.8%). The older age structure of the town centre and its surrounding districts is verified by the fact that these neighbourhoods have the highest proportion of those who moved to their current place of residence the earliest of all. In higher-status housing estates the proportion of older age groups is higher (20%), while it is lower (13%) in low-status housing estates. The primary reason for this (as it has been written above) is the real estate market prices. The young people who want to remain in the city, or even for young families moving into a new flat, the only affordable property type is currently the panel house. The rate of children aged (0-14 years) is excessively high in this otherwise ageing town, in segregated areas and slums, due to the local inhabitants’ higher fertility rate, or to the regrettable fact that by the mortality indicators these districts are by several degrees worse than the other parts of the town.

The proportion of people suffering from long-term disease is higher in low-status and at the same time ageing urban areas. While among respondents living in low status housing estates 16% suffer from a long-term (chronic) disease, this ratio among high-status people living in housing complexes is only 9%. A good indication of social polarisation is the location of people with high educational attainment within the town as well. The ratio of graduates is varying in the town’s different zones<sup>10</sup>.

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<sup>10</sup> The research has distinguished a total of 13 urban zones. A detailed explanation can be found in the research methods part.

The survey results show that a higher proportion of graduates surveyed are present in newly built gated community areas (16%) and high status suburban zones (14%). Their proportion is lower in the city centre (11.8%), in the low (10.1%) and in the high-status housing estates (10.9%). This suggests that the people with higher level of educational attainment moved out to the town's suburban, family housing zones.

The tensions resulting from socio-spatial inequalities – by the opinion of the town's surveyed decision-makers – despite the above-described facts are “not significant”. This was explained by the fact that the new higher-status neighbourhoods (gated community developments, see for example Panorama gated community) that have been built in the last ten years, have rather “lifted up the surrounding residential areas,” than caused problems. However, the positive effects of gated community developments are not seen by all the professionals in that way, so according to them new developments do not solve the social problems of the city at all, but rather reinforce the already strong presence of segregation and contribute to social exclusion.

Table 8: The proportion of graduates in different urban zones, 2014 (%)

Urban zones	Tatabánya	New towns' average
City centre	11.8	11.3
Near centre (high)	12.5	10.5
Near centre (low)	0	21.3
Housing estate (high)	10	12
Housing estate (low)	10.9	7.9
Suburban zone (high)	13.8	13.1
Suburban zone (low)	10.5	7.9
Rural type family home (high)	0	6.5
Rural type family home (low)	18.8	17.5
Villa quarter	0	20
Gated community	15.9	29.3
Enclosed garden, recreation area	4.8	11.4
Slum, poor housing	1.4	6

Source: Hungarian Scientific Research Fund survey data, 2014

## *Environmental conditions, quality of living environment*

Tatabánya, like other heavy industrial towns in the past, had to face the serious environmental problems as the consequences of mining and heavy industrial activities. It should also account for the unfavourable and wrong quality and state of the natural environment and air, the problems and costs of the re-cultivation and re-utilisation of abandoned mines buildings.

After the mine closures, the issue of rehabilitation of abandoned degraded industrial sites and plants has not been resolved up to this day. Since in the early nineties, the vast majority of large companies having freshly moved into the town started their operation as a greenfield investment in the industrial park, the proportion of brownfield investments remained low. It is typically small- and medium-size enterprises that began to operate sporadically in these former factory buildings, offices.

On the site of the cement plant today, especially such kind of small and medium-sized businesses operate. However, there was no comprehensive strategy for the city as to how the brownfield zone in the town's area should be rehabilitated and create new urban function .

Although the local government has modified the urban structural plan in order to integrate these building complexes into the urban fabric better and to attach new functions to them, only partial results have been achieved. Today a number of abandoned former industrial buildings and plots are left in the town in very poor physical condition, the exploitation of which is currently still in question and they are still spoiling the cityscape.

It is not only the perishing reminiscent buildings of heavy industry cause concerns in the town, but also of the historic public buildings of high architectural value such as the former mine, the so-called People's House (now the property of the municipal and county government), the building of the Mine Officers' Club and of the Infirmary. These public buildings built at the turn of the century in the 1910s and 1920s are representing high architectural value. They are currently vacant, though there have been some attempts for their utilisation.

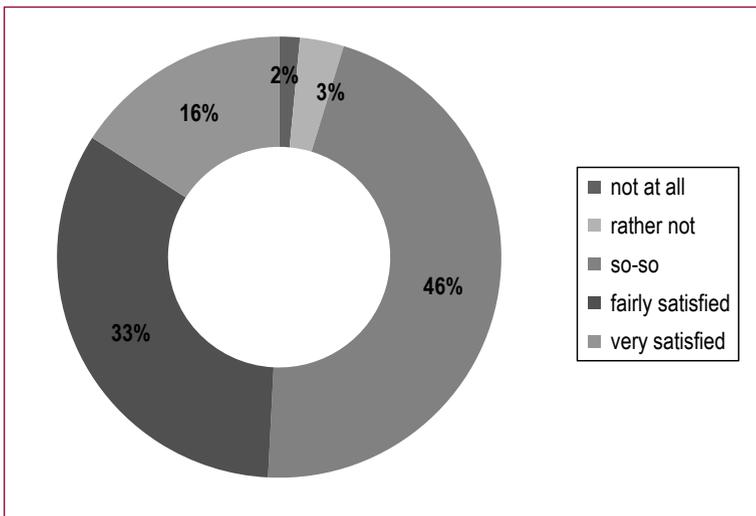
“In the early 2000s, in the period of the major real estate development boom there was plan for creating a mixed-use (residential, recreation, spa tourism) area in the territory of Hospital.

But now that option became unrealisable for several reasons. It is mostly because of the crisis.” The utilisation of these buildings and their extension with new functions have yet to be left for the future as a serious contradiction has been generated by the town’s declining population and the monumentality of these buildings.

Another serious problem in the city is the absence of high standard and quality commercial and cultural services and the lack of pleasant public spaces. This problem is exactly manifested by the fact that, although the top managers of Tatabánya’s multinational companies work in Tatabánya but they chose to live near Tata or Vértesszőlős, the dwelling spaces of much higher prestige, providing high-quality services (elegant hotels, restaurants, cafes), and not to mention Budapest, being at a distance of only 60 kilometres. Tatabánya has only one three-star hotel, which was built in the seventies. It is in a deteriorating state, satisfying neither the local nor the regional demands any more.

The rejection of low quality residential environment is reflected in the results of a residential satisfaction survey as well. Almost half of the surveyed inhabitants of Tatabánya area are moderately satisfied with their residential environment (*see Figure 14*).

Figure 14: Residential satisfaction with the residential environment, in connection with the renovation of buildings, 2015 (%)



Source: The author’s own edition based on the results of the questionnaire survey of the Hungarian Scientific Research Fund, 2015

The local experts interviewed believe that in the future improving the town's living environment quality, increasing the quality and supply of local services will inevitably be indispensable, because without this there will be serious impediments to maintain the town's middle and upper middle-class.

**Intentions to move**

The liberated real estate market after the regime change, the possibility of moving and the start of the new real estate developments strengthened the residential mobility and the demand for it, and had an impact on social polarisation within the urban area as well. The population growth that has already been presented also indicates an increase in residential mobility in peri-urban settlements and even signals the start of residential suburbanisation processes. As a result of strong private construction projects housing stock growth became more dynamic in suburban settlements and their population also increased. Between 2000 and 2013, the population number of Tatabánya dropped by nearly 6,000 people, while the overall population of suburban settlements increased by 2%. The growth dynamics of the housing stock surpassed on the one hand the population growth, on the other hand, in suburban zones showed a much larger increase. In the surveyed period, between 2001 and 2013 the housing stock growth in Tatabánya was 105% and in the town's surrounding settlements it was more than ten percent (112%).

Table 9: Changes in population and housing stock between 2001 and 2013 (%)

	Changes between 2001 and 2013	
	Population number (%)	Housing stock (%)
<b>Tatabánya</b>	91.8	105.7
<b>Tatabánya's urban region</b>	102.8	112.2
<b>Total</b>	93.9	106.8

Source: Based on CSO data

In suburban settlements the growth in housing stock is the consequence of private house building and from the middle of the 2000s of condominium construction as well. That is due to the fact that a part of the citizens of Tatabánya (typically families who could afford it financially) moved out of the city and its surrounding villages and built their homes there, or purchased a family house. Moving out of the town was urged by the changing preferences of residence (such as a desire for a healthier living environment, inner-city problems like homelessness, pollution, avoidance of parking problems, or the desire for family housing lifestyle) as well.

Or the moral and physical obsolescence of some housing estates (e.g. Bánhidai, Gál housing estates), as by the end of the nineties, most of them had been in need of rehabilitation, the real value of these apartments deteriorated rapidly. From the town's housing estates of worse ecological situation the people who could (with higher level of educational attainment and income) had moved out just in time. Typically, the middle and the lower status groups remained in them.

As one expert put it, many people have been “stuck” in panel flats, among them even the middle-classes. One reason for this is that the housing market is quite limited in Tatabánya, the smaller and medium-income groups can only pay the price of a panel flat. Under the panel program<sup>11</sup>, which started in the mid-2000s and is still going on, many residential buildings have been renovated, but only the ones where the residents could pay the necessary contribution costs.

On housing estates where residents are not able to contribute (e.g. suburban housing estates), there is an accelerated erosion. This is a serious problem for the town, because more than a quarter of its population lives in housing estates. Apart from one or two housing estates of higher status, the typical inhabitants of middle and lower-status housing estates are pensioners. They are particularly at risk, since they are the social groups who have no savings and cannot take out loans either.

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<sup>11</sup> The panel program after the regime change is the most significant cross-government term residential rehabilitation program aimed at improving the energy efficiency and physical condition, the liveability of the houses built by panel factory technology. Its funding is based partly on public financing (30%) and partly on private funding.

It is also not uncommon that those who have not been able to maintain their panel apartments move into the outskirts districts of the town to live in enclosed backyards. According to the empirical findings of the survey conducted in 2015 in the urban area of Tatabánya, more than three-quarters of the local residents, 89.7% did not want to leave their home, a total of 6.1% said they would move, and the remaining 4.1% said they would be willing to go but did not have the possibilities. The highest proportion of citizens wishing to relocate wanted to move abroad (35.4%), they were followed by those aiming to move to Budapest (32.8%) and 15% wished to move to another town within the county.

Comparing intentions to move with the relocation indices of other new towns' urban areas studied it is seen that citizens in Tatabánya intend to move in the same ratio as the average of the other urban areas of the studied new towns. In Tatabánya urban area the proportion of respondents who do not plan to move in the near future (87%) is above the average (and in comparison to the other new towns studied is the highest). The proportion of citizens intending to move in the urban area of Komló, being in a far worse social and economic situation than Tatabánya, is double of the average (12%) (*see Table 10*).

The results showed that compared to the average of the samples in Tatabánya a higher proportion of respondents answered that they do not want to leave, and it was also in Tatabánya where the lowest proportion of the interviewed inhabitants said they would move, but have no opportunities.

Table 10: Intentions to move in the urban area of Tatabánya and of the other new towns studied (%)

	Tatabánya	Dunaújváros	Komló	Kazincbarcika	Average of new towns
<b>Will definitely move</b>	6.1	2.1	11.9	8.5	6.2
<b>Would move but have no opportunities</b>	4.1	21.4	17.4	16.6	13.4
<b>Have no intentions to move within the next few years</b>	89.7	73.7	69.8	73.4	78.8

Source: The author's own edition based on Hungarian Scientific Research Fund survey data 2015

Among the respondents living in Tatabánya urban area and intending to move, there was an above urban area average ratio (6.1%) of people with very low educational attainment, such as elementary graduates (8%); the ratio of vocational school and GCSE graduates (10%) was also higher of the urban area average. As regards occupational position, manual workers, small business owners and artisans intend to move in above average ratio (14.3%). Finally, what is not too favourable for the town is that the proportion of young people but of working age (18 to 29 year olds) intending to move out of the town is much higher-than-average.

## Conclusions

Tatabánya is known as a successful “artificial town”<sup>12</sup> of the Central Transdanubian Region. The former heavy industrial centre relatively quickly recovered from the economic and social crisis following the 1989 Hungarian regime change in comparison to the North-Eastern Hungarian heavy industrial zones (like Salgótarján and Ózd), thanks to its excellent geographical location, good access opportunities, and to its proximity to Budapest, the capital city and the city of Győr.

Tatabánya and its urban region were able to successfully integrate into the global economy. Over the past two and a half decades, a number of foreign-owned companies settled in the town and its surroundings, these have been operating well since that time. Thirdly, the local government’s active development policy had a very important role in the town’s and its urban area’s successful economic transformation, which has supported (and still supports today) by various means (e.g. tax benefits, quick and efficient administration, business-friendly local policy) multinationals to settle down.

The success of the town’s strong economy (especially the multinationals) interest-driven development policy is shown by the fact that employment rates are stable, the unemployment rate was

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<sup>12</sup>The term “Artificial town” was first used by Viktória Szirmai for socialist industrial cities in her book published in 1988, see Szirmai, p. 239.

decreasing during the last few years and the town is still popular among foreign companies. The town's economy relying on diverse resources prevented the coming of more severe consequences of the economic crisis. Empirical research shows that Tatabánya's citizens are less afraid of losing their jobs than the residents of the other researched new towns, and they are more satisfied with local job opportunities than the average of new towns.

But the relatively successful economic development policy of Tatabánya could only partially remedy the social problems caused by global economic effects, the growing social and spatial inequalities in the urban area threatening the town's and its urban area's long-term economic and social competitiveness. One obstacle to the development of the town even now is that although there are job opportunities in the city, they absorb mainly the uneducated labour force, appropriate positions are offered only for a small part of the graduates and highly skilled workforce. Tatabánya during the past twenty-five years managed to improve its quality of living environment, the physical condition of residential buildings built mostly by prefabricated technology, the condition of public spaces and public buildings as well as the quality of commercial and recreational services only in very small increments. Without improving the cityscape and the overall living environment the outmigration of skilled and younger generation will be unstoppable in the future.

Finally, the town's future development processes will be influenced by a number of factors, such as the overall socio-economic development of the country, including the global economic processes, the general economic situation of the East-Central European region. Among others whether the attractiveness of Tatabánya can be increased, whether the present business-friendly policies and tax incentives and the town's good transport connections will be sufficient for it.

The position of Tatabánya in the Hungarian regional and urban network is another factor in the town's future development. In this context, the question is whether the area studied is able (and other potential partners agree with this as well) to become a sub-centre of the more and more powerfully shaping field around Budapest, the metropolitan region.

It is not easy to answer these questions: although it is encouraging that the Hungarian prime minister in the spring of 2016

launched the Modern City Programme; under the Economic Recovery Programme the Hungarian government and the town leaders of Tatabánya signed an agreement on town development of about 10 billion HUF. As part of it the town's transport system, educational and cultural institutions will be developed. How this will be achieved and to what extent these improvements will really facilitate the social and economic development of the town, how they will reduce or increase social polarisation, it will become clear in the future as well.