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Rural municipalities of Slovakia with a positive commuting balance

Abstract: *High concentration of jobs in cities and towns is accompanied by labour commuting from the rural (urban) hinterlands. It is the phenomenon that generates functional regions characterized by the relationship between an urban centre and its rural hinterland. The inverse relationship is if a rural municipality with available attractive jobs becomes the centre of the special functional region (or a centre on a lower hierarchic level) and its hinterland consists of urban and rural municipalities with labour commuting to the rural centre. The aim of the paper is to answer the question whether such inverse relationship, manifested by the rural municipality with the positive commuting balance exists in Slovakia and what is its cause. The original statistical data concerning commuting obtained from the last 2001 Census has been used in this study in order to identify what is referred to as rural employment centres (more than 100 commuters, and the positive commuting balance). The paper maps, analyses and explains spatial distribution of rural employment centres in Slovakia and adds their inner characteristics.*

Keywords: *commuting, rural commuting centres, rural employment centres, Slovakia*

Introduction

The biggest cities and towns in Slovakia referred to as growth centres, are agglomerations of economic activity offering various economic benefits for participating firms. High concentration of jobs in cities and towns is accompanied by labour commuting from their hinterlands. Commuting is a significant process from the economic, social, cultural and environmental aspects both for an individual and the whole society (Pooley, Turnbull 1999). Investigations, aim of which is to express the dynamic balance of in- and out-commuting (basic types of population's spatial mobility), are very frequent in geographical, economic and sociological research (Bašovský 1968, Šípka

1970, Eliasson et al. 2003, Pooley, Turnbull 1999, Michniak 2005a-b, and Székely 2006). Records concerning population's commuting reflect spatial distribution of jobs both in urban and rural municipalities and facilitate identification of the main commuting centres on the basis of the balance between in- and out-commuters.

It is, as a rule, the rural area that serves as the source of labour forces for firms located in towns. The fact that they live in the rural area may be the result of inaccessible dwellings in town or intent to live outside the urban area. Commuting from rural area is the phenomenon that generates functional regions characterized by the relationship between a centre and its hinterland. The inverse relationship is if a rural municipality with available attractive jobs becomes the centre of the special functional region (or a centre at a lower hierarchic level) and its hinterland consists of urban and rural municipalities with labour commuting to the rural centre. Does such inverse functional relationship exist in Slovakia, and if so, what caused it? Which rural municipalities have become centres of employment in the course of their history?

Aim of the study, definition of the key term and group of solved problems

The aim of the paper is to map, explain and analyse the existence of the rural employment centres in Slovakia. The criterion for the definition of rural employment centre was the offer of jobs for more than 100 commuters, and the positive commuting balance (number of in-commuters is higher than that of out-commuters) in rural municipality. Original statistical data concerning commuting obtained from the most recent Census carried out in Slovakia in 2001²⁴ has been used in this study. The research tries to find answers to following questions connected with comprehension of the very existence of rural employment centres and recognition of their functioning in space:

1. Where are the rural employment centres located? What location factors decided about concentration of jobs in their territories, what is their relative geographic position to the nearest cities and towns generally accepted as the main employment centres?
2. What rural municipality size categories represent the rural employment centres?
3. What are the economic branches (with specific nature of work, requirements for labour qualification reflecting also in differentiated level of wages) that attract commuters? Are rural employment centres monofunctional or multifunctional?
4. Are there identifiable differences between male and female commuters?

²⁴ The next census, which should map situation in commuting and capture not only the spatial changes but also the qualitative and quantitative characteristics of commuters will be in 2011.

Definition of commuting and the character of available statistical data

The notion commuting means travelling between the place of residence and the work place. The regularly held Censuses (the last one took place in 2001) provide extensive statistical material, part of which are also data about the movement of economically active population between the place of residence and the work place (including the data about in- or out-commuting) in case the commuter's municipality of residence and that of work are not identical. It means that distance and time are not decisive for the qualification of commuting. In turn, the decisive and indispensable criterion is crossing of the administrative boundary of a municipality of commuter's residence (with the exception of urban municipalities of Bratislava and Košice, where even commuting to individual urban parts is registered). This condition of course, makes registering of commuters very dependent on the size of the smallest territorial-administrative units, which is the municipality. The assumption that in the territory of bigger (urban) municipalities people have to overcome a fairly long distance on their way to work at certain time and financial cost is quite justified. Unfortunately, the mobility of this group of persons that takes place in the territory of a single municipality is not reflected in the statistical data (except for the already mentioned Bratislava and Košice). In spite of it, Michniak (2005) believes that the Census 2001, practically the only source of data about commuting at the national level by individual municipalities is valuable. He is convinced that an analysis of the Census data may render a comparatively exact picture of the spatial population movement and particularly commuting of active population in Slovakia.

The data about size and directions of in- or out-commuters (at least 10 persons), which have been processed for all municipalities are structured by sex, age and industries. Simultaneously, the data supplied by the Statistical Office of the Slovak Republic also contain not very exact information about time losses of daily commuters as declared by them during the statistical surveys concerning commuting.

Rural municipalities as rural commuting centres, and rural municipalities as rural employment centres

The primary result of our research is identification of rural municipalities with at least 100 in-commuters (we used the term rural commuting centres) in time of the last Census (in 2001). It was necessary to select those municipalities that met the criterion of a positive commuting balance from the set of identified rural commuting centres. The positive commuting balance can be only reached by higher in-commuting from other urban or rural municipalities than out-commuting. Number of so delimited municipalities referred to as rural employment centres was lower than the number of all rural commuting

centres. Table 1 provides a survey of number and size categories of all rural municipalities in Slovakia. Individual size categories of rural municipalities were also aligned both the rural commuting centres and rural employment centres.

Table 1. Rural municipalities as rural commuting centres, and as rural employment centres

| Size category of rural municipality (inhabitants) | Number of rural municipalities | | | | | | |
|---|--------------------------------|----------------------------|------|--|------|--|------|
| | Total | More than 100 in-commuters | | More than 100 in-commuters, and negative commuting balance | | More than 100 in-commuters, and positive commuting balance | |
| | | Number | % | Number | % | Number | % |
| < 200 | 370 | 5 | 1.4 | 0 | 0.0 | 5 | 1.4 |
| 201-500 | 804 | 19 | 2.4 | 1 | 0.1 | 18 | 2.2 |
| 501-1 000 | 784 | 78 | 9.9 | 45 | 5.7 | 33 | 4.2 |
| 1 001-2 000 | 545 | 181 | 33.2 | 149 | 27.3 | 32 | 5.9 |
| 2 001-3 000 | 150 | 92 | 61.3 | 84 | 56.0 | 8 | 5.3 |
| > 3 000 | 92 | 75 | 81.5 | 65 | 70.7 | 10 | 10.9 |
| Total | 2745 | 450 | 16.4 | 344 | 12.5 | 106 | 3.9 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

Hypothetically, it was assumed that the growth of population in rural municipalities would be accompanied by the increasing share of municipalities that became attractive during their historic development and attracted investors producing new jobs. As Table 1 shows, this assumption was confirmed. The number of rural municipalities with more than 100 commuters is relatively high and they represent 16.4% of all rural municipalities. The higher the size category of rural municipalities and the assumed higher number of produced jobs, the higher the share of rural municipalities with negative or positive commuting balance.

Location of economic subjects in places, which are not characterized by higher population concentration and by the immediately available labour sources is generally sporadic. Reasons to locate an establishment, which will have to receive workers living in environs, are very disparate and in some cases even economically irrational. Certain exception is the location of businesses that are close to some local resources. These can represent not only the sources of raw material but also the originality/exceptionality of the landscape or a specific geographical and subsequently functional position requiring location of specific activities (border crossings). Even among the smallest rural municipalities in Slovakia (population below 200), that normally supply labour sources to larger municipalities, five were identified with the positive commuting balance. The 1.4% share in total number of municipalities under the same size category proves their singularity. They are dispersed all over the territory and

no regularity in their location was recognized. Regarding their small size and the adopted criterion of 100 commuters, all the smallest municipalities show a positive commuting balance so they are regarded as the rural employment centres.

Not all rural municipalities with more than 100 commuters though, can be considered employment centres. Rural municipalities in the top size category (population more than 3 000) are examples. In more than 80% of rural municipalities in this size category such jobs were generated that had to be served by population of other municipalities. The prevailing negative commuting balance (only about a tenth of the biggest rural municipalities has a positive commuting balance) is the clear proof that the cause is definitely not in lack of labour sources living in the concrete municipality, but in the existence of disparity between employers' ideas about a suitable employee and population's ideas of an adequate job. The existing disharmony is one of the decisive impulses of commuting. This statement goes for all rural municipalities with negative commuting balance that might fill all existing work opportunities with their own people. Results of the statistical analysis have shown that in Slovakia hardly 4% of rural municipalities (106 rural municipalities) can be considered rural employment centres, i.e. rural municipalities with more than 100 in-commuters and the positive commuting balance. These rural municipalities will be subject to further investigation.

Distribution of rural commuting centres and rural employment centres

A proper understanding of rural commuting centres and rural employment centre distribution (Figure 1) requires including them into a wider spatial context formed by the neighbouring cities. Historically, cities have formed as mutually attractive centres of population and working opportunities. The urbanization process in Slovakia, which fell behind that in other European countries took place in the second half of the 20th century and was provoked by an extensive socialist industrialization of Slovakia (until 1993 as a part of former Czechoslovakia). Its political representatives set a major aim of gradual reducing of the existing differences between the economically developed Czech lands and underdeveloped Slovakia. The tool to be applied was industrialization, which in its later phases also pursued the intra-regional aim it means the regular distribution of industry all over the Slovak territory.

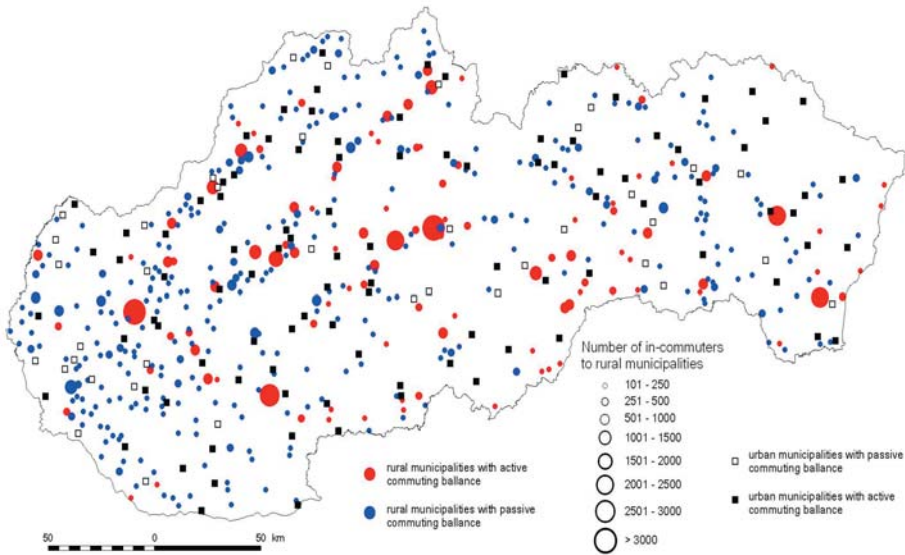


Figure 1. Rural municipalities as rural commuting centres and rural employment centres - their relative geographical position in relation to towns and cities

Location decisions concerning distributions for new industrial plants were results of a joint effect of several location factors (strategic position, raw materials, labour sources, and others). Part of newly built industrial plants exploited the linkages to raw material deposits, others were linked to consumption points. Decisions about location of industry, which was associated with an extensive construction of dwellings directly determined changes in population distribution. The majority of industrial plants were located in the cities. The accompanying construction of new dwellings led to a comparatively intensive exodus of population from villages. The depopulated rural area lost through the selective emigration its young generation and a great part of its labour potential that might have been used in exploitation of local resources. The resulting picture of distribution of industries was in no case ideal and some authors (e.g. Korec 2005) criticised it. They paid attention to local and regional disproportions that appeared between the generated work opportunities and labour sources. On the one side, the shortage of labour forces in particular places provoked an extensive commuting while some regions that disposed of labour remained underdeveloped.

Even in spite of the fact that cities were preferred for the location of industrial plants, some location decisions were oriented to the rural area. Reasons were various. Technological changes in agriculture (mechanisation and automation) set free labour forces that found opportunities in the developing industry. In the course of the 20th century, industry took on the profile of the biggest employer in Slovakia. It also plays an important role at present (despite the progressive decrease of its significance in terms of quantitative employment) in generation of work opportunities in the rural area.

Abundance of raw material and efforts invested in its exploitation was the decisive reason for the selection of the rural area by industry in the past. The mining industry, which often destroyed even the existing settlements, required an elevated number of workers, which it found in wide environs. During the socialist industrialisation of Slovakia that in some cases also concentrated on drawing work opportunities closer to population, selected industrial plants that did not require as many highly qualified labour forces, were located in rural area.

Dangerous businesses with negative environmental impact are often located in rural area. In case of potential crashes, the number of threatened persons is thus reduced. The contemporary suburbanising process and participation of a wider rural hinterland in the economic space also favours location of industrial activities in the rural area.

A full comprehension of the existence of rural employment centres with the positive commuting balance includes the awareness of substantial differences existing between agriculture that dominates among economic activities in the rural area and industry which helped to solve situation with the excessive offer of labour forces especially in the recent past. In difference from agriculture linked to extensive areas and the working activity carried out by a relatively low number of workers, industry is characterized by point locations and concentrations of a larger number of workers in a smaller area. Along with reasons in favour of location of industrial activities in rural municipalities with at least partial labour sources available, it is this substantial difference that leads to commuting into rural municipalities.

Figure 1 shows the distribution of rural commuting centres and rural employment centres along with the situation of the individual cities. The commuting balance characterizes the individual cities just like rural municipalities and they form various types regarding the employment. It is obvious that side by side in certain geographical distance there coexist varied types of municipalities. Four location combinations exist. Rural municipality with an active commuting balance is situated next to an urban municipality with passive (active) commuting balance. Or vice versa. Rural municipality with passive commuting balance is situated next to an urban municipality with active (passive) commuting. The existing spatial structure incites the following questions:

1. Did rural municipalities defined as rural employment centres act in relation to cities as competing spatial units that obtained labour forces from the neighbouring city/cities? or
2. Did rural municipalities defined as rural employment centre represent in their relation to cities rather a spatial complementary element, which gained from over-concentration of population in the cities and the regional concentration of labour-intensive economic activities, while it coexisted and formed/not formed rationally functioning cluster with economic entities located in the cities?

Table 2 summarizes the results of spatial distribution of rural commuting centres and the rural employment centres in relation to the cities.

Table 2. Relative geographical position of rural employment centres in relations to the towns with positive or negative commuting balance

| Number of commuters | Number of municipalities | % | The nearest town with | |
|---------------------|--------------------------|-------|----------------------------|----------------------------|
| | | | Negative commuting balance | Positive commuting balance |
| 101-200 | 41 | 38.7 | 6 | 35 |
| 201-300 | 12 | 11.3 | 2 | 10 |
| 301-500 | 20 | 18.9 | 5 | 15 |
| 501-1000 | 21 | 19.8 | 2 | 19 |
| 1001-2000 | 6 | 5.7 | 3 | 3 |
| 2001-3000 | 4 | 3.8 | 1 | 3 |
| >3000 | 2 | 1.9 | 1 | 1 |
| Total | 106 | 100.0 | 20 | 86 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

The smallest rural employment centres above all did not become competitive for the nearest situated cities from the draining labour forces point of view. It is rather obvious that they form supplementing employment centres of a lower hierarchic level. However, any assertion regarding the functional linkage between the economic entities on the basis of material and non-material bonds requires further reliable research.

The increasing number of commuters to the rural employment centre is accompanied by increase (not continuous) of the share of municipalities that theoretically may represent some competition to its nearest city in the relation to potential absence of human sources. A city with negative commuting balance may be and as a rule is (even in case of cities at a lower hierarchical level i.e. smaller cities) affected by the above-average labour-intensive economic activities located in a close rural municipality. A single employer who found enough land for production normally offers employment and his location is the result of a joint effect and positive assessment of several location factors. Dwelling in the vicinity of a great industrial plant requires an additional cost-ineffective investment, the impact of which on population redistribution between the nearest cities and the rural municipality would be only limited. As a matter of fact, the idea to live in close vicinity of productive complexes, operation of which is not altogether ecological is very unattractive for population. This is the reason why the solution of a sufficient number of work force employed with employers seated in rural area by commuting seems to be the optimal.

A smaller city is usually a centre of dwelling while the rural satellite offers work opportunities. The distances between the cities and rural municipalities are short. It takes less to travel to them than the intraurban movement in the biggest Slovak

cities (Bratislava, Košice). For instance, there is the eastern Slovakian village of Vojany. A thermal power plant exists in its territory. The majority of its employees commute from Veľké Kapušany (population 10,000), which is not far away.

Larger rural settlements are not the only competition for small towns. Also the close situated cities at a hierarchically higher level compete with them. Precisely these cities become the destination of the commuting population from small cities with the negative commuting balance. Flows of commuters to rural centres and the finding that the most bulky flow is not formed by population of the nearest town but by that of other rural municipalities prove it. Examples can be found above all in eastern Slovakia where the sphere of influence of Košice also absorbs towns on the lower hierarchical level.

In case of bigger cities with diversified economic structure, an important and close situated rural employment centre does not have to necessarily participate in their negative commuting balances. In case of a city situated in the lowland its orbit is evenly spread around it. It is the result of a regular transport infrastructure, building of which was not limited by the terrain. People arriving of all directions enjoy the optimal conditions for commuting while they enhance the significance of the big city. Rural employment centres (often with a single-branch economic structure) cannot, in this case, cause the negative commuting balance to the big city. Even in spite of the fact that the big city is the principal supplier of labour forces for big rural employment centres. Location of the nuclear power plant in the territory of rural municipality Jaslovské Bohunice that is situated 12 km away from Trnava with population 68,000 is a good example of the above-described relationship.

Table 3 depicts the relative geographical situation of rural employment centres from the point of view of the nearest cities. Vicinity of a city with its population concentration and economic activities plays an important role in terms of their existence.

Table 3. Distance of rural employment centres from the nearest town

| Number of commuters | Towns with negative commuting balance | | | | | Towns with positive commuting balance | | | | |
|---------------------|---------------------------------------|-----------|------------|------------|---------|---------------------------------------|-----------|------------|------------|---------|
| | 0-5 km | 5.5-10 km | 10.5-15 km | 15.5-20 km | > 20 km | 0-5 km | 5.5-10 km | 10.5-15 km | 15.5-20 km | > 20 km |
| 101-200 | | 2 | 3 | | 1 | 4 | 9 | 10 | 4 | 8 |
| 201-300 | | 1 | 1 | | | 2 | 3 | 1 | 4 | |
| 301-500 | 1 | 3 | | 1 | | 2 | 4 | 3 | 5 | 1 |
| 501-1000 | | 1 | 1 | | | 4 | 8 | 6 | 1 | |
| 1001-2000 | 2 | 1 | | | | | 2 | 1 | | |
| 2001-3000 | | 1 | | | | | 2 | 1 | | |
| >3000 | | 1 | | | | | | 1 | | |
| Total | 3 | 10 | 5 | 1 | 1 | 12 | 28 | 23 | 14 | 9 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

As much as 50% of all rural employment centres are situated in the distance below 10 km from the city. The short distance is the precondition of strong linkages between populations of rural and urban municipalities. However, if this distance is higher than 20 km, the situation is that of a sort of isolation of the rural municipalities where specific jobs existed. In Slovakia, peripheral municipalities mainly represent such rural employment centres or those situated close to the State frontier. The service to border crossings required commuting of specialised employees from the close environs of the border crossing. The entry of Slovakia to the Schengen area caused redundancy of such jobs and consequently the reasons for commuting and employment centres (for instance, Mníšek nad Popradom and Vyšný Komárnik on the border with Poland or Medveďov on the border with Hungary) disappeared.

Rural employment centres and structure of job occupancy—non-commuters versus commuters

The rural employment centre has been defined in introduction to this paper as the rural municipality with at least 100 in-commuters and a positive commuting balance (number of in-commuters is higher than that of out-commuters). It is not only commuters that fill in the work opportunities existing in rural municipalities. As humans generally try to behave economically rationally (minimisation of cost and maximisation of profit), the assumption that permanently residing inhabitants of rural employment centres should not prefer commuting to other municipalities is justified. As a matter of fact, commuting to other municipalities is normally connected with a higher cost and loss of time possibly not compensated by earnings. This is the reason why both in productive and non-productive businesses, employees residing in the same municipalities also work. In an effort to obtain a deeper knowledge of rural employment centres and their existence, the following questions should be answered: What is the share of the permanently residing population in overall employment in a rural municipality? Does this share depend on the size of the municipality or on the overall number of commuters?

Table 4 presents results of a simple statistical analysis carried out with the aim to answer the above questions. Figure 2 brings the picture of spatial distribution of rural employment centres and saturation of the created jobs by employees residing in a municipality and by commuters.

Table 4. Distribution of rural employment centres by size of the rural municipality and by share of commuters in overall number of created jobs

| Size category of rural municipality | Total | Share of commuters in overall number of created jobs | | | |
|-------------------------------------|-------|--|-------------|-------------|-------|
| | | 20 - 40 % | 40.1 - 60 % | 60.1 - 80 % | > 80% |
| < 200 | 5 | | | 1 | 4 |
| 201-500 | 18 | | | 11 | 7 |
| 501-1000 | 33 | | 6 | 21 | 6 |
| 1001-2000 | 32 | 4 | 6 | 14 | 8 |
| 2001-3000 | 8 | | 4 | 2 | 2 |
| > 3000 | 10 | 1 | 5 | 4 | |
| Total | 106 | 5 | 21 | 53 | 27 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

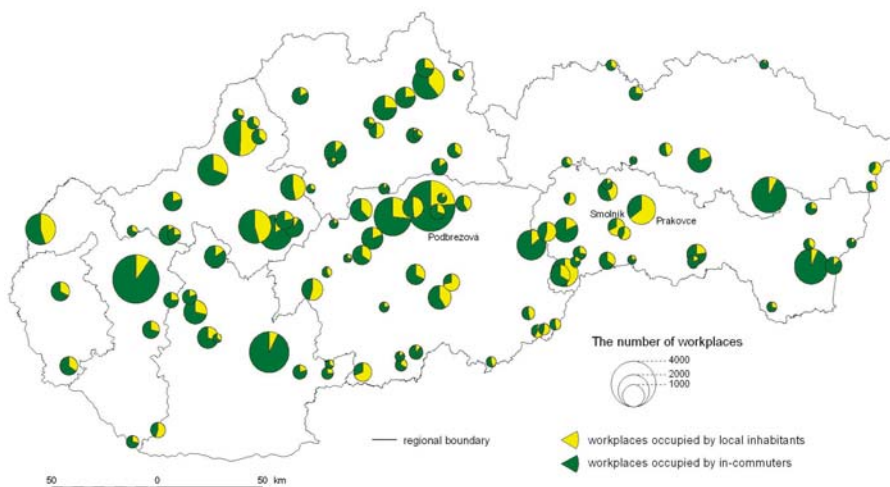


Figure 2. Rural municipalities as rural employment centres - share of commuters in overall number of created jobs

The fact that the number of such Slovak rural employment centres where the work positions are saturated above all by commuters from other rural or urban municipalities prevails is obvious at first sight. Local people filled at least 40% of the created jobs only in about a quarter of identified rural employment centres. As a rule, they are historic, spatially more or less isolated industrial centres in mountain valleys of eastern Slovakia (for instance, Prakovce and Smolník). Situation is opposite in the majority of rural employment centres where the share of the residing population in overall employment rate of the rural municipality accounts for a maximum 40%. It is due to the fact that the construction of dwellings lags behind the creation of jobs or that the employees of the local firms are dispersed all over the environs. This especially goes for the smallest rural municipalities because of their size where any bigger employer has to rely on commuters.

On the other side, there also are such rural municipalities in Slovakia, where population number, supply of jobs and options to dwell together with their technical and social infrastructure bestow them the character of an urban municipality. Their long-year appurtenance to the category of rural municipalities (without official legislative town status) is hardly comprehensible. The most typical representative of such rural municipality is Podbrezová situated in central Slovakia. The municipality with population more than 4 thousand and with a positive commuting balance amounting to over 3 thousand commuters is known as the second most important metallurgical centre in Slovakia.

Rural employment centres - structure of commuters by individual branches of economy

Every rural municipality possesses its own specific potential for the location of varied economic activities (the importance of the relative geographical position has been emphasized above). Requirements of the individual industries concerning spatial characteristics just like those concerning quality and quantity of labour forces are not the same either. Hence, the structure of the created jobs and subsequently the appurtenance to the individual branches were expected to be highly differentiated in individual rural employment centres. A strong correlation of commuters' appurtenance to different branches of economy with the economic structure of Slovakia where the dominant position in terms of employment creation corresponds to the industry was also expected.

These hypothetical assumptions were confirmed. Figure 3 depicts rural employment centres by the number of commuters according to individual branches of economy. Even a cursory glance at the map reveals the dominance of industry as the principal employer of not only the local population but also numerous commuters. In spite of the comparatively uniform distribution of commuting to rural industry in the entire territory of Slovakia, two specific features are evident. The first is higher concentration of commuting to rural industry in the economically advanced western part of Slovakia and the second is the sporadic even minimal commuting to rural industry in the peripheral boundary areas. It is the consequence of the historic development, unfavourable in terms of inclusion of these areas into the economic system of the State. These poorly populated areas without any more important natural resources, together with their strategic geographical position, were not suitable for industrial location.

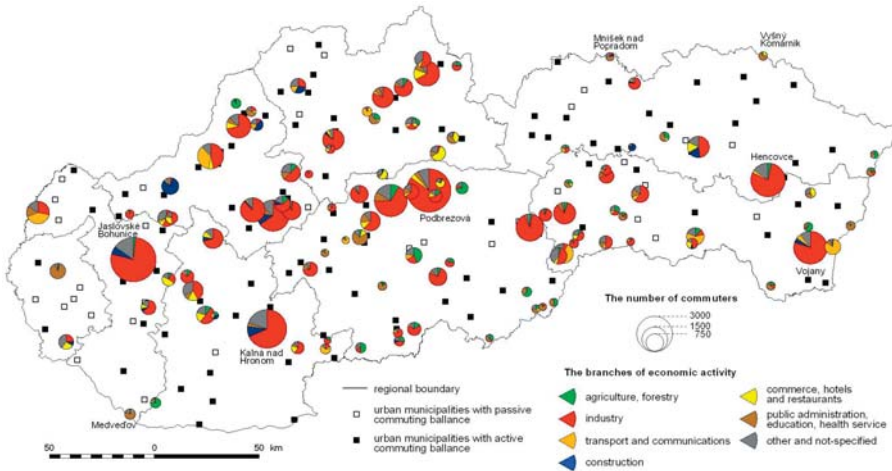


Figure 3. Rural municipalities as rural employment centres - structure of commuters by individual branches of economy

Even in spite of the fact that other branches of economy are merely complementing in terms of the rural employment rate compared with the dominating industry, there still are rural employment centres in the country where commuting to industry is not decisive. Table 5 brings information about the number of rural employment centres classified by size and appurtenance to the dominant economic branch of commuters.

Table 5. Division of rural employment centres according to size and the dominant economic branch appurtenance of commuters

| Number of commuters | Total | Agriculture, forestry | | Industry | | Construction | | Transport and communications | | Commerce, hotels and restaurants | | Public administration, education, health service | |
|---------------------|-------|-----------------------|------|----------|-------|--------------|-----|------------------------------|------|----------------------------------|------|--|------|
| | | abs. | % | abs. | % | abs. | % | abs. | % | abs. | % | abs. | % |
| 101-200 | 41 | 9 | 22.0 | 13 | 31.7 | 2 | 4.9 | 2 | 4.9 | 2 | 4.9 | 13 | 31.7 |
| 201-300 | 12 | 2 | 16.7 | 4 | 33.3 | 1 | 8.3 | 1 | 8.3 | 2 | 16.7 | 2 | 16.7 |
| 301-500 | 20 | 1 | 5.0 | 13 | 65.0 | | | 1 | 5.0 | 3 | 15.0 | 2 | 10.0 |
| 501-1000 | 21 | | | 17 | 81.0 | 1 | 4.8 | 3 | 14.3 | | | | |
| 1001-2000 | 6 | | | 6 | 100.0 | | | | | | | | |
| 2001-3000 | 4 | | | 4 | 100.0 | | | | | | | | |
| >3000 | 2 | | | 2 | 100.0 | | | | | | | | |
| Total | 106 | 12 | 11.3 | 59 | 55.7 | 4 | 3.8 | 7 | 6.6 | 7 | 6.6 | 17 | 16.0 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

Although appurtenance of commuters to industry is normal in any rural employment centre, its dominant position in terms of the percentage of commuters is not so high (about 56% of total rural employment centres). Important

thing is that only industry is in the position of the dominant provider of jobs for commuters in every rural municipality where the number of commuters exceeds 1,000 and the commuting balance is positive (12 rural employment centres, i.e. 11% of the total). Appurtenance to other branches of economy, not so demanding in terms of quantitative dimension of labour forces, may dominate in case of commuters to smaller rural employment centres. Agriculture and forestry as the economic branch, which is often used to define the differences between rural and urban areas, is worth mentioning. Commuting to agriculture and forestry is connected with the smallest rural employment centres. Their geographical position is characterized by remoteness from main population and economic centres, and also by so called inner regional isolation, by peripherality. Agriculture and forestry in Slovakia are among the branches of economy with the lowest wages, low qualification of labour and the greatest efforts put into reduction of jobs. These characteristics explain why the dominating commuting in this economic branch is linked almost exclusively to small and peripheral rural employment centres.

Rural employment centres and gender composition of commuters

Males are traditionally taken as the main economic force in a Slovak household, task of which is to secure the family financially. Position of females in the society is more complicated. On the one side, they long for self-realisation on the labour market while on the other side their economic activity is also necessary for the full financial security of the household. Women take on the time-demanding care for the family what reflects in their approach to harmonisation of both the professional and family duties. Their choice of job is often limited when they try to avoid time losses caused by commuting if that is the case. Several authors (for instance, Bašovský 1968) arrived at the conclusion that commuting is more spread among males. It is also true that with the increasing distance from the commuting centres the percentage of commuting males increases. Nowadays, persons with higher level of acquired education and skills are those who along with the search for a better paid job are also motivated to seek satisfaction of their professional ambitions and an adequate role on labour market. And it very often connected with long distance commuting.

We assumed that the rural employment centres, above all the bigger ones, are centres of male commuting. As a matter of fact, such centres must acquire labour forces from wider environs and the time losses associated with commuting are higher. Additionally, it was assumed that rural municipalities with location of productive and non-productive activities that are more acceptable for females also exist. The gender division of labour is considered something natural and appurtenance of commuters to selected branches of economy evokes potentially higher representation of commuting females than males (for instance, female commuters dominance in public administration, education, and health service). Table 6 presents individual rural employment centres by size and gender struc-

ture of commuters. Figure 4 provides the spatial picture about the quantitative relationship between the male and female commuting in individual rural employment centres.

Table 6. Division of rural employment centres by size and gender structure of commuters

| Number of commuters | Number of rural employment centres | Dominating male commuting | | Dominating female commuting | |
|---------------------|------------------------------------|---------------------------|-------|-----------------------------|------|
| | | abs. | % | abs. | % |
| 101-200 | 41 | 30 | 73.2 | 11 | 26.8 |
| 201-300 | 12 | 9 | 75.0 | 3 | 25.0 |
| 301-500 | 20 | 18 | 90.0 | 2 | 10.0 |
| 501-1000 | 21 | 17 | 81.0 | 4 | 19.0 |
| 1001-2000 | 6 | 5 | 83.3 | 1 | 16.7 |
| 2001-3000 | 4 | 4 | 100.0 | | 0.0 |
| >3000 | 2 | 2 | 100.0 | | 0.0 |
| Total | 106 | 85 | 80.2 | 21 | 19.8 |

Source: Own calculations based on the data from the Central Statistic Office of the Slovak Republic

Results have confirmed assumptions. Male commuting prevails in the majority of rural employment centres (80 %) and in some cases it approximates to the maximum value. More than 90% of male commuting is typical for monofunctional rural employment centres with representation of the typical male activities: mining (Cígeľ) or construction. Rural employment centres where commuting to construction prevails are smaller as a rule. Their existence is linked to the temporally limited investment in construction. After it is finished, the rural employment centre disappears or a new one is formed somewhere else. Construction of the road tunnel Branisko carried out by companies seated in the rural municipality Korytné is a good example of this phenomenon.

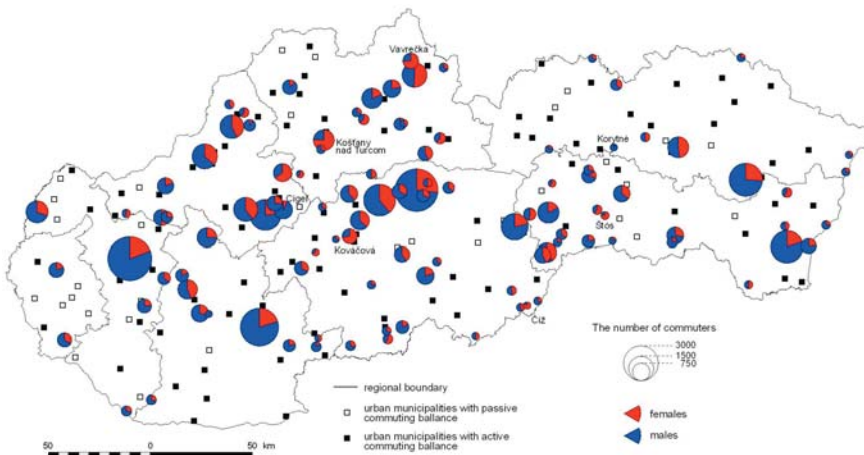


Figure 4. Rural municipalities as rural employment centres - gender structure of commuters

Percentages of female commuting that prevails in a fifth of rural employment centres are not so extreme. Despite, above all in case of small spas like Číž, Štós, Kováčová and other administered by the health service sector which represent the typical female employment domain, almost four commuting females correspond to one male commuter. However, the high representation of commuting females is also characteristic for some labour-intensive industrial branches (electro technical and textile industry). Monotonous nature of work and the demand to reduce the costs in companies lead to search for female labour outside the main areas of the economic growth. Location of plants with some production tradition or history in a particular production (including skills of locals) in (peripheral) regions, in a rural municipalities and in the proximity of medium sized cities (lower cost of properties and the important source of labour forces) seems to be the optimal solution for investors oriented to female and lower paid employment. Examples are Košťany nad Turcom near Martin (car seat cover manufacturing) or Vavrečka near Námestovo (wide-spectral electro technical production).

Conclusion

What are the general features of the few existing rural employment centres in Slovakia? Above all, they are rural municipalities located in the proximity to towns and cities. The relative geographical position regarding the distance from the town (interconnected with the transport accessibility) is an important location factor for the establishment and functioning of the rural production and/or non-production firms. Rural employment centres normally form an organic unit with the town: the town supplies labour forces and the rural municipality offers jobs that cannot be filled with locals (for the various reasons). A mutually beneficial commuting starts. As a matter of fact, it is the manifestation of efforts in spatial optimisation of human movement. Such relationship exists above all between a medium-sized town and small rural employment centre. In some cases, rural employment centre competes with the town.

In spite of long-year historic tradition of rural population working in agriculture and forestry, the contemporary decisive employer for rural municipalities with active commuting balance is industry. Location of industry in rural environment can be the response to raw material occurrence and efforts in its economic exploitation or it can result from a complex multicriterial decision-making preceded by assessment of various rational (sometimes irrational) location factors. The essential spatial characteristic of rural employment centres where labour-intensive branches of economy prevail, is again the proximity to the town where dwellings had been constructed according the urbanization project of Slovakia (with adequate concentration of population).

Principally, males commute to the rural area. Higher (statistically recorded) economic activity and the nature of production and/or non-production processes carried out in rural employment centres (prevalence of industrial enterprises) have led to the above mentioned conclusion. In specific cases (rural

municipalities as spas or localities where the industrial companies focus on employment of female labour), female commuting dominates and this especially in smaller rural employment centres.

Existence and character of rural employment centres is a dynamic phenomenon easily altered by changes in a society. It will be certainly interesting to observe what structural and spatial changes will arise in the rural area of Slovakia. It is reasonably predictable with regard to the ongoing redistribution of population between the towns and cities and rural municipalities accompanied by an increasing spatial dispersion of economic activities that changes in commuting are also possible. Changes in number, spatial distribution and character of rural employment centres will represent one of the concrete manifestations modified spatial choice behaviour of urban and rural population.

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