Anton MICHÁLEK*, Peter PODOLÁK*

IMPACT OF KEY SOCIO-ECONOMIC DISPARITIES ON MIGRATION IN SLOVAKIA: ECONOMIC DIVERSIFICATION VS. TRADITIONAL PATTERN

1. INTRODUCTION

Twenty years after the ‘velvet revolution’ of 1989, several years after joining the European Union (2004) and NATO (2002), the independent Slovak Republic (since 1st January 1993) has been incorporated into the community of democratic states. The first phase of existence of the independent Slovakia brought in serious tasks including the constitution of basic civil institutions and introduction of numerous mechanisms necessary for the functioning of the new state. These had to be addressed in situation characterised by lack of foreign investments, loss of social security accompanied by an abrupt decrease of living standard, growth of poverty, social pathology and other problems. Economic reforms introduced after 1998 brought fruit some years after and Slovakia experienced a distinct economic progress including the relatively highest GDP growth (10.4%) in the EU temporarily in 2007. Introduction of the EURO (1st January 2009) became another important factor of country’s economic development. The rising level of regional disparities is typical of countries that implement deeper economic changes. Slovakia is no exception. The situation of the country as a whole improved compared with the EU average (in 1997, SVK reached 51.3% GDP in PPS EU 27, in 2008 it was estimated 72.2%; mean GDP in the 2000–2008 period was 5.6%) but disparities between regions increased. Principal reforms in five key areas – tax system, education, health care, public administration and social security also contributed to negative social cones-

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quences for certain population groups while some of them are more vulnerable than other. Gradual diversification of socio-economic situation in Slovakia causes not only distinct changes in stratification of society but also an increase of regional disparities in terms of varied social characteristics. Slovakia consists of rich regions where regional GDP per inhabitant reaches the average of the EU 15 (region of Bratislava), situated in the western and north-western parts of Slovakia, and explicitly poor regions situated in the southern and eastern parts of the Republic where the regional GDP only reaches 50–60% of the EU average. These striking differences in the economic level of regions, beside other factors, influence and increase the income inequalities of the population.

The increased level of interregional migration should be one of the effects following the increase of regional socio-economic disparities. The common trait of the majority of transforming Central and Eastern European countries is that in spite of the widening gap between regions the rate of interregional migration stays on a relatively low level. While in advanced economies the interregional migration depends on fluctuation of relevant socio-economic factors such as unemployment and wages, it seems that the effect of these factors in the post-socialist countries is less obvious. Interregional migration in these countries is considerably reduced by various limitations. These constrains represent a set of not only economic variables but also additional factors like the housing market (shortage of available flats or the affordability of housing), spatial preferences of population, and the like. The impact of the quoted but also other limitations increases in poor regions where individuals with low income and small firms are not able to finance interregional migration.

Several authors pointed to the relatively low level of interregional migration in four Central European economies (Czech Republic, Hungary, Poland, and Slovakia). The ambition of this empirical study is to continue the work accomplished by Erbenová (1997), Burda (1994), Fidrmuc (1994) and Horváth (1996). The aim is monitoring and assessment of the regional unemployment rate and wages level impact on intensity of migration in Slovakia. Applied indicators include unemployment rates and mean nominal wages in the 1996–2008 period. They are considered relevant indicators for the comparative regional analyses. Such analysis of geographical mobility of workers, among other things, provides the opportunity to identify the flexibility of the Slovak labour market and to outline factors that limit it. It is particularly important now, when unemployment rate in Slovakia moves around the 5-year maximum (12.7% as of January 2010). It is then necessary to use all possible measures to conserve the existing jobs and to promote mobility (migration) of population. Accessible regional data supplied by the Statistical Office of the SR, the Labour, Social Matters and Family Central, and Trexima Bratislava, have been used in this study. Graphic, cartographic and statistical methods and indicators were used as well. The authors worked with annual migration data from 72 districts of Slovakia covering the years from 1996 to 2008.
2. SIMILAR RESEARCH AND THEORETICAL BACKGROUND

The issue of low interregional migration level has several important aspects associated above all with the labour market and development of regions. The relationship between migration, wages and unemployment is the subject of attention from experts in various fields. By the end of the 1960s, several studies dealing with these phenomena appeared. Simultaneously, some originally simple, later more complicated models studying the relationships and dependencies between the emigration and wage rates in regions, emigration and unemployment rates but above all the three phenomena at the same time were also presented (Todaro, 1969). The majority of migration models assumed that an individual or a household would profit by migration from a poorer region to another richer one by obtaining a better job and higher wages which would mean a better life for the individual and his/her family. Apart from that, models were based on two basic assumptions: Firstly, if the inequity between the rich and poor region diminishes, the migration rate will decrease, and secondly, the higher probability of obtaining a job in a richer region increases the migration rate. These simple models were later further elaborated and gradually improved, mainly in connection with the often observed low migration levels in spite of pronounced regional disparities. The majority of authors tried to incorporate in the models factors which could help to explain the low rate of interregional migration. Banerjee and Kanbur (1981) and Hatton (1983), for instance, explicitly modelled the ‘aversion to risk’. High aversion to risk generally lowers the migration rate. Other theoretical and empirical studies specified the ideas of incomplete information about the developments in an alien region (Stark 1991; Burda 1993; Faini 1993) and they found out that lack of information distinctly lowered the willingness to migrate. Wyplosz (1993) incorporated into the model uncertainty in expectations either concerning the living cost or further development of the region, which leads to decreased migration. Faini and Venturini (1994) introduce the term of ‘liquidity constraints’ as a special case of transaction cost. It is a barrier for the poorest because they find the cost of moving too high (it comprises the moving cost itself, search for and price of a new dwelling, which is normally more expensive, as it is located in a richer region, and the like). Precisely these liquidity constraints most reduce the expected high out-migration from the poorest regions. The result is a non-linear dependency between the wages and the emigration rate from economically weaker regions. Many experts assert that the rate of interregional migration is significantly determined by the housing market. Inaccessibility of dwelling was and still is a very important factor hindering labor mobility. Shields and Shields (1989), Stark (1991), Andrienko and Guriev (2004) and others tried to include into the

1 Liquidity constraints refer to a spectrum of important disincentives of a demographic, social and material nature existing in Slovakia.
model some additional important aspects such as infrastructure amenities with the number and quality of hospitals or schools, accessibility and quality of transport, scope of greenery, number of parks, etc. that are useful not only for individuals but for households as well. As far as the geographical mobility of labor in ‘transiting economies’ is concerned, the greatest number of studies focused on the search for migration rate determinants.

3. DEVELOPMENT OF UNEMPLOYMENT AND ITS REGIONAL DISPARITIES SINCE 1989

The Slovak labour market underwent distinct changes in the course of the 1990s. At the beginning of transition, the market was controlled by several systemic but also non systemic economic changes accompanied by an abrupt drop in GDP and increase in unemployment which went on increasing after the right assumed power in 1998. It was due to the launch of economic reforms. The unemployment rate culminated in 2001 reaching the astounding 19.2% (30% in some regions) and Slovakia ranked among the European countries with the highest unemployment rates.

Table 1. Development of unemployment and wages in Slovakia (1997–2008)

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment rates (in %)</th>
<th>Number of long-term unemployed (in thousands) (in %)</th>
<th>Nominal wages (in Sk)</th>
<th>Nominal wages (in EURO)</th>
<th>Real Wages Index*^{(in %)}</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>12.5</td>
<td>149.5 50.1</td>
<td>9 226</td>
<td>306</td>
<td>106.6</td>
</tr>
<tr>
<td>1998</td>
<td>15.6</td>
<td>160.7 50.7</td>
<td>10 003</td>
<td>332</td>
<td>102.7</td>
</tr>
<tr>
<td>1999</td>
<td>19.2</td>
<td>195.4 46.9</td>
<td>10 728</td>
<td>356</td>
<td>96.9</td>
</tr>
<tr>
<td>2000</td>
<td>17.9</td>
<td>261.6 53.9</td>
<td>11 430</td>
<td>379</td>
<td>95.1</td>
</tr>
<tr>
<td>2001</td>
<td>18.6</td>
<td>282.8 55.7</td>
<td>12 365</td>
<td>410</td>
<td>101.0</td>
</tr>
<tr>
<td>2002</td>
<td>17.5</td>
<td>291.4 59.8</td>
<td>13 511</td>
<td>448</td>
<td>105.8</td>
</tr>
<tr>
<td>2003</td>
<td>15.6</td>
<td>280.9 61.2</td>
<td>14 365</td>
<td>477</td>
<td>98.0</td>
</tr>
<tr>
<td>2004</td>
<td>13.1</td>
<td>291.2 60.6</td>
<td>15 825</td>
<td>525</td>
<td>102.5</td>
</tr>
<tr>
<td>2005</td>
<td>11.4</td>
<td>291.2 68.1</td>
<td>17 274</td>
<td>573</td>
<td>106.3</td>
</tr>
<tr>
<td>2006</td>
<td>9.4</td>
<td>258.2 73.1</td>
<td>18 761</td>
<td>623</td>
<td>103.3</td>
</tr>
<tr>
<td>2007</td>
<td>8.0</td>
<td>121.8 41.7</td>
<td>20 146</td>
<td>669</td>
<td>104.3</td>
</tr>
<tr>
<td>2008</td>
<td>8.4</td>
<td>107.5 41.7</td>
<td>21 782</td>
<td>723</td>
<td>103.3</td>
</tr>
</tbody>
</table>

* Real Wages Index has been computed as a proportion of the Nominal Wages Index and the Consumer Price Index.

Impact of Key Socio-Economic Disparities on Migration in Slovakia

Unemployment rate decreased rapidly after 2001 and in 2007 it reached a record low (8%) in the history of the independent Slovak Republic (UPSVaR 2009). Absolute values of long-term unemployment also started to decrease after 2005. The relative values of long-term unemployment peaked in 2006 (73.1% of total unemployed), and consistently decreased since then.

Table 1 illustrates the trend. All in all, the Slovak labour market started to draw closer to that of advanced economies albeit on a different level. Unfortunately, in consequence of the global financial crisis and a marked deceleration of the economy in 2008, unemployment rapidly increased. At the end of the year (as of 31st December 2008) the unemployment rate moved around 8.4% and now it is 12.7% (as of 18th January 2010).

These figures show great differences among regions. While the lowest Registered unemployment rate was 1.6% in Bratislava (2007), the highest unemployment rate, amounting to 37.4% in 1999, was observed in the district of Rimavská Sobota. The following data confirm that disparities in unemployment rates (UR) among regions have increased dramatically during the transition: 3.1% UR of Bratislava was the lowest, while that in Rimavská Sobota reached 25.4% in 1997, which means a difference of 22.3%. In 2008, this difference increased to 24.9%, while the same districts reached extreme values – URs of Bratislava and Rimavská Sobota were 1.9% and 26.8% respectively. Values of the standard deviation and variation coefficient illustrate the increasing regional disparities even better. While the 1997 standard deviation and variation coefficient were 5.4 and 29, in 2008 these values reached 5.8 and 33.6.

Fig. 1. Dynamics of regional unemployment disparities in Slovakia (1997–2007)
Figure 1 presents the time order of unemployment disparities. Inequality in regional unemployment is expressed by variation coefficients (I and II) for each year while their values were normalised (normalised value for 1997 is 1). The normalised variation coefficient I captures the development of variability in unemployment rates and always compares the value of the quoted year with the same period of the preceding year. The curve makes it possible to follow the increase of regional disparities in unemployment in 2001, 2002, 2005 and 2006. The variability distinctly increased at the beginning of the millennium and was observable above all in years of the highest unemployment rate or with a slight delay following such years. These results confirm the validity of theories asserting that the unemployment increase is accompanied by the deepening regional differences. Comparison of the dynamics of the regional disparities on the basis of a normalised variation coefficient II, which compares changes in each year with the initial year 1997 shows that 2000 was a break-through year because before 2000, the regional unemployment rate disparities decreased while they almost steadily increased after 2000.

4. DEVELOPMENT OF WAGES AND ITS REGIONAL DISPARITIES SINCE 1989

Wages in Slovakia were and still remain among the lowest in the EU (besides the new member countries, Bulgaria and Romania). According to the scale published by the FeEE in 2004, Slovakia ranked 35th among the 48 countries being compared. The source asserts that the mean wages in Slovakia in 2004 represented only 11% of mean wages in Denmark. The high unemployment rate, surplus of labour, inadequate sector structure, lack of funds, restrictions on the side of the government and other factors affected the development of wages in Slovakia. Mean wages with regard to purchasing power were several times lower than in the ‘old’ EU member states (Michálek, Podolák, 2004). Moreover, they only reached about 50–60% of the national average in some regions of Slovakia. The upturn came only after 2004 (see table 1). The situation in wages improved and the real wages started to increase with the arrival of foreign investments, restructuring and diversification of industry, introduction of new technologies etc. Since 2004, the real wages index was comparatively stable, which indicates a favorable development.

Figure 2 presents the time order of inequalities in wages. They are expressed in the same way as in unemployment, namely by variation coefficients (I and II) for the given year. The values of the normalised variation coefficient I slightly dropped in 2002 and ever since then they have maintained a relatively balanced level with slightly oscillating regional wage disparities.
The values of the normalised coefficient II slightly increased during the period by an almost balanced curve, which demonstrates the permanent increase of the regional wage differentiation level. In the first phase of transition, spatial distribution of wages was almost balanced. In the course of transition, disparities between districts appeared and grew. In 1997, mean wages in Bratislava (which was the richest) were 386 EUR, that is 1.7 more than in the poorest district of Medzilaborce, while in 2008, the difference amounted to 2.7 times the wages in the poorest district (when the highest wages in Bratislava and the lowest wages in Bardejov were 1 352 EUR and 502 EUR respectively). The available data reveal that the interregional disparities in wages in the studied period increased more than disparities in unemployment.

5. INTERNAL MIGRATION (CONVERGENCE VS. DIVERGENCE)

A period of extensive urbanisation with concentration tendencies of internal migration and a massive movement of population to cities was observed in Slovakia for several decades. Between the mid-1980s and about 2000, a phase with a distinct drop of migration mobility is evident. At the beginning of the third millennium, some new trends are beginning to appear in the migration behavior of population.

The marked regional differentiation of basic demographic characteristics such as the population age structure and the level of natural reproduction
between the northern and eastern regions on the one side and the western area of Slovakia on the other has been evident for quite a long time. Demographic differences involving differences in the level of social and economic development have also existed for long decades. However, they acquired a new dimension with several specific traits after 1989. This is the background of long-lasting polarisation concerning the economic, social and demographic development in Slovakia with some extreme differences between the south-west and other parts of the country. One of the possible consequences of such a disparity is a considerable and traditional mobility of population from regions belonging to one part of the country to regions in the other part of the country motivated by economic, demographic, social and other reasons.

Table 2. Characteristics of internal migration in Slovakia (1996–2007)

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<tr>
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</thead>
<tbody>
<tr>
<td>Total internal migration (in thous.)</td>
<td>81.6</td>
<td>82.7</td>
<td>89.4</td>
</tr>
<tr>
<td>Interregional migration (in thous.)</td>
<td>45.8</td>
<td>44.4</td>
<td>47.8</td>
</tr>
<tr>
<td>% of interregional migration as % of total internal migration</td>
<td>56.1</td>
<td>53.8</td>
<td>53.5</td>
</tr>
</tbody>
</table>

Source: authors’ calculations based on data (Štatis ticky úrad 2001, 2008).

Political, economic and social changes that took place in Slovakia after 1989, along with a significantly changed demographic behaviour of the population determined the nature and spatial arrangement of internal migration. In the second half of the 1990s, the rapid drop both in the volume and intensity of internal migration of 1996–1999 (when the average figure for internal migrations was 81 thousand compared to 100 thousand at the end of the 1980s) was fading out. The gross annual migration rate was around 15‰ compared to 19‰ of the end of the 1980s. The decreasing trend stopped after 2000 and the volume and rate of internal migration values started to increase up to the present level of 89 thousand (16.6‰, table 2). However, in the same period, migration structure displays a drop in the proportion of interregional migration in the total volume of internal migration. Migration within regions (districts) still accounts for almost half of internal migration; its share increased after the mid-1990s obviously due to progressing suburbanisation and deconcentration of population. International migration is another important phenomenon in Slovakia. Informed estimates (Jurčová, 2009) quote approximately 200,000 Slovak citizens working abroad, mainly in the Czech Republic, Great Britain and Ireland (in the period following Slovakia’s accession to the EU 2004–2008). Many of these migrants may have participated in interregional migration within Slovakia and contributed to its scores.
5.1. Development of Interregional Migration

One of possible and often used indicators of the role that migration plays in redistribution of population is the rate of migration efficiency (e.g. Plane 1984, Brognan 1984, Podolák 1995, 2006 and many others). Migration efficiency rates are used in this part to characterise the main trends in the development of interregional migration of population in Slovakia (NUTS 4 level) in the period between 1996 and 2007.

Migration efficiency of a region is expressed as

$$E_j = 100 \cdot \frac{N_j}{T_j}$$

where $E_j$ – migration efficiency of region $j$, $N_j$ – difference between immigration and emigration of region $j$, $T_j$ – volume of migration in region $j$.

Migration efficiency values will be positive if immigration outnumbers emigration and negative if emigration outnumbers immigration. If the efficiency value differed considerably from zero it was the case of the high redistribution of population in region regarding the total migration. On the other side, low efficiency values suggest that immigration and emigration eliminate each other and the result is a low spatial redistribution.

In the second half of the 1990s, positive migration efficiency values prevailed in 26 districts (36.1% of total districts) and the same happened in 2004–2007 in 27 districts (38.4% of total districts). In 1996–1999, the highest migration efficiency values were observed in districts of south-western Slovakia, particularly around Bratislava (Senec, Pezinok, Malacky, Galanta and Dunajská Streda). The most negative values were observed in the northern and eastern districts of Stará Ľubovňa, Snina, and Medzilaborce. Distribution of migration efficiency values in 2004–2007 on the district level remained more or less stabilised while positive values changed into negative and vice versa only in six and seven districts respectively. In the spatial pattern after 2000, concentration of districts with the most positive values in the south-west of the country is evident. Northern and eastern districts have negative values of migration efficiency. Simultaneously, absolute differences between the positive and negative values are more pronounced at present than in the mid-1990s.

The resulting migration efficiency values reflect the reversed effect of hierarchic and positional components. Suburban mobility leads to migration loss in the biggest cities, but this type of migration occurs in their, closer or wider, hinterlands, so it is migration within districts. On the other side, the hierarchic position of big cities on a higher economic level determines the migration attractiveness of corresponding regions with contribution of the effect exerted by the positional factor: migration attractiveness of economically advanced districts in the south-
west and west of Slovakia. The resulting values of migration effectiveness also reflect another property of interregional migrations: a comparatively high degree of reversed flows, which have already appeared for some time between some districts.

Table 3. Migration efficiency characteristics of Slovakia (1996–2007)

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Variance</td>
<td>59.7</td>
<td>74.9</td>
<td>82.9</td>
<td></td>
</tr>
<tr>
<td>Standard deviation</td>
<td>12.521</td>
<td>14.294</td>
<td>15.046</td>
<td></td>
</tr>
<tr>
<td>Total net migration rate</td>
<td>0.134</td>
<td>0.155</td>
<td>0.156</td>
<td></td>
</tr>
</tbody>
</table>

Source: authors’ calculations based on data (Štatisťsky úrad 2001, 2008).

Summarised characteristics were used in order to describe the whole system of interregional migration (table 3). The variance indicates an increasing difference between the minimum and maximum migration efficiency values in time between the beginning and end of the studied period. The increase of standard deviation values also suggests the increasing level of regional differentiation in the studied migration system from the mid-1990s until present, while this increase was more conspicuous between the end of the 1990s and the beginning of the third millennium. The certain stabilization came after 2003 when the increase of the summarised characteristics became much more moderate.

Another characteristic is the total net migration rate, which summarises the overall effect of migration on redistribution of population within the whole regional system. It is expressed as the quotient of the sum of absolute values representing migration balances and average population size in the relevant period. A high level of the index indicates that migration is an efficient mechanism of population redistribution, while low values indicate balance between the migration flows that do not notably contribute to population redistribution. This characteristic can then be interpreted as the rate of symmetry and balance in the studied system of interregional migration flows and its increase presumably means an increased role of migration as an efficient tool of population redistribution on the regional level. The level of disparities increases in the migration system: the total contribution of migration to redistribution of population becomes more important, the values of all quoted summarised characteristics of the migration system indicate a slightly increased role of migration in redistribution of population in the relevant period.

The all-system characteristics of interregional migration only provide summarised information about the migration system that may disguise some distinct differences in migration between individual regions, which are undoubtedly determined by socio-economic disparities as well. Anticipation of a population
shift from the economically less favored regions into advanced ones would be only natural. Although the data about the reasons for interregional migration should be considered with caution (regarding the scale of options and other factors which play a role in quoting reasons for moving), the values are unreasonably low. Change of working place and drawing closer to working place is quoted only by 4–5% of all movements, especially where longer distances are involved (movement from one administrative region to another). Statistical data about internal migration in the SR have not yet confirmed the thesis about movement of population from spatial units with higher levels of unemployment and low numbers of vacant jobs to those with more favourable conditions.

6. IMPACT OF REGIONAL DISPARITIES IN UNEMPLOYMENT ON INTERREGIONAL MIGRATION

Figure 3 shows the mutual dependence of unemployment rate and migration efficiency in the period 2004–2007. Theoretically, the relationship between migration efficiency and unemployment should be negative. As far as the unemployment rate in a given region is above average, a tendency to higher emigration and lower immigration is expected. However, the graph shows that districts with the top rate of unemployment are far from displaying the most negative migration efficiency values. Rimavská Sobota, Revúca a Veľký Krtíš with the highest unemployment rates are more positive than districts like Stará

![Fig. 3. Unemployment and migration – districts in Slovakia (2004–2007)](image-url)
Ľubovňa, Medzilaborce or Snina in terms of migration efficiency values. However, dependence in the case of districts with most positive migration efficiency values (Senec, Malacky, Pezinok and Dunajská Streda) characterised by low unemployment rates is much more distinct. This fact did not change over the studied period and it is also true both for the second half of the 1990s and the years 2004–2007.

As the graph shows, economic factors such as unemployment do determine the willingness of individuals to migrate, but only to a certain extent. In the case of depressed and unemployment stricken regions, the labor force does not move to economically advanced regions, mainly for financial reasons (inaccessible dwelling, cost of moving etc.) and such regions remain in what is referred to as the poverty trap. As is obvious from literature, the poverty trap may be fairly resistant to any attempts to escape.

7. IMPACT OF REGIONAL DISPARITIES IN WAGES ON INTERREGIONAL MIGRATION

Figure 4 shows dependence between wage disparity and migration efficiency in 2004–2007. Theoretically, the relationship between migration efficiency and wage inequality should be positive. As far as the wages in a particular region are above average, immigration should prevail over emigration. In this case, manifestation of expected logical linkages (migration from districts with lower mean wages to economically advanced districts) is somewhat more distinct again in the case of the most migration-wise positive districts (Senec, Pezinok, Malacky) also characterised by comparatively high mean wage values. In the case of districts with the lowest mean wages, highly negative migration efficiency values correspond to negative migration efficiency values less frequently but more distinctly than in the case of mutual dependence between migration efficiency values and unemployment rates. Typical (and expected) cases in this context are the districts of Stará Ľubovňa, Snina and Medzilaborce, where low mean wages correspond to highly negative migration efficiency values. This means a higher proportion of population moves to economically advanced regions. Against all expectation, a very low level of wages in some other regions (Námestovo, Čadca, Bardejov) is accompanied by relatively not so bad migration efficiency values. It is precisely from these regions that an extra high number of persons leave for work abroad, which compensates the presumed migration within the country. The graph shows a somewhat greater effect on the level of interregional migration of population than regional differences in the unemployment rate.
In spite of some cases, the assumptions regarding out-migration from economically weaker to economically stronger districts are confirmed only to a limited extent. The probable reasons are economic problems and cost of new dwellings in advanced districts as well as a strong bond to the original place of living. The level of population mobility in Slovakia (despite a certain revival after 2000) lags behind many countries, for instance the Czech Republic (Horváth 1996, Vánco 2005). Presumably, the contemporary migration to advanced EU countries, which in many cases compensates for the financial inaccessibility of new dwellings in the main centers of economic development, plays a certain role. A lower level of education of population characterises regions with lower, mostly negative values of migration efficiency. The generally valid dependence, which is manifested in the world, was also confirmed in Slovakia: because of financial reasons it is not the poorest who move but those who can afford it.

The results suggest that the low migration efficiency is greatly influenced, particularly in depressed districts (besides the economic factors discussed above), by liquidity constraints. It appears that the stronger such constraints, the lower the level of the region’s population mobility. Distance also plays an important role and combined with cost means that if economically advanced centers are far away, then despite their attractiveness. The level of emigration from problematic regions is low.
The most positive values of migration efficiency

The most negative values of migration efficiency

Very low values of wages

The highest values of unemployment rate

Fig. 5. Migration efficiency, unemployment and wages – districts in Slovakia (2004–2007)


In districts which should theoretically (estimating from unemployment rate and level of wages) have increased emigration, but in reality the level of migration is below average, the effects of additional factors should be considered (figure 5), such as: unavailable or deficient information, uncertain expectations, aversion to risk (increasing with age of the population) professional orientation and qualifications regarding the market offer, age composition, family bonds associated with mutual help, options of self-supply (sharing family houses), price inaccessibility of housing, and lack of flats for renting. Commuting options are also important especially if they are time- or cost-effective. However, conditions of an individual, such as having a family, capacity to adapt and learn, primary occupation in industry, agriculture or services, living in a city or in a village and many other factors must also be considered. These personal aspects and associated circumstances concerning migrations are studied by other human sciences, which is why they were not given more attention in this paper.

8. CONCLUSION

Slovak society has gone through an important phase of development in the last two decades, involving significant changes in all spheres of life. One of the measures of labor market flexibility – geographical mobility of the labour force – was analysed in this study. On the basis of two key determinants of migration
(unemployment and wages) in Slovak regions, an attempt was made to estimate
whether regional unemployment rates and wages determine the willingness of
the population to move in search of jobs. In Slovakia, as in other economies in
transition, the rate of geographical mobility of labor in the studied period
dropped or stagnated while the regional disparities increased. This situation is
contradictory, because the increasing regional differences should have been
accompanied by increased emigration from depressed areas to richer regions. In
the empirical part of the study, the authors concluded that unemployment rate
differentiation in Slovak regions determines the population mobility and flows
of labor only to a limited extent. This fact may be due to increased uncertainty
associated with the gradual transition to a market economy. Explanation of this
evident contradiction seems to be the impact of other factors of diverse nature.
The migration behaviour of Slovak population is determined by deconcentration
and suburbanisation processes on the one hand and increasing marginalisation of
some regions on the other. Moving from one region to another is connected with
considerable cost – hence the poverty trap (people cannot afford moving to
prosperous regions). The cost connected with migration is a result of the
condition of the Slovak financial market (difficult access to loans for lower
income households or those threatened by loss of job). An important factor
which affects population mobility is the housing market and price inaccessibility
of dwellings in rich regions. The analysis also indicates the significance of
liquidity constraints for population mobility. The greater the constraints, the
weaker the tendency to real convergence between individual regions. The natural
question is whether the economic, wage or regional policies are able to mitigate
the negative effects of such constraints on population mobility. In this context,
improvement of the labor market condition and changes in the housing policy by
making dwellings more accessible and adjusting loan conditions for low-income
and young households seem to be essential.

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REFERENCES
ANDRIENKO, Y. and GURIEV, S. (2004), ‘Determinants of Interregional Mobility in Russia’,
Evidence from Panel Data, Economics of Transition, pp. 1–27.
Rural-Urban Migration Functions: with an Application to Indian Data’, Oxford Bulletin of
(Internal migration in Slovakia: recent trends and spatial pattern), Geografický časopis, 58,
pp. 15–44.


MICHÁLEK, A. (2004), ‘Vývoj a súčasný stav regionálnej štruktúry a regionálnych disparít na Slovensku’ (Development and the present state of regional structure and regional disparities in Slovakia), [in:] IRA, V. and VAISHAR, A. (eds), Časopisové aspekty transformačných procesov v České republice a v Slovenskej republike (Time-space aspects of transformation process in the Czech Republic and in the Slovak Republic), Bratislava: Geografický ústav SAV, pp. 78–83.


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