

URBAN SETTINGS FOR DEMOGRAPHIC CONSIDERATION IN THE BORDER CAPITAL OF BRATISLAVA

Yasuhiro Ohzeki

Faculty of Education, Gifu University, Japan

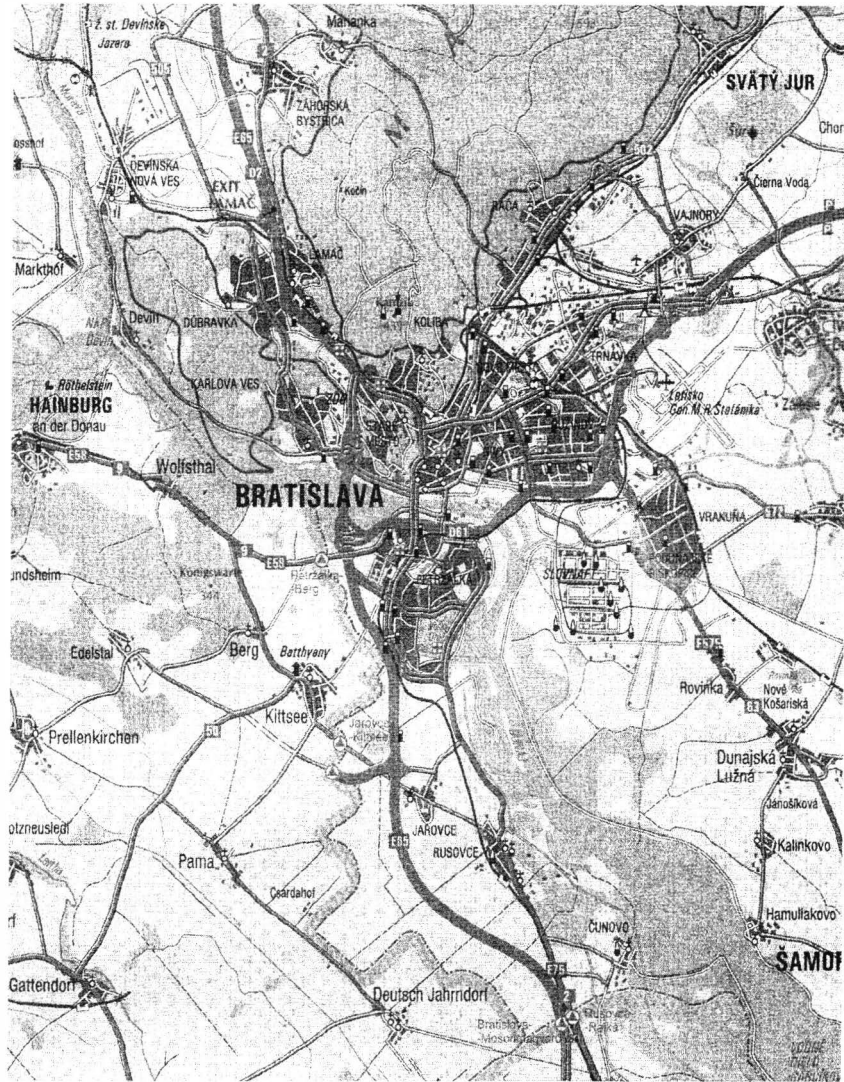
Abstract: This study focuses on urban settings for demographic consideration, including size, density and mobility of population also with its non-agricultural economic activity, in the border capital of Bratislava. After giving an overview of Bratislava and its development, regional differences by the 17 city quarters are presented from the point of static and dynamic attributes. Then, several urban landscapes are exhibited for explaining the regional characteristic.

Key words: Bratislava, urban settings, 17 municipal parts, border capital, demographic consideration, compact city

1. INTRODUCTION

Population is the most important indicator for identifying what is urban. A classical study of urbanism points out that city is defined by size, density and heterogeneity of population (Wirth, 1938). For statistical identification, the former two criteria are often used as shown in „Urbanized Area“ in USA and „Densely Inhabited District“ in Japan. But from the sociological point of view, high mobility of population is also essential for assuring their heterogeneity. And in terms of urban economics, dominance of non-agricultural activity is added to the former two criteria of population size and density.

This study focuses on urban settings for demographic consideration, including size, density and mobility of population also with its non-agricultural economic activity, in the Slovak capital of Bratislava. Bratislava is a well known border capital neighboring Austria and Hungary. Since 1993 of „Velvet Divorce“, the city has taken its geopolitical position, and since four years before the time, it has started to enter into capitalist market economy. In 2004 of EU enlargement, the meaning of Bratislava border was revised again, resulting in future transformation not only in economy but also in urban society and demographic behavior of people.



0 5km

Figure 1 Bratislava and its neighbouring area

Source: Mapa Slovakia, 2003

Recent previous studies have clarified characteristics of Bratislava from the points of geographical position in new economic and political condition (Korec and Galasová, 1994), cooperation with Vienna for development and new possibility (Mládek and Šimko, 1996), risk areas in Bratislava (Michálek, 1997), transition processes on functional spatial structure (Korec and Buček, 1999), comparison with the other four capitals in Central Europe (Divinský, 2001), location choice for science and technology park (Székely, 2002), and intra-urban structure on regional perception (Ira, 2003). These

studies highlight regional characteristic of Bratislava not only as one urban entity but also as agglomeration of intraurban subregions. But it is not enough to clarify demographic and socio-economic characteristics especially from the latter point of view. As statistical unit, it is possible to use two kinds of areal division in Bratislava, 17 municipal parts and 266 town wards. This preliminary study employs municipal part as the areal unit because of utilizing newly collected data and not only demographic but also socio-economic attribute.

2. DEVELOPMENT OF BRATISLAVA AND ITS POPULATION

Bratislava is located in south-western edge of Slovakia, only 65 km from Vienna and 50 km from its international airport of Schwechat. The river of Danube comes from Vienna, divided Bratislava into the north and south parts. Another important obstacle for the city development is Little Carpathian Mountains, which restricts built-up area mainly to the south side of the mountains and on the Danube Lowland (Fig. 1).

The name of Bratislava has been used officially since 1919, which had former names of Pressburg in German, Prešporok in Slovak, Posonium in Latin, or Poszony in Hungaian. This means political and cultural layered structure in the history of Bratislava.

This region was settled since paleolith and Roman and German tribes started to live here in 9 B.C. Slavic tribes came in 6th century A.D. and made this region a part of Great Moravian Empire. After invasion of Mgyar tribes in 10th century, Bratislava became a border city of Hungarian Kingdom. During 1536 – 1784, it had been capital city of the kingdom under Turkish military pressure.

The 18th century was the time of increasing number of Bratislava population, showing 9,000 inhabitants in 1720, through 26,845 in 1787, and in 1792 already 33,245 counted (Fig. 2). The most famous Austro-Hungarian queen of Maria Theresia (1740 – 1780) spent much of her time in the city, providing various settings for the development.

Also during the 19th century, the same tendency of population growth was continued in the background of industrial revolution such as steam ship transport and railway line in 1830 and 1840 respectively, sewerage and gas-works in 1856, chemical factory and oil refinery in 1873 and 1895 respectively. The first official census in 1869 counted 50,720 of Bratislava population.

Bratislava population has changed its volume and composition dramatically in the 20th century. The population increased from 83,000 in 1919 to 124,000 in 1938. At the same time, the share of inhabitants of Slovak and Czech nationalities in 1930 represented three fifths, while more than four fifths of Germans and Hungarians before the WWI. During 1939 – 1945, Bratislava became capital of Slovak State temporarily under the Nazi Germany.

In 1943, the city started territorial expansion to incorporate its surrounding village of Karlova Ves. After the WWII, seven villages of Vajnory, Rača, Petržalka, Prievoz, Lamač, Devín and Dúbravka were incorporated in 1946, with additional seven villages of Podunajské Biskupice, Vrakuňa, Záhorská Bystrica, Devínska Nová Ves, Jarovce, Rusovce and Čunovo in 1971. Bratislava population develops its number very rapidly from 143,000 in 1945 to 452,282 in 1996 as shown in Fig. 2. The present municipal parts are basically composed of the above 14 villages and original Bratislava in 1918, of which the latter makes two municipal parts of Staré Mesto (Old Town) and Nové Mesto (New Town) with a part of Ružinov and Vrakuňa (Fig. 3).

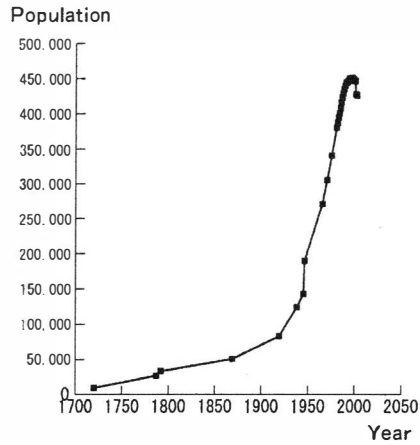


Figure 2 Long-term development of Bratislava population

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

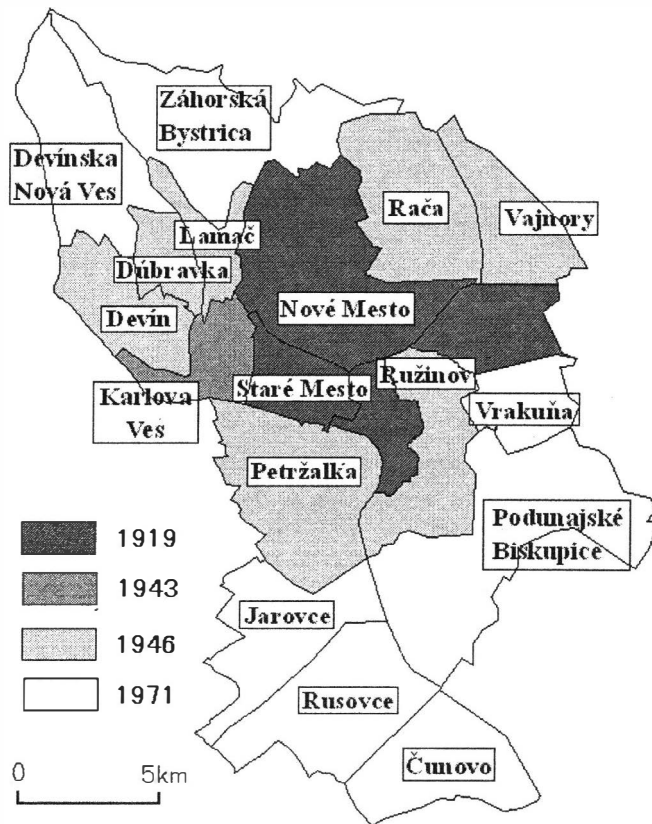


Figure 3 Municipal parts and their incorporation into Bratislava

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

In 2002, Bratislava has 427,049 in the number of population, which occupies 7.9 % of the total in Slovakia. The rate of concentration to capital city is not said to be high as compared to 19.1 % of Vienna and 18.5 % of Budapest. In terms of urban system, Bratislava doesn't always take position of the primate city (Tab. 1). The second largest city of Košice has 235,509 inhabitants, corresponding to 55.1 % of Bratislava population size. Additionally, the other 18 cities in Tab.1 are also independent centres, meaning Bratislava has no satellite-city over 33,415 of population. In fact, though commuting hinterland of Bratislava is spreading to the outside (Hrnčiarova, 2002), the city contains almost all important urban settings for understanding demographic behaviour of the inhabitants.

Table 1 Population rank and size of Slovak cities in 2002

Rank	City name	Population	Rank	City name	Population
1	Bratislava	427,049	11	Prievidza	52,658
2	Košice	235,509	12	Zvolen	43,674
3	Prešov	92,496	13	Považská Bystrica	42,716
4	Nitra	86,958	14	Nové Zámky	41,866
5	Žilina	85,347	15	Michalovce	39,865
6	Banská Bystrica	82,493	16	Spišská Nová Ves	38,958
7	Trnava	69,869	17	Komárno	37,070
8	Martin	60,017	18	Levice	36,545
9	Trenčín	57,413	19	Humenné	35,039
10	Pôpad	55,982	20	Bardejov	33,415

Source: Statistical Office of the SR, 2003

2. REGIONAL DIFFERENCES IN BRATISLAVA

Greater density of population is one of the most important indicators in defining city or being urban as noted before. Figure 4 shows density distribution by 17 municipal parts in Bratislava. Staré Mesto is the most densely inhabited municipal part (4,581 persons/km²), following with Petržalka in the opposite Danube River side, and the western neighboring of Karlova Ves and Dúbravka. Five surrounding municipal parts show sparsely inhabited (less than 100 persons/km²), of which Záhorská Bystrica and Devín are rural and separated from the central Bratislava by Little Carpathian Mountains. The other three of Jarovce, Rusovce and Čunovo are also rural parts on the southern river side of Danube Lowland.

From the point of day-time activity of people, percentage of non-residential telephone lines to the total lines becomes a good indicator for expressing the other side of urban character. „Non-residential“ means inclusion of public payphone and many kinds of business use. Figure 5 shows distribution of the non-residential telephone lines by 17 municipal parts in Bratislava. High percentage of non-residential telephone line in Staré Mesto (66.6 %) and Nové Mesto (65.3 %) suggests that these two municipal parts function as day-time business centre in Bratislava. And the eastern municipal parts of Ružinov (59.6 %) and Vrakuňa (45.9 %) contain not a little quantity of day-time economic activities. Densely inhabited area in Figure 4 does not always take a high percentage of non-residential telephone line, as shown in Dúbravka (19.0 %), Petržalka (25.5 %) and Karlova Ves (26.6 %).

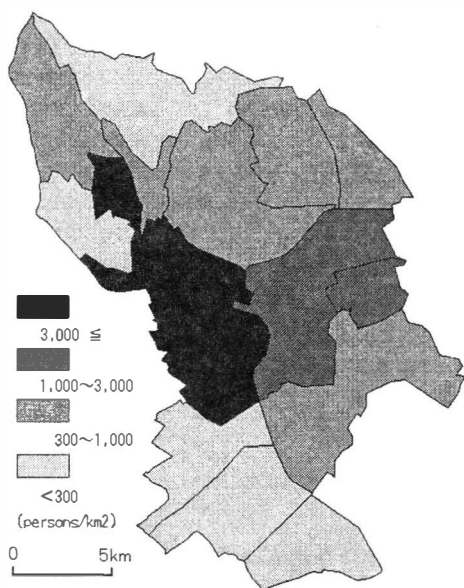


Figure 4 Population density distribution in Bratislava (2002)

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

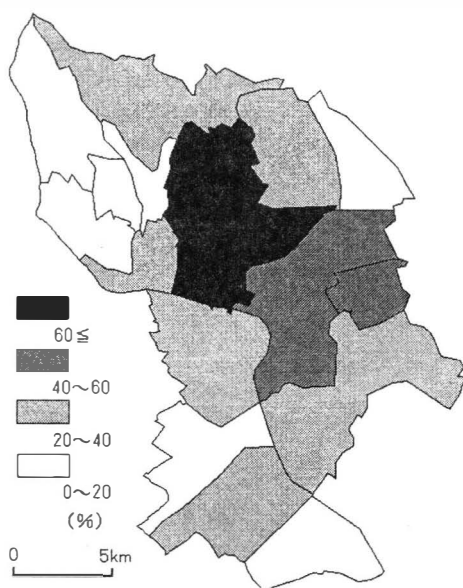


Figure 5 Percentages of non-residential telephone lines (2002)

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

Based on the above static presentations, Bratislava has an excellent urban centre (Staré Mesto), specialized area of inhabitation (Dúbravka, Petržalka and Karlova Ves), characteristic area of day-time economic activity (Nové Mesto and Ružinov), with the surrounding rural parts. In the next, dynamic perspectives are introduced to describe Bratislava as an urban entity.

As mentioned before, Bratislava population has been increased rapidly since the WWII. But precisely to say, such development tendency turned to decelerating phase in late 1980s, and then it has entered into population decreasing since 1997 (Fig. 6). In terms of natural and social increase rates, these two demographic indicators show decelerating trend with some degree of fluctuation (Fig. 7). In natural increase, almost steady deceleration has been recorded from 11.0 ‰ in 1975 to -1.5 ‰ in 2002. During the same period, birth rate has fallen from 19.6 ‰ to 7.5 ‰ as compared to limited scale of rising death rate from 8.6 ‰ to 9.0 ‰. This means the deceleration and decrease of Bratislava population is attributed to the falling birth rate on one hand.

On the other hand, another important component is social increase as a result of migration into or out from the city. Though social increase rate showed 13.0 ‰ in 1985, after 1996 it has been recording negative value of net migration loss. In-migrants (immigrants) rate to the total population has fluctuated from 20.1 ‰ in 1985 through 7.7 ‰ in 1999 to 11.0 ‰ in 2002. During the same period, out-migrants (emigrants) rate has fluctuated from 7.2 ‰ in 1985 through 6.9 ‰ in 1995 to 11.9 ‰ in 2002. Therefore, the fall of in-migrants rate contributes to the deceleration of Bratislava population, following with the rise of out-migrants rate for the succeeding decrease of the population.

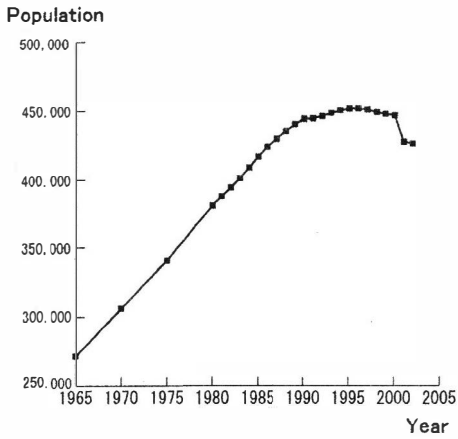


Figure 6 Transition from increase to decrease of Bratislava population

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

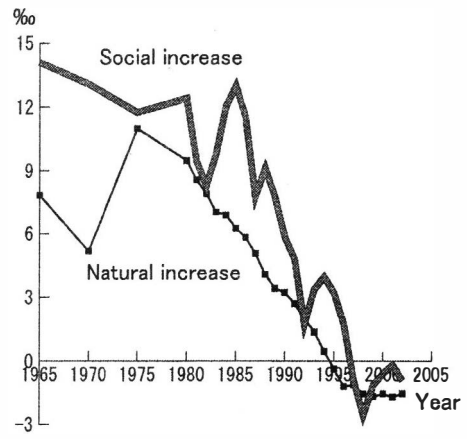


Figure 7 Natural and social increase rates of Bratislava population

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

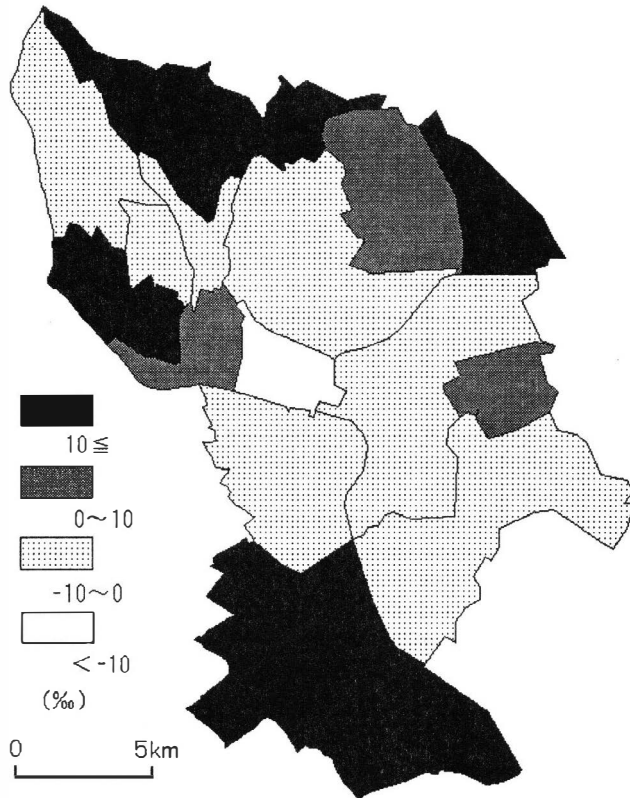


Figure 8 Distribution of population increase rate in Bratislava (2002)

Source: Statistical Office of the SR -Regional Administration in Bratislava, 2003

Figure 8 shows distribution of population increase rate by the 17 municipal parts in 2002. Concentric zone pattern is detected in the reverse shape to those in Figure 4 and Figure 5, from the low value in the city centre to the high value in the peripheral area.

The urban centre of Staré Mesto show the most rapid decrease of -11.8% , which means this municipal part has already started to change its character from residential centre to business one. As shown in Figure 9, Staré Mesto is characterized by decrease both in the natural and social components. Its northern and eastern neighboring parts of Nové Mesto (-2.8%) and Ružinov (-2.5%) tend to intensify their character of business area. The decreases are attributed to their natural component.

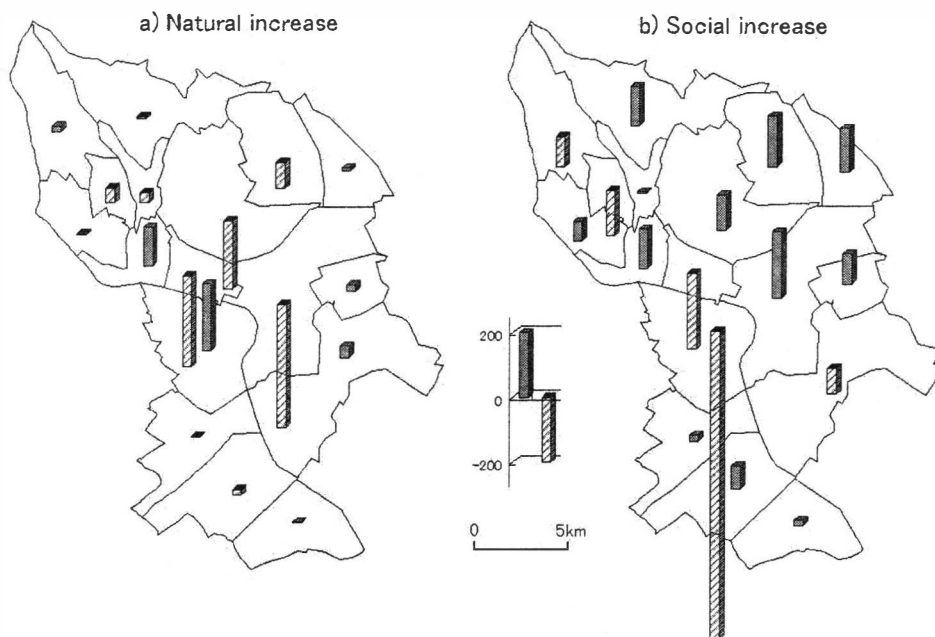


Figure 9 Distribution of natural and social increase number in Bratislava (2002)

Source: Statistical Office of the SR – Regional Administration in Bratislava, 2003

Two residential parts of Petržalka (-6.4%) and Dúbravka (-5.2%) also show negative value of the population increase rate, as contrasted to positive value in another specialized part of inhabitation, Karlova Ves (7.3%). Both increases of the natural and social components characterize Karlova Ves as a residential centre of development. In Petržalka, the absolute size of social decrease is much greater than that of natural increase. It also shows the largest number of 1,963 in-migrants and 2,913 out-migrants among the 17 municipal parts. Petržalka has entered into a phase of greater net migration loss from the balanced stage in the late 1980s as noted by Cibul'ková (1994). With consideration of one time mass-influx of young family (Miškolci and Mládek, 1994), it can be said that Petržalka will go forward to the next stage of natural decrease in the near future as already exhibited in Dúbravka.

Six rural municipal parts show 10% and more of population increase rate, in the order of Devín (61.4%), Záhorská Bystrica (52.9%), Vajnory (36.1%), Rusovce

(24.7 ‰), Čunovo (18.5 ‰) and Jarovce (14.1 ‰). Such increases are mainly attributed to net migration gain as shown in Figure 9, with the highest rates of in-migrants in the northern peripheral part of Záhorská Bystrica (72.2 ‰) and the eastern peripheral part of Vajnory (54.1 ‰). In the peripheral area, dwellings construction has been growing in the last five years as suburbanization process in Bratislava.

3. CONCLUDING REMARKS

This study focuses on urban settings for demographic consideration, including size, density and mobility of population also with its non-agricultural economic activity, in the border capital of Bratislava. The 17 municipal parts are employed as areal division, of which data is derived mainly from the statistical office in Bratislava. After giving an overview of Bratislava city, population and their development, regional differences by the 17 municipal parts are presented from the point of static and dynamic attributes of Bratislava. Then, several urban landscapes are exhibited for explaining regional characteristic of the city and its municipal parts. The results are summarized as follows.

1. Bratislava has been increased its number of population since the 18th century, risen the speed markedly in the 20th century, with territorial expansion of incorporating the surrounding 14 villages during 1943 to 1971. But after 1997, Bratislava population has been decreasing its number, caused by negative value of natural and social increase rates.
2. The present Bratislava is not always concentrated in the state population as compared with the neighbouring countries. It has no populous satellite-city, and makes an independent and compact urban region of 427,049 inhabitants in 2002.
3. Based on distributions of population density and percentage of non-residential telephone line, Bratislava has an excellent urban centre (Staré Mesto), specialized area of inhabitation (Dúbravka, Petržalka and Karlova Ves), characteristic area of day-time economic activity (Nové Mesto and Ružinov), with the surrounding rural municipal parts.
4. From the point of population development, Staré Mesto shows the most rapid population decrease in the functional transformation from residential area to business one. It contains the historic core of Bratislava, absorbing commuters and tourists from the surrounding municipal parts, the whole Slovakia and even the foreign countries.
5. The northern and eastern neighbors of Nové Mesto and Ružinov also show population decrease with intensifying the character of business area. In Nové Mesto, Polus City Center is a symbolic shopping center for commercial development by foreign investment and new life style of Bratislava consumer. In contrast, the latter Ružinov contains a petrochemical complex of Slovnaft, which was symbolic of socialist-era.
6. Among the three specialized municipal parts of inhabitation, the western neighbors of Karlova Ves is the most favourable alternative for wealthy people and young families, resulting in population increase both on natural and social components. In contrast, the southern Danube bank of Petržalka shows the greatest net migration loss and will go forward to the next stage of natural decrease in the near future as already

exhibited in the north-western municipal part of Dúbravka. Standardized high-rise flats make up the typical landscape in the most populous municipal part of Petržalka.

7. The surrounding rural municipal parts show higher rate of population increase as well as dwellings increase, attributed mainly to net migration gain, as suburbanization process of Bratislava. Volkswagen car factory in such municipal part of Devínska Nová Ves has been growing its number of employees, of which German company provides them with not only job opportunity but also bus transportation and flats for housing in the municipal part.

Under the condition of EU enlargement in 2004 and only 65 km distant from Vienna, it may be possible to say that Bratislava will go into the process of Vienna suburbanization. But if Bratislava needs independency, „humanistic diversity“ is the key word for surviving in the competitive circumstance. Compact historic core with its adjacent economic activities and residences makes easier to interact among different people by a short distance not only for Bratislava inhabitants but also for commuters, investors and tourists from the rest of Slovakia and abroad. It's the charm of Bratislava from the point of new urbanism.

The platform for this study was provided by the research project „A Geographical study in the interrelationship among fertility decline, migration and aging in the Slovak Republic and Japan“, supported by Japanese Society for Promotion of Science and Ministry of Education of the Slovak Republic. I would like to express my sincere gratitude to the staffs of Department of Human Geography and Demogeography of the Comenius University, especially to Prof. Jozef Mládek, Assoc. Prof. Dagmar Kusendová, Dr. Jana Marenčáková, Dr. Jana Širočková, Mr. Kurčík Luboš and Miss Valeria Fillová.

References

- CIBULKOVÁ, J. (1994): Migration movements of Petržalka population. *Acta Facultatus Rerum Naturalium Universitatis Comenianae Geographia*, 34. 61-70.
- DIVINSKÝ, B. (2001): Position of Bratislava within the Central European metropolitan system from the population viewpoint. *Geografický časopis*, 53. 171-190. (SE: Slovak with English abstract)
- HRNČIAROVA, T. (2002): The Landscape Atlas of the Slovak Republic. Bratislava, Esprit. (Compact Disk)
- IRA, V. (2003): The changing intra-urban structure of the Bratislava city and its perception. *Geografický časopis*, 55. 91-107.
- KOREC, P., BUČEK J. (1999): Transition process in Bratislava after 1989. Kobayashi, K ed. *Market economy and changing regional structures: the case of Central Europe*, Tokyo, Monbusho International Scientific Research Program (Field Program) Research Results. 488-509
- KOREC, P., GALASOVÁ S. (1994): Geographical position of Bratislava in new economic and political conditions. *Geografický časopis*, 46. 75-86. (SE)
- LACIKA, J. (2000): Bratislava. Bratislava, Dajama. 268.
- Mapa Slovakia (2003): Town Plan, Bratislava 1:20 000. Bratislava, Mapa Slovakia Bratislava, 2.
- MICHÁLEK, A. (1997): Risk areas of Bratislava from the point of view of chosen kinds of crime. *Geografický časopis*, 49. 47-62. (SE)
- MIŠKOLCI, A., MLÁDEK, J. (1994): The basic characters of population structure of Petržalka. *Acta Facultatus Rerum Naturalium Universitatis Comenianae Geographia*, 34. 83-93.
- MLÁDEK, J., ŠIMKO, D. (1996): Cooperation between Vienna and Bratislava: development and new possibilities. *Acta Facultatis Rerum Naturalium Universitatis Comenianae Geographica*, 38. 109-121.

- Statistical Office of the Slovak Republic (2003): Slovak Republic in Figures 2003. Bratislava, Statistical Office of the Slovak Republic. 34. [in Slovak]
- Statistical Office of the Slovak Republic – Regional Administration in Bratislava (2003): Statistical Yearbook of the Capital of the Slovak Republic Bratislava 2003. Bratislava, Statistical Office of the SR – Regional Administration in Bratislava. (Compact Disk)
- SZÉKELY, V. (2002): An intraurban location choice for a science and technology park in Bratislava: A feasibility study. *Geografický časopis*, 54. 319-340.
- WIRTH, L. (1938): Urbanism as a way of life. *American Journal of Sociology*, 44. 1-24.

Urbánne prostredie so zreteľom na demografiu v prihraničnom hlavnom meste Bratislave

Resume

Táto štúdia sa zameriava na mestské prostredie so zreteľom na demografiu, vrátane počtu, hustoty a mobility obyvateľstva, ako aj jeho nepoľnohospodárske ekonomické aktivity v zastavanom území hlavného mesta Bratislavy. Územie bolo rozdelené na sedemnášť mestských častí, ku ktorým sa viaže väčšina oficiálnych štatistických dát Štatistického úradu Bratislavy.

Bratislava zvýšila tempo rastu obyvateľstva na konci 20. storočia, územnou expanziou pričlenila 14 okolitých obcí, pôvodne samostatných dedín. Avšak po roku 1997 došlo k poklesu obyvateľstva, ako ukazuje aj záporná hodnota miery prirodzeného a sociálneho prírastku. V súčasnosti Bratislava je samostatným kompaktným urbánnym regiónom s 427 049 obyvateľmi (v roku 2002).

Urbánný región má centrálnu mestskú časť vrátane historického centra, tri špecializované obytné časti a dve časti charakteristické dennými ekonomickými aktivitami, obklopené priľahlými mestskými štvrťami. Najprudší pokles obyvateľstva zaznamenalo centrum mesta, ktoré ale absorbuje množstvo ľudí dochádzajúcich za prácou a turistov. Západne susediaca časť s centrom sa stala najpriaznivejšou alternatívou pre bývanie najmajetnejších ľudí a mladé rodiny, súdiac podľa prirodzenej a sociálnej zložky populačného prírastku. A naopak, južná obytná časť, vystavaná v typickom socialistickom štýle s typizovanými viacpodlažnými bytovkami, ukazuje najväčší úbytok migračného salda. Petrochemický komplex je ďalším príkladom podobnej masívnej výstavby, lokalizovanej vo východnej časti.

Transformácia zo socializmu do kapitalizmu spôsobila veľa zmien v živote mesta. Veľké obchodné centrum v severnej časti Bratislavy a nový automobilový závod na severozápadnom predmestí sú typické príklady zahraničných investícií, ktoré ovplyvňujú život ľudí a celého mestského regiónu. Avšak základný charakter kompaktného mesta tu stále pretrváva a môže sa stať v budúcnosti výhodou pre prihraničné hlavné mesto – Bratislavu.

国境首都ブラチスラバにおける人口学的考察の都市的背景

大関 泰宏

本研究は、国境首都ブラチスラバにおける人口学的考察の都市的背景に焦点を当てており、そこには人口の規模や密度、移動に加えて非農業的な経済活動も含まれる。地域区分の単位として17行政区を採用し、それに関するデータは主としてブラチスラバの統計局から得ている。

ブラチスラバは20世紀後半に人口増加の速度を増し、同時に周辺14村の合併によって領域を拡大してきた。しかし、1997年以降は人口が減少し続けており、自然・社会増加率ともに負の値を示している。今日のブラチスラバは、2002年時点で427,049人が住む1個の独立したコンパクトな都市地域を形成している。

ブラチスラバの都市地域には、歴史核を含む中心行政区、居住に特化した3区、昼間の経済活動が特徴的な2区、および周辺の農村的行政区がある。中心行政区は最も急激な人口減少を示しているが、同時に多数の通勤者や旅行者を吸い寄せる地区でもある。その西隣の地区に住宅を得ることは、富裕層や若年世帯層にとって最も好ましい選択となっており、結果として自然的・社会的の両面で人口が増加している。対照的に、南の住宅地区は標準化された高層集合住宅群となっており、典型的な社会主義時代の景観を呈している。ここは移動による人口減少が最も多い行政区でもある。東部地区にある石油化学コンビナートも同様の大規模建設の事例である。

社会主義から資本主義への転換は、ブラチスラバの生活様式に多くの変化をもたらした。中心行政区の北隣に位置する大規模ショッピングセンターや北西郊外の新しい自動車工場は、外資によって人々の生活や都市地域が変貌した典型事例である。それにもかかわらず、コンパクトな都市であるという基本特性は生き続けており、これは今後も国境首都ブラチスラバの利点であり続けるだろう。