

Tomislav Pejaković and Dragana Ivanković, “Number of Inhabitants of the City of Zagreb during the Period 1857-2011”

Tomislav Pejaković

City Office for Demography

Zagreb, Croatia

demografija@zagreb.hr

Dragana Ivanković

Croatian Diving Federation

Zagreb, Croatia

info@diving.hr

Abstract

The aim of this paper is to show migrations and changes in the City of Zagreb since the first official census until today, that is in the period from 1857-2011. Since 1857 when the first official census was conducted which represents the first present-day census until the year 2011, there have been sixteen censuses by means of which we can follow and analyze the number of inhabitants. The first part of the paper analyzes entire migrations of the inhabitants according to official census data whereas the second part analyzes migrations of the current population. Based on scientific analysis, the processing of census and other demographic statistical data and the application of theoretical and empirical literature, this paper also analyzes changes and migrations of the population in the City of Zagreb. The causes and characteristics of these changes are considered and the regional differentiation of the fundamental characteristics of these processes up to the level of settlements is also examined.

Key words: Zagreb, demographic development, number of inhabitants, natural migrations, balance of migration

Introduction

Demographic trends during longer historical periods are an unseparable constituent part and reflection of the overall, primarily economic development on the state level as well as of every other regional and local area. In Croatia demographic dynamics comes before its socio-economic development which is an essential limiting factor of not only the demographic, but also the entire regional development of the state. The population development of Croatia after the Second World War proceeded in the direction of the main demographic-transitional characteristics and processes that developed European countries went through at some time in the past. The essential differentia specific to the development of Zagreb's inhabitants in relation to developed European countries was a hastened transition in the sphere of birthrates, that is, a transition in a relatively short period, induced by specific factors - primarily long-lasting external migration.¹

The basic characteristics of demographic migrations in Croatia at the beginning of the 21st century are: the decrease of the total number of inhabitants and natural depopulation, intensive demographic ageing, unfavourable migrational trends and associated problems of the increasingly evident deficit of a workforce as the bearer of development in depopulating areas, problems of care for elderly people and connected with this problems in the pension, health and social systems. Due to the continuation of these long-term processes associated with economic difficulties and reduced economic growth, we expect past unfavourable demographic trends in Croatia and on the territory of the City of Zagreb to continue regardless of its somewhat bigger resistance to negative changes in relation to the remaining part of the state.² The inhabitants of Croatia are passing through a long-term ageing-process which is noticeable from numerous indicators of

¹ Wertheimer-Baletić (1992): 238-50.

² Akrap (2014): 25-71.

population ageing - average age amounts to 41.7, ageing index to 115, age coefficient to 24.1.³

There are numerous factors affecting the number of inhabitants and their changes. Demographic literature differentiates four basic groups of terms of reference. Among the first ones demographic factors of population development should be emphasized. Most importantly for the dynamics of population development are tendencies in the ratio of birth-rates and deathrates, changes in family structure, age-sex structures and so on. The second but no less important group of terms of reference of demographic development are represented by economic factors that are mirrored in the change of the economic structure according to sectors of work and profession. Political factors make up the third group of terms of reference of population development by its size. Political conflicts and wars that are most frequently a consequence of violent solutions to political conflicts which often result in large-scale human sufferings and material destructions as well as political-territorial changes, are significant and generally disrupting factors of the total movements and structure of a population. The remaining group is represented by other factors comprising the following: the socio-psychological population 'profile', individual relationship towards some traditional standards and values, the relation of the people towards family values and standards, predominant religions and so on. All the aforementioned factors have mutually permeating and short-term, periodical and long-term effects upon population development.⁴

The aim of this paper is to show the demographic migrations and changes in the City of Zagreb since the first official census until today and especially the influence of natural movements and migrations in the last forty years, that is from 1971 to 2011. This is possible only in this period as official statistics do not have data of natural migrations for earlier periods. The focus was to display changes on the level of the

³ Državni zavod za Statistiku (2011).

⁴ Wertheimer-Baletić (1999): 1-2.

smallest spatial unit, that is settlements that are within system of the City. Although it simultaneously has the status of a local and regional self-government (district), the City of Zagreb also has the status of a local authority unit (city) and it is mainly 'perceived' through the settlement of Zagreb, whereby the remaining 69 autonomous settlements that are located within the structure of the City of Zagreb are neglected in a certain manner. This is so, in the first place, because, in comparison to other districts divided into cities and municipalities, there is no such division in the City of Zagreb. Instead, the City consists of 70 autonomous settlements whereby the whole City area is divided into 17 boroughs. Although the settlement of Zagreb is the biggest and 87.1% of total City population live in it, it is also crucial to display settlements where the remaining 13% of inhabitants of the City of Zagreb live.

Methodological explications

In order to understand the demographic data and indicators in this paper it is necessary to indicate some methodological explications regarding the spatial and temporal contexts of the investigation, census methodology and the statistical-demographic level of published or available data from censuses and other relevant sources of data.

When analysing the results of censuses, the problems of the methodological (in)comparability of census data must be taken into consideration. Data from the 2011 Census is neither directly comparable with the data from the 2001 Census nor with the data from former censuses since the statistical definition of the total number of inhabitants applied in the 2011 Census differs from those applied in past censuses.

The data from six censuses conducted after Second World War, that is, censuses from 1948, 1953, 1961, 1971, 1981 and 1991 refer to permanent inhabitants, that is people who have residence in the Republic of Croatia regardless of whether they were present, at the time of the census, in the residence or not and irrespective of the

duration of their absence from the residence. In the 2001 Census, when defining the total number of inhabitants, the concept of the 'common dwelling place' is applied for the first time and a one-year period and longer is introduced as an elementary criteria for inclusion and exclusion of a person from the total number of inhabitants. In the 2011 Census, the concept of a 'common dwelling place' is also used and, for the first time, the intention of absence/presence is introduced as an additional criterion for inclusion or exclusion of a person from the total number of inhabitants. Although the data from both censuses for 2001 and 2011 is based on the concept of a 'common dwelling place', they are not directly comparable. That is mainly due to the intention of absence/presence that was not collected in the 2001 Census and also because this Census included into the total number of inhabitants people absent for a year or longer that would come back to their permanent dwelling place seasonally and monthly. These people are not included in the total number of inhabitants in the 2011 Census.⁵

In order to get approximately similar values of the number of inhabitants with the last census from 2011, inhabitants working and dwelling abroad were excluded from earlier censuses from 1971 to 2011. Although we cannot obtain completely comparable data with this calculation as this is simply impossible, by means of them we still can orientationally without great variations take into consideration, determine and show the real circumstances of demographic dynamics in the analyzed period.

There is a similar problem with vital events that official statistics keeps a record of according to settlements since 1964. In the vital statistics until 1998, the 'total number of born people' was made up of the births 'in the country' and 'births abroad'. Similarly to the census data, here we subtracted people born abroad from the total of births and with such a calculation we get the real number of all inhabitants born in the country that simultaneously represents the population actually present. The problem is that, in the tables the number of people born

⁵ Državni zavod za statistiku (2011).

and people who died abroad was not demonstrated according to settlements separately - except for the years from 1993 till 1997 - instead they were illustrated for the total of former municipalities. According to this on the whole we obtained more precise data for the City of Zagreb by subtracting the number of the people born and people who died abroad from former municipalities whereas for settlements there is individually very small variation from the real value that cannot be calculated accurately. Croatia on the whole, as well as the City of Zagreb, could not expect natural growth achieved abroad since the return of emigrants especially their children who were born abroad was poor. Most people born abroad stayed and continued living in the countries where they were born so that according to methodology and the concept of a 'common dwelling place' applied by Eurostat they are not inhabitants of Croatia but of the country where they have a common dwelling place.

According to the 2011 census the City of Zagreb comprises 70 autonomous settlements: two city ones – Zagreb and Sesvete – and 68 other settlements. The basic time span of this analysis includes the period from 1971 till 2011. However, in the analysis of long-term tendencies in the population development of the City of Zagreb, the time span extends until the middle of the 19th century, that is, the first official census from 1857 year till the last in 2011.

The number of inhabitants in the period 1857-2011

In this part the number of inhabitants is analyzed according to the published official data of each census. The change in the number of inhabitants in a particular period is the result of the interaction of three processes: giving birth, dying and migrations that make up the dynamic components of change in the number of inhabitants and result in increase, decrease or stagnation.

The development and arrangement of inhabitants and settlements, as well as the population density of the City of Zagreb,

were affected by natural-geographic, socio-economic, political and demographic factors: migration, birth and death rates.

As the biggest city and at the same time the capital of the Republic of Croatia, Zagreb, with its demographic size and economic, scientific, cultural and other significance, is the most important urban agglomeration at the junction of the Mediterranean, Central and South-Eastern Europe.⁶ Although it is mentioned in historical records more than 900 years ago, its population and entire development were increasing slowly until the beginning of the 20th century.

The total number of inhabitants of the City of Zagreb was determined by a population census defined by two components: the natural migration of inhabitants and spatial mobility or immigration. The increase in population in large cities is brought about thanks, to a large extent, to spatial mobility, that is, the immigration of a population whereas the natural component in the total movements of the population is less represented. Apart from favourable natural-geographic preconditions for settlement and a markedly favourable trading-geographical position, the demographic development of the City of Zagreb was affected predominantly by economic and socio-political events.⁷ Since 1857 when the first general census, which represents, according to its features, the first contemporary census, was conducted until 2011 sixteen censuses have been carried out on the basis of which we can follow and analyze the number of inhabitants.

⁶ Žuljić (1965): 66-182.

⁷ Laušić (1987): 19-29.

Figure 1:The number of inhabitants of the City of Zagreb and Croatia 1857-2011⁸

Census of the year	the City of Zagreb		Croatia		Share of GZ in RC
	Number of inhabitants	Index 1857=100	Number of inhabitants	Index 1857=100	
1857	48,266	100	2,181,499	100	2.2
1869	54,761	113.5	2,398,292	109.9	2.3
1880	67,188	139.2	2,506,228	114.9	2.7
1890	82,848	171.6	2,854,558	130.9	2.9
1900	111,565	231.1	3,161,456	144.9	3.5
1910	136,351	282.5	3,460,584	158.6	3.9
1921	167,765	347.6	3,443,375	157.8	4.9
1931	258,024	534.6	3,785,455	173.5	6.8
1948	356,529	738.7	3,779,858	173.3	9.4
1953	393,919	816.1	3,936,022	180.4	10.0
1961	478,076	990.5	4,159,696	190.7	11.5
1971	629,896	1,305.1	4,426,221	202.9	14.2
1981	723,065	1,498.1	4,601,469	210.9	15.7
1991	777,826	1,611.5	4,784,265	219.3	16.3
2001	779,145	1,614.3	4,437,460	203.4	17.6
2011	790,017	1,636.8	4,284,889	196.4	18.4

Besides following the number of inhabitants of the City of Zagreb from 1857 till 2011 it is essential to emphasize that the data refers to the administrative-territorial division from 1997, that is, today's situation according to the last census. The City of Zagreb⁹ covers an area of 641.35 square kilometres (or 1.1% of Croatian land-territory) where 790,017 inhabitants live or 18.4 % of the entire population of Croatia.

⁸ Source: Državni zavod za statistiku (2005); (2011). All the figures are authored by the authors of the paper.

⁹ The Law on Territory of *Županijas* (counties), Cities and Municipalities in Republic of Croatia, defines The City of Zagreb as autonomous, single territorial and administrative unit, which has position of *županija* (county). The City is composed of 70 settlements, *Narodne Novine* (Official Gazette) no. 10/97, 124/97, 68/98, 22/99, 86/06.

The total number of inhabitants of the City of Zagreb in the 154-year period was uneven with considerable oscillations in the average annual rate according to between-census-periods but with a pronounced and continued trend of demographic growth. The number of inhabitants of the City of Zagreb in the observed period increased by 16.4 times and is considerably bigger in comparison to the total population growth of Croatia that unfortunately did not even redouble. Numerically observed, the number of inhabitants in the City of Zagreb increased from 48,266 in 1857 to 790,017 inhabitants in 2011. From the first official census till the last census, the entire population growth amounted to 741,751 which means that the City annually increased by 4,816 inhabitants.

The City of Zagreb had the biggest increase of inhabitants (53.8%) in the between-census period from 1921 to 1931. In three between-census periods (1931-1948, 1890-1900 and 1961-1971) the increase totalled from 31% to 38%. The growth in five between-census periods (1880-1890, 1910-1921, 1869-1880, 1900-1910 and 1953-1961) amounted to between 21% and 23%. In three between-census periods the growth totalled from 10 to 15% and in the remaining three less than 10%. The last two between-census periods had the least growth in the 154-year-period, 0.2% (1991-2001) and 1.4% (2001-2011).

The City of Zagreb had its most dynamic growth from 1857 till 1931 when the number of inhabitants increased five times. However, though the number of inhabitants after the Second World War only redoubled, this period recorded the biggest growth in total. The most significant population growth in the City of Zagreb in this period was recorded in the between-census period from 1961 to 1971 when the number of inhabitants increased by 151,820. The relatively bigger population growth after the Second World War lasted until the beginning of the 1990s as a consequence of immigration. In the last two between-census periods population dynamics visibly slowed down. Population growth in the periods 1991-2001 and 2001-2011

amounted only to 0.017%, that is, 0.139% on average annually. This is a consequence of the strengthening of emigration, reduction of natural dynamics, reproductive and generational depopulation, the worsening of economic trends and the decline of immigration.

Figure 2

The between-census change of inhabitants of the City of Zagreb and Croatia from 1857-2011¹⁰

Census of the year	City of Zagreb			Croatia		
	Between-census change of inhabitants		Average annual increase-decrease	Between-census change of inhabitants		Average annual increase-decrease
	Absolute	Relative (%)		Absolute	Relative (%)	
1857-1869	6,495	13.5	1.058	216,793	9.9	0.79
1869-1880	12,427	22.7	1.877	107,936	4.5	0.4
1880-1890	15,660	23.3	2.117	348,330	13.9	1.31
1890-1900	28,717	34.7	3.021	306,898	10.8	1.03
1900-1910	24,786	22.2	2.027	299,128	9.5	0.91
1910-1921	31,414	23.0	1.903	-17,209	-0.5	-0.05
1921-1931	90,259	53.8	4.399	342,080	9.9	0.95
1931-1948	98,505	38.2	1.92	-5,597	-0.1	-0.01
1948-1953	37,390	10.5	2.015	156,164	4.1	0.81
1953-1961	84,157	21.4	2.45	223,674	5.7	0.69
1961-1971	151,820	31.8	2.796	266,525	6.4	0.62
1971-1981	93,169	14.8	1.389	175,248	4.0	0.39
1981-1991	54,761	7.6	0.733	182,796	4.0	0.39
1991-2001	1,319	0.2	0.017	-346,805	-7.2	-0.73
2001-2011	10,872	1.4	0.139	-152,571	-3.6	-0.34
1857-2011	741,751	93.9	1.832	2,103,390	49.1	0.44

The intensive demographic dynamics of the entire population of the City of Zagreb is the consequence of immense socio-economic processes and changes in this region but also of demographic movements borne primarily by migration processes. The demographic growth recorded in all between-census periods is not so much the result of natural movements but of strong migrations that were brought about by economic reasons. The unification of Kaptol and Gradec into a

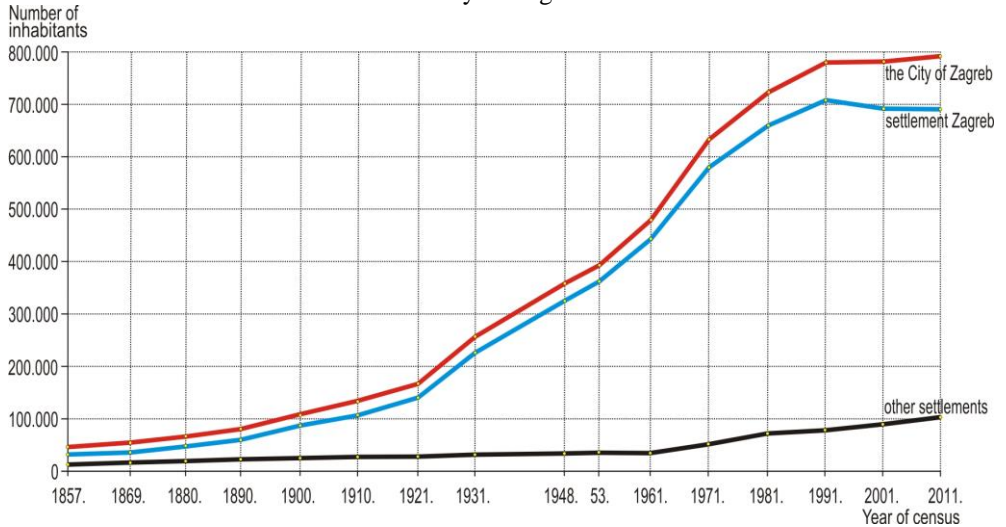
¹⁰ Source: Državni zavod za statistiku (2005); (2011).

unique urban complex after 1850, the development of manufacturing, and construction of railway lines in the second half of the 19th century characterised the significant economic development of Zagreb. The construction of railway lines gave a new impulse to the development of the city and it especially favoured the development of industry. The industrial development of Zagreb also stimulated its demographic development as is indicated by data according to which the City of Zagreb increased its population by 2.8 times in the period from 1857 till 1910. Apart from the required workforce from the local surroundings, numerous industrialists and owners of capital, as well as a skilled and trained workforce from Austria and Hungary settled in Zagreb in this period.

The First World War did not stop population growth. The between-census period from 1910 to 1921 already recorded a growth of 31,414 inhabitants. After the First World War and the collapse of the economic-political formation of Austria-Hungary, new economic relationships and conditions were created within the framework of the new political formation of Yugoslavia. In this period between the two world wars Zagreb was the most important and most developed economic centre of the newly created state. Generally, it can be said that the industry of Zagreb was developing at an accelerated pace within the new state from 1918, which was also visible in its demographic development. In the between-census period from 1921 to 1931 the City of Zagreb gained new 90,259 inhabitants. It is interesting that, during the time of the Second World War, Zagreb recorded an extraordinary population growth which was a consequence of the influx of war displaced people and refugees who found refuge in Zagreb.

Figure 3

Number of inhabitants of the City of Zagreb from 1857 till 2011



After 1945 industry in Zagreb began to develop intensively and the City of Zagreb, which was the strongest industrial centre even before the war, strengthened its position significantly and remained even further the biggest centre of industry in the state of that period. Industrial expansion favoured the vigorous settlement of the City of Zagreb area, which demographically grew by 421,297 inhabitants from 1948 till 1991. The increase in this 43-year-period makes up 56.8% of the entire population growth of the City of Zagreb from 1857 till 2011. In this period the biggest growth was recorded in the between-census period of 1961-1971 (151,820 new inhabitants) which represents the biggest absolute between-census growth in the entire 154-year-period. In this between-census period population growth amounted to an annual average of 15,182 inhabitants.

The between-census period from 1981 till 1991 can be considered as the final period of dynamic demographic growth of the City of Zagreb. From 1971 onwards, there begins the slowing down of the growth of the number of inhabitants.

From 1948 till 1971 the number of inhabitants of the City of Zagreb increased by 76.7% and from 1971 till 1991 the rate of

demographic growth amounted to only 23.5%. The absolute population growth between 1971 and 1991 is almost twice as less (1.8 times) than the demographic growth in the period of 1948-1971.

Since 1981 the slowing down of demographic dynamics was affected, to a lesser extent, by migration from the City of Zagreb into the surroundings and, to greater extent, by the directing of new migrations to the satellite cities of Zagreb: Velika Gorica, Zaprešić, Samobor and Dugo Selo. Accordingly, the spatial rearrangement of the population slowed down the population growth of the City of Zagreb and it led to the demographic expansion of satellite cities, especially Velika Gorica, Samobor and Zaprešić.

The between-census period from 1991 till 2001 brought about changes in the movement of the number of inhabitants that was significantly reflected in the total demographic growth of the City of Zagreb from the middle of the 19th century until the beginning of the 21st century. Due to the Serbian aggression on Croatia at the beginning of the 1990s numerous refugees from the regions endangered by war and displaced people from Bosnia and Herzegovina found refuge in Zagreb. In spite of this, Zagreb had, in this between-census period, the smallest population growth in the century and a half long census observation of population migrations. It is obvious that after the return of the occupied areas of Croatia most inhabitants dwelling in Zagreb during the war, returned to their settlements or settled down in other settlements in the surroundings of Zagreb or moved out of the country.¹¹ Alongside the decreased migrational influx of the population into the City of Zagreb from 1991 till 2001 natural fluctuations that were negative in this decade (-1511), also worsened.

In the century and a half long period since the first official census of 1857 until 2011 in the area of the City of Zagreb seven settlements had less inhabitants in 2011 than they had in 1857. The decline amounts to -0.7% in the settlement of Vuger Selo till -88.3%

¹¹ Antić *et al.* (2003): 42.

in Botinec.¹² Out of these seven settlements there were particular parts of three settlements that separated and joined neighbouring settlements or new settlements were formed from these parts so that we find a more noticeable decrease of the population in these places.¹³ In four settlements there was no separation and population decline was registered. The remaining 63 settlements of the City of Zagreb had population growth whereas six settlements (Gornji Dragožec, Hrvatski Leskovac, Markovo Polje, Planina Gornja, Veliko Polje, Vugrovec Gornji) did not exist in 1857 but were formed later and therefore we point them out as if they had had a large population growth.

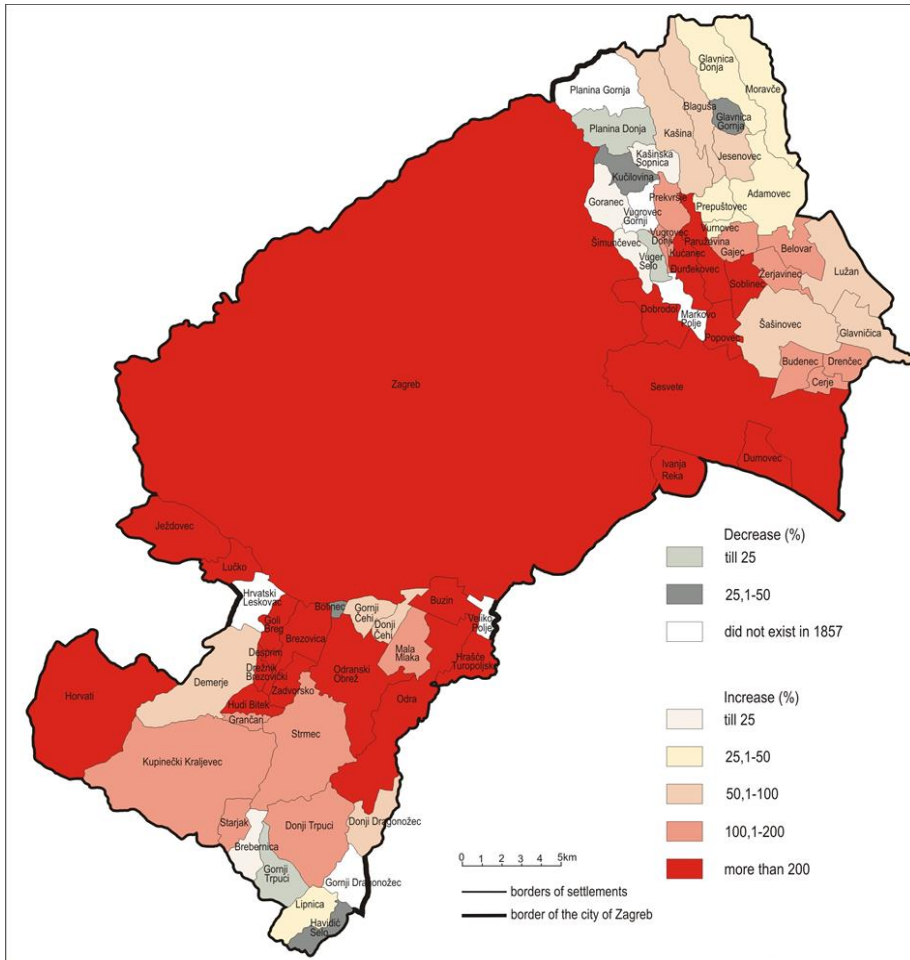
The town settlements of Zagreb and Sesvete had the biggest population growth. In relation to 1857, Zagreb increased by 21.3 times and Sesvete by no less than 51 times. Apart from town settlements, 20 settlements that are situated in the surroundings of Sesvete and Zagreb increased their population by several times or even fused with these cities. These are the settlements of Lučko and Hrvatski Leskovac, which increased by more than 2,000 inhabitants in total. Nine settlements had a growth of between 1,000 and 2,000 inhabitants (Veliko Polje, Ivanja Reka, Ježdovec, Odra, Kupinečki Kraljevec, Odranski Obrež, Dobrodol, Zadvorsko i Horvati). Among the remaining settlements ten of them had a population growth of 500 to 1,000, 31 settlements 100-500, five settlements 50-100 and four settlements to 50 inhabitants. Even in these settlements that had a population growth there are examples of a significant increase being

¹² Here it should be pointed out that the reduction of Botinec inhabitants by no less than 88.3% is not realistic as it is a consequence of the change in the administrative-territorial constitution of the settlements of Botinec and Zagreb and not of recent population trends and processes. In 1991 the settlement of Botinec was reduced by the separation of a part of the settlement that joined the settlement of Zagreb.

¹³ Apart from the settlement of Botinec there are the settlements of Planina Donja and Glavnica Gornja.

brought about by administrative changes of the settlement borders, that is, the fusion of parts of areas or whole neighbouring settlements.

Figure 4:
Relative change of the population number of the City of Zagreb according to settlements from 1857-2011



The natural migration of the population (1964-2011)

The research and knowledge of natural migrations of populations is required for the comprehension of demographic conditions in a particular area. Through the natural migrations of inhabitants we can analyze demographic characteristics and demographic processes,

movements and the structure of inhabitants as well as follow the interdependence of demographic and socio-economic relationships and processes that take place in a certain area.

The knowledge of the natural migration of a population is required for the assessment and explication of the entire demographic complex and its changes as well as the achieved level of its entire development.¹⁴ There are two basic constituents of natural migrations of population, the birth rate (natality) and death rate (mortality) and by means of their mutual comparison we obtain natural growth or natural change, which can be positive, so that we can talk about positive natural growth but it can be negative as well and in that case we talk about the natural depopulation of a population. In normal or balanced conditions of population development natural migration is mainly positive, which means that more people are born than they die. However, unfavourable long-term demographic processes such as the decrease of natality, emigration and demographic ageing as well as abnormal conditions of population development such as wars, epidemics and natural disasters, negatively affect the biodynamics of a population.

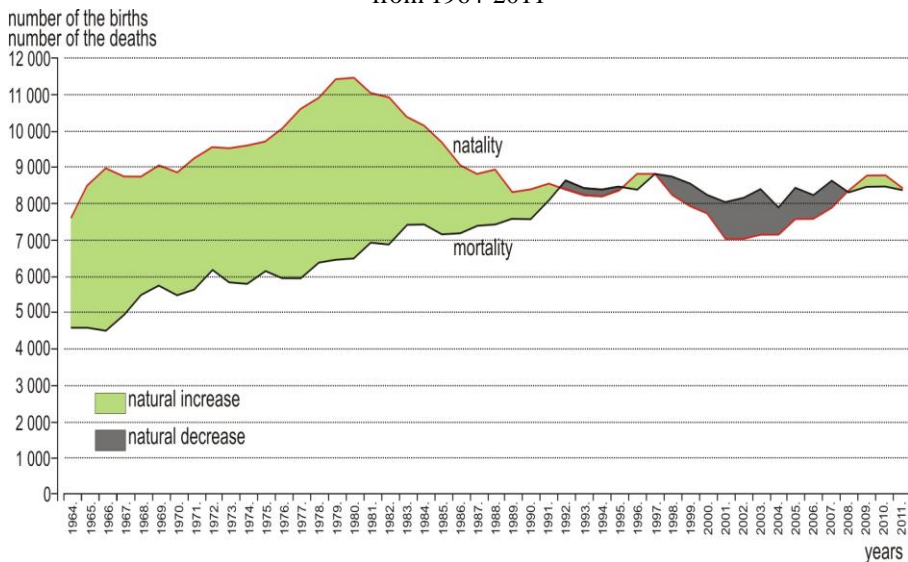
The population development of Croatia in the present-day period (after the Second World War) is characterized by increasingly unfavourable natural dynamics as a consequence of a specific social and economic development. In demographic theory there is a well-known regularity according to which economic development accompanies the decline of the natural growth rate that we call demographic transition. Under the process of demographic transition we understand radical changes in the regime of population reproduction that take place concurrently with socio-economic changes. Basically, demographic transition is a process of transformation of the traditional into a contemporary type of population reproduction – a change from high to low natality and

¹⁴ Friganović (1990): 75.

mortality rates that proceeds in three stages: pre-transitional, transitional and post-transitional.¹⁵

An analysis of the natural population growth of the City of Zagreb relates to natural growth achieved in ‘the country’ since natural growth achieved abroad has not been registered in state statistics since 1998. Therefore, we can follow natural growth in the country in comparison to the one abroad throughout the entire observed period. Apart from this, neither the City of Zagreb nor Republic of Croatia can rely upon natural growth achieved abroad as the return of emigrants, especially their children born outside Croatia has been minimal until now.

Figure 5:
Natural migrations of inhabitants in ‘the country’ of the City of Zagreb in period from 1964-2011



In the observed period from 1964 till 2011 there were altogether 427,067 live-born children in the City of Zagreb, 345,062 people died and natural growth amounted to 82,005 people in this period. Until

¹⁵ Wertheimer-Baletić (1999): 105.

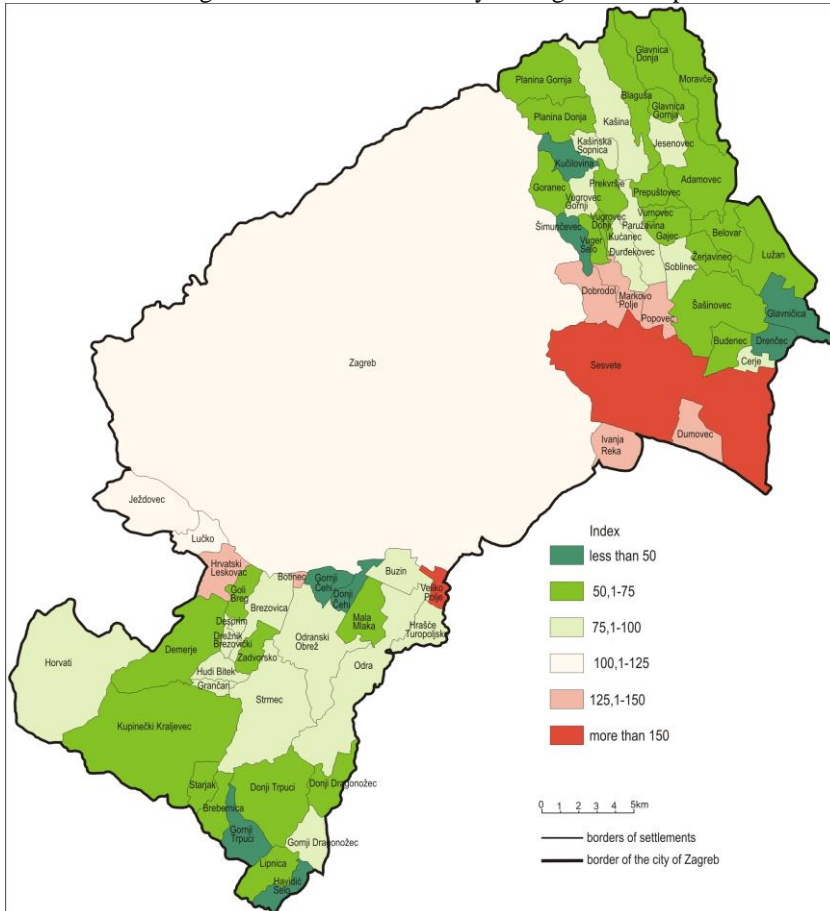
1991 the natural migration of the population in the City of Zagreb was positive which means that there were more births than deaths. Looking at the period from 1964 till 1991 in its entirety, the natural migration of the population was positive in the City of Zagreb but the trend of its worsening was clear. The number of the live-born in the City of Zagreb until 1988 was more than 8,000 live-born children annually and since the middle of the 1970s until the middle of the 1980s even over 10,000. The high natality rate during the 1960s, 1970s and 1980s is directly connected with the highly intensive migration to the City of Zagreb in this period. Mostly young inhabitants in their reproductive age migrated to the City which resulted in an increase in natality. On the other hand, the number of people who died until 1990 was under 8,000 and from 1991 onwards slightly more than 8,000 inhabitants die on an annual average basis in the City of Zagreb. The cause of the increase in the death-rate is the ageing of the population in the City of Zagreb, that is, the increase of the share of elderly inhabitants in the entire population.

In 1961 the City's elderly inhabitants comprised 11.1 % of the population (60 and more years) and in 2011 this share increased to even 24.3%. According to the data of the last census in 2011 1/5 of the population is older than 60 years. The most unfavourable natural migration was in the period from 1998 to 2007 which was a consequence of the decrease in the natality rate and an increase in the mortality rate. The vital index displaying the ratio of the live-born to 100 deaths is a good indicator of the direction of population reproduction. According to this indicator the City of Zagreb had an increased reproduction of population during the observed period from 1964 to 2011 (index bigger than 100) in the longer part of this period, that is, 33 years in total and during 14 years the index was less than 100. An analysis of the vital index according to the settlements of the City of Zagreb (Figure 6) shows that 12 settlements had an increased population reproduction (index bigger than 100) in the City of Zagreb¹⁶

¹⁶ The settlements: Veliko Polje, Sesvete, Dumovec, Dobrodol, Ivanja Reka,

and 58 settlements had a declining population reproduction (vital index less than 100).

Figure 6:
Vital index according to settlements of the City of Zagreb in the period 1964-2011



The migration of the present population from 1971 to 2011

In the first part of the paper an analysis of the entire population was conducted as it was recorded by each census. Due to the change of methodology in the 2001 census and especially in the last census in 2011, such an analysis gives us an unrealistic picture of the migration

Markovo Polje, Hrvatski Leskovac, Botinec, Popovec, Zagreb, Lučko, Ježdovec.

of the population of the City of Zagreb. In order to get a clearer image of between-census population migrations in the City of Zagreb from 1971 to 2011, we somewhat adapted former censuses (from 1971 till 2001) to the 2011 census in such a way that we took from these censuses only the present population into consideration, that is, the one really living in the settlement for the census (population in the country). In consideration of the fact that, since the 2011 census inhabitants dwelling and working abroad for longer than a year were not included in the entire population, it was necessary to gain a more realistic picture of between-census migrations in order to correct the data of the censuses from 1971 to 2001, that is, exclude the inhabitants dwelling and working abroad from the entire population. It should be emphasized that, with this correction, data was not completely adapted to the methodology applied in the 2011 census as this was simply impossible and this data can be taken more for orientation purposes. Observed as a whole we can say that these figures on the numbers of inhabitants after these calculations are approximately accurate as we do not have large variations here. It would be more precise to say that this data is more on the level of a statistical mistake. In earlier censuses, the population living abroad was made up of all people working and dwelling regardless of the time of their absence whereas in the 2011 census the inhabitants abroad absent for a year who had the intention of returning to their place of residence were included in the permanently present population. Regardless of a lesser or bigger statistical consistency, that is, an inconsistency in the application of census methodology, the share of the population registered abroad from the 1990s until 2011 for the City of Zagreb amounts to between 4 and 5% and this is somewhat less than the average value for Croatia. But it is important here to assess the dynamics of migrations of the entire number of inhabitants 'in the country'.

Apart from an analysis of between-census change emphasis is also placed on determining the share of natural increase/decrease and the balance of migrations in this change. Concerning vital statistics

there is data on the number of births and deaths according to settlements only since 1964. Due to the lack of data of vital statistics according to settlements for the years 1961, 1962 and 1963 it was not possible to calculate the share of natural migrations and net migration in the between-census period from 1961 to 1971 as well as for the period from 1961 to 2011. Therefore, in this part of the paper the only possible analysis was conducted and this is the one referring to the period from 1971 till 2011, that is, the last four between-census periods.

Figure 7

The influence of natural migrations and balance of migrations upon between-census change of inhabitants of the City of Zagreb¹⁷

Between-census period	Absolute change of population number			Relative share (%)		
	Total	natural increase/decrease	balance of migrations	Total	natural increase/decrease	balance of migrations
1971.-1981.	87,583	41,431	46,152	100	47.3	52.7
1981.-1991.	45,528	21,918	23,610	100	48.1	51.9
1991.-2001.	17,650	-1,885	19,535	100	-10.7	110.7
2001.-2011.	32,953	-5,450	38,403	100	-16.5	116.5

In all between-census periods from 1971 till 2011 the absolute increase of the number of inhabitants of different intensity and dynamics was registered in the City of Zagreb. The City increased its population in this forty-year-period by 183,714 inhabitants. In the between-census period from 1971-1981 the number of inhabitants of the City of Zagreb increased by 87,583 and in the between-census period from 1981-1991 by 45,528 inhabitants. These two between-census periods represent the end of intensive population growth, since already in the next between-census period from 1991-2001 the absolute increase amounted to 17 650 inhabitants which makes up only 9.6% of the entire increase in the forty-year-period.

¹⁷ Sources: Savezni zavod za statistiku (1972); Republički zavod za statistiku (1982); Državni zavod za statistiku (1994); (2001); (2011); Tablogrames and reports on the vital statistics by Republički/Državni zavod za statistiku (1971-2011).

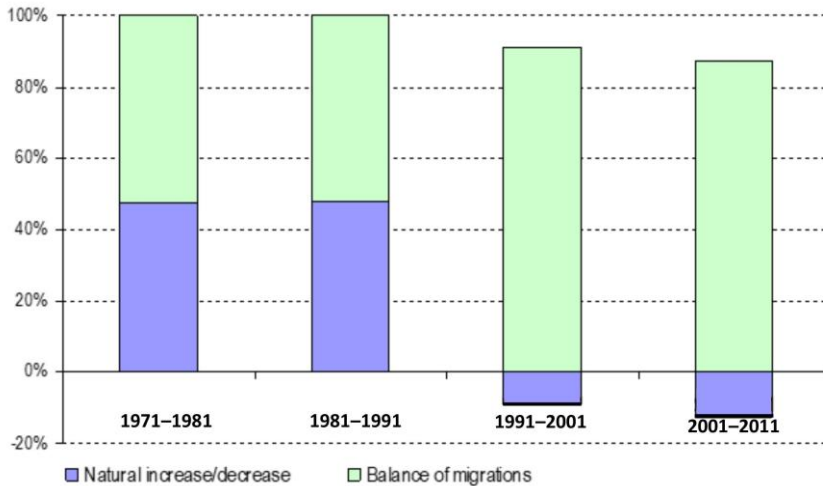
At the beginning of the 1990s and until the peaceful reintegration of the Croatian Danube region in 1997, the Republic of Croatia suffered the consequences of the War of Independence. Although the City of Zagreb was not directly impacted by the activities of the war, wartime mortality was registered in its area. There were wartime sufferings of civilians to a smaller extent due to low-range rocket attacks on the city while a considerably greater number of civilians of this city were killed on some of the battlefields throughout Croatia. Besides wartime mortality the birthrate during the war years was decreased and with it the natural growth of the population. As the City of Zagreb was a refuge for numerous displaced people from the Republic of Croatia and refugees from Bosnia and Herzegovina it was to be expected that in this between-census period the number of inhabitants would increase considerably. However, it did not happen presumably due to the fact that most displaced people and refugees returned to their homes or emigrated. Here it should be pointed out that even during the 1990s a certain number of inhabitants of other nationalities, especially Serbian (unfortunately not registered in the files) moved out of Zagreb.

Apart from this, as in every war, a specific number of people presumably emigrated, due to psychological reasons such as fear and insecurity and stayed abroad permanently. The City of Zagreb increased its population by 32,953 inhabitants in the last between-census period. The absolute between-census change of the number of inhabitants of the City of Zagreb in the first two observed between-census periods was a result of positive natural growth as well as a positive balance of migrations. In the other two between-census periods from 1991-2001 and 2001-2011 the positive migration balance contributed to population growth as a natural decrease of population was registered (negative natural migration). From all the above mentioned it can be concluded that the dynamics of the population growth of the City of Zagreb in the last two analyzed between-census periods slowed down considerably and is

of significantly smaller intensity in relation to the 1970s and the 1980s. The focus of the demographic growth of the City is no longer on the territory of the settlement of Zagreb but on Sesvete and the greater part of the eastern and especially southern settlements.

Figure 8

The share of natural increase/decrease and net migration in total change of inhabitants of the City of Zagreb 1971-2011



If observed according to its constituent parts in this 40-year-period, the number of inhabitants increased by 23% in the settlement of Zagreb, while the eastern settlements increased by 48.3% and the southern by 33.1%. Out of the four separated constituentparts of the City of Zagreb, the settlement of Sesvete even increased its population by 3.5 times in the analyzed period. All four constituentparts of Zagreb, Sesvete, and the eastern and southern settlements had absolute population growth in all four between-census periods, with an exception in the southern settlements in the between-census-period from 1981-1991, when the population declined but this was due to joining almost the whole settlement of Botinec to the settlement of Zagreb.

Among all constituent parts of the City of Zagreb only Sesvete had a population increase in both natural and mechanical ways, that is, by migrations during the whole analyzed period. In the first two

between-census periods the settlement of Zagreb achieved its population growth naturally and by migrations whereas in the last two ones only migrations contributed to the increase as the natural growth was negative. Although the southern and eastern settlements had, in all between-census periods, population growth resulting from immigration – the eastern settlements had a negative natural migration, that is, a natural decline of inhabitants in every between-census period, whereas the southern settlements had, in contrast to the three former ones, positive growth only in the last (2001-2011) between-census period.

In the entire growth of the number of inhabitants of the City of Zagreb (183,714) from 1971 to 2011, the share of the natural component amounted to 30.5% and the balance of migrations to 69.5%. From 1971 to 2011 due to migrations the City of Zagreb increased by 127,699 inhabitants. In this increase the settlement of Zagreb had the biggest share (63.9%), Sesvete had 21%, while the eastern settlements participated with their share of 7.4% and the southern with 7.7%.

Out of 37 eastern settlements, 30 settlements, which makes up 81.1% of all settlements, had an absolute growth of the number of inhabitants in the analyzed period whereby only 7 settlements had positive natural migrations. 35 settlements (94.6% of all settlements) had a positive net migration whereby the settlement of Ivanja Reka stands out with an increase bigger than 1,000 migrants. In the settlement of Dobrodol the population growth was due to joining the bigger part of the settlement of Markovo Polje so that we cannot talk here about the meaning of the migrational component in population growth.

Out of a total 31 southern settlements, which have a more favourable size structure of population than the eastern settlements, 26 settlements had an absolute population growth in the analyzed period. Only four settlements had a population decline whereas the settlement of Botinec cannot be taken relevantly into account here as the entire settlement joined the settlement of Zagreb in 1981. As in the eastern settlements a few number of settlements, only four of them, had a

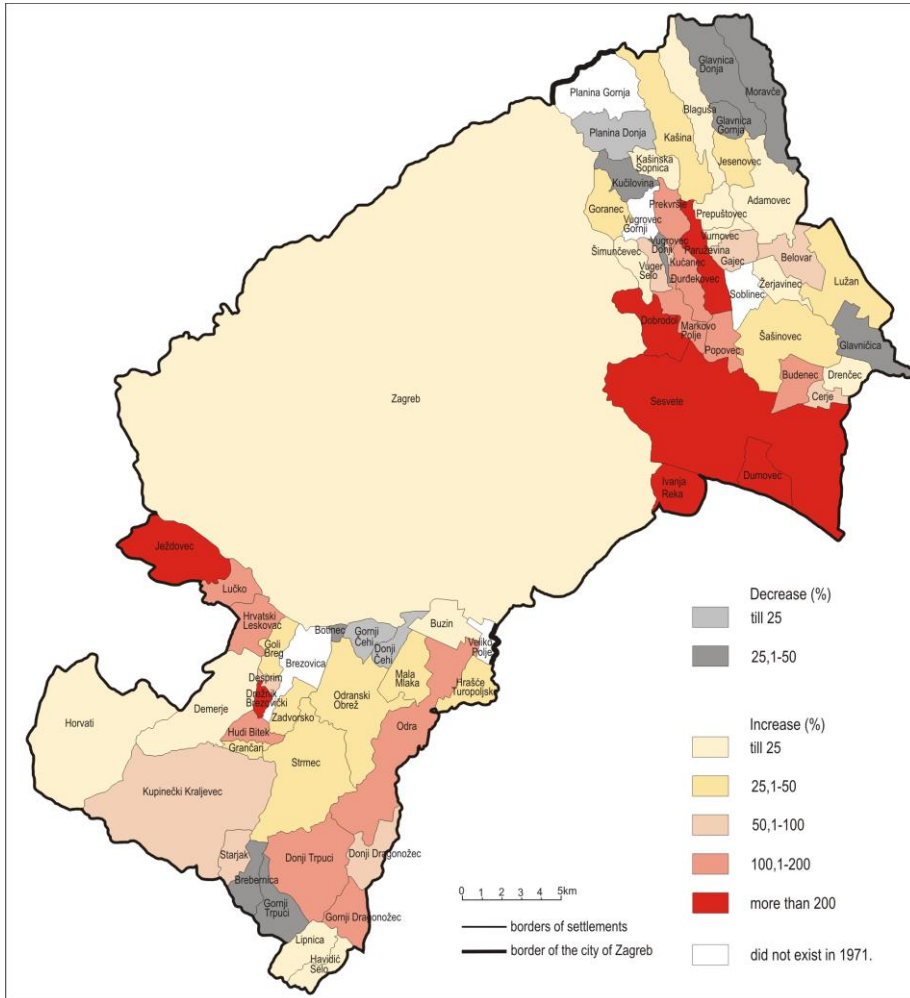
positive natural migration. According to this, the balance of migrations here was also a component that caused an increase in the number of inhabitants.

Due to the migration of its population, the southern settlements of Lučko, Veliko Polje, Hrvatski Leskovac, Ježdovec and Odra redoubled their population, along with the eastern ones of Dumovec and Paruževina, while in Ivanja Reka the number of inhabitants even increased by four times in this forty-year-period. The spatial rearrangement of settlements shows that the greatest part of large (1,500 till 2,000) and 2 markedly large settlements (with more than 2,000 inhabitants) is located directly alongside the city settlements of Zagreb and Sesvete. The smaller and depopulating settlements are situated further away from the city settlements and main traffic corridors, either railway or road ones. The development of settlements was affected by natural-geographic characteristics as well as by socio-economic activity. Low-lying country with an agricultural landscape prevails in the southern city area, whereas the eastern part is predominantly an area of rolling foothills.

The process of urbanization in the last thirty years has considerably affected the southern and eastern settlements of the City of Zagreb. In this area there was more intensive construction of family houses and low-rise blocks of flats, mainly due to cheaper pieces of land than in Zagreb. In the last between-census period (on the initiative of private capital) there was planned construction of blocks of flats in the former rural settlements of Odra and Veliko Polje and of a business-trade zone in Buzin as well. In the southern suburbs and on the territory of Sesvete and its surrounding settlements there was also significant construction of family houses in the 1990s by a part of the refugee and displaced population from Bosnia and Herzegovina who were buying inexpensive pieces of land that were affordable to them and building family houses .

Figure 9

The relative change of the number of inhabitants of the City of Zagreb according to settlements 1971-2011



Conclusion

The entire development of population of the City of Zagreb with regard to the total, natural and spatial movements of the inhabitants is characterized by features of different signs and intensity, depending on the individual demographic structure which is primarily the result of

the directional change of socio-economic development of the area as a whole and especially some of its separated constituent parts.

The data of earlier censuses during the 20th century shows that Zagreb, as the biggest economic, political, cultural and educational centre of Croatia, had a very intensive demographic growth as a result of industrialization and urbanization with increased immigration.

Observed in its entirety, the development of this City has both positive and negative features, whereas in relation to the remaining part of Croatia as well as Croatia as a whole it has considerably more favourable demographic and socio-economic features. The positive features of the City of Zagreb are reflected in the increase of the entire number of inhabitants; the increase of the population density; the positive balance of migration; the favourable educational structure of inhabitants; and the relatively stable socio-economic development. Among its negative characteristics, the disrupted age-sex structure of the population, negative natural growth and uneven spatial rearrangement are emphasized.

In the last between-census period, the entire number of inhabitants of the City of Zagreb increased. Out of the two positive constituent parts of the total movement of the population, that of birth-rate and immigration, only immigration influenced the total increase in the population of the City of Zagreb.

In terms of region, natural depopulation affected the settlement of Zagreb and the eastern settlements, whereas Sesvete and the southern settlements had a positive natural migration of the population. A positive balance of migration compensated for the natural loss of population in all parts of the City of Zagreb and especially in the settlement of Sesvete where, besides positive natural growth, it contributed to an even bigger increase of the entire population.

By conducting its current and long-term developmental politics (spatial, economic, workforce, housing-communal, social etc.), among other factors, the City of Zagreb must with continuity bear in mind its final influence upon the demographic situation.

It is especially important for the City of Zagreb to adapt city infrastructures –communal, traffic and social ones with demographic conditions and developmental processes as well as the creation of possibilities of providing the population with housing to a greater degree.

It is also of vital importance to decrease the existing discrepancy between the offer of workplaces and offer of a workforce. For the time being Zagreb has, at its disposal, enough high quality workers together with the workforce from its regional surroundings that should be used more, in the first place, for economic development. Therefore it is important to take measures and activities with the aim of increasing the employment rate in order to improve economic, and thus demographic and total, development.

Croatia and Zagreb as well as other units of local self-government urgently need new active population-policies with an emphasis on migration policies with measures for stopping emigration of the young educated workforce and at the same time attracting the migration of educated and entrepreneurially-oriented foreign citizens. This would be one of the basic factors of promoting development and finally exiting from the economic crisis as well as stopping negative demographic trends including the increase in natality. Since Croatia has been perceived traditionally as a country of emigration it not impossible to finally make a turnaround, and prove that it can be an open country taking care of the improvement of life conditions of its domicile population alongside supporting the mobility of all young people for a shorter period of time. The above-mentioned programme or strategy of migrations on the state level and implemented on the local level should have two key constituent parts: measures for stopping emigration and immigration policies instead of using Croatia and Zagreb only as a corridor for transfer of migrants into other EU countries. Croatia has realistically been such a country to a great extent ever since the Croatian War of Independence until the present day.

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Sažetak

Grad Zagreb je u proteklom stoljeću i pol imao vrlo dinamičan demografski razvoj koji se odvijao pod znakovitim utjecajem političkih, vojnih, društvenih, gospodarskih, kulturnih, vjerskih i drugih (ne)prilika i zbivanja, pri čemu je migracija bila temeljnom demografskom odrednicom ukupne brojčano strukturne dinamike pučanstva. U ovom radu namjera je prikazati kretanje i promjene u Gradu Zagrebu od prvog službenog popisa stanovništva do danas, tj. u razdoblju od 1857.- 2011. godine. Od godine 1857. kada je proveden prvi opći popis stanovništva, koji po svojim značajkama predstavlja prvi suvremeni popis, pa do 2011. godine, bilo je šesnaest popisa na osnovu kojih možemo pratiti i analizirati kretanje broja stanovnika. U prvom dijelu rada analizira se ukupno kretanje stanovništva prema službenim popisnim podacima, a u drugom dijelu rada analizira se kretanje prisutnog stanovništva. Temeljem znanstvene analize, obradom popisnih i drugih demografskih statističkih podataka te upotrebom teorijske i empirijske literature u radu se analizira promjena i kretanje stanovništva Grada Zagreba, razmatraju uzroci i značajke tih promjena i daje se prostorna diferencijacija osnovnih obilježja tih procesa do razine naselja.