THE CHANGES IN NATURAL MOVEMENT OF POPULATION IN THE CITY OF EAST SARAJEVO

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ABSTRACT: One of the main demographic problems of the Republic of Srpska is a negative natural increase which has been recorded from 2002 onwards. The same problem has been registered in the city of East Sarajevo, so this trend and changes in the natural movement of the population of the city will be observed in future work and research. The components of natural movement were observed for the period from 1997 to 2012 because the official statistical records refer to that period. The aim of this paper was to analyze the basic components of natural increase, the birth rate, mortality rate and natural increase in East Sarajevo, and to determine if there is homogeneity in this respect, i.e. whether all municipalities of the city have the same trend when natural movement of population is concerned. This paper will also show how local authorities and local communities deal with certain demographic problems. Does the City Council implements appropriate measures of population policy and can the city of East Sarajevo expect 'a brighter future'?

KEYWORDS: the birth rate, mortality rate, natural increase, the city of East Sarajevo

INTRODUCTION

The City of East Sarajevo is situated in the central and eastern part of Bosnia and Herzegovina, that is, the eastern part of Republic of Srpska. The city is comprised of six municipalities: East New Sarajevo, East Ilidža, Pale, Sokolac, Trnovo and East Old Town. The territory of East Sarajevo includes two parts: a greater northern part (1,380.61 km²) and a far smaller southern part (45.16 km²).
After 22 years, in October 2013, the census took place in Bosnia and Herzegovina, so that for now the preliminary census data are available for demographic research purposes. According to the 1991 Census, the present territory of East Sarajevo was populated by 44,430 inhabitants. According to the same census, the City of Sarajevo had population of 527,049 inhabitants, so that only 8.43% of the inhabitants of Sarajevo belonged to the present territory of East Sarajevo, excluding Sokolac municipality.

Numerous important social and economic changes occurred during the war (1992–1995) and affected the demographic changes and their precise assessment. It is the war migrations, in particular, which caused such demographic situation on the territory of East Sarajevo. In 1996, 48.3% of the city population was categorized as refugees or displaced persons, and in 2001 this percentage was 32.9%. War migrations influenced gross reproduction rate and decline in natural increase rate, as well as disruption in gender, age, ethnic, education and economic structure of the city population. However, the migration balance of internal migration in East Sarajevo in the last five years has been positive: the population inflow has been greater than the population outflow. In 2013, according to the preliminary census results [Census of population, households and dwellings in BH, 2013], the City of East Sarajevo has the population of 64,966 i.e. 20,536 persons more than in the beginning of the city establishment which means that in the last 20 years the number of persons on the territory of East Sarajevo increased by 46.3%.

Since 1996, one of the biggest demographic problems of the city has been negative natural increase. The problem of low birth rate has not been adequately tackled either by the local or state authorities in the sense that no adequate measures have been undertaken as a way of solving this problem [Lukić 2011].

COMPONENTS OF NATURAL MOVEMENT OF THE CITY OF EAST SARAJEVO

The term natural population movement presupposes presence of biological, as well as natural factors and processes in this movement. However, natural movement does not depend only on biological occurrences, but social, economical, cultural, psychological and other factors, as well [Nejašmić 2005].

The City of East Sarajevo is confronted with many demographical problems such as birth rate decrease, depopulation process, dying villages, aging of population, youth emigration, but the biggest problem is recurrent negative natural increase. These demographic problems are at the same time the problems of the entire region of Republic of Srpska, which certainly has a range of negative consequences.

By analyzing the Table 1, it is noticeable that the population growth in the City of East Sarajevo has been constantly negative over the last seventeen years. In the time period between 1996 and 2012, the population growth changed from -63 to -263, which is the lowest population growth recorded for

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1 Considering the problem of bordering between settlements, the number of population in East Sarajevo territory for 1991 is imprecise, approximatelly determined population number.
2012. Furthermore, the year 2005 also had low population growth of -262, and the year 2007 had -247. It should be pointed out that only Sokolac municipality had positive population growth (17) in 2000, while other municipalities of the City of East Sarajevo have constantly had higher mortality than birth rates.

In 2012, only 3 out of a total of 62 municipalities had positive population growth rate in Republic of Srpska. The municipalities of the City of East Sarajevo are among them, with the rate below the average state rate of natural increase, which is -3.0‰ for Republic of Srpska.

Birth rate in East Sarajevo is on the increase when compared to 1996. The number of births per year fluctuated within this 17 year period from 267 in 1996 to 611 in 2000, but in all succeeding years, the smaller number of births was recorded in comparison to 2000. In the period 1996–2012, 8,758 children were born in the City, which is, on average, 515 per year. In 2012, compared to 1996, the number of births increased by 107.5%, but compared to 2000, 9.3% less children were born in 2012.

In the analyzed period, Pale municipality constantly had the highest number of births. It was opposite in Trnovo municipality where only 146 children were born in the 17 year period. They are followed by Old City municipality where only 171 children were born in the same period.

Table 2 shows live births in the City according to the maternal age in the period between 2003 and 2012. This analysis shows that in 2003, most children were given birth to by mothers between 25–29 years of age; mothers between 20–24 years of age are in the second place, and mothers whose age ranges between 30–34 are in the third place. In 2012, most children were still being born by mothers whose age ranges between 25–29. However, some changes have occurred with respect to the beginning of the observed period, so now, mothers between 30–34 years of age hold the second place and mothers between 20–24 years of age are in the third place.

The same trend is noticeable on the level of entire Republic of Srpska where order of the births according to maternal age is the same. However, 14 years ago in Republic of Srpska most women gave birth to children during the period between 20–24 years of age (there is no available information whether the same change occurred in East Sarajevo, but it can be assumed that the same tendency was present there as well), which serves as confirmation that birth border moves, that younger population enters the marriage later, and consequently, the motherhood comes later, as well.

### Table 1. Absolute number of live births, deaths and population growth of the City of East Sarajevo within the period between 1996–2012

<table>
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<tbody>
<tr>
<td>l.b.</td>
<td>267</td>
<td>599</td>
<td>461</td>
<td>579</td>
<td>611</td>
<td>509</td>
<td>548</td>
<td>502</td>
<td>519</td>
<td>498</td>
<td>512</td>
<td>498</td>
<td>514</td>
<td>546</td>
<td>527</td>
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<td>554</td>
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<td>d.</td>
<td>330</td>
<td>589</td>
<td>690</td>
<td>659</td>
<td>810</td>
<td>678</td>
<td>727</td>
<td>742</td>
<td>682</td>
<td>760</td>
<td>731</td>
<td>745</td>
<td>752</td>
<td>783</td>
<td>739</td>
<td>742</td>
<td>790</td>
</tr>
</tbody>
</table>

Source: Demographic statistics. Statistical bulletin no: 4, 10, 14, 15 and 16
Table 2. *Live births according to the maternal age in the period from 2003–2012*

<table>
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<tr>
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<tbody>
<tr>
<td>2003</td>
<td>–</td>
<td>26</td>
<td>158</td>
<td>161</td>
<td>90</td>
<td>49</td>
<td>10</td>
<td>–</td>
<td>7</td>
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<tr>
<td>2004</td>
<td>1</td>
<td>21</td>
<td>184</td>
<td>167</td>
<td>92</td>
<td>41</td>
<td>11</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2005</td>
<td>–</td>
<td>24</td>
<td>151</td>
<td>168</td>
<td>98</td>
<td>40</td>
<td>14</td>
<td>–</td>
<td>3</td>
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<tr>
<td>2006</td>
<td>–</td>
<td>23</td>
<td>125</td>
<td>214</td>
<td>94</td>
<td>41</td>
<td>8</td>
<td>2</td>
<td>5</td>
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<tr>
<td>2007</td>
<td>–</td>
<td>21</td>
<td>129</td>
<td>179</td>
<td>107</td>
<td>46</td>
<td>8</td>
<td>–</td>
<td>8</td>
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<tr>
<td>2008</td>
<td>–</td>
<td>20</td>
<td>104</td>
<td>215</td>
<td>126</td>
<td>44</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>–</td>
<td>15</td>
<td>96</td>
<td>236</td>
<td>154</td>
<td>35</td>
<td>7</td>
<td>–</td>
<td>2</td>
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<tr>
<td>2010</td>
<td>–</td>
<td>12</td>
<td>92</td>
<td>216</td>
<td>151</td>
<td>46</td>
<td>8</td>
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<td>2011</td>
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<td>105</td>
<td>215</td>
<td>125</td>
<td>46</td>
<td>8</td>
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<tr>
<td>2012</td>
<td>–</td>
<td>19</td>
<td>75</td>
<td>208</td>
<td>183</td>
<td>55</td>
<td>13</td>
<td>1</td>
<td>–</td>
</tr>
</tbody>
</table>

*Source: Republic of Srpska Institute of Statistics*

Table 3. *Live births according to birth order in the period from 2003–2012*

<table>
<thead>
<tr>
<th>year/order of birth</th>
<th>first</th>
<th>second</th>
<th>third</th>
<th>fourth</th>
<th>fifth +</th>
<th>unknown</th>
<th>total</th>
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<tbody>
<tr>
<td>2003</td>
<td>209</td>
<td>166</td>
<td>45</td>
<td>10</td>
<td>1</td>
<td>70</td>
<td>501</td>
</tr>
<tr>
<td>2004</td>
<td>237</td>
<td>163</td>
<td>52</td>
<td>6</td>
<td>–</td>
<td>61</td>
<td>519</td>
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<tr>
<td>2005</td>
<td>225</td>
<td>163</td>
<td>46</td>
<td>6</td>
<td>2</td>
<td>56</td>
<td>498</td>
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<tr>
<td>2006</td>
<td>235</td>
<td>178</td>
<td>40</td>
<td>8</td>
<td>2</td>
<td>49</td>
<td>512</td>
</tr>
<tr>
<td>2007</td>
<td>230</td>
<td>169</td>
<td>47</td>
<td>2</td>
<td>4</td>
<td>46</td>
<td>498</td>
</tr>
<tr>
<td>2008</td>
<td>221</td>
<td>187</td>
<td>47</td>
<td>7</td>
<td>–</td>
<td>52</td>
<td>514</td>
</tr>
<tr>
<td>2009</td>
<td>240</td>
<td>205</td>
<td>43</td>
<td>1</td>
<td>1</td>
<td>55</td>
<td>545</td>
</tr>
<tr>
<td>2010</td>
<td>219</td>
<td>201</td>
<td>50</td>
<td>3</td>
<td>2</td>
<td>50</td>
<td>525</td>
</tr>
<tr>
<td>2011</td>
<td>265</td>
<td>198</td>
<td>40</td>
<td>7</td>
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<td>1</td>
<td>511</td>
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<tr>
<td>2012</td>
<td>279</td>
<td>213</td>
<td>53</td>
<td>6</td>
<td>3</td>
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<td>554</td>
</tr>
</tbody>
</table>

*Source: Republic of Srpska Institute of Statistics*

Through the analyzed period, the number of the firstborn was constantly the highest, followed by the second born, and then by the third born (Table 3). The number of firstborn in the City of East Sarajevo in the period between 2003–2012 increased by 33.5%; the increase was present for the second born, as well, of 28.3%, while the third born increased by 17.8%. The biggest number of the firstborn, second born and third born children was recorded in 2012, while the most fourth born were recorded in 2003.

In 2012, out of the total number of babies born according to the birth order, 50.4% of the cases were the firstborn, 38.4% were the second born, and only 11.2% were third born, fourth born, and fifth born jointly (out of which the fourth and fifth born accounted for 1.6%). In this respect, the City followed
the same trend as that of the republic, having the same birth trend according to the birth order in 2012, but the number of firstborn, second and third born was decreasing.

By analyzing Table 1, it is noticeable that the number of deaths in East Sarajevo was on the increase in the observed 17 year period. In the period between 1996–2012, 11,949 people died in the City, which is, on average, 702 per year. In the period between 1996–2012, the number of deaths per year increased from 330 to 790 deceased in 2012, which is 139.4%. All these years have higher number of deaths compared to the year 1996, but in comparison to 2012, the number of deaths is smaller in all succeeding years.

The highest number of deaths is continually in Pale municipality, where 286 deaths were recorded in 2000. After Pale, there is Trnovo municipality where 353 people died in a 16 year period, and Old City municipality with 417 deaths. Although these municipalities have low mortality, they also have low population and smaller birth rate, so the final result is still depopulation.

'The main reason for increased mortality rate in Republic of Srpska is aging of the population, because there is a constant increase in the number of older population groups, and decrease in younger population' [Marinković 2014: 29].

Charts 1 and 2. Ratio between total number of deaths and number of deaths of those aged over 70 in the period between 2003–2012, and number of deaths according to gender and age for 2012

Chart 1 shows that in the period between 2003–2012, the number of deaths of those aged over 70 increased so, in 2003, the percentage of deaths of those aged over 70 was 56.6%, and in 2012 it was 71.5% (the increase of 14.9%). If we look at the distribution of deaths of those aged over 70, according to gender, it is noticeable that mortality in females is higher than mortality in males. In the observed 10 year period, this percentage increased and it was 15.3% for women (in 2012, 80.7% out of total number of deaths in females who were over 70), and 13.9% for men (in 2012, 62.6% of total number of deaths in males who were over 70). In the City of East Sarajevo, mortality of male population was higher than female mortality, except in 2010 and 2012.
In 2012, the mortality of younger men was higher (Chart 2). Mortality of males under 75 years of age was higher than female mortality of the same age, so out of total number of deaths, 27.3% was mortality of males under 75, and 16% was female mortality. In the age group of those over 75, the number of female deaths was higher, so out of a total number of deaths of those aged over 75 the deaths of females and males accounted for 34.4 and 22.3%, respectively.

The highest percentage of women (25.6%) and men (19.1%) who died in 2012 were in the age between 75–79, followed by women from 80–84 years of age (21.4%), and men from 70 to 74 years of age (17.9%). The highest number of deaths in 2012 was caused by blood circulation disorders (55.7%), tumors (19.7%), and diseases of the glands of internal secretion, diet and metabolism (6.6%) [Republic of Srpska Institute of Statistics].

The key indicator of mortality is the infant mortality, but it is also the indicator of general standard of living and health conditions in certain area. By analyzing infant mortality rate in the City of East Sarajevo, it can be concluded that it was low, although unequal, in the period of last 10 years. The years of 1999, 2000, 2004 and 2006 had zero infant mortality rates, and the highest rate was in 2009 when it was as high as 7.3‰. In 2012, infant mortality rate in the city was 1.8‰, which was 1.9‰ less compared to the average of Republic of Srpska [Demographic statistics. Statistical bulletin no: 4, 10, 14, 15 and 16].

Important demographic indicator which considerably influences the population dynamics is the number of marriages and divorces. In the period between 2003–2012, in the City of East Sarajevo, the number of marriages diminished by 25.2%, and number of divorces increased by 80% in 2012 compared to 2003. In the observed 10 year period, 3,116 marriages were entered into, or 311 per year, on average. Most marriages were entered into in 2007 (369), and least in 2012 (249). The total number of divorced marriages for the same period was 103, or 10 marriages per year, on average. The year with the least divorced marriages was 2008, and 2010 was the year with the most divorced marriages [Republic of Srpska Institute of Statistics].

Chart 3. Ratio between the number of births and the enrolled in the first grade in the City of East Sarajevo
The fact is that in Republic of Srpska the number of pupils has been in decrease which is the consequence of emigration of considerable number of reproductive and vital population. The decrease of enrolled pupils in the first grade, naturally, is reflected on the constant decrease of the total number of school population [Pašalić 2008].

The City of East Sarajevo is, in a certain sense, isolated case when compared to the rest of Republic of Srpska. Some oscillations were recorded before the school year 2007/2008, but they were a result of unstable demographic status in war and post-war period. The ratio between number of births and enrolled pupils in school year 2003/2004 fell to 59.6%, and in the following school year 2004/2005, the number increased to 118.2%. Similar ratios were evident in the following two years: 61.5% (2005/2006) and 93.3% (2006/2007) [Pašalić i Dragosavljević 2007].

However, the situation changed as of 2007/2008 school year. The number of births was smaller but the ratio between the numbers of births and the enrolled was on the increase. The ratio between the numbers of births and the enrolled in the period from 2007/2008–2013/2014 school years exceeds the value 100. In the 2009/2010 school year, the ratio between the number of births and the enrolled was 109.2%, and has been in mild decline ever since, so that in 2013/2014 this ratio is 105%. This is a consequence of the population inflow, that is, positive migration rate recorded in the last five years [Basic Education. Statistical bulletin no: 8, 9, 10, 11, 12, 13 and 14].

MEASURES OF THE POPULATION POLICY TO BOOST THE BIRTHRATE

Republic of Srpska does not have a developed unique population policy but, in the last decade, certain institutions carried out different activities as means of stimulating the population policy measures. The Council for Demographic Politics, Department for Family Issues, Council for Children of Republic of Srpska, and Board for Reproductive Health and Demography were established for that purpose [Marinković 2014].

The institutions of Republic of Srpska have been taking some measures to stimulate the birthrate by being involved in the field of work and work relations, health care, children, parents and family protection, and social care.

The most evident are pro-natal measures of the Public Fond for Children Protection: child support, mother support, refund of net compensation during maternity leave, help with infant equipment, gifts for third-born babies, and so on [Pašalić et al. 2006].

‘Need to activate the local self-government in the population policy originates from the fact that none of the state population policies can give appropriate answer to all needs and expectations of the population, or it can express specificity of living in each environment. Population policy that endeavors to be successful and comprehensive must also be supplemented by measures of local self-government... Local self-government is the most important factor in the society that can recognize the needs of specific parents in the best possible
way and within its boundaries and competences, activate certain mechanisms that can satisfy those needs accordingly’ [Marinković 2014: 148].

The City of East Sarajevo does not have a single document, book of rules or decision regarding the population policy issues. Every municipality is, individually, responsible for the measures of population policy, and commissions and book of rules relating to the population politics are brought on the municipality level.

Pale municipality is among the city municipalities that does not realize the urgency of the problem of insufficient births and multiannual negative population growth. The reason could be that this municipality is the one with the highest population number and multiannual positive migration rate.

Pale municipality does not have any commission that refers to the population policy; instead, there is an administrative worker in charge of these issues. Its budget does not foresee any financial means for local population policies. There is a marriage fee and not any financial help for marriages. It does not provide any help for families with many children; the only privilege for families with three and more children is that the third child has free stay in state kindergarten [Information provided by Pale municipality, personal communication, August 2014].

The municipality of East New Sarajevo understood the seriousness of this problem. In this municipality, there is a commission that brought a Book of Rules on Distribution of Financial Means for Support to Pro-natal Policy, and the budget provides 25,000 KM (in 2014) for pro-natal policy. The municipality of East New Sarajevo applies the following measures: co-finances the expenses of one procedure of assisted reproduction (artificial insemination) in the amount of 2,000 KM; every new born baby receives 100 KM as a financial support [Official Gazette of the City of East Sarajevo, 2014].

Trnovo municipality has also regulated the measures of population policy by adopting the Decision for 2014. Population policy measures in this municipality include: 1,000 KM of support for every marriage (spouses have to fulfill certain conditions); 250 KM is given for every first and second born baby; 350 KM is given for every third and fourth baby [Official Gazette of the City of East Sarajevo, 2014].

East Ilidža municipality has not adopted any special strategy for implementing the population policy measures, except for some activities relating to the employment of young people in order to improve the conditions for starting a family, defined in the Development Strategy of this municipality. Social Care Center of East Ilidža municipality provides 250 KM for every birth, and the Union of workers provides 100 KM from their own budget for the workers with a newborn. In 2009, the municipality administered education through some projects in order to boost birthrate and healthy life [Information provided by the municipality of East Ilidža, personal communication, August 2014].

In Old City municipality, one of the least developed municipalities of the City, and also the one with the least population number, certain population policy measures are regulated by the Decision on Determining Criteria and Users of One-Time Basis Financial Help for Marriages and Parenthood. The
municipality provides the following support: 500 KM for marriage; 200 KM for the first and second child; 300 KM for the third child [Official Gazette of the City of East Sarajevo, 2014].

CONCLUSION

The City of East Sarajevo is facing a serious problem of natural depopulation. Ever since 1996, with certain oscillations though, the natural increase has had negative value, which is the case in all municipalities of the City. Decrease in the number of births and increase in the number of deaths from 2000 onwards has been the result of bio-vital, bio-dynamic and migration flows.

Although some institutions of Republic of Srpska are responsible for the population policy and implementation of certain measures in order to boost the birthrate, understanding of the demographic problem by local communities, and their intentions to solve it, is also very important. Over the past 2 or 3 years, this problem has been confronted more seriously by the City of East Sarajevo in the sense that some municipalities have established commissions for population policy and adopted decisions which regulate certain issues relating to pro-natal population policy. However, the awareness of the problem of insufficient birth is not equally developed in all municipalities of the City; for instance, the municipalities of East Ilidža and Pale have not implemented a single measure of population policy to solve the problem, while two smallest and underdeveloped municipalities (Trnovo and East Old City) provide the most financial support for marriages and births.

Still, in order to reach the goal of population policy of Republic of Srpska, which is to realize the fertility rate of 2.1 children per mother, that is to realize the level of stationed population, it is necessary to approach the problem of population policy much more seriously. Bright demographic future can be expected only with well-devised and enforced pro-natal measures implemented at both state and local levels. Such measures should include better stimulation of motherhood, care for mother and child health, but also the quality of life in general, as well as economic and social conditions in order to diminish immigration of young and educated population. The education is of equal importance if one wishes to raise awareness among the population about areas of reproductive health and family planning.

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ОРИГИНАЛНИ НАУЧНИ РАД

ПРОМЕНЕ У ПРИРОДНОМ КРЕТАЊУ СТАНОВНИШТВА ГРАДА ИСТОЧНО САРАЈЕВО

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Циљ рада је да се анализирају основне компоненте природног кретања становништва, наталитет, мораталитет и природни прираштај у граду Источно Сарајево и да се утврди да ли је простор хомоген по том питању, односно да ли све општине града имају исти тренд када се говори о природном кретању становништва. Такође, жели се указати и на то како се локалне власти и локална заједница сусрећу са одређеним демографским проблемима и на који начин их решавају; да ли општине града спроводе одговарајуће мере популационе политике и да ли град Источно Сарајево може очекивати „светлију будућност”?

КЉУЧНЕ РЕЧИ: наталитет, мораталитет, природни прираштај, град Источно Сарајево