

THE END OF DEMOGRAPHIC TRANSITION IN KOSOVO: DOES THE MEANING OF THE POPULATION FACTOR CHANGE?*

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Abstract: Political issues in Kosovo were strongly related to its population dynamics during the twentieth century, above all due to the “demographic explosion” induced by the huge lag in fertility transition if compared to the rest of Europe. However, soon after the turn of the century, the total fertility rate in Kosovo has dropped to about the replacement level (2.1 children per woman), which, along with permanent migration outflows since the 1990s, indicates a new demographic era in sight. Using the recent evidence on demographic and migration trends supported by the updated theoretical considerations in the framework of demographic transition and the migration cycle concept, we examine the key demographic implications that could be expected in light of assumed population dynamics in Kosovo over the next decades. The effects of the demographic momentum (population increase purely on account of the young age structure) reduced by the negative impact of emigration could expire up to 2035-40. As a result, the decreasing and ageing population could become a highly probable future of Kosovo in just 20-25 years, indicating the tremendous reversal could happen in the perception of the population factor in this territory from the viewpoint of political and security issues in the region.

Keywords: fertility transition, migration cycle concept, population projection, Kosovo, demographic change

Introduction

Countries throughout the world nowadays face the total fertility rate (TFR) that is below the theoretical level needed for replacement of generations.

* The views presented in the article express author’s own opinion and not necessarily the one of the Institute of Social Sciences.

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Furthermore, the subreplacement fertility is not only a phenomenon of developed countries or exclusively of western civilization, as, according to the United Nations estimates, 83 countries or around 46 percent of the world population are experiencing the TFR lower than 2.1 children per woman, including the entire European continent, but also some of the most populous countries - China, the USA, Brazil, Russia, Japan, Vietnam, Germany, Iran, Thailand and Great Britain. Until recently, some of these countries were synonymous of very high fertility. The subreplacement fertility is the most obvious consequence of major changes in demographic tendencies that started to develop after the post-World War II baby boom first in Northern and Western Europe (in the 1960s and 1970s), then in Southern Europe (in the 1980s), and finally in Central and Eastern Europe (after 1990). These changes are most often regarded as the Second Demographic Transition (SDT), which should be conceived as a framework for understanding the profound cultural change that will sooner or later induce demographic changes, certainly not only in the fertility regime.²

However, while changes associated with the SDT were spreading from Northwest to Southeast Europe, the substantial lags in a sub-regional diffusion of the first demographic transition – reducing of very high fertility levels typical for a backward and dominantly agrarian phase in the development of societies – were taking part in Serbia. Since the 1960s, Serbia represented a European phenomenon in terms of regional divergence of demographic trends primarily caused by the differential TFR. In Kosovo, the TFR was at least twice as high as in the rest of the country, and by far the highest in Europe at the end of the 1980s. Therefore, the population doubling time in Kosovo (17.5 years) in 1991 was two times faster than the world's peak (35 years) in the 1960s, while the rest of the country began to face depopulation.³

Albeit unreliable fertility statistics since the dissolution of former Yugoslavia, available data suggest that Kosovo has experienced a marked decline in the TFR in this century, reaching the replacement level around

² Ron Lesthaeghe, "The second demographic transition: A concise overview of its development", *Proceedings of the National Academy of Sciences*, Vol. 111, No. 51, December 2014, pp. 18112-18115.

³ Mirjana Rašević, "Fertility trends in Serbia during the 1990s", *Stanovništvo*, Vol. 42, No. 1-4, 2004, pp. 7-27; Vladimir Nikitović, Branislav Bajat and Dragan Blagojević, "Spatial patterns of recent demographic trends in Serbia (1961-2010)", *Geografije*, Vol. 121, no. 4, December 2016, p. 526.

2010.⁴ Compared to most of the European population, the knowledge on the population development of Kosovo suffers from a lot of empty fields, which are paradoxically bigger in recent decades than before the 1980s. There are various reasons for such a situation – political (boycotts of population censuses and official institutions for collecting data on vital statistics during the period of Yugoslavia), socio-cultural, institutional (slow capacity building of new institutions), economic, etc. However, despite unclear picture on current population development in Kosovo, particularly at lower spatial levels, there is no doubt that the two components of demographic change strongly determined recent trends of population change in this territory – fertility and international migration. Due to the long history of extremely high fertility rates, typical for pre-transitional societies, it is reasonable to expect that demographic momentum will provide population rise for at least several decades ahead, contrary to most countries in the region, but the opposite impact of migration component has proven to be significantly important for the population trends since the 1990s, thus resembling the trends observed in Albania after the fall of the Iron curtain. On the other hand, most of the population in the region of Southeast Europe is expected to decline in the next decades, which is recognized as the widening depopulation zone at the east rim of the EU.⁵ Furthermore, the most recent sudden influx of asylum seekers from West Asia and North Africa, whose final asylum destination represents primarily the EU founding member countries, has its transition route through the region, which quite directly opened an issue of future migration in the region in terms of both the subreplacement fertility of autochthonous population and the demographic surpluses in politically unstable origin societies of immigrants.

Therefore, one could pose a quite meaningful question: How the population trend in Kosovo will evolve in the following decades – will it converge to the general trend of the region at a faster pace due to both expected continuation of emigration (caused by slow economic development and demographic surpluses of young and low educated persons) and accelerated tempo of socio-cultural changes associated with the SDT (similarly to the trends in diffusion of the first demographic transition in

⁴ Ibid., p. 526.

⁵ Vladimir Nikitović, “Long-term effects of low fertility in the region of former Yugoslavia”, *Stanovništvo*, Vol. 54, No. 2, July-December 2016, pp. 27-58; United Nations, *World Population Prospects 2017 – Data Booklet*, United Nations – Department of Economic and Social Affairs, Population Division, New York, 2017.

regions that were the last to experience it), or will it lag in demographic change as it was the case during the period of Yugoslavia? The reasoning behind this aim is closely connected to quite different political and societal conditions in which Kosovo's population had been experiencing its fast growing during the period of Yugoslavia in comparison to what could be expected in possible EU future of the region. This could be concluded when analysing previous findings of studies on fertility behaviour of women in Kosovo, which indicate that specific anthropological, cultural and political factors might be those that decisively influenced the population dynamics in this sub-region during the socialism period, since the levels of economic development and education in comparison with other sub-regions of Serbia at the time, despite their limitations, could hardly be those that made women have the ideal and desirable number of children smaller than the actual.⁶ Therefore, it is easier to understand that during the period of former Yugoslavia, the TFR of the ethnic Albanian population in Serbia was much higher in Kosovo than in other regions of the country, but also in relation to Albania (on average one child).⁷ Recent studies substantially grounded on the diffusion theory as an explanation for spatial patterns of demographic change suggest that sociocultural heterogeneity prevent the equal diffusion of attitudes and information that support modern reproductive ideas and behaviour, thus confirming that in Kosovo, unlike the rest of the country, "the effect of the socio-economic development on changes in fertility had been conditional on the perceptions and customs of individual ethnic groups and their susceptibility to change".⁸ In other words, cultural and ideational changes as assumed by the SDT could be more relevant for women's birth decisions in Kosovo in this century than it was the case until very recently.

⁶ Mirjana Rašević and Mina Petrović, "Is there a basis for implementing a family planning programme in Kosovo and Metohija?", *Balkan Demographic Papers*, Vol. 4, 2001, Laboratory of demographic and social analyses, Department of Planning and Regional Development, University of Thessaly, http://www.demobalk.org/Publications/papers/docs/Demobalk_Papers_Doc_00013.pdf; Mimosa Dushi, "Number of children among generations: The case of Kosovo", *Procedia Social and Behavioral Sciences*, Vol. 19, 2011, pp. 37-40.

⁷ Mirjana Rašević, "Fertility trends in Serbia during the 1990s", *op. cit.*, p. 12; Jane Falkingham and Arjan Gjonca, "Fertility transition in Communist Albania, 1950–90", *Population Studies*, Vol. 55, No. 3, pp. 309–318; KAS, "Statistical Yearbook of the Republic of Kosovo 2014", November 2014, Kosovo Agency of Statistics, Pristina, http://ask.rks-gov.net/ENG/publikimet/doc_download/1192-statistical-yearbookof-the-republic-of-kosovo-2014.

⁸ Murat M. Yücesahin and Murat E. Özgür, "Regional Fertility Differences in Turkey: Persistent High Fertility in the Southeast", *Population Space and Place*, Vol. 14, No. 2, March/April 2008, pp. 137; Mirjana Rašević, "Fertility trends in Serbia during the 1990s", *op. cit.*, p. 21.

Therefore, we aim to examine the long-term effects of the changes in the two arguably crucial components of the demographic future of Kosovo in this century – fertility and international migration. In that sense, we try to achieve two goals at the same time: to assess realistic population projection outcomes and to warn decision-makers on future implications of demographic and migration trends in Kosovo in the context of the region of former Yugoslavia. Recent improvements in the methodology of population estimates and projections by the UN Population Division, particularly for populations with incomplete and rather shorter data series, helped us in producing methodologically and regionally consistent set of population projections for Kosovo, as a basis for answering the opening questions of the paper.

Hypothesis on components of population change – the theoretical and methodological framework

We framed our hypothesis about components of future population dynamics in Kosovo inside the projection model that is used by the Population Division of the UN (hereafter the UN model) for its latest releases of the *World Population Prospects* (2012-17). Also, the hypothesis on future fertility and mortality of the population in Kosovo are completely derived from the UN model, which we consider to be a very reasonable decision since the model is based on the recent theoretical achievements in terms of modelling the demographic transition, whereby it draws its strength from the data on fertility and mortality for all countries of the world. The model also has the technical benefits – it is well documented, fully transparent, probabilistically consistent, and implemented in the open-source R software, thus, allowing for easy adjustments and modifications of input parameters where needed.⁹ This was particularly beneficial for the purpose of the paper since the UN does not produce projections for territories whose borders are under dispute as is the case with Kosovo.¹⁰ Besides, as the UN migration hypotheses are not

⁹ Adrian E. Raftery, Leontine Alkema and Patrick Gerland, “Bayesian Population Projections for the United Nations”, *Statistical Science*, Vol. 29, No. 1, February 2014, pp. 58-68; United Nations, “World Population Prospects: The 2017 Revision, Methodology of the United Nations Population Estimates and Projections”, Working Paper No. ESA/P/WP.250, 2017, United Nations – Department of Economic and Social Affairs, Population Division, New York, http://esa.un.org/unpd/wpp/Publications/Files/WPP2017_Methodology.pdf

¹⁰ UN dataset recognizes only Serbia including disputed territory of Kosovo (it unilaterally proclaimed independence from Serbia in 2008) in accordance with the UNSCR No. 1244/1999.

theoretically grounded (apart from a lack of data for Kosovo), as is usually the case with migration projections, we instead included our hypothesis (based on the “migration cycle concept”) in the UN projection model.¹¹

Fertility hypothesis: the century of the transition to subreplacement fertility in Kosovo?

According to the onset of the first demographic transition, the two sub-regions in former Yugoslavia can be differentiated: “Early starters” (Slovenia, Croatia, Vojvodina, and Central Serbia) and “Late starters” (Bosnia & Herzegovina, Montenegro, Kosovo, and Macedonia). The latter sub-region, except Kosovo, experienced the decline to the subreplacement fertility two-three decades later than the former.¹² Currently, the whole region of former Yugoslavia is characterized by the subreplacement TFR (below 2.1), with the longest duration in Vojvodina, Central Serbia and Croatia, and the shortest in Kosovo.¹³ Although the fertility transition in Kosovo may have begun in the 1920s and 1930s, according to some indications, it was surely discontinued and brought back to the pre-transitional period by the late 1960s, as the TFR was above five even in the 1970s.¹⁴ A slow decline in the TFR in the next two decades resulted in its still high level, even before the breakup of Yugoslavia (3.9 in 1990); the TFR was high even after the 1990s Yugoslav wars (3.0 in 2000), and only recently fell just below 2.1.¹⁵

From a long-term perspective, changes in fertility behaviour are decisive for the size and age structure of a given population in the absence of sudden catastrophic events. The UN model, in accordance with the recent evidence of recovery of the post-transitional fertility, predicts convergence of the total

¹¹ Details on the specific adjustments of input parameters (initial population, fertility, mortality, and migration rates) and the projection procedure for the region of former Yugoslavia, which were used for the forecast simulations presented and interpreted in this paper, are fully described in: Vladimir Nikitović, “Long-term effects of low fertility in the region of former Yugoslavia”, *op. cit.*

¹² *Ibid.*, p. 35.

¹³ Damir Josipović, “The Post-Yugoslav Space on a Demographic Crossway: 25 Years after the Collapse of Yugoslavia”, *Stanovništvo*, Vol. 54, No. 1, January-July 2016, pp. 15-40; Vladimir Nikitović, Branislav Bajat and Dragan Blagojević, “Spatial patterns of recent demographic trends in Serbia (1961-2010)”, *op. cit.*

¹⁴ Mirjana Rašević, “Fertility trends in Serbia during the 1990s”, *op. cit.*, p. 7.

¹⁵ Damir Josipović, “The Post-Yugoslav Space on a Demographic Crossway: 25 Years after the Collapse of Yugoslavia”, *op. cit.*, p. 16.

fertility rates in the region towards the level of 1.8 by the end of the century.¹⁶ The total fertility rate across the region will most probably experience a mild increase by 2055, ranging between 1.55 (Bosnia & Herzegovina and Vojvodina) and 1.84 (Slovenia). Due to the lag in the onset of the transition to low fertility, the model predicts that the transition in Kosovo would last until 2070 (the lowest TFR of 1.71), with a target value of 1.75 in 2100.¹⁷

For the sake of an insight in “theoretical” limits of future demographic change, we also calculated the UN traditional high and low variants, which differ from the medium variant (forecast) in the total fertility rate by +/-0.5 children per woman, respectively. The UN model suggests that there are even 10% chance that the TFR in Kosovo could fall by 0.5 (low variant) until 2100, thus, reaching the “lowest-low” fertility, the same as the post-communist CEE countries had experienced at the beginning of the century. The official projections of the population of Kosovo also assume a further decline in fertility in the coming decades, but are more pessimistic than the UN model. Namely, the TFR is expected to fall to 1.7 by 2031, and then to the current level of Serbia excluding Kosovo (1.45) by 2061 according to the “medium” variant, usually regarded as to the most probable, while the range between high and low variant of the TFR is predicted to be 1.9-1.1 in 2061, which is narrower than the 80% prediction interval of 1.22-2.05 resulted from the UN model for the same year.¹⁸

International migration assumption: the century of emigration from Kosovo?

The whole region of former Yugoslavia (excluding Slovenia) is recognized as an emigrational at the beginning of this century, whereas Kosovo represents a specifically pronounced emigration area since the 1990s.¹⁹ A recently developed “model of the migration cycle”, based on evidence from

¹⁶ Joshua. R. Goldstein, Tomas Sobotka and Aiva Jasilioniene, “The end of lowest-low fertility?”, *Population and Development Review*, Vol. 35, No. 4, December 2009, pp. 663-699.

¹⁷ Vladimir Nikitović, “Long-term effects of low fertility in the region of former Yugoslavia”, op. cit., p. 39.

¹⁸ KAS, “Kosovo Population Projection 2011–2061”, December 2013, Kosovo Agency of Statistics, Pristina, http://ask.rks-gov.net/ENG/publikimet/doc_download/1126-kosovo-population-projection-2011-2061, p. 27-28.

¹⁹ Heinz Fassmann, Elisabete Musil, Roman Bauer, Atila Melegh and Kathrin Gruber, “Longer-Term Demographic Dynamics in South-East Europe: Convergent, Divergent and Delayed Development Paths”, *Central and Eastern European Migration Review*, Vol. 3, no. 2, December 2014, pp. 150–172; Besim Gollopeni, “Kosovar emigration: Causes, Losses and Benefits”. *Sociologija i prostor*, Vol. 54, No. 3, Prosinac 2016, pp. 295-314.

the 'old' immigration countries in Europe, which experienced a gradual long-term transition from predominantly emigration to typical immigration countries in conditions of the subreplacement fertility, provided the theoretical framework for formulating migration assumption in the paper, as it seems that the successor states of former Yugoslavia could experience common migration trends in the future due to both officially proclaimed strategic goals of their governments with respect to the EU accession and expected position of the region itself as to the global migration directions.²⁰

According to this heuristic concept, the region of former Yugoslavia, excluding Slovenia, could be considered as stuck in the initial, pre-transition stage. We assumed 2035 as a symbolic milestone between net emigration and net immigration according to the current prospects of further EU enlargement to the Western Balkans, which implies that the whole region of the former Yugoslavia would certainly be a part of the EU by the time. We considered the membership in the EU as an indicator that the population of a member state has reached the level of living standard and quality of life that can affect the reduction of outflows and the increase of inflows to the country in the long run. Prior to 2035, we account for the intensified post-accession emigration from the whole region due to increased labour mobility associated with slow economic growth in new EU members by analogy to the evidence from the Eastern enlargement and based on the expectations from the future in the EU.²¹

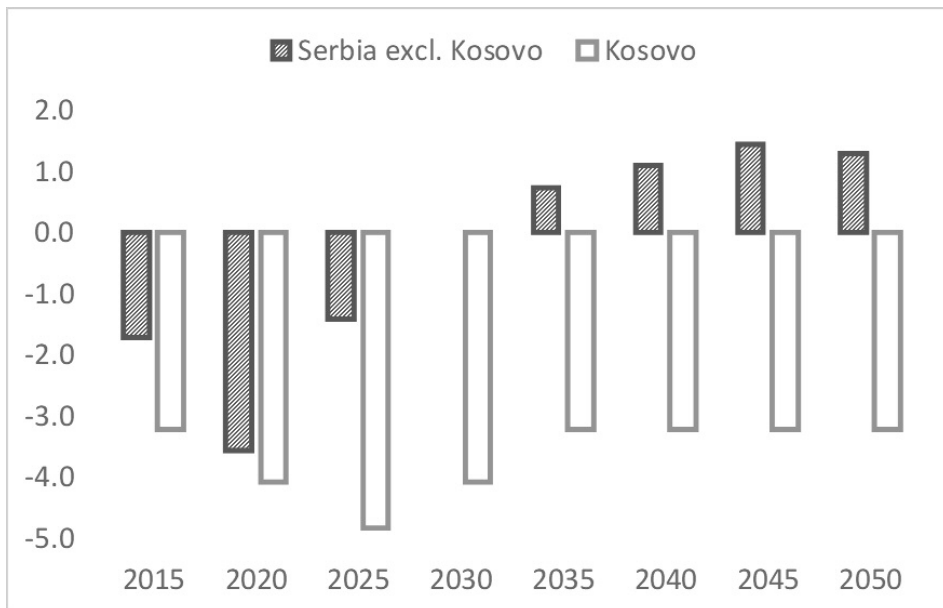
If we focus on the first 40-year period (2015-2055) of the projection horizon considered in this paper, the sub-region of "Early starters" excluding Slovenia is supposed to exit the initial or pre-transition stage by 2035, and to experience the intermediate or transition stage (immigration typically outweighs emigration) thereafter, while the "Late starters" sub-region would follow the

²⁰ Heinz Fassmann and Ursula Reeger, "'Old' immigration countries in Europe. The concept and empirical examples", in: Marek Okólski (ed.), *European Immigrations: Trends, structures and policy implications*, IMISCOE Research Series, Amsterdam University Press, Amsterdam, 2012, p. 67-68.

²¹ Marek Kupiszewski, "Migration in Poland in the Period of Transition - the Adjustment to the Labour Market Change", in: Masaaki Kuboniwa and Yoshiaki Nishimura (eds.) *Economics of Intergenerational Equity in Transnational Economies*, Maruzen Co. Ltd, Tokyo, 2006; Marek Kupiszewski, Dorota Kupiszewska and Vladimir Nikitović, *Impact of demographic and migration flows on Serbia*, International Organization for Migration - Mission to Serbia, Belgrade, 2012; Vladimir Nikitović, "Migraciona tranzicija u Srbiji: Demografska perspektiva", *Sociologija*, God. 55, br. 2, 2013, str. 187-208; Mirjana Rašević, Vladimir Nikitović, Dragana Lukić-Bošnjak, "How to motivate policy makers to face demographic challenges?" *Zbornik Matice Srpske za društvene nauke*, Vol. 148, No. 3, 2014, pp. 607-617.

same course with a delay of 5-10 years.²² However, Kosovo seems to be the only exception in the region of former Yugoslavia since we could not find convincing evidence that this population is likely to undergo fundamental societal changes needed to enter the intermediate transition stage during the projection period (Figure 1). This is acknowledged by the official population projection for Kosovo, which does not assume cessation of net emigration until 2061 given pronounced emigration potential and generally unfavourable economic conditions in that territory. Yet, after 2035, the projection assumes a certain reduction in net emigration by the “medium” (most probable) variant, or even a turn into a mild net immigration according to the high variant.²³

Figure 1: Assumed average annual net migration rate (per thousand of the 2015 population), 2015-2055 (five-year periods)



Source: Author’s calculation based on the “migration cycle model” considerations and the literature review

²² We found reasonable to consider and interpret possible changes in migration trends no longer than the mid-century given general volatility of this component and consequently a high long-term uncertainty; therefore, no specific migration assumption was made after 2055, but only further linear decrease in net migration rate towards zero by 2100.

²³ KAS, “Kosovo Population Projection 2011–2061”, op. cit., p. 31-33.

Demographic future of Kosovo

The most important indicators of future demographic change in Kosovo, which resulted from the long-term population projection simulations as described in the introduction of the previous section, are presented and interpreted in the context of contextually and comparatively relevant region of former Yugoslavia. This might help readers to more easily perceive magnitude and tempo of the projected demographic changes in Kosovo. For the sake of an insight in “theoretical” limits of future demographic change, we also calculated the UN traditional high and low variants, which differ from the median (most probable) total fertility rate by +/-0.5 children per woman, respectively.

Changes in population size and age structure until 2100

According to the most likely future of the forecast simulation (median of the distribution), only Kosovo will not experience a decline in the total population in the region of former Yugoslavia by the mid-century (Table 1).²⁴ Although this result might not be a surprise, the population dynamics over the projection period and changes in crucial demographic indicators reveal that the meaning of the population factor in Kosovo will certainly experience substantial changes in relation to the period of former Yugoslavia, particularly in the context of political implications.

Table 1: Total population forecast (median and 80% prediction interval), 2015-2100, including the UN traditional high-low bounds of the forecast (median TFR +/- 0.5)

Country/ Territory	Year	80% prediction interval			The UN traditional low-high variants	
		Lower limit	Median	Upper limit	Low fert.	High fert.
Former Yugoslavia	2015		21,200,300			
	2035	19,155,960	19,436,430	19,708,720	18,473,454	20,458,210
	2055	16,900,560	17,586,480	18,179,220	15,429,237	20,068,480
	2100	12,318,762	14,037,020	15,551,010	8,535,989	22,054,810

²⁴ Vladimir Nikitović, “Long-term effects of low fertility in the region of former Yugoslavia”, *op. cit.*, p. 48.

Country/ Territory	Year	80% prediction interval			The UN traditional low-high variants	
		Lower limit	Median	Upper limit	Low fert.	High fert.
Vojvodina	2015		1,855,571			
	2035	1,461,097	1,500,021	1,539,506	1,425,636	1,572,327
	2055	1,187,610	1,268,060	1,350,326	1,104,714	1,447,986
	2100	763,686	947,372	1,144,705	570,818	1,505,964
Central Serbia	2015		5,140,644			
	2035	4,153,445	4,279,935	4,389,473	4,070,693	4,487,032
	2055	3,478,100	3,741,154	3,976,102	3,272,474	4,260,945
	2100	2,413,114	3,053,492	3,580,905	1,846,681	4,735,175
Kosovo	2015		1,855,853			
	2035	1,980,099	2,067,377	2,155,741	1,942,859	2,195,571
	2055	1,829,773	2,028,908	2,244,909	1,753,505	2,353,193
	2100	947,567	1,428,016	1,971,471	773,441	2,442,654
Serbia excluding Kosovo	2015		6,996,215			
	2035	5,640,035	5,774,646	5,900,948	5,496,328	6,059,359
	2055	4,728,966	5,000,839	5,247,676	4,377,188	5,708,931
	2100	3,322,863	4,003,528	4,573,074	2,417,500	6,241,139
Serbia including Kosovo	2015		8,852,068			
	2035	7,682,827	7,838,320	7,996,070	7,439,188	8,254,929
	2055	6,689,436	7,032,649	7,371,740	6,130,693	8,062,124
	2100	4,566,661	5,435,412	6,235,772	3,190,941	8,683,793

Source: Author's calculation based on the population forecast simulations

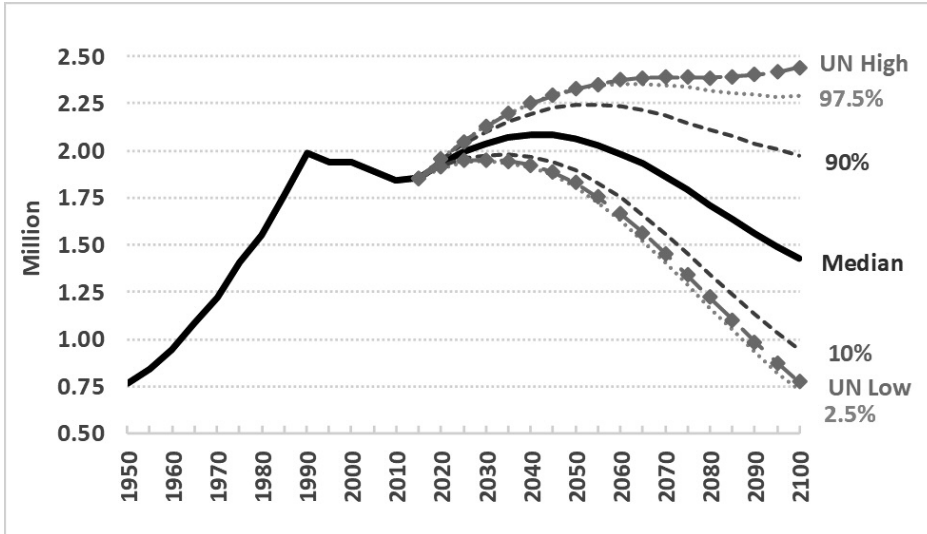
Note: The results for Serbia (80% prediction interval including median) are not simply the summation of its constituent parts but present aggregations across the probabilistic distributions of simulated outcomes.

While the total population in the region would most probably decrease by 16.9 percent, the population in Kosovo is expected to rise by 9.3 percent between 2015 and 2055. This rise could have been much higher due to the

projected positive natural change of even 564 thousand people, resulting from positive demographic momentum. Yet, its counterbalance is represented by the overall impact of negative net migration, which summed over the period should account for the population loss of 391 thousand persons (of which 267 thousand due to the direct effect). Furthermore, the population increase in Kosovo by 2055 practically results from the increase during the first 20-year period of the projection (Table 1). Indeed, the majority of the positive effect of demographic momentum (362 thousand more live births than deaths) is expected to be realized up to 2035, which is also the period of stronger emigration due to the higher volatility of socio-economic conditions.

It should be noted that the maximum population size of Kosovo will most probably be reached by 2040 (2.08 million), followed by a period when the demographic momentum will be insufficient to cancel the impact of the negative migration balance (Figure 2). If we want to estimate the power of the demographic momentum to drive the population increase despite the subreplacement fertility, a hypothetical “closed” population (zero-migration balance) scenario has to be considered. In that scenario, the maximum population size of Kosovo would be most probably reached by 2065 (2,43 million), which means that the fertility rates by previous generations provided population growth for about 60 years ahead in relation to the first decade of this century when the fertility transition to below replacement level has begun. However, apart from the pure theoretical character of a “closed” population concept, no realistic empirical evidence could be found to support a scenario which would neglect the significant impact of net emigration on demographic change in Kosovo at least in the next two decades when the demographic momentum should reach its peak. This is illustrated by the distribution of future outcomes as to the UN model (assumes a low probability of return to replacement fertility level during the whole century) presented in Figure 2, according to which the maximum size of the “closed” population would be beyond the upper limit of the 95% prediction interval. Furthermore, Figure 2 suggests that the range between traditional high and low variant in regular world population prospects by the UN Population Division, representing bounds of ± 0.5 in relation to the TFR of the medium variant, are much wider than the 80% prediction interval of the forecast. It indicates that the role of migration balance could be of greater importance if compared to the previous periods.

Figure 2: Observed and forecasted population size of Kosovo, 1950-2100



Source: Author's calculation based on the population forecast simulations.

Note: Solid line represents the past trend and the most probable future, while the dashed and dotted lines show the bounds of the prediction intervals which should contain the future value with probabilities of 80% and 95%, respectively. The lines with markers show the bounds in accordance with the traditional high and low variant in the UN projections (median TFR +/- 0.5 children per woman).

Although the power of demographic momentum is undoubtedly strong and important for the future demographic change of Kosovo, its capacity is certainly limited in the long run in terms of the expected fertility transition associated with the SDT. Namely, according to the model simulations, the chances that the total population in Kosovo and Slovenia (the only part of former Yugoslavia that has entered the migration transition) by 2100 would be the same as the current is about 5 and 35 percent, respectively – this clearly indicates that the subreplacement fertility will strongly reduce population size of Kosovo if a transition to positive net migration is missing in the long run.²⁵

²⁵ Vladimir Nikitović, "Long-term effects of low fertility in the region of former Yugoslavia", *op. cit.*, p. 42.

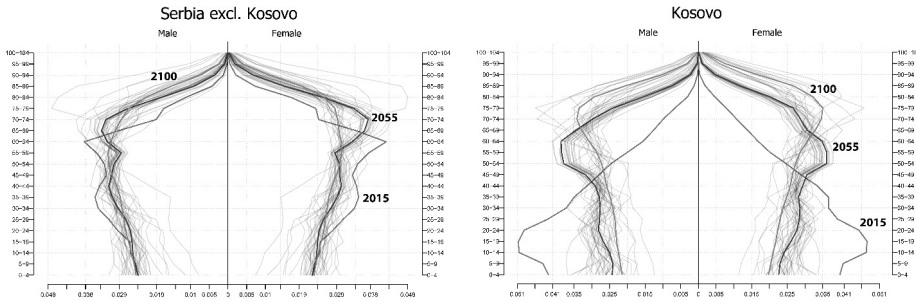
It is evident that the large lag in the fertility transition onset in Kosovo induced lags in relevant demographic processes in that territory if compared to populations in its neighbourhood. Consequently, the demographically very young population in Kosovo is currently contrasted with the surrounding old populations. However, significant structural changes in terms of rapid population ageing in Kosovo should be expected in this century. Although the share of persons aged 65 years and above in the total population will most probably increase by 75% (from 16.37% to 28.64%) between 2015 and 2055 in the region of former Yugoslavia, this indicator will more than triple in Kosovo in the same period (from 7.30% to 23.82%), with the abrupt increase experienced already by 2035 (13.94%).²⁶ The same stands for the old age dependency ratio (number of persons older than 65 in relation to those aged 20-64 years) as one of the crucial indicators in the context of the modern conception of sustainable demographic development.²⁷ Concurrently, both the current share of young persons (below 15 years of age) and the share of those in education age (5-24 years) is expected to be almost halved by 2055 in Kosovo (from 26.44% to 14.27% and from 37.47% to 20.42%, respectively).

These immense disturbances in the age composition of the population can be more easily comprehended if we compare the population pyramids of Serbia excl. Kosovo and Kosovo in the three cross sections of time (Figure 3). In just a 40 year from now, the demographic pressure of the older population in Kosovo could be much more pronounced than it is currently the case in Serbia excluding Kosovo, where the demographic situation is most commonly regarded as the very unfavourable. This upside-down change of the population pyramid in Kosovo between 2015 and 2055 in comparison with the gradual ageing of the pyramid of Serbia excl. Kosovo, suggests that Kosovo will have to face demographic challenges that are quite different from those it has faced so far. In that sense, one can comprehend current and expected huge emigration from Kosovo as intrinsically similar to the emigration trends between the mid-1960s and the 1980s observed in former Yugoslavia, which were fuelled by surpluses of low qualified labour force born during the post-war baby-boom.

²⁶ Ibid., p. 43.

²⁷ Wolfgang Lutz, "A Population Policy Rationale for the Twenty-First Century", *Population and Development Review*, Vol. 40, No. 3, September 2014, p. 528.

Figure 3: Population pyramid of Serbia excl. Kosovo and Kosovo, 2015, 2055, 2100



Source: Author’s calculation based on the population forecast simulations

Note: Solid lines represent observed pyramid in 2015 and its most probable future in 2055 and 2100 (median of the distribution)

Impact of migration on demographic change by the mid-century

Given the expected transition to the subreplacement fertility and highly negative trends in terms of international migration in Kosovo, we have specifically assessed the migration impact from the aspect of the assumed stages of the migration transition on population dynamics in this sub-region by the mid-century. For that purpose, apart from the *Forecast* simulation, as discussed in the previous paragraphs, we prepared the *Zero migration* simulation based on the assumptions that all the age-specific fertility and mortality rates are as per the *Forecast*, while the net migration is set to zero. The comparison between the medians of the two simulations in terms of the total population size of Kosovo and comparatively relevant sub-regions of former Yugoslavia is presented in Table 2.

This impact of migration may be decomposed into a direct and an indirect component. The former consists of the total net migration flows summed over the forecast period, while the latter refers to the births and deaths which the migration either prevented or caused to happen, depending on the overall direction of migration flows, also summed over the forecast period. It should be noted that, in terms of indirect migration impact, no reference is made to the hypothetical demographic events which might have happened to the emigrants had they not emigrated. Table 2 shows the migration-related components of the forecasted population dynamics. As to the assumptions of the model, we review its results in relation to 2035 when it is assumed

that large post-accession emigration waves, induced by the EU enlargement towards the Western Balkans, will disappear throughout the region while the net migration rate in Kosovo will return to its current level (Figure 1).

Table 2: Impact of migration on population change – difference between Forecast and Zero migration simulation (median), 2015-2035-2055

Country/ Territory	Migration impact (thousand), 2015-2035					Migration impact (thousand), 2035-2055				
	Total	Direct	Indirect			Total	Direct	Indirect		
			Total	Births	Deaths			Total	Births	Deaths
Former Yugoslavia	-515.0	-384.1	-130.9	-114.0	16.9	115.9	258.8	-142.9	-98.2	44.7
Vojvodina	-99.5	-75.4	-24.1	-21.7	2.3	36.6	50.4	-13.8	-14.4	-0.6
Central Serbia	-212.3	-160.3	-52.0	-48.5	3.5	70.6	107.1	-36.5	-33.9	2.5
Kosovo	-184.2	-148.3	-35.9	-32.2	3.7	-206.5	-118.6	-87.8	-79.3	8.5
Serbia excl. Kosovo	-312.9	-235.8	-77.1	-70.0	7.1	107.7	157.5	-49.8	-48.0	1.8
Serbia incl. Kosovo	-496.2	-384.1	-112.1	-102.3	9.8	-101.2	38.8	-140.1	-126.3	13.7

Source: Author's calculation based on the population forecast simulations

According to the *Forecast*, the population in Kosovo in 2035 will be smaller by 184 thousand than it would be if there were no migration. The direct impact of migration on the population in the *forecast* equals -148 thousand. This is the net migration, aggregated over the period from 2015 to 2035. In the case of negative net migration, the indirect impact of migration consists of both the loss of births owing to the emigration of potential mothers and the loss of the emigrants' deaths. As Table 2 suggests, the effect of the latter is small. The number of births which female emigrants would have delivered had they not emigrated accounts for 32 and even 79 thousand in the first and the second 20-year period, respectively. Likewise, the number of deaths was reduced by less than 4 and 9 thousand by migration during the two periods, respectively; these people might have died anyway, but their death occurred

after they emigrated, so it cannot be counted in the figures for Kosovo, as they did not number among the population of the region at the time of death. The overall indirect impact of migration is -36 thousand by 2035, and even 88 thousand between 2035 and 2055.

In relative terms, the expected population increase in Kosovo (21% of the initial population) on account of strong demographic momentum would be almost halved by 2035 due to the direct or indirect impact of migration. Thus, net emigration represents a strong counterweight to the very high positive natural change. Almost 20% of the migration induced (direct and indirect) decline of the population in Kosovo by 2035 is due to migration-related, potential, but not 'consumed', natural change (Table 2).

The ruinous synergetic effect of long-term emigration could be best perceived when the period after the assumed accession to the EU is analysed. In case of Kosovo, the overall migration-induced population decrease between 2035 and 2055 would be higher than in the first 20-year period of the projection (207 vs. 184 thousand) despite smaller direct migration loss (119 vs. 148 thousand) – the indirect migration impact (natural change) would present even 43% percent of the overall migration-induced population decline.

Finally, we quantified the impact of migration on selected demographic indicators by calculating the percentage difference between the value of the indicator for both cross-sections 2035 and 2055 in the *Forecast* and the *Zero migration* simulation, scaled to the latter (Table 3). In the *Forecast*, the total population of Kosovo is smaller by 8.2% and 16.2% in 2035 and 2055, respectively as a result of migration. Migration also has a significant impact on the age structure of the population. As assumed in the *Forecast*, it would decrease the share of the population aged 0-14 in Kosovo by 6.5% and increase both the share of the population older than 65 years and old-age dependency ratio by even 13.4% and 13.6%, respectively until 2035. The negative migration impact on the share of the older population in Kosovo would further increase by 2055, while the transition to net immigration in Serbia excluding Kosovo after 2035 would even induce positive migration impact in terms of the share of the young population (Table 3), thus highlighting importance of migration transition for the region in this century.

Table 3: Migration induced changes for selected demographic indicators: percentage difference between Forecast and Zero migration simulation (median), 2035 and 2055

Country/ Territory Time cross section	Total population	Share of young/old age groups in total				Old-age dependency ratio (65+/20-64)
		Below 15 years	School age (5-24)	Above 65 years	Above 85 years	
2035						
Former Yugoslavia	-2.59	-2.82	-1.72	3.92	3.24	4.69
Vojvodina	-6.22	-5.46	-2.70	8.02	8.11	10.21
Central Serbia	-4.73	-4.07	-1.99	6.07	5.62	7.69
Kosovo	-8.18	-6.49	-5.01	13.43	11.34	13.57
Serbia excluding Kosovo	-5.14	-4.43	-2.20	6.63	6.20	8.36
Serbia including Kosovo	-5.95	-5.33	-3.32	8.06	7.39	9.40
2055						
Former Yugoslavia	-2.23	0.00	-0.36	2.73	4.15	4.12
Vojvodina	-4.72	2.62	0.90	3.40	7.28	5.82
Central Serbia	-3.65	1.92	0.41	2.62	5.63	4.51
Kosovo	-16.15	-8.70	-7.22	20.49	24.43	25.85
Serbia excluding Kosovo	-3.94	2.01	0.56	2.81	6.00	4.81
Serbia including Kosovo	-7.83	-1.73	-2.22	7.77	11.29	10.96

Source: Author's calculation based on the population forecast simulations

Conclusions

During the period of former Yugoslavia, political crises in Kosovo were usually interpreted in the context of demographic factors, which was not surprising since the population in that territory had been growing at rates typical for Africa at the time while much of the country had started to experience the subreplacement fertility. Paradoxically, the knowledge on population development in Kosovo was limited even then, but particularly after the dissolution of Yugoslavia since there was a gap of 30 years (1981-2011) without the population census data on Albanian majority, who was the driving force of the “demographic explosion”. Coincidence or not, the 30-year period was politically the most turbulent in the recent history of Kosovo – it started with protests on the constitutional status of the province in 1981 and culminated with a unilateral declaration of its independence in 2008. Available statistics on the actual demographic change in Kosovo usually offers contradictory data particularly as to the fertility and migration, which, therefore, makes it difficult to understand current population dynamics and processes in that territory. Furthermore, a lack of comprehensive interpretation of a tremendous delay in the onset of the first demographic transition in Kosovo in relation to the surrounding populations, which should explain the failure of cultural and economic drivers of the fertility transition, suggests that a political factor might have had an important impact on demographic change in that territory until recently.

However, at the beginning of this century, apart from the crisis on the political status of Kosovo, two important factors inducing population dynamics have changed – high increase in emigration since the 1990s and beginning of the transition to the subreplacement fertility. Therefore, in this paper, we aimed to see whether the meaning of demographic factors in Kosovo would be changed in this century, particularly from the aspect of the expected EU future, as it would imply a substantial change in the factors driving demographic development. Thus, we based our analysis on recent improvements in theoretical and empirical evidence, particularly regarding the change in fertility and migration to consider the long-term implications of population dynamics in Kosovo. The probabilistic model on future fertility and mortality used for the current UN World Population Prospects and “migration cycle concept” served us as the methodological tools.

Although it seems certain that only Kosovo will not experience a decline in the total population in the region of former Yugoslavia by the mid-century, the meaning of demographic factors in Kosovo will undoubtedly experience

substantial changes. Namely, demographic momentum fuelled by fertility rates of previous generations could provide the population growth for about 60 years ahead, but it will most probably be considerably weakened by the negative migration balance. Therefore, the population increase in Kosovo by the mid-century would practically result from the increase during the next 20 years, which would also be the period of stronger emigration due to the higher volatility of socio-economic conditions, particularly in case of intensified post-accession emigration. Kosovo will most probably reach its maximum population size by 2040 (2.08 million), when a period of almost depleted demographic momentum should follow. The power of demographic momentum is certainly limited in the long run in terms of expected fertility reduction associated with the second demographic transition, which implies a strong decline in population size of Kosovo if a transition to positive net migration is missing by the end of the century.

From the viewpoint of modern sustainable demographic development, reduction in the population size of Kosovo would be a minor issue in comparison with changes in its age structure. Much faster population ageing in Kosovo should be expected in relation to surrounding populations – while the share of persons older than 65 years would increase by 75% in the region of former Yugoslavia by 2055, it would more than triple in Kosovo. The projection of age structure, also, suggests that the expected emigration from Kosovo might be intrinsically similar to the emigration trends between the mid-1960s and the 1980s in the former Yugoslavia, which were fuelled by surpluses of low skilled labour force born during the post-war baby-boom. Thus, given the maximum effects of demographic momentum in the next 20-30 years, along with expected slow economic development, it is reasonable to expect a continuation of current emigration trends. A specific findings refer to strong indirect effects of emigration – although the projected population increase in Kosovo on account of strong demographic momentum could be almost halved by 2035 due to the overall impact of migration, the indirect migration loss on account of prevented natural change could reach more than 40% of the overall migration-related population decline between 2035 and 2055.

The theoretical framework that we used in the paper to interpret possible demographic future of Kosovo is closely related to the cultural and ideational change behind the second demographic transition. Such a transition implies adopting modern family norms, which in turn should help in the development of modern political and economic systems. If we accept that the population of Kosovo is on the course of substantial change of demographic regime, it seems that the tempo of further diffusion of the ideational changes could be strongly dependent on the process of the EU enlargement to the Western Balkans.

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