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Labor migration from East to West in the context of European Integration and changing socio-political borders

CASE Network Studies & Analyses, No. 366

Provided in Cooperation with:
Center for Social and Economic Research (CASE), Warsaw

Suggested Citation: Uzagalieva, Ainura; Chojnicki, Xavier (2008) : Labor migration from East to West in the context of European Integration and changing socio-political borders, CASE Network Studies & Analyses, No. 366, Center for Social and Economic Research (CASE), Warsaw

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Labor Migration from East to West in the Context of European Integration and Changing Socio-political Borders

Ainura Uzagalieva
Xavier Chojnicki

No. 366/2008

Warsaw Bishkek Kyiv Tbilisi Chisinau Minsk

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This work has been prepared within the framework of the ENEPO project (EU Eastern Neighbourhood: Economic Potential and Future Development), financed within the Sixth Framework Programme of the European Commission.

The authors gratefully acknowledge financial support by European Commission under the ENEPO project managed by CASE, in particular, Marek Dabrowski, Sebastien Leclef and Maryla Maliszewska. We are indebted to Randall Filer from CERGE-EI and Vladimir Borgy from Banque de France for useful comments and suggestions enriching this research. The first draft of this work was presented at the ENEPO workshop in Brussels on November 30, 2007. The opinions of the author do not necessarily express the view of the institutions they are affiliated with. All usual disclaimers apply.

Keywords: **Labor economics, demographic trends and forecast, immigration**

JEL classification: **J01, J11**

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Graphic Design: Agnieszka Natalia Bury

EAN 9788371784644

Publisher:

CASE-Center for Social and Economic Research on behalf of CASE Network
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Abstract

Labor migration from Eastern Europe and the member countries of Commonwealth of Independent States (CIS) to the Western countries became an important socio-economic issue. Since political systems and the nature of border management in these regions, migrations turned out to be a very complex and unpredictable issue. The purpose of this study is to analyze the region specific factors, practices and policies of migration in the Eastern countries, the possible scenarios and demographic consequences of the future migration flows. In order to address this issue properly, some of the complexities of labor migration phenomenon in the region are uncovered.

1. Introduction[1]

Migration issues and associated policies have become a very important socio-economic issue during the last two decades or so given the increased number of emigrants coming from the member countries of Commonwealth Independent States (CIS) to the western countries. This grows the concern of policy-makers in both migrant sending and receiving countries that the size of migration flows could be very large in the future. According to various estimations, the future migration potential from the CIS to West is calculated approximately at 13.5 mln. for the horizon from 2000 to 2050 (Mansoor and Quillin 2007). While these estimations are based on demographic and economic factors, which are undoubtedly very important in determining migration flows, the complexity of the issue that stems from various problems related to migration (e.g. irregular migration, trafficking in people, and changing borders) requires, in addition, a careful consideration of cultural, public and political aspects of migrants' lives.

Studies focused on the post-Soviet countries distinguish ethnicity, quality of life, population composition and economic factors as the important determinants of migration (e.g Fassmann and Munz 1994, Cao 1999). For example, population composition and the quality of life are distinguished to be the important determinants of migration within these countries (e.g. out-migration from the North and East part of Russia), while ethnic aspects are stressed to be the main force for migration between the countries (e.g. "non-ethnic" nationalities emigrate mostly from newly formed states). One should remark also that earlier work downplayed the impact of traditional labor market factors (e.g. wage and employment levels) on immigration flows in the CIS, claiming that under the prevalence of wage arrears and extensive barters, its standard market signals did not operate (e.g. Cao 1999). Later studies, on the contrary, argued that the labor market variables considered in the neoclassical approach shall operate in the post-Soviet countries exactly as theory predicts (Andrienko and Guriev 2004).

The main purpose of this study is to empirically investigate the determinants of migration flows in the CIS taking into account its region specific factors and, based on this, develop the possible scenarios of future migration flows for three regional parts, including: Russia and the European part of CIS, the Caucasus and Central Asia. In particular, the main driving forces of the past and recent migration trends are analyzed focusing on large migration waves, which took place from the former Soviet Union (SU) prior to 1990 and the CIS after 1990, and their main features. Then, the potential sizes of emigration flows under three possible scenarios are proposed. In analyzing the migration flows, uncertainty issues and policies implemented by the major receiving countries within the CIS are taken into account, apart from traditional labor market factors. The next section provides a brief survey of migration theories, their empirical relevance and stylized facts on the CIS countries. Section 3 describes backgrounds for large migration flows as well as recent migration trends in the region. The main determinants of migration are discussed in Section 4 and the possible scenarios of future migration flows are provided in Section 5. Section 6 evaluates the demographic consequences of migration for some selected CIS countries and Section 7 concludes.

[1] Comments, suggestions and critiques on this draft work are welcome. Corresponding the authors: uzagali@uac.pt at the Centre of Applied Economics Studies of the Atlantic at the Department of Economics and Management, the University of the Azores and Xavier.Chojnicki@univ-lille2.fr at the University of Lille 2.

2. Theoretical and empirical background

A traditional neoclassical approach assumes that migrants choose locations based on current and expected income differentials. These stem from varying economic and employment opportunities across countries where migration is considered an investment decision of rational agents whose overall gains from migration exceed the moving costs (e.g. Sjaastad 1962; Todaro 1969). The probability of migration, consequently, is expected to increase with wage and welfare gains and decrease with the rise of unemployment rates. Moreover, various permanent and transitory shocks, which differ in their persistence and predictability, influence migration through changes in labor supply. Most empirical studies, which are based on the traditional theories of migration (e.g. Pissarides and McMaster 1990; Greenwood et al. 1991; Barro and Sala-i-Martin 1991), analyze the relationship between current net migration and various labor market and non-market variables using, typically, aggregated data. Important labor market variables in these studies are wage and unemployment rate. Non labor market factors are controlled usually by a wide range of variables including, for example, geographic distance, satisfaction with the location of origin, attachment to local labor markets, institutional and legal aspects, family ties, customs and cultural differences between immigrants and natives (Enchautegui 1997, Konya 2007, Lazear 1999, Fertig and Schmidt 2000).

Many of the above-mentioned empirical studies, as mentioned by Gallin (2004), ignore the forward looking nature of migration, even though this nature is crucially important in the theoretical models. Specifically, Gallin argues that the estimated effect of the current variables on net migration can be largely biased due to identification problems, if the forward looking nature of migration decision is ignored, as is the case in many empirical studies. Recent studies in this area, which are known as “the new economics of labor migration”, add new dimension of labor migration. Namely, market uncertainty and risks in family migration decisions are incorporated to the above-mentioned traditional models (Chen et al. 2003, Stark 1991). Focusing on a collective and interdependent decision-making, the authors emphasize household families as an important decision-making unit in which a migration choice stems from the risk diversification strategies of families. Collective migration decisions result in remittances from migrants to their families in their home countries. In this respect, income risks or income correlation between countries and regions are found to be key determinants of family migration decisions since negative correlation reduces the overall risk and strengthen incentives to migrate (Chen et al. 2003). Based on a comprehensive analysis of family migration in the framework of utility maximization with heterogeneous members, the authors argue that members with high earning potential abroad migrate even if they earn less and income risks are high in a foreign country. Thus, under the assumption of risk uncertainty, migration doesn’t flow automatically in response to wage differentials, but it also depends on certain risks (country risks, economic and political uncertainty, migrations cost), which vary across countries, and market correlations between home and foreign countries.

Empirical studies covering the main determinants and future potential of migration flows between and within the CIS countries include Memedovic et al. (1995), Fertig (1999), Weiss et al. (2003), Andrienko and Guriev (2004), Patzwaldt (2004) and Rios (2006). Uncertainty and risk factors, which are important determinants of migration, are not, however, considered in these studies. Bauer and Zimmerman (in Memedovic et al. 1995), for instance, analyze the welfare implications of labor migration from the least developed countries to Western Europe. The authors investigate empirically the structure of population and demographic trends for Europe and the least developed countries and outline two important facts. First, there is a stagnating and ageing population in the European Union (EU), while in the least developed countries there is noticeable population growth. Second, there is no statistical relationship between migration and the level of unemployment in the receiving EU member states. Incorporating these assumptions into a formal model of migration, they provide a scenario in which migration flows to Europe from the least developed countries will be concentrated among low-skilled workers. The present study attempts to empirically investigate the determinants of migration flows in the CIS, taking into account uncertainty issues and policies implemented by the major, migrant receiving countries, apart from traditional factors described in the above-mentioned studies. Specifically, the main factors and origins of migration, as well as the groups of migrants under the past migration flows are analyzed. Based on these, three possible scenarios of migration flows within and from the region are proposed.

3. Earlier and recent migration in the CIS

In order to understand better reasons for migration flows in the CIS, one needs to examine the historical origins of these flows. Migration flows can be traced back to the 19th century when Russian territorial borders sharply extended towards Caucasus and Central Asia. In this period, the former Russian Empire initiated substantial reforms in education, the government, the judiciary and military under the rule of Alexander II. Among these reforms were military expansion and agricultural colonization. Following the Crimean War, Russian troops first gained control of the Caucasus region, where they faced revolts of Muslim tribes under the leadership of the Chechen rebel, Shamil[2]. After capturing him in 1859, the army expanded into Central Asia. By 1868 Russian forces had occupied the territory of Turkestan, the capital of which was Tashkent (the capital of present Uzbekistan), and the Samarqand area. Later, in the 1870s, Russian troops incorporated the remaining Central Asian emirates into the empire and in 1881 the Turkmen lands on the Persian and Afghan border were occupied.

In the 20th century, the territory of the former Russian Empire was expanded further. Between 1920 and 1945, new regions (e.g. the former Bukhara and Khiva Emirates[3], Western Ukraine, Western Byelorussia, Bessarabia, Northern Bukovina, the Baltic States, Tuva and Konigsberg [i.e. Kaliningrad]) were included. Migration in these regions as well as other economic and geographic peripheries of the former Empire was intensified by urbanization, which occurred first within Russia and Ukraine between 1917 and 1941. After the World War II, it spread to other regions including Belarus, Moldova, Central Asia and several eastern autonomous republics of Russia[4]. With the goal to urbanize and develop virgin lands with rich natural resources, the authorities of the former SU were intensively moving citizens from the European regions towards East, North-East and South. Very often aggressive campaigns were used against population. As reported in Pockney (1991), for example, many civilians were taken forcibly from their homelands and scattered to newly incorporated territories in the eastern and southern regions of the former SU during the state-building process.

The state-building process of the former SU, therefore, was accompanied by massive population flows including forced, state-organized and voluntary movement. There is not much written about these in the economic literature so far. The primary reason for this is that migration issues generally were not a popular area of research in the former SU since economic activity and labor force distribution within the country were planned and controlled by the state. Yet, there were a few attempts to analyze the concepts of population mobility restrictions and migration flows both before and after the collapse (e.g. Santalov and Segal 1927; Lewis and Rowland 1979). According to these studies, there were several large waves of migration flows in the former SU. The first wave took place between 1917 and 1938. Santalov and Segal (1927) report that about *23.8%* of population in the former Russian Empire left the country immediately after the red revolution of 1917. During the following years, i.e. between 1921 and 1933, which are marked as the period of severe famine in the history of SU, about *4–5.5* mln. emigrated (Pockney 1991). Emigration was almost impossible between 1937 and 1941, but there was an unprecedented ethnic migration within the country, primarily, from the European part towards East and South. This was caused partly by the collectivization policies of the early 1930s, which generated large losses for agricultural settlers pushing them out of their settlements, as well as repressions largely victimizing intellectual elites in the late of the 1930s. People were moving massively within the country through state-organized as well as private ethnic migration.

After World War II, the second large wave of emigration flew when about *8–10* mln. left the country, then the long period of the "iron curtains" followed. From the 1950s to the 1970s emigration was almost impossible. Table 1 demonstrates the structure of population by ethnic groups during the period from 1959 to 2002 when there was a large fall in the number of a few ethnic groups (e.g. Jews, Germans and Poles) during the 1970s. According to Fassmann and Munz (1994), this

[2] This example demonstrates that some of the ethnic conflicts in the CIS have very old roots going back to earlier centuries.

[3] The Bukhara Emirate and the Khiva Khanat, which were located in Central Asia, were included to the former SU in 1920 as parts of present Uzbekistan, Tajikistan and Turkmenistan.

[4] The SU experienced significant city growth from the 1940s through the 1980s with one of the fastest rate of urbanization in the world (Gang and Stuart 1998).

was the result of eased restrictions in the emigration policy of the former SU under the pressure of the United States (US) and Western Europe. The third wave of large emigrations started in 1988 when legislation allowing all citizens of the former SU to travel abroad by private invitation was put in force[5]. Immediately after enacting this law, emigration increased by *2.5* times in 1988 compared to 1987. It mainly consisted of representatives of national groups, most of which were returning to their historical homelands or joining powerful foreign diaspora (Fassmann and Munz 1994). According to Fassmann and Munz (1994), about half of these emigrants were ethnic Jews, almost all of whom went to Israel or US[6]. More than a third of emigrants were ethnic Germans whose emigration was supported by the Federal Republic of Germany. Thus, a variety of factors motivated these emigrants to leave the country. These included economic, political, ethno-cultural and religious reasons, but all emigrants had one thing in common: politically powerful bridgeheads abroad.

The overview of emigration flows that took place in recent years shows that migration was limited geographically. The main source countries of emigration to the Western Europe, for example, were Russia and the European part of the CIS (*84%*) including Ukraine, Belarus and Moldova. Mostly, ethnic Jews emigrated from these countries, which caused a decrease in their total number by *76%* between 1989 and 2002 in the CIS. During the same period, the number of ethnic Germans decreased by about *50%*, most of whom emigrated from Central Asia. Further evidence suggests that the largest part of CIS emigrants was from capitals and large cities. About *40%* of emigrants from Russia previously resided in Moscow and St. Petersburg, emigrants from Ukraine were inhabitants of Kiev and Odessa, people from Belarus used to live previously in Minsk and the Gomel province, and those from Kazakhstan came from Alma-Ata and Karaganda province.

Ethnic factors played an important role not only in external, but also in internal migration flows in the CIS. So far, two main trends of such migration flows have been observed. The first is the migration of those ethnic groups to the states in which they form a titular nation, referred as return migration. The second trend is migration to Russia by the members of ethnic Russians and all nationalities assimilated to Russian culture (e.g. Locher 2002). One has to remark, however, that the return migration of ethnic Russians from the other SU republics started in the 1970s, before the break-up of the SU. Table 2 demonstrates that the process of ousting Russians began in the Caucasian republics in the 1960s when the share of ethnic Russians in the total population decreased e.g. by *2* and *4* percentage points in Georgia and Azerbaijan, respectively. While the Russian population was already decreasing in Central Asia and the Caucasus during the 1980s, immigration into the European part of the former SU, especially, to Ukraine, Belarus, Estonia and Latvia continued by ethnic Russians. In recent years, the pace of this process has been intensified by the social and political development following the collapse of the SU. With the transformation of the SU to the CIS, about *73* mln. altogether became the members of new ethnic groups. The largest fraction were ethnic Russian (*26* mln.) living outside Russia. So, a relatively recent phenomenon in the CIS is an increase in the number of ethnic Russian refugees and accompanying groups (e.g. Russian speaking small ethnicities) due to ethnic and religious conflicts in the CIS[7]. These conflicts arose in various controversies over political power, ownership, and citizenship due in many cases to a revival of nationalism. For these reasons, voluntary or forced migration to Russia was large during the period from 1992 to 2005 (Table 2).

Table 3 demonstrates that the inflow of migrants to Russia from other CIS states is large, with net immigration roughly equal to *4.8* mln. between 1990 and 2005. About *35%* of these people left Kazakhstan, *24%* are from Uzbekistan and Tajikistan, *16%* – from Georgia and Azerbaijan, and *8%* – from Ukraine. Table 4 further indicates that refugees were departing mostly during violent ethnic conflicts and also from those states where ethnic Russians are either few in numbers (e.g. Georgia, Tajikistan and Uzbekistan) or dispersed over large areas (Kazakhstan). This implies that one of the main factors pushing emigration is political instability and ethnic tensions forcing various ethnic and religious groups to flee. Another reason is the fact that in these newly established states, domestic policies were suddenly changed in order to quickly revive their own culture and lan-

[5] This legislation was enforced under political and economic pressure at the international level.

[6] The anecdotal evidence, however, suggests that many of these "Jews" had no background in the religion, but declared so in order to emigrate.

[7] The example of these conflicts includes the Nagorno-Karabakh conflict in Azerbajan, conflicts between Kyrgyz and Uzbeks in Osh region in Kyrgyzstan, between Uzbeks and Meskhetian Turks in the Fergana Valley of Uzbekistan, between Chechens and Ingushis in the Northern Caucasus, and the civil war in Moldova and Georgia.

guages. For example, Russian is no longer the official language in these countries and knowing the language of a titular nation is a necessary condition for many jobs. Consequently, ethnic Russians and many other small ethnicities assimilated to Russian culture and language are willing to emigrate[8]. For historical reasons the main destination for these refugees and emigrants is Russia. According to the Russian Federal Migration Service, for example, the inflow of both regular and irregular migrants to the country has substantially increased recently. The number of work permits issued to foreign citizens rose from *129* thousand to *670* thousand between 1994 and 2005. The number of irregular migrants is much larger, but not precise, estimates are ranging from 5 to *10* mln. during this period (Voronina in Rios 2006). Key migration trends have taken place recently are briefly overviewed below by three regions, the CIS European part, the Caucasus, and Central Asia.

3.1. The European part of the CIS

The CIS European part is identified in this study as Belarus, Moldova, Russia and Ukraine with a total population of about *203* mln. people. The discussion above suggests that Russia is in the core of migration issues in the CIS, receiving as well as sending the large number of migrants. According to the State Committee of the Russian Federation on Statistics (SCRFS), about *4.8* mln. emigrated from Russia during the period from 1990 to 2005. The majority of these people left for other CIS states (*78%*), including Ukraine (*33.9%),* Kazakhstan (*13.6%*), Belarus (*8.1%*) and Uzbekistan (*3.8%*). Among the rest of the countries, Germany (*16.1%*) and Israel (*5.5%*) are the largest receivers of migrants from Russia. As for the number of immigrants during this period, SCRFS reports that approximately *8.7* mln. people came, most of whom left Kazakhstan (*27.2%*), Ukraine (*23.2%*), Uzbekistan (*11.1%*), the Caucasus (*14.3%*), other CIS countries (*19.7%*), and the rest of the world (*4.5%*). One has to remark that a key concern for Russia is the large size of irregular immigration from its neighboring states. According to International Organization for Migration (IOM)[9], for example, the official estimates of irregular immigrants residing permanently in the Russian Federation in 2005 ranged from *3* to *5* mln. people, while the number of Russian citizens working abroad at both regular and irregular basis was in the range between *500* thous. to *1.5* mln. Moreover, about *12* to *15* mln. immigrants visit Russia every year for seasonal work, however, the number of work permits obtained for foreigners by Russian employers annually is much fewer (*300* thous.). Consequently, the majority of foreigners work illegally in Russia, mainly in the shadow and informal structures of the economy (ILO 2005).

Ukraine is the second largest country in the region with a population of about *47* mln. The number of emigrants living abroad is also large. For example, the size of the Ukrainian diaspora in the West was estimated at *3* mln. prior to 1989. During the period from 1991 to 2004, about *4.5* mln. left mostly for US, Canada, Argentina and Europe, while the number of immigrants coming permanently from other CIS states to the Ukraine has been estimated to be about *2* mln. (Rios 2006). So, between 1989 and 2005, population of Ukraine dropped by *4.6* mln. due to large net migration outflows as well as falling birth rates with the lowest rate of natural increase in the world (*-0.8%*). Because of a large number of Ukrainian emigrants leaving for abroad, the government of Ukraine has recently signed a number of bilateral labor agreements with a purpose of simplifying employment procedures for Ukrainian workers and protecting their rights[10]. For example, an agreement on temporary labor migration has been signed with Portugal where Ukrainians form about *2%* of its inhabitants. In 2005, Italy granted legal status to about *100* thous. workers coming from Ukraine. The EU and Switzerland announced that visa regimes for Ukrainian workers will be eased. These agreements can increase the migration outflows. According to Cipko (in Rios 2006), however, relatively well educated Ukrainian citizens living in these and other European countries are mostly engaged in sectors with low-skill requirements such as, for example, agriculture (harvesting fruits and vegetables), construction, care taking (taking care of seniors, children and sick) and service (hotels, cafeterias, restaurants, nightclubs). Therefore, the large outflow of profession-

[8] According to a field survey of 945 ethnic migrants conducted by the Center of Demography and Human Ecology of the Institute for Employment Studies in the beginning of the 1990s, 27% of them would like to emigrate.

[9] See e.g. International Organization for Migration (2005): Russian Federation, "Facts and Figures".

[10] The list of these countries includes Belarus, Armenia, Moldova, Russia, Latvia, Lithuania, Poland, Portugal, Spain and Slovakia.

als as well as a sharp fall in country's population increased the importance of domestic policies towards return migration. This will presumably determine to a certain extent the future prospects for migration flows from the country, along with the speed of political and economic reforms in Ukraine. Evidence suggests also that Ukraine is one of the origin countries in Europe for trafficking in human beings for prostitution, labor and domestic servitude for Western Europe, Turkey and Russia (IOM 2005). This creates a major migration and human rights challenge for the country.

Widespread poverty with about *64.7%* of population living below the poverty line and the lack of job opportunities caused many Moldavians, estimated at about *408* thous. by 2005 (IOM 2005), to emigrate abroad, mostly illegally. In addition, Moldova has, by far, the greatest number of victims of trafficking in the region (IOM). The government attempts, in this respect, to improve migration management through accessing the impact of migration, ensuring protection of migrants' rights and preventing trafficking in persons. In Belarus, the number of emigrants is estimated at about *1.2* mln. people (or *12.2%* of population) since the beginning of the 1990s. As in other CIS countries, preventing trafficking in people, especially young women, to the EU countries, Russia, Middle East and South-East Asia is considered a major challenge for Belarus. According to IOM, the government of Belarus demonstrated its commitment and made visible efforts to counteract illegal migration, trafficking in human beings, and related crime, however, the capacity of the country alone in responding these difficult challenges is limited. In this respect, in partnership with government institutions, international and nongovernmental organizations, IOM works to address the main migration priorities in line with the state migration programme set for 2006–2010. IOM applies a regional programmatic approach to enhance the capacity of the Belarusian government to improve border management, fight illegal migration and trafficking in human beings, promote cross-border cooperation and develop legal migration opportunities.

3.2. Caucasus

The Caucasian countries, with a total population of *16* mln. people, experienced difficult state building processes in the 1990s, accompanied by natural and human disasters with devastating effects on their economies. As a result, various ethnic and socio-economic tensions became a push factor for many emigrants. Between 1988 and 2005, for example, between *0.9* mln. and *1* mln. people permanently left Armenia (Yeganyan in Rios 2006), while about *2* mln. and *1.9* mln. emigrated from Azerbaijan and Georgia, correspondingly. The estimated potential of emigration from the region (*0.8*–*1.5* mln.) suggests that migration flows will continue for some time (Yeganyan 2004, IOM 2006). The main factors for this are social and economic conditions in the region which are enhanced, in addition, by migrant community networks established abroad (e.g. a large Armenian diaspora of more than *10* mln.). Among the Caucasian countries, Azerbaijan is recognized to be a leading exporter of labor to the CIS. About *2* mln. Azerbaijanis are identified labor migrants, *75%* of whom live in the capital and major cities of Russia[11].

The main migration challenges in the region, apart from high migration flows abroad, are transit migration originating from Central Asia and the Middle East, trafficking in people and associated border control issues. According to IOM (2005), all three countries face an important challenge to prevent smugglers and irregular migrants from using the region as a transit corridor to Russia and Western Europe. In this respect, various technical assistance programs financed by international and donor institutions are focused on promoting legal migration. These include national capacity building and inter-regional dialogue between the South Caucasus and the EU on preventing irregular migration, enforcing legislation on cross-border transfers, upgrading the border management system, trainings in investigating the cases of trafficking in people, assisting in the voluntary return of migrants to the region, etc. (IOM 2005)[12].

[11] During the period from 1989 to 2005, for example, the number of ethnic Azerbaijanis residing in the capital city of Russia increased by 4.6 times.

[12] International and donor institutions assisting the governments of the countries in the region include, for example, the governments of US and Canada, EU, Swiss Agency for Development and Cooperation, World Food Programme, Foreign and Commonwealth Office.

3.3. Central Asia

The Central Asian part of the CIS, with a total population of *58* mln. people, largely diverged in terms of main economic and social indicators after the break-up of the SU. Due to dynamic economic development and relatively high wages[13], Kazakhstan, for example, became a major destination for labor migrants in the region. Two types of labor migration are distinguished within the region: immigration for seasonal work, with about one million illegal migrants coming every year from the poorer neighboring countries, and illegal migrants that prefer to use Kazakhstan as a transit country for moving to Russia and Europe. The second category includes immigrants from the Central Asian region as well as Eastern Russia, China, Turkey and Afghanistan. Irregular immigrants are estimated to compose *80%* of all immigrants in the country (Bulekbaev in Rios 2006). In this respect, policies towards legalizing illegal labor migration were introduced with the purpose to increase budget revenues through the taxation of currently unregistered labor migrants, ensure their right and social protection, and eventually decrease illegal labor migration. As a result, the number of officially hired foreign workers has increased from *10.7* thous. in 2001 to *24.8* thous. in 2005. According to Bulekbaev (in Rios 2006), the majority of foreign workers were employed in the *Atyrau* region (*32.6%*), where concentrated the oil refining and producing branches of the Kazakh economy, as well as in the current (*15.4%*) and previous (*8.4%*) capital cities[14]. At the same time, the Kazakh government set annual quotas for foreign specialists in each industrial sector in order to protect the national labor markets[15].

While many ethnic Russians and Germans have left Kazakhstan, over *300* thous. ethnic Kazakhs have returned since independence. This was enhanced for some extent by the Kazakh government that established special quotas for ethnic Kazakhs (or "*oralmans*") coming from Russia, Uzbekistan, Turkmenistan and Mongolia. These immigrants were supported by the state both in housing and work. For example, about *99.7*% of budgeted allowance was assigned to these immigrants in 2004 (Bulekbaev in Rios 2006) which contributed for some extent to a balanced net migration in 2005, after the net out-migration pronounced in the early and mid-1990s. At the same time, growing salaries and demand for workers attracted labor migrants from the neighboring countries in Central Asia. Due to a restricted legal employment framework, however, still most labor migrants work irregularly. In mid-2006, the government developed regularization for certain categories of labor migrants. This initiative, however, has not brought yet legal status and protection to the majority of labor migrants in Kazakhstan.

Other countries in the region – Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – are primarily sending countries. Various social studies (e.g. IOM 2005, Rios 2006) indicate that external migration from these countries amounted to *2–3* mln. during the period from 1995 to 2005. While most of these people went to Russia and Kazakhstan, some emigrated to Turkey, the UAE, Iran and Arab countries with which Central Asia established various social networks through shuttle trade at the beginning of the 1990s. Some countries in the region (e.g. Turkmenistan) became transit countries for Afghans going to Russia and then to the West. As for the future potential of external migration, social surveys conducted in the region suggest that about *12%* of the population, on average intends to emigrate abroad (e.g. Rios 2006). The largest share of potential emigrants is from the middle-income group, with a primary reason for their wish to emigrate being the lack of appropriate work in the region. Most of the potential external migrants, roughly *50–60%*, would like to go to Russia, *10–15%* to Kazakhstan, and the rest of the respondents to other foreign countries including Turkey, the UAE and Arab countries.

According to IOM (2005), the regional projects financed by international donor institutions[16] are focused on combating trafficking in people through law enforcement, prevention, protection and capacity-building activities, promoting dialogue between the government agencies within the region on improving border controls, assisting voluntary return migrants, etc. Apart from these initiations,

[13] A minimal threshold of wages in Kazakhstan was 250 USD while the average salary in Kyrgyzstan and Uzbekistan was about 60 USD in 2005.

[14] The present capital city of Kazakhstan is Astana, the previous one is Almaty.

[15] In order to strengthen migration control over the temporary stay of foreigners in Kazakhstan, special migration cards were introduced in 2003. The top three sectors with the highest demand for foreign labor were the construction (58.4%), mining (15%) and agricultural (7.8%) sectors in 2005.

[16] These include e.g. the Canadian government, EU, the Norwegian government, Swedish International Development Agency, the government of US, etc.

improving the border management and controls, first of all, at the eastern and southern boundaries of the region seems to be a very important challenge in the region due to the geographical position of Central Asia[17]. With the withdrawal of the Russian forces from the borders, after the collapse of the SU, there is a substantial ground for increased risk factors. In particular, the borders between countries with weak governance (e.g. between Tajikistan and Afghanistan, Turkmenistan and Iran, Kyrgyzstan and China) are very vulnerable to drug and human trafficking. For these reasons, the region is potentially attractive for smugglers and organized crimes as a transit corridor, traditionally, for trafficking drugs from Afghanistan to Russia and Europe and, more recently, for trafficking young people to the Gulf, Middle East and South-East Asia (see e.g. IOM 2005). Therefore, coordinated cooperation on the common border management in a close partnership with the neighboring countries, particularly with Russia, as well as international and inter-governmental organizations at both regional and international levels is an important and urgent challenge in the region.

4. Region and country specific factors of migration

The discussion above suggests that socio-economic, ethnic and political factors have played an important role in the migratory flows from and within the CIS and suggests that these factors will also determine the direction, pattern and magnitude of future migration flows. In terms of economic and demographic factors, the CIS countries are characterized by large disparities. Table 4 demonstrates the selected economic and demographic indicators from the CIS countries in 2006. According to Table 4, the CIS countries differ greatly in terms of demographic factors in 2006. For example, the highest population decrease is in Ukraine (by *0.74%*), while in Armenia it increased by *2.23%*. Generally, the European part of CIS is characterized by a low ratio of children under *15* when compared to the Caucasus and Central Asia (Figure 1, Appendix 2). In terms of economic growth rates, Azerbaijan achieved the highest growth rate (*34.5%*) in 2006, while Kyrgyzstan grew by only *2.7%*. The wealthiest country in terms of GDP per capita is Russia and the poorest one is Tajikistan. As shown in Figure 2 (Appendix 2), GDP growth rates fluctuated in a wide range, between *-44.9%* and *34.5%*, during the period from 1989 to 2006. Furthermore, although prior to 2004, the countries were converging in terms of GDP growth rates, after this date they largely diverged. One important reason for diverging trends in the GDP growth rates was political instability in a number of countries experienced revolutions between 2004 and 2005. For example, in the year following the rose revolution in Georgia, the growth rate of GDP declined by *6%* compared to the previous year. In Ukraine it fell from *12.1%* in 2004, the year when the country experienced the orange revolution, to *2.6%* in 2005 and in Kyrgyzstan from *7.0%* in 2004 to *-0.2%* in 2005 after the tulip revolution that took place in March 2005.

Therefore, in terms of economic differentials, there is substantial impetus for increased migration flows. Both housing availability and job opportunities in potential destination countries are important. At the same time, migrants' ability to access information on various opportunities is also important. With respect to the absorptive capacity of potential destination countries (e.g. Russia and Kazakhstan), it seems that so far these countries are neither economically nor socially and psychologically prepared for receiving a large number of migrants from neighboring countries. Recent studies focused on internal labor migration in Russia, for example, mentioned that city restrictions, the lack of a real housing market and other policies undertaken by the policy-makers to curb the massive flow to major cities and regional centers are major obstacles in resettling immigrants (e.g. Andrienko and Guriev 2004). Therefore, many migrants, who left their former places of residence outside Russia lack stable accommodation in Russia. Given these, it can happen that potential migrants will start looking for other destinations. In many cases the orientation is either towards the West (e.g. ethnic Russians and other ethnicities assimilated to Russian culture) or countries like Turkey, Iran, and Afghanistan (e.g. ethnic groups assimilated to Islam). In this respect, one can expect that many in similar situations in the CIS will start looking for opportunities either to settle in a state where their ethnic group forms a majority or to emigrate abroad. Since Russia is one of the largest destination as well as origin countries in the world, in terms of migration flows (Mansoor and Quillin 2007), the demographic and migration situation in Russia deserves a special attention.

[17] Central Asia is bordered with Russia to the north, China to the east, and Afghanistan and Iran to the south which makes the region very attractive for organized crimes and smugglers for trafficking people, drugs, etc.

The demographic situation in Russia is characterized by an imbalance of geographic distribution of migration flows and unequal distribution of population in terms of age structure across the regions of the country. Namely, the large migration of young adults from rural areas to the central and southern parts of the country intensified in the 1990s and has resulted in the depopulation of economically and geopolitically important regions like Siberia and the Far East. Moreover, according to the forecasts of Russian ethno-demographers, the population of the country will decline by a further *10* mln. people between 2006 and 2025. This will be translated to a stronger decline in working age population by more than *1%* per year (Voronina in Rios 2006). In this respect, immigration is seen to be an important way of replenishing the shrinking labor force. Therefore, Russian authorities initiated reforms in migration policies in 2005. The policies prior 2005 can be presented in the following few stages.

The reforms initiated during the first stage (1991–1994) included enforcing the migration laws and establishing the main institutions governing the development and implementation of migration laws. At this stage, various funding programs were launched with the purpose to support immigrants to Russia. Later, between 1995 and 1999, the importance of regulations was recognized and reflected in correcting measures adopted at the presidential level. After 1999, key institutions responsible for migration policies plunged into multiple and effective reorganizations, which eventually caused the departure of qualified personnel and policy deterioration. Therefore, during the period from 1999 to 2002, institutions did not manage to resettle migrants. As a result, many immigrants who came to the big cities of Russia faced problems with housing, employment, etc. With a sharp increase in the various categories of migrants, especially irregular ones coming from the CIS as well as other regions (e.g. South-East Asia, Africa and the Middle East) to the big cities, the situation in the social sphere became difficult leading in many cases to racial intolerance and national conflicts among the population. In response, Russian authorities introduced various restrictions on migrants between 2002 and 2004 (Voronina in Rios 2006).

Reforms in migration policies started in 2005 are aimed at combating irregular immigration. These policies include actions on liberalizing and improving the legal status of nationals coming from the CIS, as well as integrating immigrants into the Russian society. At the same time, strict punishment from smuggling and trafficking people as well as sanctions against employers hiring irregular workers are emphasized. Joint actions with other CIS countries include modernizing immigration control systems and facilitating permanent immigration to Russia. In addition, policies focused on attracting highly qualified specialists into Russia from the CIS as well as other countries of the world will receive high priority.

5. Possible scenarios of future migration flows

The discussion above suggests that migration pressure in the CIS countries will increase due to diverging demographic, economic and political situations, as well as various ethnic factors. The question of how large the potential migration will be is not, however, clear. Empirical studies focused on the future migration flows from the CIS to EU and Russia are typically based on economic and demographic factors (e.g. Mansoor and Quillin 2007). For example, the net immigration flows to the EU and Russia are estimated at *13.5* mln. and at *5.4* mln., respectively, for the period from 2000 to 2050. The direction, pattern and size of migration flows from and within the CIS are determined also by many other aspects of migrants' life, apart from demographic and economic differences. These are, for example, ethnic background, political situation and migration policies which vary from one country to another in the CIS. Therefore, this study attempts to take into account some of these factors and determine the possible scenarios for future migration flows in the CIS. Since ethnicity based migration has been one of the main features of migration flows during the last decades in the CIS, the scenarios of future migration flows are determined for two population groups separately. The first group includes nationalities which have ethnic ties with other countries or large diasporas abroad. The second group includes new ethnic minorities which appeared after the establishment of independent CIS states.

5.1. Emigration for ethnic reasons

The potential emigrants of the first population category exceeded *8* mln. in the population census of 1989 in the entire former SU. The most numerous among them were ethnic Germans (*2*

mln.), Jews (*1.5* mln.), and Poles (*1.1* mln.). Other nationalities included Greeks, Koreans, Persians, Turks with the total number of about *3.4* mln. In the 1990s, most ethnic Germans, Jews and Poles emigrated abroad so that the total number of these groups decreased by more than three times in the CIS. Presumably, other ethnicities were leaving too. Thus, assuming that at least half of these ethnicities left the CIS, one can expect that the maximum potential of *8* mln. declined to about *2.9* mln. This suggests that emigration for ethnic reasons will eventually decrease, but not disappear completely (Fassmann and Munz 1994). Most likely, according to Fassmann and Munz (1994), it will be sustained by the second group, i.e. new ethnic minorities or potential return migrants appeared with the establishment of the CIS states. This group includes about *46* mln. people of various nationalities and *26* mln. ethnic Russian in the CIS. Therefore, all CIS countries might face an increased potential for migration flows. Namely, national and religious minorities dissatisfied with the domestic policies as well as their positions in the CIS states most likely will move. Migration of large ethnic groups, particularly Russians, who prefer to leave the CIS states with the new national majorities could also be large.

The first group of potential emigrants will most likely emigrate irrespective of the socio-economic and political situation in the CIS, if they are attracted by foreign countries. In other words, various shocks in the CIS members as well as immigration controls and restrictions imposed by potential destination countries outside the CIS can be ignored in determining the future scenarios of emigration for this group. Layard et al. (1992) proposes three scenarios for migration flows under the absence of shocks and major controls assumption. According to the first scenario, potential emigrants would move quickly once emigration becomes possible so that the rate of emigration flow is high initially, but later converges to a certain steady level. Under the second scenario, information channels available to potential emigrants matter because they need some time for searching various opportunities related to housing, jobs, etc. in destination countries. Consequently, not many emigrate at the beginning. With the development of information channels, however, more people would be willing to move. The third scenario combines the first and second ones. Under this scenario, emigration increases steadily over time until it eventually tails off. According to Layard et al. (1992) the third case is the most realistic one.

The visual inspection of actual emigration flows from Russia during the period from 1985 to 2005 suggests that the actual data approximate closely the first scenario (Figure 3, Appendix 2). Namely, the largest spike of emigration took place between 1985 and 1990 only, when major controls on migration were removed and travel abroad by private invitations was allowed. In this respect one can expect that the future emigration flow of the first population group will, most likely, follow the first scenario. Therefore, relative changes in the number of emigrants moving abroad from Russia between 1985 and 2005 were used for tracing the potential emigration flow from the CIS during the same period. Then based on the assumption that the formation of the expected emigration flows will follow a geometric series of the past values[18], the potential emigration is obtained at about *1* mln. for the period from 2006 to 2025. The actual and forecasted values are presented in Figure 4 (Appendix 2).

5.2. Migration of return migrants

With respect to the second group (i.e., return migrants within the CIS), one can assume that migration potential will depend more on socio-economic and political situation in the CIS, as well as domestic policies. In particular, the situation in Russia and Kazakhstan, which are the major receivers of migrants among the CIS members, shall be very important. If these countries sustain a high rate of economic growth and implement effective reforms in their migration policies, then the large part of the potential migrants will most likely be absorbed by their labor markets. If conditions for accepting a considerable numbers of return migrants remain unfavorable, however, then most of the migrants will naturally consider other alternative options, i.e. countries beyond the CIS. In order to estimate what would be the size of potential migrants to one of these countries, Russia, a standard gravity model under the following specification is used under the following specification:

$$\ln(M_{ijt})=\alpha_1+\alpha_2\ln(Y_{jt}/Y_{it}) + \alpha_3\ln(K_{ij})+ \alpha_4 \ln(U_{jt}/U_{it})+ \alpha_5\ln(S_{it})+ \alpha_6 D_1+ \alpha_7 D_2+e_{it}. \quad (1)$$

[18] When forming their expectations, potential emigrants give the most recent past the largest weight and that weight declines over time.

The dependent variable *M* in expression (1) denotes migration flows from county *i* to country *j* at time *t*. The terms *Y*, *K*, *U* and *S* denote GDP per capita, distance (in kilometers) between the capital cities of the countries, unemployment rates, and the stock of migrants, respectively. The first term proxies wage differentials between the countries. Costs associated with migration are captured with the distance variable. The forward looking nature of migration is controlled by the stock of migrants. The term D_1 is a dummy variable indicating whether general economic and political situation in CIS was stable during the period from 1995 to 2005. The second dummy variable, D_2, is a policy restriction dummy. Indexes *i* and *j* denote origin and destination countries such that $I=1,..,11$, $J=1$[19] and *t* stands for years such that $T=1,...,10$. The parameters to be estimated by this model are $\alpha_1,..., \alpha_7$ with e_{it} as an error term. Following the theory, the hypothesis to be tested are $\alpha_2>0$, $\alpha_3<0$, $\alpha_4>0$, $\alpha_5>0$, $\alpha_6>0$, and $\alpha_7<0$.

The sample data covers the number of immigrants coming to Russia from the CIS states, constant GDP per capita in USD, the distance values in kilometers, unemployment rates and the stock of immigrants in Russia. The sources of the data for GDP and unemployment are the World Bank's World Development Indicators and the International Monetary Fund's World Economic Outlook databases. The data for migration flows come from the Russian Statistical Yearbook for 1995–2006. The distance values between the pairs of capital cities of countries are calculated using a software tool available on the website *http://.indo.com/distance*. Capital cities are used because they are assumed to be the main destination and receiving centers of countries. Since any sort of destabilization including political instability, which can vary from one country to another, causes GDP to fall, the standard deviation (SD) of GDP growth rates that is calculated across all the CIS countries at every *t* is used as a proxy for the uncertainty measure. Thus, the uncertainty dummy variable is defined as $D_1=1$ if standard deviation of GDP growth rates across the member states exceeds the median level ($SD>SD_{median}$) and $D_1=0$ if otherwise. The relationship between this measure and migration flows is shown in Figure 5. The second dummy, D_2, is equal to *1* if policies towards migration are restrictive in Russia and *0* otherwise.

The equation specified in expression (1) is estimated on a pooled data set for 1995–2005. A standard ordinary least-squares (OLS) regression is used since it allows one to estimate the independent effect of an each factor, while holding constant other variables included. The results of the estimations on the pooled data covering *99* observations are demonstrated in Table 5. The basic model variables including GDP, population, unemployment and distance have the expected signs. Namely, with an increase in the ratio of GDP per capita and the stock of migrants in receiving countries, migration flows between countries increase and with the increase of the distance between the countries, migration flows decrease. Unemployment levels are not significant statistically which is in line with earlier findings reporting no statistical relationship between migration and the level of unemployment (Memedovic et al. 1995). As for the impact of uncertainty, the sign is positive and highly significant suggesting that, under general uncertainty in the CIS, immigration to Russia consistently increases by about *79%* (the exponent of the coefficient on the dummy variable [*0.58*] is *1.79*). On the contrary, restrictions towards immigration in Russia consistently decrease the inflow of immigrants by about *2* times. The equation under this specification explains about *71%* of the variation in the migration flows from CIS to Russia.

The assessment of the immigration potential to Russia from the CIS countries requires a number of assumptions to be made in order to reflect future differences in economic and political climate, policies and reform progress. Based on the assumptions of GDP per capita ratios, the standard deviation of GDP growth rates across countries and possible development of migration policies in Russia, three scenarios are suggested below for the horizon from 2006 to 2025.

Scenario 1: Optimistic scenario

Since 1999 the president of Russia has repeatedly asserted that Russia needs 8% annual growth for 15 years in order to enter the group of strong, economically advanced and influential states of the world and, therefore, regain the regional position of a great power. In 2005, the president of Kazakhstan also set the goal for the country to develop into one of the 50 most highly industrialized economies in the world. Given these goals, the optimistic scenario assumes that by

[19] Due to data limitations, the sample covers only one destination country (Russia).

2025 the major receivers of migrants in the CIS (e.g. Russia and Kazakhstan) will catch up with the 50 highly industrialized countries in the world, by reducing substantially their dependence on exports of basic commodities (e.g. oil, mineral and energy resources). Furthermore, differences in the economic growth rates and incomes differentials among the CIS countries are assumed to increase. This is because in highly indebted CIS countries (e.g. Armenia, Georgia, Kyrgyzstan, Moldova and Tajikistan), with less favorable positions in terms of natural resources endowment and geography, investment from abroad will not be high enough to ensure rapid progress. In addition, the exports of these countries will be small due to low productivity and poor quality standards. Therefore, they are assumed to develop, in terms of GDP per capita, up to the below-than-average level of lower-middle income countries. This scenario, consequently, assumes a divergence in per capita incomes among the CIS countries, so that migration pressure will persist over time.

For assessing the migration potential under this scenario, GDP per capita in Russia is assumed to grow at a constant annual rate of 9%, in Kazakhstan at 10%, and in the rest of the countries at the range of 2.5%-8%. Unemployment rates are assumed to stabilize at the level of 7% in 2010 and remain constant thereafter[20]. The predicted immigration flows for the period from 2006 to 2025 is about 6.72 mln. Imposing policy restrictions by Russia towards immigration would largely reduce the estimated potential to 3.25 mln., which means that roughly 3.48 mln. would look for alternative destinations, most likely, outside the CIS. Under the assumption of increased economic and political uncertainty in the CIS, the estimated potential of migration to Russia would increase from 6.72 mln. to 11.99 mln. and to other countries from 3.48 mln. to 8.52 mln.

Scenario 2: Status-quo

We assume that the political and economic situation in the CIS is equivalent to the present in terms of socio-economic and policy development. The GDP per capita values in all countries are assumed to grow at a 6-year average (2000–2006). The assumed growth rate in Russia is 7%, in Kazakhstan is 10% and in the rest of the countries it ranges between 4% (Uzbekistan) and 15% (Azerbaijan). The unemployment rates are assumed to stay constant at the 2006 level. The estimated migration potential under these assumptions is 6.68 mln. Under increased uncertainty, the potential migration flows increase to 13.18 mln. and restrictive policies towards migration reduce it to 3.23 mln.

Scenario 3: Pessimistic scenario

Under the pessimistic scenario, no catching up will take place since the economies of Kazakhstan and Russia are not organized like those of 50 developed countries, which are based on the competitive conditions of free market economies. For example, the service, manufacturing and industrial sectors in Kazakhstan and Russia are relatively underdeveloped compared to highly-industrialized Western countries. Besides, the exports of Kazakhstan and Russia are composed of predominantly basic exportable goods (e.g. oil and mineral resources). Therefore, under this scenario, international oil prices and the real exchange rate would continue to play major roles in the Russian and Kazakh economies. Due to high dependence on the basic exportable commodities, fluctuations in growth in these countries would be wide with the symptoms of Dutch decease which would eventually depress the average GDP growth rates intensified by political economy considerations. This scenario, therefore, assumes convergence in per capita incomes among the CIS countries. The potential migration estimated under this scenario is roughly 6.68 mln., which goes down to 3.23 mln. under migration restrictions and increases by 4.11 mln., reaching 10.79 mln, under increased uncertainty in the CIS. In other words, under restrictive policies in Russia towards immigration, about 3.45 mln. would look for potential destination either in the CIS or other countries outside the CIS.

Potential destination countries in the CIS will probably be open for immigrants given their demographic conditions and migration policies. Consequently, under uncertainty consideration,

[20] The unemployment forecasts are drawn from “Employment and Fiscal Policy Implications of Ageing in Eastern and Southeastern Europe, Caucasus and Central Asia”, Background note by the UNECE secretariat. The International Labor Organization (http://laborsta.ilo.org).

which is highly probable in light of recent political development, one can expect that roughly 10.79 mln. (convergence), 11.99 mln. (divergence) and 13.18 mln.(status quo) would migrate to Russia under the above mentioned three scenarios. Since, the number of potential return migrants is larger than the estimated potential to Russia, there is a room for emigration flows from the CIS to the rest of the world, which will depend on the openness of potential receiving countries.

5.3. Emigration potential from the CIS to Europe

The above-mentioned sections suggest that the most favorite destination for the former SU and, lately, CIS emigrants were Europe and US in the 20th century. With the enlargement of EU, Central Europe became an important destination too. According to official sources, about *400–450* thousand migrants from the CIS, mostly from its European part, worked legally and illegally in Central Europe, especially, in the Czech Republic and Poland in 2005[21]. In this respect, the European Neighborhood Policy (ENP) implemented with the recent enlargement of EU stresses the problem of illegal migration. In particular, the ENP emphasizes the importance of legitimate travel "for business, educational, tourism and official purposes" once the proper preconditions in the neighboring countries are met and increased cooperation with other countries in fighting against illegal migration[22]. The core elements of the ENP would include, consequently, educational and youth exchange, mobility of researchers, civil society exchanges, business-to business contacts, etc.

The ENP action plans suggest that the level of skills and education would be the major determinants of migration from the CIS to Europe, at least in intermediate term. Consequently, one can expect that migrants with higher skills and better education in the CIS would most likely emigrate, especially, from the European part of the CIS where the concentration of scientific centers is higher than in other regions. In this respect, the potential migration outflows from the CIS obtained from the gravity estimates are adjusted by the size of population with tertiary education.

The assessment of potential emigration flows from CIS is based on long-run coefficients obtained from the estimation results reported in Fertig (2001). The underlying intuition behind this is that in the long-run, migration will be driven by economic factors. The approach used by Fertig (2001) allows one to determine the driving forces of the past immigration flows to Europe using a well-established model[23] that distinguishes between short-term and long-term factors influencing migration flows. Namely, using the pooled data covering *17* countries for the period from 1960 to 1994, the author derived long-run coefficients for major determinants which were further used for forecasting the immigration potential from EE to Germany. The explanatory variables, long-run coefficients and *t*-values obtained in Fertig (2001) are presented in Table 6 (Appendix 1). Fertig (2001) used three sets of assumptions to predict the future migration flows for the period from 1994 to 2015 based on these coefficients. Under the first two assumptions, referred as "medium convergence scenario with and without free movement", the annual per-capita income in Germany grows at a constant rate of *2%* leading to a decrease in the income gap between Germany and EE at a rate of *2%* per annum. Unemployment rate in Germany is set at *8.6%* per annum. Under the "no convergence with free movement" assumption, the rate of per capita income in Germany is set at *2%*, while unemployment rate is at *5%* per annum.

The potential for emigration from CIS to Germany based on these coefficients and three set of assumptions is calculated for the horizon of 2006 to 2025. Under the first scenario, in which difference in GDP per capita between CIS and Germany is assumed to decline at a rate of *2%* per year, the estimated emigration potential is about *1.25* mln. Under the second scenario, in which difference in GDP per capita between CIS and Germany is assumed to increase by about *1%* per annum, the predicted value of migration potential increases to *1.27* mln. In the third scenario, the average growth of GDP per capita in CIS countries is assumed to grow at a constant rate of *8%* leading to the decline of income difference between countries by about *6%* per annum (a five year average for 2001–2006), which gives roughly *1.25* mln. These predicted numbers were used to ob-

[21] The Czech and Polish Statistical Yearbooks, 1995-2005.

[22] "Communication from the commission to the council and the European Parliament: On strengthening the European Neighborhood Policy" (Commission of the European Communities 2006).

[23] The model is formulated in the framework of individual utility maximization and explicitly accounts for uncertainty in the migration decision and the formation of expectations regarding the future income of potential migrants.

tain the approximate emigration potential of CIS to Western Europe using the average weighted size of past emigration flows (Table 7, Appendix 1).

Given the above-mentioned results, migration flows from the CIS to Western and Central Europe might include the following components. First, emigration for ethnic reasons consisting primarily of national and religious groups with roughly *1* mln. for the period from 2006 to 2025. Second, return migration of large ethnic groups, particularly, Russians who prefer to leave the CIS states with new official languages and national majorities either for Russia or West, depending on situation in Russia and other CIS countries. Third, the potential emigration to Germany and Europe for economic reasons, which is obtained on the long-term coefficients, is equal to *1.26* mln. and *2.69* mln., respectively. These results are close to those obtained from the gravity model (Table 8, Appendix1).

6. Demographic consequences of migrations for some CIS countries

Numerous CIS countries are advanced in the ageing process, as presented in Figure 1 (Appendix 2) and are already suffering from a declining population. From this point of view, migrations could modify the age structure of the population, positively or negatively, according to the status of each country (receiving or losing workers). To evaluate the consequences of migration from a demographic perspective, we present population evolution based on different migratory scenarios for selected CIS countries: Russia, Ukraine and Uzbekistan. These countries have been chosen regarding their size and the relative importance of migratory flows to illustrate how reasonable migration flows modify the population size and structure. The choice of these three countries as an illustration is justified by two main reasons. First, these are the largest countries in term of population in the CIS with overall population of more than *200* mln. people (Table 4, Appendix 1). Seconds, demographic, economic, political and migration situation is largely differ from one country to another.

The methodology used for analyzing the demographic consequences of migration flows in this study consists of the following. We alter the population cohorts by sex and by age with three components of demographic change: fertility, mortality and net migrations. The starting point is the population structure by age and sex taken for a given year (i.e. 2005). Then, by applying survival probabilities according to age and sex, we estimate the surviving population of the following year. At the same time, the female fertility rate is applied to calculate the number of births expected during this interval. Lastly, the migratory surplus by sex and by age is added to the number of survivors at the end of the year. These operations are iterated with a five-year-interval until the last year, included to the forecast period (the year of 2050). Consequently, the projection starts with the age pyramid of three countries built for 2005. The values of initial indicators are based on the United-Nations data which are presented in Table 9 (Appendix 1). In 2005, the total fertility rate is equal to *1.34* for Russia, *1.22* for Ukraine, and *2.49* for Uzbekistan. Life expectancy is respectively of *59.0* and *72.6* for men and women in Russia, *62.1* and *73.8* in Ukraine and *64.0* and *70.4* in Uzbekistan.

The values retained for the projection (target values in Table 9) are also those of the United-Nations. Total fertility in all countries is assumed to converge eventually towards the level of *1.85* children per woman, except for countries where the total fertility rate was far below *1.85* children per woman in 2000–2005 (Russia and Ukraine). Mortality is projected on the basis of models capturing the change of life expectancy produced by the United Nations Population Division. According to these models, the higher the life expectancy reached the smaller the gains are.

Concerning the net migration flows, we incorporate as an input numbers the results presented in Section 5 for each of the three retained countries. As it is mentioned in the above-mentioned sections, three population groups are considered. The first group includes emigration for ethnic reasons (nationalities which have ethnic ties with other countries) that will take place, most likely, irrespective of socio-economic and political situation in the CIS, if they are attracted by foreign countries. The second group includes new ethnic minorities which appeared after the establishment of independent CIS states. Their migration potential to Russia will depend more on socio-economic and political situation in the CIS, as well as the Russian politics. The third group concerns emigration potential from the CIS to Western Europe. The assessment of this potential emigration flow is based on the underlying intuition that long-run migration perspectives will be driven

by economic factors. Note that for each country considered, we only consider migration flows to Russia and Western Europe (Table 10, Appendix 1) consisting of three countries. By comparison, Table 9 presents the net migration flows retained in the recent population projections of the United-Nations.

We present here demographic results related to three migratory flows assumptions:

1. A "no migration" scenario (benchmark) which exactly correspond to the United-Nation "zero migration" variant;

2. A "high migration" scenario which corresponds to the status quo assumption in term of convergence as well as with the assumption of increase uncertainty;

3. A "low migration" scenario which corresponds to the status quo assumption in term of convergence as well as without policy and uncertainty impact.

Projections results are given in Table 11 to 13 (in Appendix 1) for each of the three countries. The first part of each table gives the "No migration" scenario results. Russia and Ukraine are clearly more affected by ageing than Uzbekistan. For example, their total population quickly decreases, by respectively *27%* and *31%*, when the other country sees a population increase during the next half century. Note that the Russian and Ukrainian situation in term of ageing is highly explained by their total fertility rate which is far bellow the generation replacement level of *2.1* children per a woman. At the same time, the working age population of these two countries is strongly reduced.

A usual measure of the degree of ageing is captured through the old age dependency ratio (i.e. the ratio of people aged 65+ to people aged 20–64). Again, the situation is totally different by countries. In Russia and Ukraine, ageing is largely marked since the old age dependency ratio more than doubles, reaching, respectively, 43.4% and 48.6% in 2050 (around two workers for a pensioner). The resulting demographic ageing raises numerous issues for pension schemes since the burden of the retirees will grow spectacularly during the next years of the century. On the contrary, the values expected in Uzbekistan are clearly lower.

The introduction of migration in our projection model could be analyzed from the angle of ageing population. The projected population decline and population ageing will have profound and far reaching consequences, forcing Governments to reassess many established economic, social and political policies, including those relating to international migration. If retirement ages remain the same as they are today, increasing the size of the working age population through international migration (or limiting the departure of young people to foreign countries) could be a solution in the short and medium term to reduce declines in the potential support ratio. The second part of Table 11 to 13 gives the demographic consequences of migration flows in the context of two reasonable scenarios. Only Russia is characterized by inflows when the two other countries by the outflows of migrants.

In the case of the Russian Federation, the contribution of net positive flows is relatively weak from a demographic perspective. Indeed, the total population is only by 3.6% higher (1.8% for the second scenario) in 2050. The size of the working age population is also slightly higher, but the old age dependency ratio is only reduced by 1.4 point in the more optimistic scenario (0.7 point in the other one) at the end of the projection period. In fact, the important migration flows that are introduced (varying between 134 thous. and 387 thous. migrants per year, according to the year and scenario considered) only represent a small fraction of the total population (less than 0.4%) and explain the small demographic effect. It implies that only the implementation of an active migratory policy, that increases substantially the migration flows in next decades, could justify the use of immigration as one of the important ways to replenish population fall in Russia.

The two other countries are characterized by net migration outflows. In the case of Ukraine which will be strongly affected by demographic ageing, introducing migration outflows will increase the consequences of ageing though the departure of young people to Russia and Western Europe. However, the simulated flows are sufficiently week (less than 0.25% of the population) not to destabilize the age pyramid in a catastrophic way. So, the old age dependency ratio is only 0.9 point higher in the more optimistic migratory scenario.

As previously seen, Uzbekistan is in a situation totally different from the other countries since its total population (as well as its working age population) still increases on the next half century without migration. Net migratory outflows are of the same scale of sizes as Ukraine so that the demographic consequences are also very week. However, given the vitality of the fertility behavior,

only the size of the population is really affected since the age structure of the population is relatively stable.

To conclude, further demographic ageing is inevitable over the next decades even if the three countries are not similarly affected. Indeed, the dependency ratio, or the ratio of retirees to the working population, should double. The study also shows that reasonable migratory flows – economically motivated – will have no significant impact on these trends unless if they become substantial.

7. Conclusion

This paper reviews the evidence of migration flows from and within the CIS countries, focusing on large migration flows, region specific issues and policies implemented by the major receiving countries. Based on this, possible migration scenarios for the horizon of 2006–2025 are proposed for the two different groups of potential migrants. The first group includes ethnicities which have close ties with countries or large diasporas abroad. The second group includes new ethnic minorities which appeared with the collapse of the former SU and establishment of independent CIS states. Assuming that the first group of potential migrants would leave the CIS irrespective of its socio-economic and political situation (i.e. the formation of the expected emigration flows follows a geometric series of the past values), the size of potential emigration is obtained at about 1 mln. For the second group of return migrants in the CIS, on the contrary, the socio-economic and political situation in the major receiving countries (i.e. Russia and Kazakhstan) will presumably play an important role. In this respect, the gravity model is used for obtaining the estimates.

Three scenarios proposed in the model are as follows. Under the optimistic case, which assumes a catching up process with the 50 most highly industrialized countries in the world, migration pressure will persist over time with the estimated size of 6.72 mln. It declines to 3.25 mln. under policy restrictions in Russia and increases to 11.99 mln. with general economic and political instability in the CIS. Under the status-quo scenario, the estimated potential is estimated at about 6.68 mln., 3.23 mln. and 13.18 mln., correspondingly. Under the third, pessimistic scenario, which assumes no catching-up process, the potential size of migration is roughly 6.68 mln., which goes down to 3.23 mln. under policy restrictions in Russia and increases by 4.11 mln., under increased uncertainty in the CIS. Assuming further that potential destination countries in the CIS (i.e. Russia and Kazakhstan) will be open for immigrants, one can expect that roughly 10.79 mln. (under convergence), 11.99 mln. (under divergence) and 13.18 mln. (under status quo) would migrate to Russia. The potential migration to the Western European countries is much lower than that of within the CIS (2.69 mln.).

Based on different migratory scenarios, the consequences of migration are evaluated in terms of demographic perspective as well, in selected CIS countries. These countries are Russian Federation, Ukraine and Uzbekistan which are the largest CIS members in term of population (with more than 200 mln. people in overall) and differ in terms of demographic, economic, political and migration situation. Our results suggest that further demographic ageing is inevitable over the next decades even if these three countries are not similarly affected. Indeed, the dependency ratio, or the ratio of retirees to the working population, should double. The study also shows that reasonable migratory flows – economically motivated – will have no significant impact on these trends unless if they become substantial.

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Appendix 1: Tables

Table 1. National composition of the former SU (mln. people)

Major ethnic groups	1959	1970	1979	1989–1991	1999–2002	Percentage changes	
						Between 1959 and 1979	Between 1989 and 2002
Russians	114.0	129.0	137.0	144.6	134.1	20.2	-7.3
Ukrainians	37.0	40.0	42.0	43.3	41.5	13.5	-4.3
Belarusians	6.0	9.0	9.5	8.7	8.7	58.3	-0.5
Uzbeks	6.0	9.2	12.5	15.7	20.2	108.3	28.4
Kazakhs	4.0	5.2	6.6	7.7	9.4	65.0	21.3
Tatars	5.0	5.9	6.3	5.5	5.6	26.0	1.8
Tadjiks	1.4	2.3	2.8	4.1	6.1	100.0	47.3
Turkmens	1.0	1.5	2.0	3.5	4.4	100.0	25.7
Kyrgyz	0.9	1.4	1.9	2.3	3.1	111.1	34.8
Azerbaijanis	2.9	4.4	5.5	6.1	7.6	89.7	24.8
Armenians	2.8	3.5	4.1	4.0	3.9	46.4	-2.5
Georgians	2.7	3.2	3.5	3.8	3.6	29.6	-5.3
Moldavians	2.2	2.7	2.9	2.8	3.0	31.8	7.2
Lithuanians	2.3	2.6	2.8	2.9	2.9	21.7	0.0
Latvians	1.4	1.4	1.4	1.4	1.4	0.0	0.0
Estonians	0.9	1.0	1.0	1.0	0.9	11.1	-3.4
Germans	1.6	1.9	1.8	1.5	0.8	18.8	-50.0
Jews	2.3	2.1	1.6	1.4	0.4	-21.7	-76.2
Chuvash	1.5	1.7	1.8	1.2	1.1	20.0	-8.3
Dagestans	0.9	1.4	1.6	1.8	1.9	77.8	5.6
Bashkirs	0.9	1.2	1.4	0.9	1.1	55.6	22.2
Mordvinians	1.3	1.3	1.1	0.7	0.6	-15.4	-14.3
Poles	1.4	1.2	1.0	0.3	0.2	-14.3	-8.9

Sources: Pockney (1991); Mansoor and Quillin (2007).

Table 2. Migration flow to and from Russia

	thousands				percent			
	1980	1985	1990-2000	2001-2005	1980	1985	1990-2000	2001-2005
Immigration	*876*	*877*	*7,925*	*913*	*100.00*	*100.00*	*100.00*	*100.00*
CIS	841	847	7,561	880	95.95	96.54	95.40	94.25
Other countries	35	30	347	33	4.05	3.46	4.37	5.75
Emigration	*781*	*705*	*4,333*	*729*	*100.00*	*100.00*	*100.00*	*100.00*
CIS	733	666	3,228	605	93.91	94.44	74.51	49.39
Other major countries	48	39	1,093	123	6.09	5.56	25.23	50.61
Germany	1	0	600	34	0.17	0.06	13.84	37.37
Israel	4	1	249	61	0.52	0.09	5.75	2.78
Latvia	16	15	28	9	2.09	2.14	0.64	0.27
Lithuania	11	11	26	7	1.36	1.50	0.59	0.28
The United States	0	0	112	2	0.01	0.01	2.59	3.78
Estonia	14	10	18	5	1.74	1.48	0.42	0.33
Net migration between Russia and other CIS states								
Total	**108**	**181**	**4,332**	**524**	**100.00**	**100.00**	**100.00**	**100.00**
Azerbaijan	12	20	351	14	11.36	10.85	8.10	2.75
Armenia	5	9	201	24	4.98	5.16	4.65	4.49
Belarus	6	2	-3	-8	5.30	0.96	-0.07	-1.45
Georgia	10	13	373	28	9.15	7.18	8.62	5.35
Kazakhstan	34	70	1,552	174	31.92	38.71	35.82	33.27
Kyrgyzstan	7	9	294	51	6.43	4.73	6.79	9.81
Moldova	3	3	79	27	2.48	1.91	1.83	5.14
Tajikistan	5	7	355	22	4.53	3.67	8.19	4.27
Turkmenistan	4	6	121	22	3.44	3.34	2.80	4.18
Uzbekistan	11	16	671	111	10.47	9.07	15.48	21.14
Ukraine	11	26	337	58	9.94	14.44	7.79	11.07

Source: State Committee of the Russian Federation on Statistics: Russia in Figures, 1990-2005.

Table 3. Forced migration flows to Russia (% of total)

Regions/countries of origin	1992	1993	1994	1995	1996	1997	1998	2000	2001	2002	2003	2004	2005
Regions of Russia	*14*	*17*	*9*	*13*	*12*	*12*	*12*	*16*	*11*	*6*	*9*	*35*	*94*
European part	*6*	*2*	*2*	*2*	*3*	*3*	*2*	*2*	*2*	*2*	*0*	*0*	*0*
Belarus	0	0	0	0	0	0	0	0	0	0	0	0	0
Ukraine	0	0	1	1	2	2	1	1	1	1	0	0	0
Moldova	6	2	1	1	1	1	1	1	1	1	0	0	0
Baltic States	0	2	4	3	4	4	1	0	0	0	1	0	0
Caucasia	*36*	*39*	*14*	*9*	*10*	*6*	*5*	*8*	*7*	*15*	*55*	*45*	*1*
Azerbaijan	20	15	5	5	5	4	2	1	1	1	2	1	0
Armenia	0	1	1	1	0	0	0	0	0	0	0	0	0
Georgia	15	23	7	4	4	2	3	7	7	14	54	44	1
Central Asia	*44*	*40*	*72*	*73*	*71*	*76*	*80*	*73*	*79*	*77*	*34*	*18*	*5*
Kazakhstan	0	3	25	33	36	49	61	49	53	47	18	8	3
Kyrgyzstan	1	7	13	7	5	3	2	2	3	4	2	1	0
Tajikistan	41	24	10	10	12	10	6	6	4	5	5	4	1
Turkmenistan	0	0	1	2	4	3	1	0	1	1	1	1	0
Uzbekistan	2	6	23	22	14	10	10	16	19	20	9	5	1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: State Committee of the Russian Federation on Statistics: Russia in Figures, 1990-2005.

Table 4. CIS economic indicators for 2006

Countries	Population			GDP		Inflation, annual rate, %	Current account balance, mln. USD
	Total, mln. people	Annual growth, %	Urban, % of total	Annual growth rate, %	Per capita (PPP, constant) in USD		
Armenia	3.4	2.3	64.3	13.4	4 515.6	3.0	-254.0
Azerbaijan	8.5	0.8	50.0	34.5	5 895.3	8.0	167.3*
Belarus	9.7	-0.4	72.8	9.9		7.0	-1 511.6
Georgia	4.4	1.8	51.7	8.6	3 755.5	8.0	-1 243.4
Kazakhstan	15.1	0.1	55.9	10.6	9 133.7	8.6	-724.0*
Kyrgyzstan	5.2	1.1	33.9	2.7	2 224.4	5.6	-228.2
Moldova	3.4	0.0	46.2	4.0	2 707.6	13.0	-263.7*
Russia	142.2	-0.4	73.3	6.7	11 904.3	9.7	94 466.6
Tajikistan	6.4	0.6	24.5	7.0	1 506.3	12.0	-18.9*
Turkmenistan	5.1	1.6	45.6	8.7	8 663.6	-	-
Ukraine	46.6	-0.7	67.3	7.0	7 816.2	9.1	2531.0*
Uzbekistan	26.6	1.3	36.5	7.3	1 983.1	9.0	-

Source: National statistical agencies, International Financial Statistics (* - data for 2005).

Table 5. Estimation results

Regression: $ln(M_{ijt})=\alpha_1+\alpha_2 ln\ (Y_{jt}/Y_{it}) + \alpha_3 ln(K_{ij})+ \alpha_4\ ln(U_{jt}/U_{it})+ \alpha_5 ln(S_{it})+ \alpha_6 D_1+ \alpha_7 D_2+e_{it}$.			
Variables Dependent variable Trade flows from country *i* to country *j* at time *t*	$ln(M_{ijt})$		
Independent variables:		**Coefficients**	
Constant term	C	α_1	-3.30 (1.21)**
GDP per capita$_j$/GDP per capita$_i$	$ln(Y_{jt}/Y_{it})$	α_2	0.17 (0.12)***
Distance between the capital cities of countries *i* and *j*	$ln\ (K_{ij})$	α_3	-0.53 (0.27)**
Unemployment$_j$/Unemployment$_i$	$Ln(U_j/U_i)$	α_4	0.08 (0.11)
The stock of migrants	$ln(S_{it})$	α_5	1.09 (0.10)*
Uncertainty measure	D_1	α_6	0.58 (0.13)*
Migration restrictions in Russia	D_2	α_7	-0.73 (0.11)*
Number of observations	99		
Adjusted R-squared	0.71		

Notes. White Heteroskedasticity-consistent standard errors: *,**,*** define 1%, 5% and 10% significance level, respectively.

Table 6. Long-run coefficients

Explanatory Variable	**Long-Run Coefficient**	**t-value**
Per capita income ratio	0.00012	2.43
German employment rate	0.00027	2.39
Employment rate of home countries	-0.00049	-3.94
Stock of Migrants*1,000,000	-0.00034	-1.80
"Free Movement" Dummy[24]	0.00038	3.12

Source: Fertig (2001).

Table 7. Migration flows predicted using a Fertig's model (i.e. without policy and uncertainty assumptions in CIS), in thousands

Scenarios	**Destination countries**	**2006-2010**	**2011-2015**	**2016-2020**	**2021-2025**	**2006-2025**
Scenario 1 (convergence between CIS and Europe)	Western Europe*	778.6	685.8	632.2	596.3	2692.9
	Eastern Europe					
	European part of CIS	-476.6	-383.8	-332.3	-296.4	-1489.2
	Mediterranean World	-302.0	-302.0	-299.8	-299.9	-1203.7
	-Caucasus	-40.6	-40.3	-39.8	-39.3	-159.9
	-Central Asia	-261.5	-261.7	-260.0	-260.6	-1043.8
Scenario 2 (divergence between CIS and Europe)	Western Europe*	856.3	761.6	705.6	667.7	2991.2
	Eastern Europe					
	European part of CIS	-227.4	-152.6	-116.7	-95.5	-592.3
	Mediterranean World	-628.8	-609.0	-588.9	-572.1	-2398.9
	Caucasus	-202.8	-193.4	-184.6	-176.2	-757.0
	Central Asia	-426.1	-415.6	-404.3	-395.9	-1641.9
Scenario 3 (status quo)	Western Europe*	868.9	770.8	711.6	671.3	3022.6
	Eastern Europe					
	European part of CIS	-646.3	-556.6	-505.3	-472.3	-2180.6
	Mediterranean World	-222.6	-214.2	-206.3	-198.9	-842.0
	Caucasus	-17.1	-18.1	-19.0	-20.1	-74.3
	Central Asia	-205.4	-196.1	-187.2	-178.9	-767.6

Note. *) These values include emigration for ethnic reasons.

[24] In the assessment of CIS countries' emigration potential to Europe, a free movement dummy is skipped.

Table 8. Migration flows (predicted values are based on the CIS gravity (with policy and uncertainty assumptions), in thousands

Under restrictive immigration policies in Russia and low degree of uncertainty in CIS						
	Destination regions	**2006-2010**	**2011-2015**	**2016-2020**	**2021-2025**	**2006-2025**
Scenario 1 (divergence within CIS)	Western Europe*	475.0	404.5	376.7	362.5	*1618.6*
	European part of CIS	-365.1	-283.9	-242.1	-215.3	*-1106.5*
	Mediterranean World	-109.9	-120.6	-134.5	-147.2	*-512.2*
	Caucasus	-12.3	-13.1	-14.8	-13.2	*-53.4*
	Central Asia	-97.6	-107.5	-119.8	-134.0	*-458.8*
Scenario 2 (convergence within CIS)	Western Europe*	466.0	397.3	371.1	358.7	*1593.1*
	European part of CIS	-365.9	-286.7	-246.8	-221.8	*-1121.3*
	Mediterranean World	-100.1	-110.6	-124.3	-136.9	*-471.8*
	Caucasus	-12.1	-12.8	-14.4	-12.9	*-52.3*
	Central Asia	-87.9	-97.7	-109.9	-124.0	*-419.5*
Scenario 3 (status quo)	Western Europe*	465.0	394.3	366.3	352.0	*1577.7*
	European part of CIS	-364.7	-283.5	-241.7	-214.9	*-1104.9*
	Mediterranean World	-100.3	-110.8	-124.6	-137.1	*-472.8*
	Caucasus	-12.2	-12.9	-14.5	-13.0	*-52.6*
	Central Asia	-88.1	-97.9	-110.1	-124.1	*-420.2*
Under high degree of uncertainty in CIS						
	Destination regions	**2006-2010**	**2011-2015**	**2016-2020**	**2021-2025**	**2006-2025**
Scenario 1 (divergence within CIS)	Western Europe*	542.6	478.5	458.8	451.1	*1931.0*
	European part of CIS	-383.4	-303.1	-262.2	-236.4	*-1185.2*
	Mediterranean World	-159.2	-175.4	-196.6	-214.7	*-745.9*
	Caucasus	-18.7	-19.9	-22.4	-19.0	*-80.0*
	Central Asia	-140.5	-155.5	-174.2	-195.7	*-665.9*
Scenario 2 (convergence within CIS)	Western Europe*	490.6	424.2	401.0	392.8	*1708.6*
	European part of CIS	-372.6	-293.7	-254.1	-229.4	*-1149.7*
	Mediterranean World	-118.0	-130.5	-146.9	-163.3	*-558.9*
	Caucasus	-14.5	-15.4	-17.3	-17.0	*-64.1*
	Central Asia	-103.6	-115.2	-129.7	-146.4	*-494.8*
Scenario 3 (status quo)	Western Europe*	579.1	519.1	504.8	505.6	*2108.6*
	European part of CIS	-395.6	-315.8	-275.5	-250.4	*-1237.3*
	Mediterranean World	-183.5	-203.3	-229.2	-255.2	*-871.3*
	Caucasus	-22.8	-24.1	-27.1	-26.7	*-100.7*
	Central Asia	-160.8	-179.2	-202.1	-228.6	*-770.6*
Under high degree of uncertainty in CIS and restrictive migration policies in RUSSIA						
	Destination regions	**2006-2010**	**2011-2015**	**2016-2020**	**2021-2025**	**2006-2025**
Scenario 1 (divergence within CIS)	Western Europe	664.3	611.5	606.5	614.9	*2497.2*
	European part of CIS	-416.3	-337.5	-298.4	-274.4	*-1326.6*
	Mediterranean World	-247.9	-274.0	-308.1	-340.5	*-1170.6*
	Caucasus	-30.2	-32.1	-36.1	-33.7	*-132.1*
	Central Asia	-217.7	-241.9	-272.0	-306.8	*-1038.5*
Scenario 2 (convergence within CIS)	Western Europe	611.3	556.2	547.5	555.1	*2270.0*
	European part of CIS	-405.1	-327.7	-289.8	-266.9	*-1289.5*
	Mediterranean World	-206.2	-228.5	-257.7	-288.2	*-980.5*
	Caucasus	-25.8	-27.4	-30.7	-31.5	*-115.4*
	Central Asia	-180.4	-201.1	-226.9	-256.7	*-865.1*
Scenario 3 (status quo)	Western Europe	699.8	651.1	651.2	668.1	*2670.2*
	European part of CIS	-428.2	-349.9	-311.3	-288.0	*-1377.3*
	Mediterranean World	-271.7	-301.2	-339.9	-380.1	*-1292.9*
	Caucasus	-34.0	-36.1	-40.5	-41.1	*-151.8*
	Central Asia	-237.6	-265.1	-299.4	-339.0	*-1141.1*

Note. *) These values include emigration for ethnic reasons.

Table 9. Assumptions related to the demographicc projections

		Total Fertily rate	Men life expectancy	Women life expectancy	Net Migratory flows
Russian Federation	Initial indicator	1.34	59.0	72.6	250.00
	Target value	1.71	68.5	77.9	250.00
Ukraine	Initial indicator	1.22	62.1	73.8	-100.00
	Target value	1.59	71.0	79.1	-100.00
Uzbekistan	Initial indicator	2.49	64.0	70.4	-200.00
	Target value	1.85	71.5	77.2	-100.00

Source: United Nations (2006).

Table 10. Migration flows computed for demographic projections

		2005	2006-2010	2011-2015	2016-2020	2021-2025
Scenario 1: Under increased uncertainty + Status-Quo						
Russia	From CIS	132.5	307.0	334.6	375.0	415.2
	To WE	-22.1	-26.8	-25.4	-24.1	-22.8
	Refugees		-18.7	-11.5	-8.0	-5.9
	Net flows	*110.4*	*261.6*	*297.6*	*342.9*	*386.6*
Ukraine	To Russia	-18.1	-40.2	-42.3	-44.2	-46.2
	To WE	-17.5	-21.0	-19.6	-18.3	-17.1
	Refugees		-14.6	-8.9	-6.1	-4.4
	Net flows	*-35.6*	*-75.8*	*-70.8*	*-68.6*	*-67.7*
Uzbekistan	To Russia	-29.8	-57.5	-62.6	-73.5	-86.2
	To WE	-1.8	-2.2	-2.2	-2.2	-2.2
	Refugees		-5.3	-3.2	-2.3	-1.7
	Net flows	*-31.6*	*-64.9*	*-68.1*	*-78.0*	*-90.1*
Scenario 2: without policy and uncertainty impact						
Russia	From CIS	132.5	155.5	169.5	190.0	210.3
	To WE	-22.1	-21.4	-20.4	-19.3	-18.2
	Refugees		-20.7	-12.8	-8.9	-6.5
	Net flows	*110.4*	*134.1*	*149.2*	*170.7*	*192.1*
Ukraine	To Russia	-18.1	-20.4	-21.4	-22.4	-23.4
	To WE	-17.5	-16.8	-15.7	-14.6	-13.7
	Refugees		-16.3	-9.9	-6.7	-4.9
	Net flows	*-35.6*	*-53.4*	*-47.0*	*-43.7*	*-42.0*
Uzbekistan	To Russia	-29.8	-29.1	-31.7	-37.2	-43.7
	To WE	-1.8	-1.8	-1.8	-1.8	-1.8
	Refugees		-16.5	-15.9	-15.2	-14.7
	Net flows	*-31.6*	*-47.4*	*-49.4*	*-54.3*	*-60.2*

Source: Author's calculation.

Table 11. Demographic consequences of migration in the Russian Federation

	2005	2010	2020	2030	2040	2050
No Migration						
Net migration flows (in thousands)	0	0	0	0	0	0
Total population	143 953	140 054	131 564	122 449	113 660	105 018
<20	23.5%	20.8%	21.2%	19.9%	18.9%	19.9%
20-65	62.7%	66.6%	63.8%	61.0%	60.5%	55.9%
65+	13.8%	12.6%	14.9%	19.1%	20.5%	24.2%
65+/20-65	22.0%	18.9%	23.4%	31.3%	33.9%	43.4%
Scenario 1						
Net migration flows (in thousands)	262	298	387	387	387	387
Net migration flows (% of population)	0.18%	0.21%	0.29%	0.31%	0.33%	0.36%
Total population	143 953	140316	132519	124 309	116 491	108 856
<20	23.5%	20.8%	21.3%	20.0%	19.1%	20.1%
20-65	62.7%	66.6%	63.9%	61.2%	60.7%	56.2%
65+	13.8%	12.6%	14.8%	18.8%	20.1%	23.6%
65+/20-65	22.0%	18.8%	23.2%	30.8%	33.1%	42.0%
Scenario 2						
Net migration flows (in thousands)	134	149	192	192	192	192
Net migration flows (% of population)	0.09%	0.11%	0.15%	0.16%	0.17%	0.18%
Total population	143 953	140 188	132 045	123 380	115 074	106 932
<20	23.5%	20.8%	21.2%	19.9%	19.0%	20.0%
20-65	62.7%	66.6%	63.9%	61.1%	60.6%	56.0%
65+	13.8%	12.6%	14.9%	19.0%	20.3%	23.9%
65+/20-65	22.0%	18.9%	23.3%	31.0%	33.5%	42.7%

Source: Authors' calculation.

Table 12. Demographic consequences of migration in the Ukraine

	2005	2010	2020	2030	2040	2050
No Migration						
Net migration flows (in thousands)	0	0	0	0	0	0
Total population	46 918	45 273	42 004	38612	35 268	31984
<20	22.4%	19.8%	18.8%	17.9%	16.8%	17.3%
20-65	61.6%	64.6%	64.1%	61.4%	60.5%	55.6%
65+	16.1%	15.6%	17.1%	20.7%	22.8%	27.0%
65+/20-65	26.1%	24.1%	26.6%	33.7%	37.6%	48.6%
Scenario 1						
Net migration flows (in thousands)	-76	-71	-68	-68	-68	-68
Net migration flows (% of population)	-0.16%	-0.16%	-0.16%	-0.18%	-0.19%	-0.22%
Total population	46 918	45 197	41 777	38 231	34 728	31282
<20	22.4%	19.8%	18.8%	17.8%	16.7%	17.2%
20-65	61.6%	64.6%	64.1%	61.3%	60.3%	55.4%
65+	16.1%	15.6%	17.2%	20.8%	23.0%	27.4%
65+/20-65	26.1%	24.1%	26.8%	34.0%	38.2%	49.5%
Scenario 2						
Net migration flows (in thousands)	-36	-53	-44	-44	-44	-44
Net migration flows (% of population)	-0.08%	-0.12%	-0.10%	-0.11%	-0.13%	-0.14%
Total population	46 918	45 237	41 861	38 369	34 922	31 533
<20	22.4%	19.8%	18.8%	17.9%	16.7%	17.3%
20-65	61.6%	64.6%	64.1%	61.4%	60.4%	55.5%
65+	16.1%	15.6%	17.1%	20.8%	22.9%	27.3%
65+/20-65	26.1%	24.1%	26.7%	33.9%	38.0%	49.2%

Source: Authors' calculation.

Table 13. Demographic consequences of migration in the Uzbekistan

	2005	2010	2020	2030	2040	2050
No Migration						
Net migration flows (in thousands)	0	0	0	0	0	0
Total population	26 593	28 796	32 963	35 940	38 283	39 677
<20	44.9%	40.7%	35.1%	30.3%	26.3%	24.6%
20-65	50.3%	54.9%	59.7%	61.4%	62.9%	61.2%
65+	4.7%	4.3%	5.2%	8.2%	10.8%	14.2%
65+/20-65	9.4%	7.9%	8.7%	13.4%	17.2%	23.3%
Scenario 1						
Net migration flows (in thousands)	-65	-68	-90	-90	-90	-90
Net migration flows (% of population)	-0.24%	-0.24%	-0.28%	-0.25%	-0.24%	-0.23%
Total population	26 593	28 731	32 728	35 491	37 604	38 760
<20	44.9%	40.7%	35.2%	30.4%	26.3%	24.6%
20-65	50.3%	54.9%	59.6%	61.4%	62.8%	61.1%
65+	4.7%	4.4%	5.2%	8.3%	10.9%	14.4%
65+/20-65	9.4%	7.9%	8.7%	13.5%	17.4%	23.5%
Scenario 2						
Net migration flows (in thousands)	-47	-49	-60	-60	-60	-60
Net migration flows (% of population)	-0.18%	-0.17%	-0.18%	-0.17%	-0.16%	-0.15%
Total population	26 593	28 749	32 794	35 628	37 816	39 051
<20	44.9%	40.7%	35.1%	30.4%	26.3%	24.6%
20-65	50.3%	54.9%	59.7%	61.4%	62.8%	61.1%
65+	4.7%	4.3%	5.2%	8.3%	10.9%	14.3%
65+/20-65	9.4%	7.9%	8.7%	13.5%	17.4%	23.4%

Source: Authors' calculation.

Appendix 2: Graphs

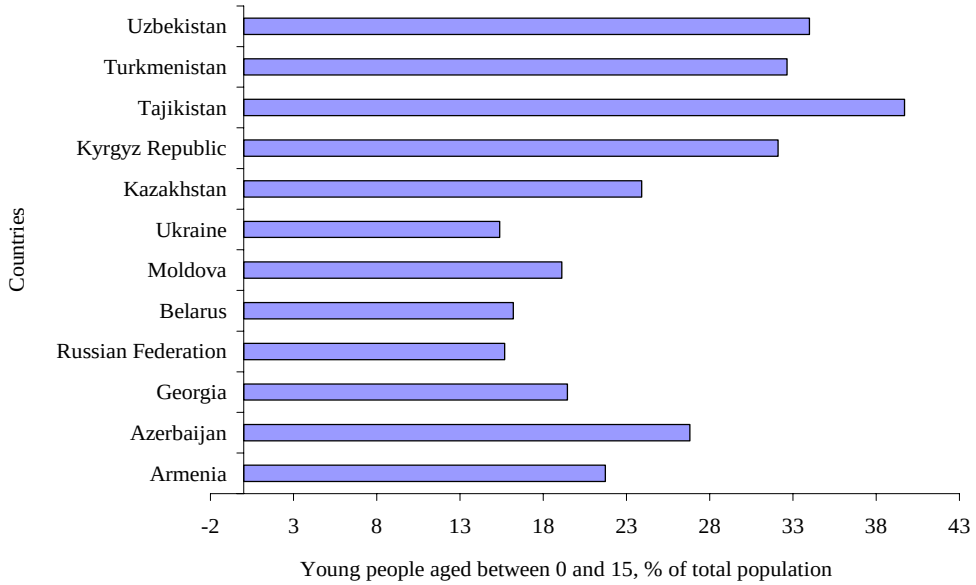


Figure 1. The proportion of young people in population

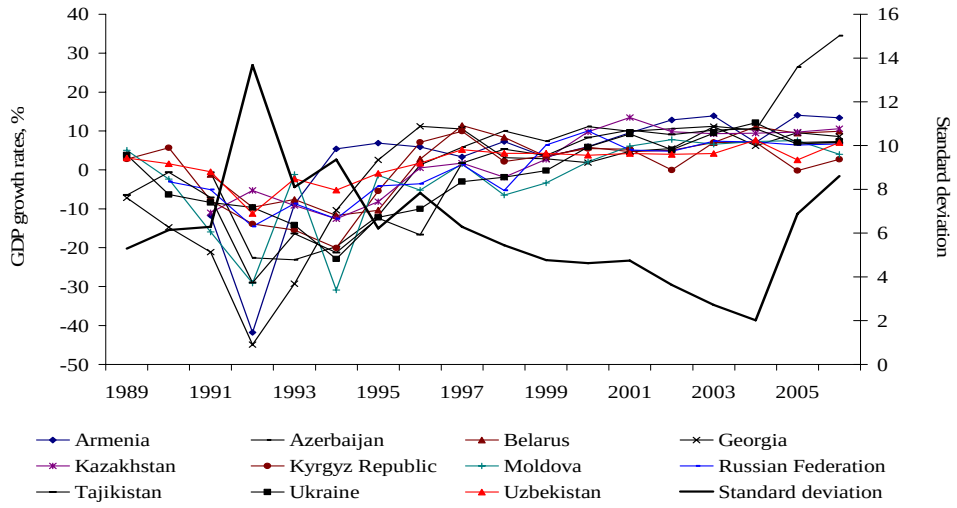


Figure 2. Annual GDP growth rates between 1989 and 2006

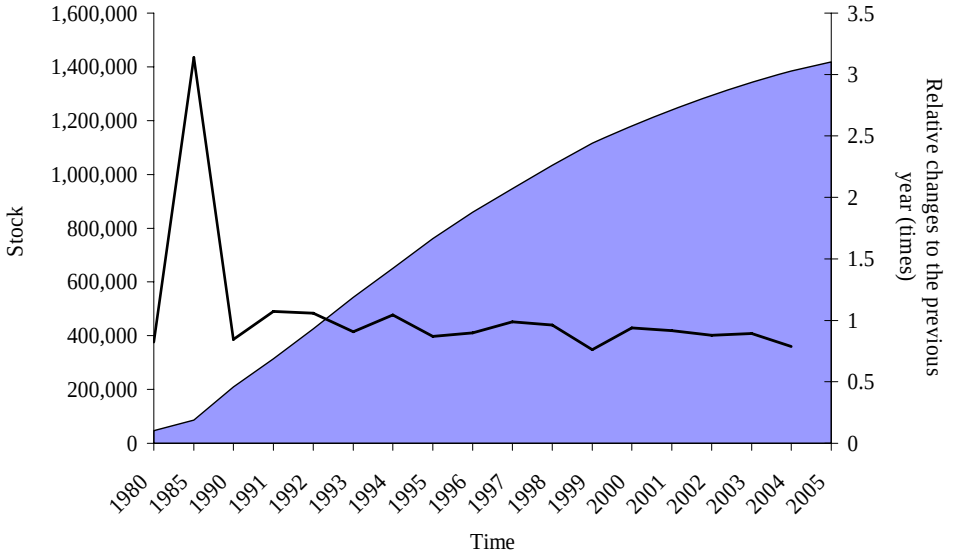


Figure 3. Emigration from Russia to non-CIS foreign countries between 1980 and 2005

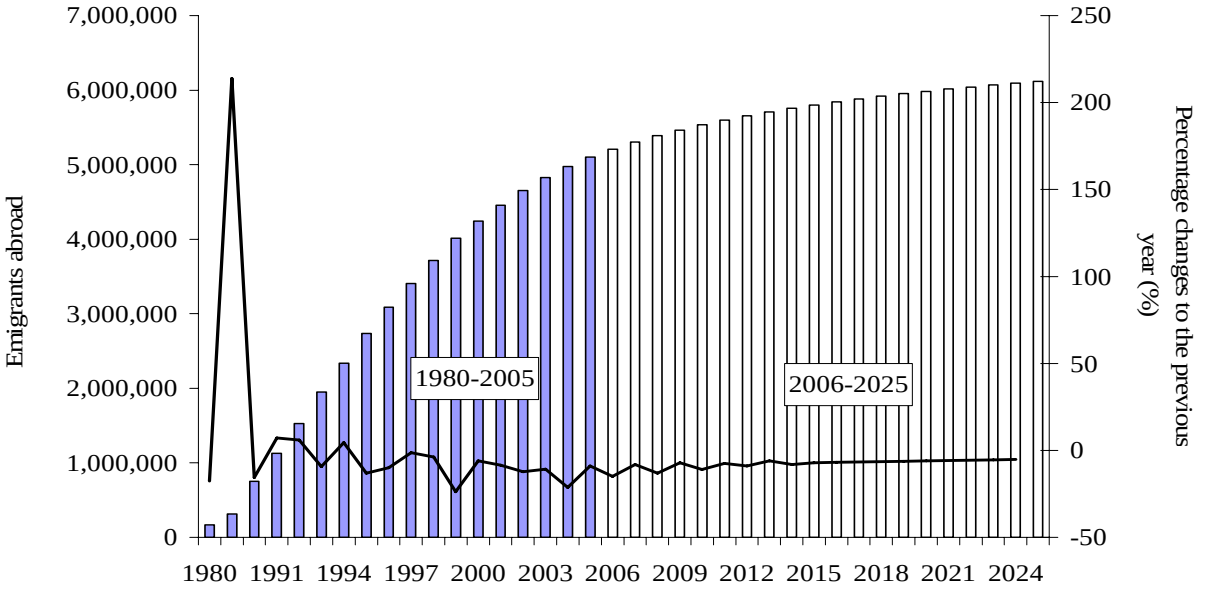
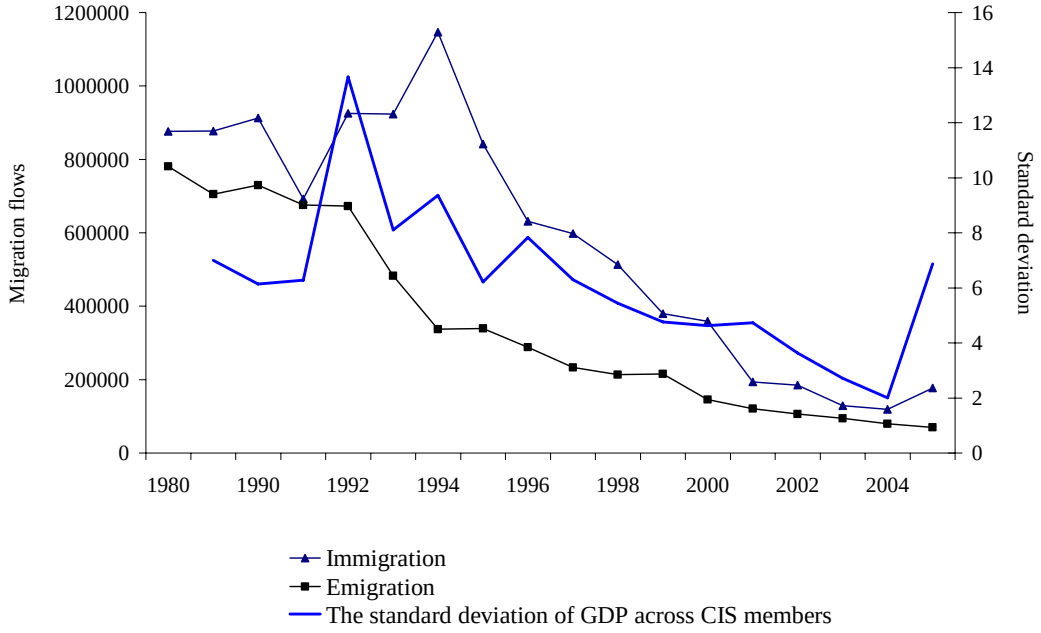


Figure 4. Emigration from CIS

a) annual migration to/from Russia



b) the stock of migrants

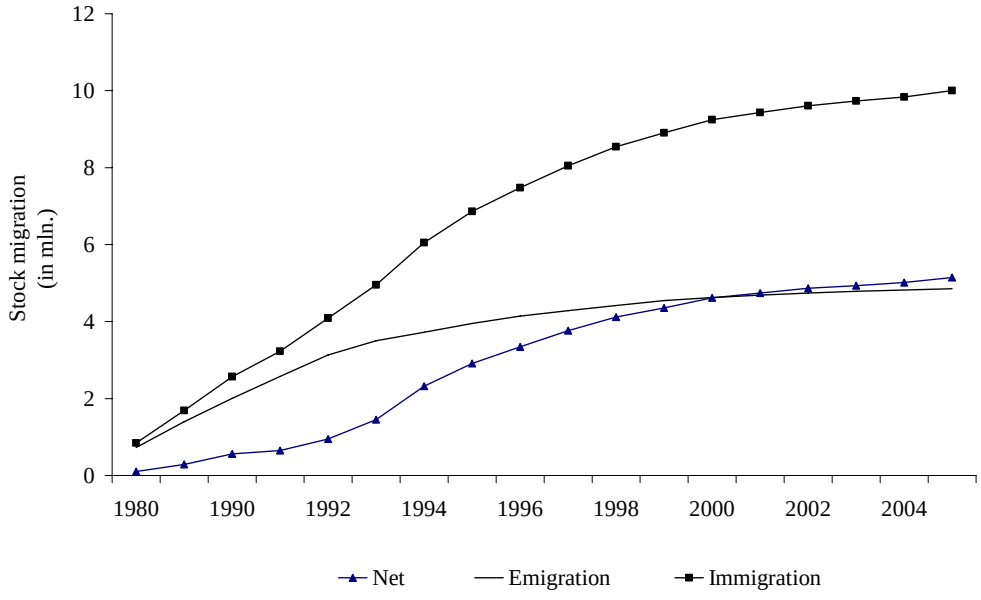


Figure 5. Migration between Russia and other CIS states