

# Understanding Migration in Russia

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This paper summarizes the policy debate and the existing academic research on internal and external migration in Russia. We argue that enhancing both international and internal migration can bring sizeable benefits to Russia. In particular, international immigration seems to be the only solution to Russia's impending demographic crisis: if current trends continue, Russia's population will shrink by 20% to 115 million people in 2050; moreover, the share of working age population will decline substantially. Internal immigration can help overcome huge interregional imbalances and reallocate millions of workers from regions with low wages and high unemployment to the regions with zero unemployment.

## Key Words

Internal migration, labour migration, demographic crisis, Russia's transition

## JEL Codes

J61, J68, P23, R23

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## Acronyms and abbreviation

CEE	Central and Eastern Europe
CEFIR	Center for Economic and Financial Research at the New Economic School
CIS	Commonwealth of Independent States
EU	European Union
FSU	Former Soviet Union
GDP	Gross Domestic Product
Rosstat	Russian State Committee for Statistics
ILO	International Labour Organization
IMF	International Monetary Fund
IOM	International Organization for Migration
NES	New Economic School
NOBUS	National survey of household budgets and participation in social programs
OECD	Organization for Economic Cooperation and Development
RLMS	Russia Longitudinal Monitoring Survey
USA	United States of America

## 1. Introduction

In this paper we summarize the debate on external and internal migration in Russia, discuss the available data and research, and propose a research agenda for better understanding migration in Russia.

We proceed in the following fashion. First, in Section 2, we motivate the importance of understanding of internal and external migration for Russia's social and economic development. We summarize the existing knowledge on migration in Section 3, where we describe the available data, existing estimates, and empirical research. Section 4 concludes.

## 2. Motivation

### 2.1. *International migration*

International migration to Russia is becoming a major prerequisite to Russia's sustainable economic development.<sup>1</sup> Its increasing importance is the result of, more than any other single factor, Russia's ongoing demographic crisis. The Russian population is both ageing and shrinking - and this process is expected to continue for decades. Since the beginning of economic transition, Russia has experienced a serious mortality crisis, caused primarily by increased alcohol consumption and psychological stress (Brainerd and Cutler, 2005). As the most dramatic increase in mortality has occurred among working

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<sup>1</sup> In this paper we concentrate on the role of Russia as a host country. Emigration *from* Russia is certainly also an important problem. While its intensity has been relatively small, it has predominantly included very high-skilled individuals and may have cost Russia a substantial part of its human capital, e.g. there were above 100 thousand Russian specialists working in US hi-tech [Zaionchkovskaya and Mkrtchian, 2004]; as a proportion of Russia's population it is similar the Indian diaspora. It is not clear to what extent this brain drain has reduced Russia's academic potential, as observable characteristics such as education/degrees are only an imperfect predictor of human capital at these levels of skills.

age males, this has created long-term implications for the size and age composition of the population. Ageing and depopulation trends in the Russian Federation are more acute than even those in most European countries. According to the World Population Data Sheet [WPDS 2004], the rate of natural increase in Russia is the world's second lowest -0.6 percent after -0.8 percent in Ukraine. In addition, the WPDS projects<sup>2</sup> population change in Russia in 2004-2050 to be -17 percent (declining from 144 to 119 million), which is only slightly higher than -19 percent in Eastern Europe, in contrast to positive change in Russia's neighbors Northern Europe 8 percent, Western Asia 60 percent, South Central Asia 89 percent. The United Nations provides an even lower estimate for population in Russia by 2050: 112 million (WPP, 2004).

While the population in Russia has been gradually falling since 1992, the decline in *working age* population has only recently started. It will be especially severe after 2007, basically in central regions, as a long-term consequence of birth rate behavior in 1980s (Mkrtchian and Zubarevich, 2005). In order to fully compensate for this drop, there should be an annual inflow of about 1 million working age migrants, a number which is three times the average net inflow in the years between the Censuses of 1989 and 2002. According to a demographic forecast for 2050, the share of population of working age (from 16 and 55 for females and 16 to 60 for males) will be close to 50 percent, which is considerably lower than the 61 percent reported in the 2002 Census, but similar to the share in the 1939 Census, with a difference of a higher proportion of elderly in the population: 34 percent in 2050 vs. 9 percent in 1939 (Andreev and Vishnevsky, 2004).

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<sup>2</sup> This projection is based upon reasonable assumptions on the future course of fertility and mortality. It also already takes into account migration, although this is extrapolated on the basis of past trends. It is not clear to what extent it fully accommodates the potential risks related to a likely HIV/AIDS epidemic in Russia.

Does this demographic crisis imply that Russia needs migrants? At first glance, as Russia's comparative advantage is in natural resources, it is not obvious that a decrease in population automatically implies a slowdown in economic growth. Indeed, in a natural resource economy, income per capita is simply the natural resource rent over the number of citizens; hence, a decline in population is can actually result in per-capita growth. There is also a security issue ("Russia needs a large army") but given Russia's continued nuclear capabilities, the risk of a large scale military aggression against Russia in any foreseeable future is probably overblown. However, the link between demographic crisis and the need for migration is strong. As mentioned above, Russia is not only losing population, it is also aging, which results in a steady growth in the dependency ratio. Second, Russia's oil reserves are limited and already in several decades Russia will have to find other industries to rely upon – not even mentioning the variables of volatility of oil – price volatility and the potential rise of alternative energy sources. In non-mining economies, a large population brings economies of scale and agglomeration, and the benefits of large market size. Also, international migrants to Russia may well be more productive than the average Russian, as a result of skills and, especially, age profiles. As discussed in Borjas (1994), the positive self-selection of migrants would occur when migrants' skills are transferable from the home country to Russia, and when returns to skills in Russia and relative wage dispersion are higher than those at home. Both assumptions seem to be true for the neighboring former Soviet Union countries most of which (i) share a similar economic and social background, and (ii) have gone through a more serious transformational decline. The benefits of international migration depend crucially on the differences in capital per worker ratios across these countries.

Russia therefore faces a trade-off that is somewhat similar to the one of the EU countries. Immigrants are needed to fuel economic growth, but the incumbent population is afraid of the risk to the country's cultural identity and the burden on the welfare state. The analysis of costs and benefits of migration implies that Russia should be much more in favor of immigration than the EU countries. As discussed above, the benefits of immigration are greater for Russia as its ageing and depopulation

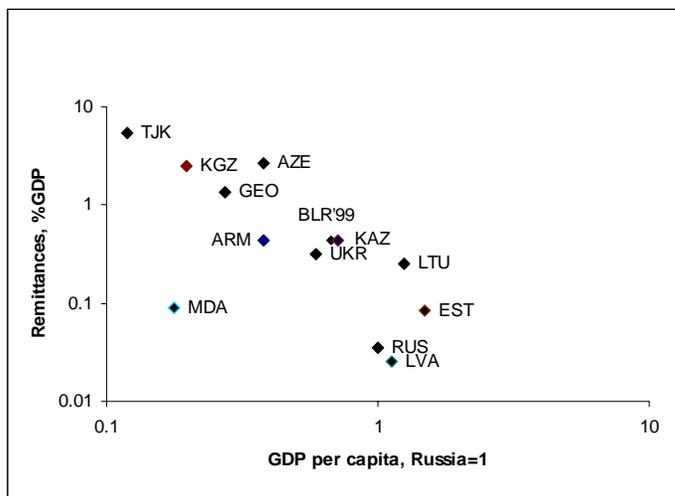
problems are more serious. The costs of immigration are also lower. First, the vast majority of immigrants is Russian-speaking – or even ethnic Russians – from former Soviet Union. Second, Russia’s welfare state is much smaller than the EU countries’. Third, the migrants even have a claim to Russia’s public goods, as they or their parents contributed to building Russia’s public goods and infrastructure before the 1990s.

Although Russia’s demographic problems are more serious than those in the European Union, there has been no consistent policy to attract foreign labour, especially high-skilled workers. Instead, the current regulatory framework has been increasingly restrictive towards immigrants. However, as the regulation is not perfectly enforced and there is no visa regime within the FSU, immigration flows are still significant, especially those from Central Asia (Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, and Kyrgyzstan) and the Slavic CIS countries (Belarus, Ukraine, and Moldova). As the returns to migration from these countries remain large, undocumented migration continues. While it is hard to provide a good estimate of the undocumented labour flows (see the Section 3), one can use remittances as a proxy. Even if the balance-of-payments-based IMF data underestimate the magnitude of remittances, they are still very substantial, especially for the poorest former Soviet Union (FSU) countries (Figure 1). The pattern in Figure 1 is consistent with the view that CIS-Russia migration is driven primarily by huge income differentials.

Given that Russia’s restrictive migration policy has failed to stem the tide of immigrants, does the policy matter at all? There are three reasons to believe that it does. First, it may well be the case that under a different policy regime the intensity of migration flows would be different. The prevalence of bribes and harassment still deters migrants. Second, the existing policy does affect the skill composition of migration. As we argue below, the existing research has not yet provided sufficient evidence on these effects, but the general theory implies that repressive policies tend to result in low-skilled migration (Friebel and Guriev, 2004). Third, the repressive policies may have pushed many otherwise legal migrants into a clandestine migration. Again, there is little research on

undocumented migrants in Russia. Yet, the research on illegal immigrants in the US suggests that (a) repressive policy measures do create substantial illegal immigration (Donato et al., 1992, Massey and Espinoza, 1997); (b) those who enter the country illegally are trapped in low-skilled jobs, do not invest in their human capital, and eventually lag behind in productivity, relative to native workers with the same initial levels of human capital.

**Figure 1. Income differentials between FSU countries and Russia and remittances in 2002 (Belarus data refer to 1999), logarithmic scale. Source: International Monetary Fund.**



## 2.2. Internal migration

Internal migration plays an important role in economic transition as it helps to improve the efficiency of the spatial allocation of resources and mitigates interregional differentials in income and unemployment. These issues are especially relevant in Russia for several reasons. First, there is a need for a substantial spatial reallocation of economic activity. The inherited geographical structure dates back to Soviet industrialization when location decisions were not necessarily made for economic reasons. Even when the planners took economics into account, price distortions resulted in a serious misallocation of production.

Second, given the insecurity of property rights and problems with contract enforcement, Russia's capital market remains to be developed. Reallocation of capital is therefore problematic. Also, there are regions to which capital would not flow, even if there were no barriers, simply because of the cold temperature and transportation costs.<sup>3</sup> Soviet planners overinvested in parts of the country that are either too cold or too far away for sustaining production in a market economy.

Third, the liberalization of foreign trade has resulted in large increase of wage inequality across industries (Yudaeva, 2003). As Soviet industry structure was geographically concentrated, such inequality also implied huge income differentials between regions. For example, both real wages and unemployment rates across the regions had standard deviations half the values of their mean during the second half of 90's, but only one third of their mean during the first half (since 1992). As discussed in Blanchard and Katz (1990), in the US regional economies take about 7 years to adjust to region-specific shocks, and the adjustment occurs via internal migration. As shown in the graphs below, there has been very limited interregional convergence in income (price adjusted) and no convergence in unemployment rate across Russian regions (also see Huber (2004) for more detailed analysis). Interregional dispersion of real incomes continues to be high and the interregional differentials in unemployment are even increasing. Bornhorst and Commander (2004) and Kwon and Spilimbergo (2004) reproduce Blanchard and Katz's analysis for Russia and show that indeed there is far less convergence than in the US economy. Even though the interregional differentials

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<sup>3</sup> According Census estimates, the population of the area defined by the World Bank as the Russian North fell, mostly due to out-migration, by 14 percent from 9.9 to 8.5 mln between 1989 and 2002 (Hill and Gaddy, 2003, p. 222). Surprisingly, official projections of 1997 expected the Northern population to shrink to 8.5 mln only by 2010 (Rosstat, 1997). A survey of individuals living in four Northern regions in 1998 identified very high northern migration potential, above 50 percent of population (Heleniak, 2002). However, this survey has shown financial constraints to be the major barrier to out-migration, as up to 95 percent of north residents did not have sufficient savings to leave stagnating territories.

are very high (higher than in the US and than in Europe<sup>4</sup>), internal migration is much lower than in the US (Andrienko and Guriev, 2004). Bornhorst and Commander show that the Russian market is the least dynamic among all the transition countries they consider. Kwon and Spilimbergo (2004) also showed that the problems were aggravated by procyclical behavior of regional budgets. They also show that mobility due to regional shocks is higher in Russia than in the EU-15; even though the financial and housing markets are more developed in the EU and Russian regulation and social benefits provide little incentive to move out of depressed regions. In Russia, the procyclical regional budgets make the regional recessions more painful but the financial and housing market imperfections still prevent mobility. In the figures below we present some graphical evidence on the lack of convergence. We have also carried out the standard econometric convergence analysis (available upon request) that shows that there is either no convergence or it is very slowly. The present trends imply the persistence of existing interregional differentials for decades to come.

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<sup>4</sup> For the application of Blanchard and Katz's methodology to Europe, see Decressin and Fataz (1995).

Figure 2. Evolution of interregional dispersion in real income and unemployment rates in Russia, 1992-2003. Source of data: Rosstat (2004)

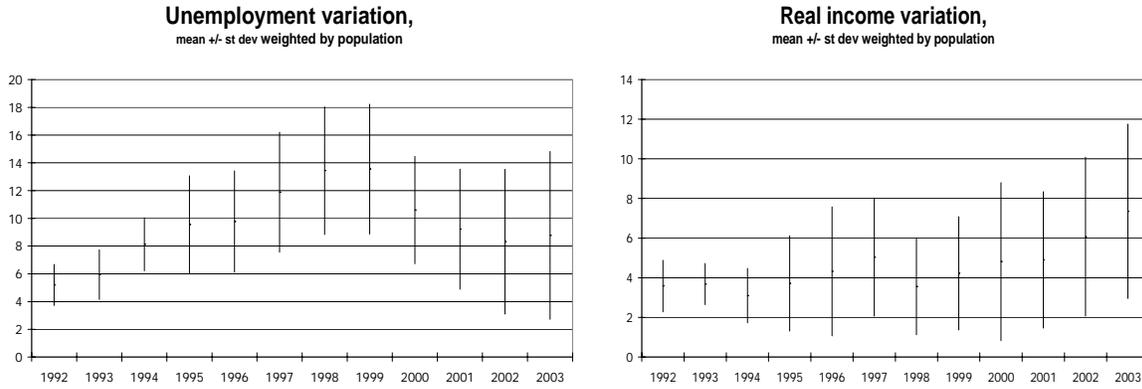
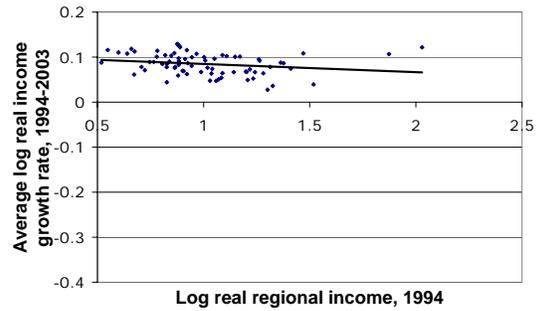
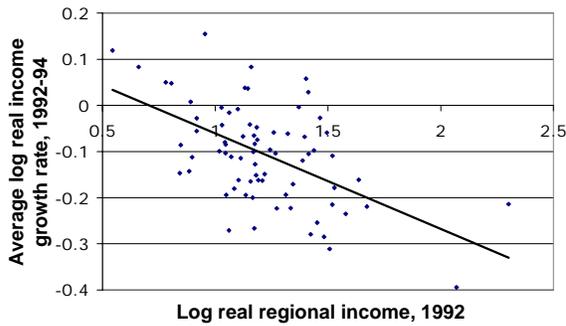


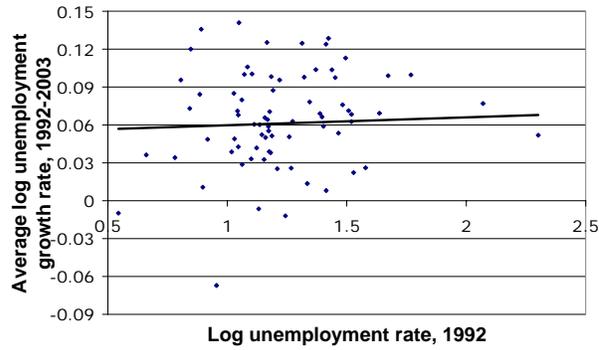
Figure 3. Convergence in real income, and lack thereof in unemployment, in Russian regions, 1992-2003. Source: Rosstat (2004).

Fast convergence in income, 1992-94

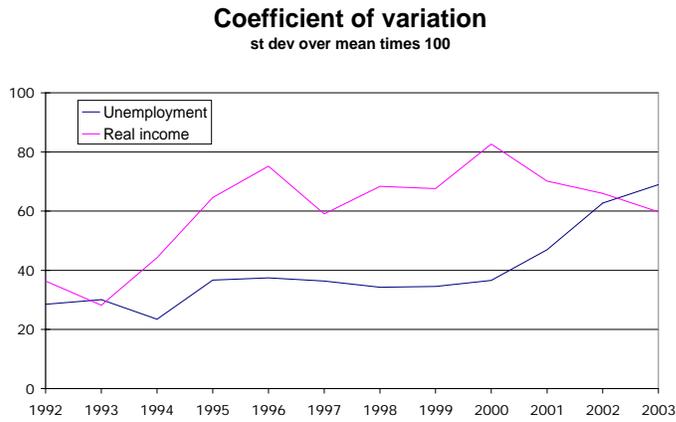
Slow convergence in income, 1994-2003



### Lack of convergence in unemployment, 1992-2003



**Figure 4. Dynamics of real income and unemployment rate dispersion in Russian regions, 1992-2003.**



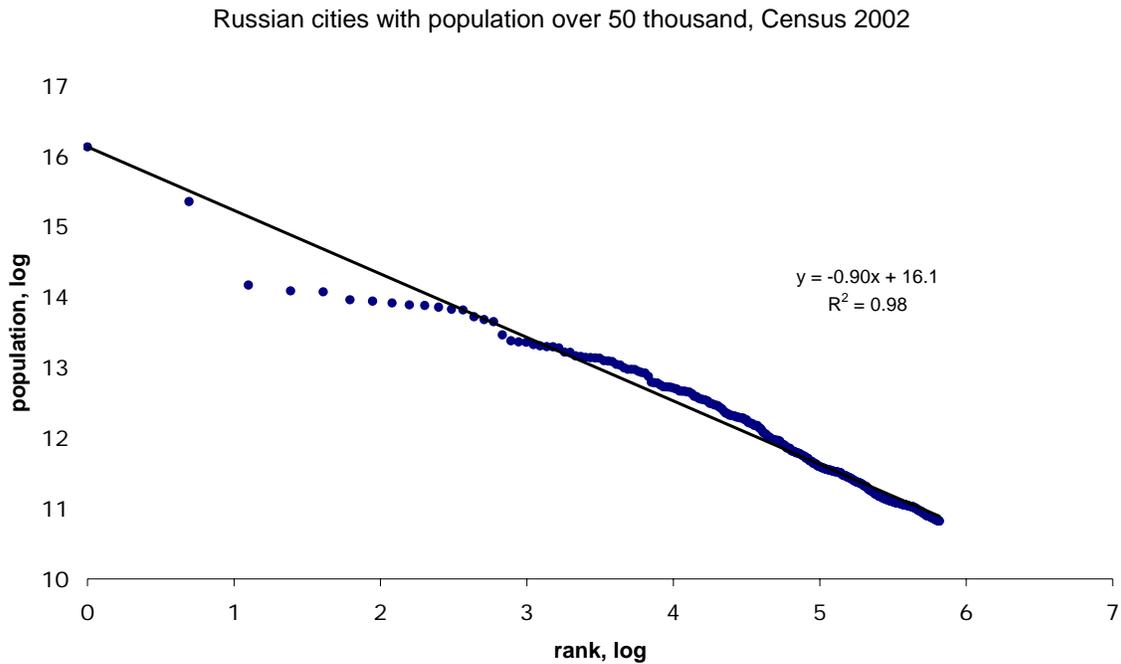
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**Box: Soviet legacies**

Russia inherited a number of economic geography problems from Soviet Union. In addition to the geographical concentration of production discussed above, others include the allocation of resources in very cold regions and a distorted urban structure. During tsarist and especially Soviet times many Siberian and Far East permanent settlements were created in places where they never would have been located under a market economy. Misallocation of capital and, especially, human resources has long-term negative consequences on economy. The analysis of *temperature per capita* (Hill and Gaddy, 2003) shows that during the decades of central economic planning, Russia became “economically colder”, while in the market economies, production reallocated to warmer regions. An average Russian now faces a 1°C lower temperature than in 1913; the respective number in the US is 4°C *higher*. It is then rationally expected that the largest cities responsible for Russian economic coldness (with populations over one million: Novosibirsk, Omsk, Ekaterinburg) and other Siberian and Far East remote territories should shrink, with labour going to warmer and more productive central areas (Hill and Gaddy, 2003). Indeed, the gradient of population flows in post-Soviet Russia has south-west direction. But the first decade of transition has not yet resulted in a drastic change in the size of the largest cities in Siberia.

In addition to spatial misallocation, Russia also inherited distortions in urban structure. In order to maintain higher living standards for the ruling elite, Soviet Union subsidized better provision of goods and services in the main cities and imposed restrictions on mobility to the cities (Gang and Stuart, 2004). Therefore it was not surprising that the Soviet Union violated Zipf’s law that is observed in most large countries around the world including Poland and China (although excluding Romania, World Bank, 2004). Post-Soviet Russia’s deviation from Zipf’s law is much more substantial as many large Soviet cities are now outside of Russia. Out of 20 largest Soviet cities, 7 were capitals of non-Russian republics and 4 were Ukrainian non-capital cities. This is why modern Russia’s second tier cities (after Moscow and St Petersburg) are “too small”. One should expect that in the long-run under unconstrained migration the population of the second tier cities should double or even triple (see the graph below). However, this change will take a long time; the 2002 Census did not yet show a significant change.

**Figure 5. Deviation from Zipf law in Russia.**



### 3. What do we know about migration in Russia?

#### 3.1. *Basic facts on external migration*

##### 3.1.1. Immigration

In terms of both stock and flow of immigrants, the Russian Federation is second only to the USA in the world. In 2000, the number of international migrants was 35 mln in the US, 13 mln in Russia, 7 mln in Germany and Ukraine, and 6 mln in France, India, and Canada (IOM, 2003). The net number of immigrants, 1970-1995, has been 17 mln in the US, 4 million in Russia, and 3 mln in Saudi Arabia, India, Canada, and Germany. According to the Russian Census of 2002 11.0 mln had immigrated to Russia since the previous Census in 1989 (net immigration was 5.6 mln). 99.5 percent were from former Soviet Union (FSU) countries, mostly repatriating ethnic Russians.

As in other countries, there are many unregistered immigrants in Russia most of which are labour migrants who came from the twelve members of the Commonwealth of Independent States (CIS) – the FSU countries with exclusion of the three FSU Baltic countries. There is no consensus in the scale of unregistered migration. Some politicians and mass media even use upper estimates of about 35 mln immigrants, based on the border crossing statistics of the Federal Border Service; these data show that the annual number of arrivals less departures of foreign citizens is about 3.5 mln (Chudinovskikh, 2005). However, demographers and sociologists arrive at much lower estimates of the stock of illegal immigrants – usually at the level of 4-5 mln (Kovalchuk, 2004a).<sup>5</sup> This estimate means that about a quarter of all migrants in post-Soviet Russia have no legal status, a proportion similar to the one, in 2000, in the USA (Passel, 2002) and the EU, where Brücker et al. (2002) estimate 30 percent of the total migration inflow was made up of illegal migrants.

### **3.1.2. Emigration**

In order to understand distortions in immigration data, we need to discuss briefly the *emigration* estimates. According to the Census in 2002, since 1989 the total number of emigrants has been 5 mln, out of which, 76 percent migrated to FSU countries. Among the migrants to non-FSU countries, 59 percent went to Germany, 24 percent to Israel, and 11 percent to the USA. There is no Russian data on the number of Russian citizens living and working abroad, but migration flows and stocks from Russia and other CIS countries are reported in statistics collected in OECD countries (OECD, 2005). It seems that the number of emigrants is underestimated by the Russian registration system; other countries register at least 20 percent more immigrants from Russia

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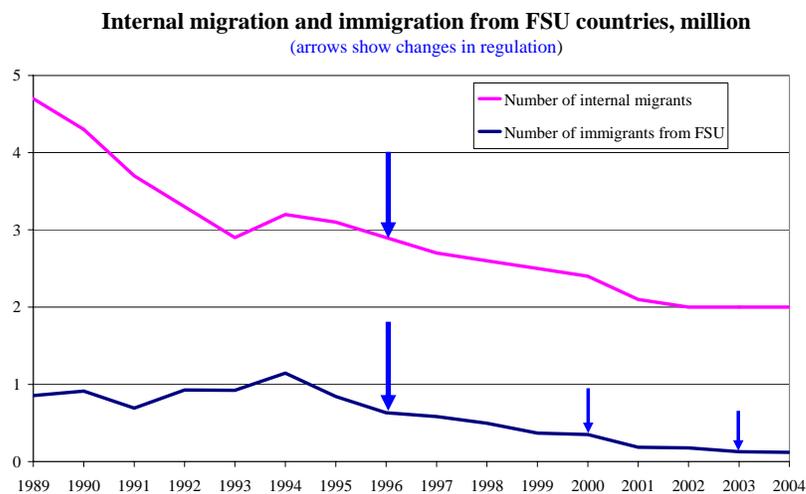
<sup>5</sup> Krassinets (1998) reports the results of a survey of experts who estimated the stock of illegal immigrants at 0.4-7 mln people in 1997. Apparently, there has been a substantial growth in recent years.

(Denisenko et al, 2003). This implies that net immigration estimates based on Russian border data may be biased.

### 3.2. Basic facts on internal migration

According to official statistics, both internal and external migration has been gradually declining over the last decade (see Figure 6). The number of Russians changing their place of residence fell from 3.2 to 1.4 percent of the population. The decline in migration is similar to the downward-sloping interregional mobility trends in other transition countries (Czech Republic, Poland, and Slovakia) but in these countries, the population was considerably less mobile than in Russia (Fidrmuc, 2004). The value of such comparison is however limited as regions in CEE countries are much smaller than regions in Russia, and hence much interregional migration can be substituted by commuting. Bornhorst and Commander (2004) also show that the Russian population is more mobile than the population of Hungary, Romania and France, but less mobile than population of the USA.

**Figure 6. Changes in legislation and official migration flows.**



The official statistics methodology has a number of problems, and especially so after 1996. The Population Census of 2002 counted more people in Central Russia and South European Russia

and fewer people in the northern and Siberian part of the country than it was expected from the accurate data on natural population increase and from imperfect migration figures. The partial explanation of this excess population registered on the north is in the benefits their families gain from that registration. Some outmigrants are also unwilling to deregister in order to keep their options open. Similar argument may explain why Census 2002 has identified many more people than expected in several southern regions that are recipients of the federal budget transfers. The Census also found 1.8 mln people who were accounted for as unregistered migrants from the FSU countries.

### **3.3. *Research on migration in Russia: what is known and what is to be done***

There have been quite a few studies of migration based on Soviet and Russian statistics. Since 1960s, Soviet researchers have intensively studied internal migration flows; the data were quite accurate then, given the tight administrative controls in the Soviet Union. At that time, Soviet economists proposed two theories of migration, one considering labour-resource balance as the primary factor of migration (Litvyakov, 1969) while another supposed intra- and interregional differentiation of life conditions to be more important (Perevedentsev, 1967). Correlation and multinomial regression analysis based on cross-sectional republic- and region-level data revealed that economic conditions were relatively more important for migration than social characteristics. Average wage and real wage, capital investment, housing construction, and job creation had large significant influence on migration (Zaitsev, 1974, Ribakovskiy, 1974, Glazov et al. 1974, Staroverov, 1979).

Western scholars of Soviet migration also established the applicability of standard neo-classical economic theories and the traditional gravity model in the Soviet context and have shown that there was great market force influence from service sector development and investment (Mitchneck, 1991). They have also demonstrated that command forces such as city growth restriction

suppressed migration in Soviet period and (to a lesser extent) in the transition period (Gang and Stuart, 2004).

Sociological literature on Russian migration also explored official data sources but recently has tried to rely on surveys of experts and migrants. An International ILO study held in 1997 was based on the survey of national and local level authorities who are specialists in the field of illegal migration and illegal employment in Russia (Krassinets, 1998). This study highlighted a need to redesign immigration policy as well as enforcement mechanisms. It also emphasized the importance of additional research on trends and geographical destinations of illegal migration, labour market consequences, and the evaluation of policy effectiveness.

A 2003 ILO survey of 442 international migrants in three large Russian cities has shown a rather high educational level and social status of migrants who used labour migration to Russia as a long-term vital strategy of household adaptation to economic hardship in their home country (Tyuryukanova, 2004). Similar conclusions were reached for internal temporary labour migrants in Russia in a survey of 6,000 households in five regional capitals in 2000 (Zaionchkovskaya, 2001.) In addition, this large scale survey for the first time demonstrated a quite stable and significant proportion, from 8 to 12 percent, of households that rely on circular migration.

A 1998 World Bank survey of 600 recent migrants from the Russian North, conducted in four regions, shows that during the period of economic recession, social considerations and relative economic development in host areas were important pull factors. Migrants mostly valued social links in the destination, the availability of dwelling, and only then job opportunity (World Bank, 1998).

The econometric research on migration in Russia has almost exclusively focused on internal migration and used region-level official annual data on migration. As better data were becoming available, research evolved from a cross-sectional regional data analysis in Brown (1997), Korel and Korel (1999), to panel data analysis for net migration rates for regions in Gerber (2000), IET

(2002), and Fidrmuc (2004), and finally to panel data for gross migration flows between regions, Andrienko and Guriev (2004). Despite differences in datasets, all these papers have used the same conceptual framework and produced similar results. The authors assume that Russian economy is in disequilibrium (see a summary of equilibrium vs disequilibrium models in Greenwood, 1997); hence the papers studied how migration depended on region-level variables. The papers found that (i) migration is quite low, especially given the substantial interregional differentials; (ii) economic factors such as real income, unemployment and public good provision affect migration in an intuitive way; (iii) the most important barrier to migration is the underdevelopment of financial and real estate markets – very much like the results of sociological research. This methodology is discussed in more detail in section 4.1.

There are two important exceptions to this literature. First, Becker et al. 2005 studied international migration and used monthly data. The authors looked at the net official migration flows from Kazakhstan to Russia and showed that the migration is responsive to relative exchange rate changes and wage differentials. In particular, Kazakh-Russian migration reacted to the 1998 Russian crisis within a few months.

The second exception is Gerber (2005). Gerber is using microeconomic data from migration histories of more than 7000 Russians. In general, the migration responded to changes in economic conditions in a very intuitive way; it has also confirmed the importance of networks, family life cycle, etc. The richness and representativeness of the survey allows the making of inferences about the average migrant's profile in terms of age, skills, etc. Unfortunately, the survey did not include questions on past income and therefore it could not test to what extent the lack of liquidity (underdeveloped financial markets) is an important barrier to migration.

The effect of migration on labour market and different aspects of social life remains under-researched in Russia. An exception is the paper of Andrienko and Shelley (2005), who studied the influence of net migration flows on different types of violent and property crimes, using regional

panel data for the 90's, and reported ambiguous results.<sup>6</sup> There is no econometric study of the labour market consequences of immigrants in Russia. However, there is a persistent view that natives do not want to do the work which migrants are ready to do (Tyurkin, 2004). A sociological survey of international labour migrants in Russian cities supports this view, since only 30 percent of migrants feel competition with local workers, and this is particularly seen in Moscow (Tyuryukanova, 2004). As economic studies in developed countries show, this competition can be serious: immigration leads to lower wages of competing workers, elasticity of wage with respect to labour supply is about 0.3-0.4 (Borjas, 2003).

Summing up, the existing research implies that

- migration flows do respond to economic and social incentives;
- these incentives, however, are inadequately low; and
- the main barriers to migration are administrative controls and underdeveloped financial and real estate markets.

Yet, much more work is needed in order to understand the following questions:

- Is there any competition between migrants and local workers in any sector, and what are the implications for the workers, and for the economy?
- What is the impact of migration on a migrant's and household's life, human capital accumulation, and career, for both international and internal labour migrants?

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<sup>6</sup> A fact reported by police officials in Moscow – that every second crime in the city is committed by a migrant – is used by politicians to appeal to tighten registration or even close the capital (Sanin, 2005). However, most offenders in Moscow are circular visitors, rather than migrants.

- What is the economic impact and social affect of both legal and illegal migration at the macro level?
- What policy mechanisms are effective in regulating migration in terms of social welfare?

#### **4. Conclusions**

Both external immigration and internal migration are crucial for social and economic development in Russia. Russia is in the middle of a severe demographic crisis. Despite minor recent improvements, ageing and depopulation are most likely to continue for decades. Given current trends in migration, Russia's population is estimated to shrink by 20% to 112-119 million people by 2050. In the nearest future Russia will also face the problem of a shortage of working age population. To compensate for this, Russia needs an annual inflow of 1 million immigrants – 3 times as many as the average official annual flow over the last 15 years, and 5 times as many as in the recent years after tightening the migration legislation. Not only is there a need for immigrants, but there is also a huge potential pool from which to draw from: tens of millions of skilled Russian-speaking residents of former Soviet Union countries, many of whom are willing to migrate to Russia.

Internal migration is also important as it can help mitigate huge interregional employment imbalances and put Russia's scarce labour resources to more efficient use. Given the Soviet legacies, there is substantial potential for improvement. Even though some reallocation has occurred during transition, there are still millions to be moved. Despite 6 years of economic growth and quickly rising wages (exceeding growth of labour productivity), and trivial unemployment in many prosperous regions, Russia still has many regions with low wages and high unemployment. If one assumes 5.5% natural unemployment rate, there are 2.3 million unemployed who could find jobs in the labour-scarce regions. And as the natural rate is probably lower, this estimate could be adjusted upwards. There are also many additional workers currently employed in depressed regions

who could make a substantial contribution to Russia's growth by moving away from these regions with low productivity and low wages to highly-productive, high-wage regions.

The existing data and research on both external and internal migration is far from complete in providing a clear picture of the intensity and composition of migration flows; the impact of immigration on the labour market opportunities of native populations; the careers and human capital accumulation of legal and illegal migrants; and the implications of migration for overall social welfare. All existing work does suggest, however, that the major barriers to migration are administrative controls and underdevelopment of financial and housing markets.

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