

**INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT  
UNITED NATIONS POPULATION FUND**

**URBANIZATION AND EMERGING POPULATION ISSUES  
WORKING PAPER 9**

# Russian urbanization in the Soviet and post-Soviet eras



**by CHARLES BECKER, S JOSHUA MENDELSON and  
KSENIYA BENDERSKAYA**



**HUMAN SETTLEMENTS GROUP**

**NOVEMBER 2012**

---

## **Russian urbanization in the Soviet and post-Soviet eras**

---

**Charles Becker, S Joshua Mendelsohn and Kseniya Benderskaya**

**November 2012**

## ABOUT THE AUTHORS

### **Charles M. Becker**

Department of Economics  
Duke University  
Durham, NC 27708-0097 USA  
[cbecker@econ.duke.edu](mailto:cbecker@econ.duke.edu)

### **S Joshua Mendelsohn**

Department of Sociology  
Duke University  
Durham, NC 27708-0088 USA  
[sjm26@duke.edu](mailto:sjm26@duke.edu)

### **Kseniya A. Benderskaya**

Department of Urban Planning and Design  
Harvard University  
Cambridge, MA 02138 USA  
[kseniya.benderskaya@duke.edu](mailto:kseniya.benderskaya@duke.edu)

## Acknowledgements:

We have benefited from excellent research assistance from Ganna Tkachenko, and are grateful to Greg Brock, Timothy Heleniak, and Serguey Ivanov for valuable discussions and advice. Above all, the BRICS urbanization series editors, Gordon McGranahan and George Martine, provided a vast number of thought-provoking comments and caught even more errors and inconsistencies. Neither they, nor the others gratefully acknowledged, bear any responsibility for remaining flaws.

© IIED 2012

Human Settlements Group  
International Institute for Environment and Development (IIED)  
80-86 Gray's Inn Road  
London WC1X 8NH, UK  
Tel: 44 20 3463 7399 Fax: 44 20 3514 9055

ISBN: 978-1-84369-896-8

This paper can be downloaded free of charge from  
<http://www.iied.org/pubs/display.php?o=10613IIED>. A printed version of this paper is also available from Earthprint for US\$20 ([www.earthprint.com](http://www.earthprint.com))

Disclaimer: The findings, interpretations and conclusions expressed here do not represent the views of any organisations that have provided institutional, organisational or financial support for the preparation of this paper.

## CONTENTS

<b>SUMMARY .....</b>	<b>1</b>
<b>1. Russian urbanization and urban growth patterns, 1897–2010 .....</b>	<b>2</b>
1.1 Urbanization in one country .....	3
1.2 Patterns of urbanization .....	6
1.3 Urbanization, natural population growth and age structure .....	12
1.4 Russian urbanization issues .....	16
<b>2. Demographics and war .....</b>	<b>19</b>
2.1 Defining urban areas .....	19
2.2 Historical urbanization: spatial density gradients .....	20
2.3 Natural population growth: changing fertility .....	22
2.4 Famine, war and ongoing premature mortality .....	27
2.5 Rural–urban migration .....	33
<b>3. Socialist planning and urban change, 1921–1991 .....</b>	<b>36</b>
3.1 The distribution of Russian cities .....	36
3.2 Political forces in urbanization .....	37
3.3 Housing shortages, militarisation and urban growth .....	44
3.4 Social processes in urban Russia .....	47
3.5 Policies and urban growth .....	51
<b>4. Post-Soviet urban change .....</b>	<b>55</b>
4.1 Post-Soviet cities: mobility and urbanization in one country .....	55
4.2 Adjustment to the market economy: housing and use of space .....	61
4.3 Social processes in contemporary urban Russia .....	63
4.4 The market and migration .....	64
4.5 Leaving extreme conditions .....	70
<b>5. Post-Soviet suburbanization: St Petersburg case study .....</b>	<b>72</b>
5.1 St Petersburg’s decentralisation: an overview .....	73
5.2 Housing in St Petersburg: the fuel for out-migration .....	76
5.3 Suburban life in Vsevolozhsk .....	82
5.4 Suburbanization and its consequences .....	87
5.5 Who suburbanises and why? .....	93
<b>6. Post-Soviet, post-transition .....</b>	<b>102</b>
<b>References .....</b>	<b>110</b>
<b>Recent Publications by IIED’s Human Settlements Group .....</b>	<b>123</b>

## FIGURES, TABLES AND BOXES

Figure 1: Population of Russia, 1897–2002.....	5
Figure 2: Russian urban population, 1897–2002.....	6
Figure 3: Urban growth rates by oblast, 1900–2000.....	7
Figure 4: Russian city populations, 1897–2002.....	8
Figure 5: Russian regional populations, 1897–2002.....	9
Figure 6: Russian urban population growth by region and city type.....	11
Figure 7: Urban population by age group, 1897–2002.....	13
Figure 8: Total and urban population by age and sex structure, 1897–2010 .....	14
Figure 9: Russian regional urban and rural populations with age structure, 1897–2002 .....	16
Figure 10: Russian urban growth rates: total and urban populations by age, gender, and urbanization across census years .....	17
Figure 11: Krig extrapolations of the Russian population gradient, 1897–2002 .....	21
Figure 12: Proportion of population under age 10, various Russian regions, 1897–2002 ....	24
Table 1: Estimates of total fertility rates, historic values .....	24
Table 2: Life expectancy in Russia and comparator nations.....	28
Figure 13: Russian population in the presence and absence of catastrophes, 1926–1961..	31
Figure 14: Population growth-rate comparisons: Chinese and Russian sides of the Amur River, 1959–1989.....	32
Figure 15: The ‘millionaire’ effect: distribution of city populations in Russia, 1979–89 .....	33
Table 3: Urbanization in the USSR and USA (thousands).....	38
Figure 16: Russian urban and rural population, 1900–2000 .....	39
Table 4: Rapidly growing Russian cities, 1959 and 1970 .....	41
Table 5: Population in different city-size groups, 1989 and 1999.....	42
Figure 17: Comparison of Moscow (1992) and Paris (1990).....	49
Table 6: Large urban agglomerations, population as of January 1997 .....	54
Figure 18: Inter-regional migration to Moscow and St Petersburg, 1993–2010 .....	56
Table 7: Russian science cities: population growth in the post-Soviet era .....	58
Table 8: Material living conditions of Russian households in major cities, 2006 .....	64
Table 9: Russian net regional migration flows, 1978–88 and 1989–99 (thousand people) ..	65
Figure 19: Net inter-regional migration, 1990–95 to 2005–10.....	66
Figure 20: Russian firm entry and exit by market-access deciles .....	67
Figure 21: Leningrad oblast population gradient, 1996–2010 .....	73
Figure 22: Lenigradskaya oblast .....	83
Figure 23: Privatised rivers and lakes near St Petersburg.....	92
Figure 24: Residential complex – new koltushi (economy class) in Vsevolozhsk District.....	94
Table 10: Descriptive statistics for prices of suburban and urban housing.....	98
Table 11: Descriptive statistics for travel time to the metro station .....	98
5.6 The future of the periphery of Russia’s large cities .....	99
Box 1: Logistic regression of suburbanization choice .....	101
Table 12: City growth-rate correlation over time .....	102
Figure 25: Russian city growth, 2002–10 (vertical axis) and 1989–2002 (horizontal axis) .	102
Table 13: Fastest-growing Russian cities, 2002–2010 .....	103
Figure 26: Population trajectories of Russia’s ‘millionaire’ cities (as of 2002), 1897–2010.	105
Table 14: Population trajectories of large Russian cities, 1897–2010.....	105
Table 15: Most rapidly declining Russian cities, 2002–2010.....	108

## **Russian urbanization in the Soviet and post-Soviet eras**

### **SUMMARY**

This paper explores patterns of urban growth and urbanization in Russia, linking them to social, economic, political and demographic processes. We also focus on the consequences of Russia's recent history, a series of extraordinary tragedies overlaying a society undergoing massive, wrenching modernisation and social change. We argue that industrialisation and political command decisions were decisive factors during the Soviet era, and that the post-Soviet era has been a period of adjustment from a disequilibrium to an equilibrium structure.

Central planning gave rise to a system of cities with greater primacy than would have emerged under more decentralised government. Within cities, the absence of markets resulted in massive land misuse that is being rectified only gradually. The Soviet system also meant that substantial cities were created in inhospitable areas and in the past two decades Russia has witnessed net flows toward cities viable in market economies, and away from those that were monuments to a determined command economy.

Because it is so different, Russia may offer few lessons to other countries, beyond the obvious one: ignoring economic incentives and natural comparative advantage comes at a huge price, and many, though not all, cities without a natural economic base cannot thrive. The major exception to this statement appears to be Russia's scientific research cities, which are not tied to natural amenities or other locational features.

## 1. Russian urbanization and urban growth patterns, 1897–2010

“theory can explain the Russian trends when they are not deeply distorted by some extraordinary events, which, however, were and are so common in this country.”  
(Nefedova and Treivish, 2003, p75)

There are many studies of Russian urbanization, though perhaps fewer than one would expect, and very few in English. Until recently, data were inconsistent and a great deal of supporting information was obscured. Before the Gorbachev era, outside scholars often struggled to establish a basic picture, while Soviet demographers were unable to address many sensitive issues. However, in the past quarter-century a wealth of information has come to light, enabling us to explore the path and composition of the urban transition in a society that industrialised and developed in a manner radically different from any other. The story that unfolds offers insights into what may be common experiences regardless of social structure and also highlights striking divergences.

The following chapters emphasise that demographic and urban transitions are key to a country's economic development, and Russia's transitions have been rocky.<sup>1</sup> Even today, Russia suffers from a Soviet legacy of a poorly managed urban transition, and experiences continuing difficulties finding efficient and fair means of negotiating urban expansion. Property rights are more secure today than ever before in Russia's history, and as strong or stronger than in other BRICs, but security and fairness are not guiding themes of Russia's urban growth and settlement policies.

However, while Russia's history in the past century has been cataclysmic, it urbanised nonetheless. During the course of the 20th century, Russia went through a number of truly traumatic events (revolution, heavy involvement in world wars, rural collectivisation, the adoption of a central planning system, and finally the collapse of this system). These traumatic events all had important consequences for Russia's demographic and urban change. Still, in terms of the broad trends of population growth and urbanization, only the last of the events (the collapse of the Soviet system) actually seems to have halted population growth and urbanization for over a decade.

Behind the superficial continuity of growth and urbanization, the revolutionary and military events did have important demographic consequences, involving in some instances large 'missing' populations. Moreover, demographic issues were integral to both the challenges the Soviet Union faced and the responses it devised.

Overall, in terms of Russia's urban transition, the Soviet system achieved a high rate of urbanization, which supported industrialisation, and ought to have supported continued economic growth. However, the rural policies of collectivisation designed to help fund the industrial investments were extremely harmful. Further, urban activities and populations often were not located in the right places in the sense that individuals would have chosen to settle elsewhere had central planners considered their preferences. Other economic efficiency considerations – for example, input-supply cost minimisation – were also ignored in favour of military and political objectives, and ensuring dispersed industrialisation and concomitant creation of a proletariat throughout the USSR. These non-market objectives left many cities exposed with the end of the Soviet Union, and meant that dismantling the Soviet central planning system inevitably would be accompanied by significant spatial restructuring.

---

<sup>1</sup> The remainder of this section draws with permission from a summary by BRICS urbanization series editors Gordon McGranahan and George Martine.

This has amplified the inequalities emerging through the market economy, and has driven a significant shift in populations towards newly vibrant cities in the south and west – which may be the right response, but has involved considerable dislocation. The converse has been movement away from the far north and east, and from industrial cities with few amenities, towards larger cities and emerging service centres. Cities with natural resource bases or other strengths in the market economy suffered in the 1990s but have since thrived. Others have continued to struggle, especially those based on uncompetitive manufactures that produced for the military-industrial complex or that provided consumer goods in the absence of competition.

The formation of the Soviet Union and its central planning system also had important unintentional consequences, even if some of these became evident only after its dissolution. It is difficult to judge whether the pace of urbanization, regulated through economic planning but also direct controls on movement, under the Soviet system was effective in redistributing economic activities and population, or whether it was appropriate. It is clearer that the location of much urban development was not appropriate from an economic perspective, and that the location and levels of activities within urban areas were particularly ill chosen.

This ‘Russian spatial mismatch’ has meant substantial intra-urban area adjustment, even within the most vibrant cities. Per capita housing space was restricted in the Soviet era, and industrial plant was interspersed with residential areas. Central cities had wide boulevards and there were impressive arterial highways in large cities, but the USSR was not a private-automobile-oriented society, and the Soviet road network of the 1980s plus neglected maintenance of the 1990s has led to traffic congestion today. That in turn has meant soaring housing prices near city centres, while demand for space has meant sprawl on the outskirts. But while suburbanization is increasing in importance, it serves only some groups well, and others face large welfare losses. Because this restructuring has no precedent there is little analysis or understanding of policy choices, and the dynamics and options for improvement remain poorly understood.

## **1.1 Urbanization in one country**

Before turning to these complex issues, it is appropriate to start with the most basic one, that of documenting Russia’s urbanization experience. Documenting Russia is not a straightforward task. Today’s Russian Federation has been part of a larger empire for most of its existence – for practical purposes, throughout history until 1991. During this period, populations moved across boundaries of Russia proper to the affiliated (or subjugated) states with little reference to change in national location and certainly no concept of having ‘emigrated’. Boundaries also shifted for military and political reasons. In the pages that follow, we correct for many of these changes, as others have done, and present more consistent series and discussion than, to our knowledge, is available in English. However, in this chapter we present data fairly uncritically, not because we believe them to be highly accurate, but because the alternative is to bog down the reader in successive debates or measurement issues, with the result that the big picture is lost. Nonetheless, it is necessary to begin with a general warning concerning the data, with many specific points to follow during the course of the text. For the sake of imposing some sense of consistency, we focus primarily on those areas that are part of the current Russian Federation.

Despite a myriad of name and boundary changes, and concerns over data quality, Russia’s population has been documented frequently. Population censuses were conducted in 1897, 1926, 1939, 1959, 1970, 1979, 1989, 2002 and 2010. In addition, a microcensus (5 per cent sample) was conducted in 1994, a censored and suppressed census was conducted in 1937, and a partial census (inherently incomplete because of the Civil War) was conducted in 1920. Moreover, Tsarist, Soviet, and post-Soviet authorities all have maintained mandatory population registration systems and, until the end of the Soviet Union, population



movements were restricted. In consequence, annual population figures were reported and in the post-war Soviet era are likely to have been highly accurate.<sup>2,3</sup>

Our approach to the change in boundaries is to present both aggregate and regional data. Although provincial-level regions also change, in both name and area, we have linked them over time based on the assignment of the regional capital.<sup>4</sup> This permits us to create aggregated virtual regions whose populations can be tracked over time, despite frequent changes in administrative organisation. While imprecise, the error in most cases is modest, since most regions have a single, dominant city that serves as the regional capital.

The obvious questions at the core of a study of Russian urbanization concern whether the system of severe population control mattered and, if so, how it affected urban growth and economic development. There were substantial controls during the Tsarist era, and these increased further in the Soviet epoch. These included the quasi-enslavement of serfdom, restrictions on regional residence and rights to live in cities by Jews and other minorities, banishment to remote areas for political or criminal offenses, and an internal passport system during the Tsarist era. The Soviet era was accompanied by even stronger controls and assignment of individuals to workplaces to meet industrial needs. Comparison with neighbouring Poland indicates that Russia was less urbanised in the early 20th century but more urbanised by the end of the Soviet era (Szymanska and Matczak, 2002; Deichmann and Henderson, 2000). For reasons detailed below, we conclude that differences in economic structure were central to this outcome, while population control mainly affected the distribution of city sizes rather than the overall urban population.

A third issue – involving more conjecture than conclusive evidence – concerns the long-term consequences of the famine and purges of the 1930s followed by the Great Patriotic War (GPW, or World War II). A fourth focus of this paper is whether the shift from centrally planned Soviet socialism to a quasi-market economy with fewer population controls resulted in structural changes in the urban population.

These topics are addressed in subsequent sections. In this chapter, we seek to present an overall picture of the population transition that has taken place over the course of slightly more than a century. We begin by presenting a picture of Russia's population (Figure 1). The census data suggest that population rose from 80 million in 1897 to 100 million in 1926, and thence to 109 million in 1939, with growth thereafter stagnating at 146 million until around 1959. The pre-war data are disputed (see Livshits, 1990; Volkov 1990a, 1990b) but there is little doubt of the pattern of erratic growth in the pre-war era, with very high fertility and high mortality, followed by a baby boom in the 1946–1962 post-war era, followed by declining growth that became negative after 1992. As discussed below, the 1939 census is likely too high for political reasons, and could be an overstatement of as many as 9 million persons. Note also that the 1897 census includes those parts of eastern Europe that were part of the Russian empire, while Kazakhstan is included in both 1897 and 1926. Note also that these figures otherwise refer only to Russia (Russian Soviet Federated Socialist Republic, or Russian Federation after 1991) and not to other constituent republics of the USSR.

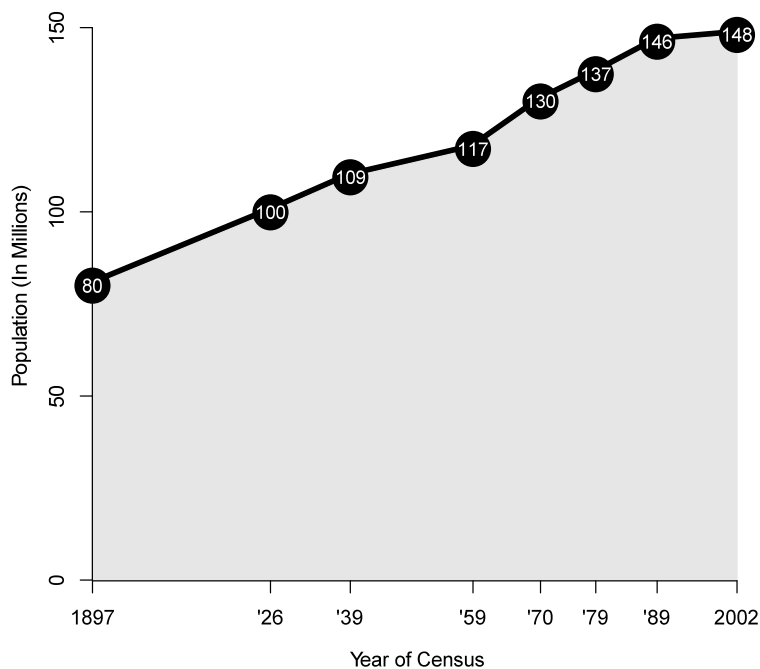
---

<sup>2</sup> 'Post-war' refers at all times to the Second World War, or, as it is known in Russia and hence referred to in this paper, the Great Patriotic War (GPW).

<sup>3</sup> However, as Heleniak (2011A) notes, the post-Soviet gradual shift from mandatory registration of all events to estimation based on sampling has resulted in increased error in recent years, thereby hindering comparability problems.

<sup>4</sup> Provinces or second-level administrative units were referred to as *guberniyas* in Tsarist times, and then as *oblasts*, as well as autonomous republics and regions – *okrugs* – in [post]-Soviet years; we generically refer to them as *oblasts*. We use the Russian *raion* to denote third-administrative-level (county) regions.

**Figure 1: Population of Russia, 1897–2002**



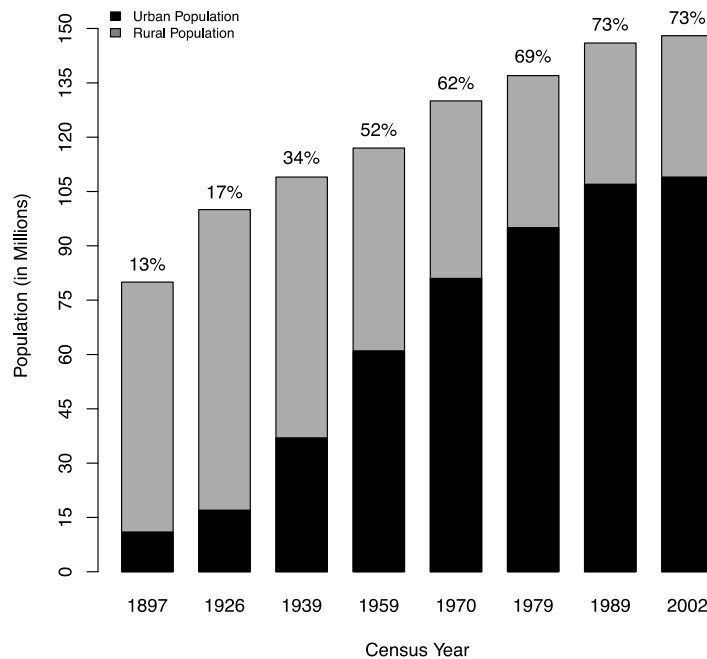
Sources (for Figure 1 and elsewhere, unless otherwise noted): Russian Federation, USSR, and Russian Empire censuses, various years.

Notes: Preliminary 2010 data are not incorporated in the figures included in Chapter 1.

Census data for recent years are online (for example, [www.perepis2002.ru](http://www.perepis2002.ru)) and are publicly available for earlier years. Eastview Press provides English-language versions.

The census data record steady urbanization during this period, with the urban share ultimately rising to 73 per cent of the population in 1989 and then stagnating (Figure 2). Particularly rapid growth was recorded during the industrialisation-push era (1926–70). The continued growth in urban population through the war period is noteworthy: despite the enormous destruction that took place, the shift to a more urban wartime economy (and continued militarisation thereafter) more than offset the decline in population caused by the conflict and destruction.

**Figure 2: Russian urban population, 1897–2002**

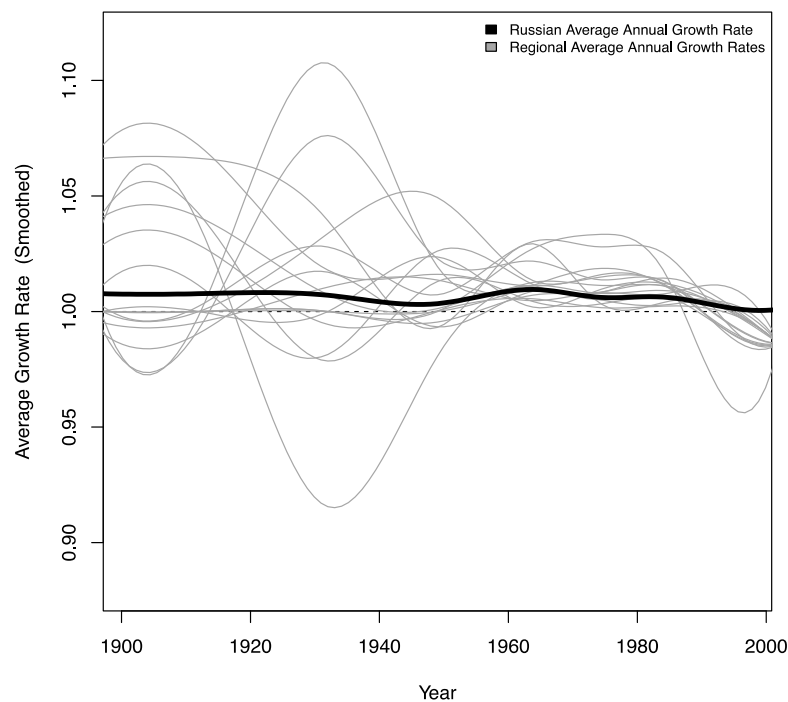


It is also striking that Russia's urbanised population growth halted abruptly with the collapse of the Soviet Union. While this pattern surely in part reflects the collapse of urban economic activity and job growth in the 1990s, other factors also were at work. Russia's urban population aged considerably in the post-war era, and birth rates, already low, plummeted in the 1990s. The consequence was a decline in natural growth, especially in urban areas, that exceeded the modest in-migration both from rural areas and from the 'near abroad' (other former Soviet republics – much of this migration involved repatriation of ethnic Russians).

## 1.2 Patterns of urbanization

While Russia urbanised rapidly, it also was characterised by enormous variance during the Soviet era. This section depicts these patterns in general terms, without reference to specific cities. Figure 3 traces the patterns of urban population growth for specific oblasts (or provinces). The variance gradually declines over time, but is high even in the late Soviet era (post-1960s). There is marked convergence (and decline in mean growth rates) in the decade following the collapse of the USSR, in part reflecting stagnation of the large majority of Soviet cities in the 1990s. As we shall see below, the picture during the past decade, one of dramatic but uneven economic recovery, is more complex. Unregistered migration almost certainly has increased, leading to large population undercounts for the more dynamic cities. Concurrently, moderate suburbanization has started for the first time in Russian history, leading to population losses in central cities.

**Figure 3: Urban growth rates by oblast, 1900–2000**

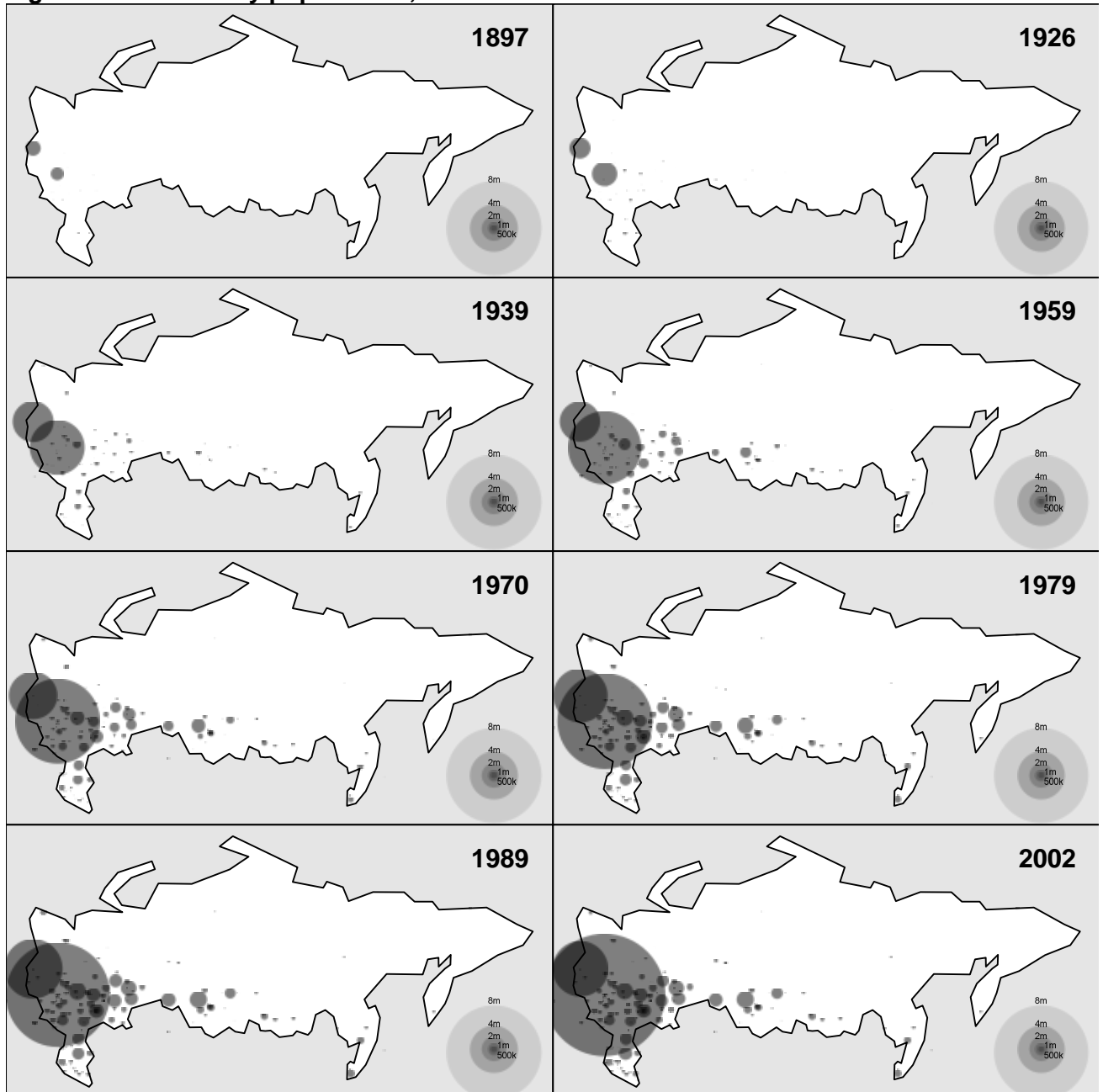


Figures 4 and 5 provide a detailed picture of regional urbanization from 1987 to 2002 (which are interpolated from the 2002 census). One sees a pattern of steady urbanization, but at different paces in different locations. The industrialised areas around Moscow and St Petersburg urbanised first, along with mining and military towns in the far north and far east. The dominance of the largest cities is also striking, with Moscow (initially smaller) catching up to and then surpassing Leningrad/St Petersburg by 1940.<sup>5</sup>

---

<sup>5</sup> The city of St Petersburg was renamed Petrograd during the First World War, then renamed Leningrad by the Soviets, and then again renamed St Petersburg following the collapse of the USSR – though it is still surrounded by Leningrad Oblast. We refer to it as St Petersburg throughout the text unless a specific Soviet reference is appropriate.

**Figure 4: Russian city populations, 1897–2002**

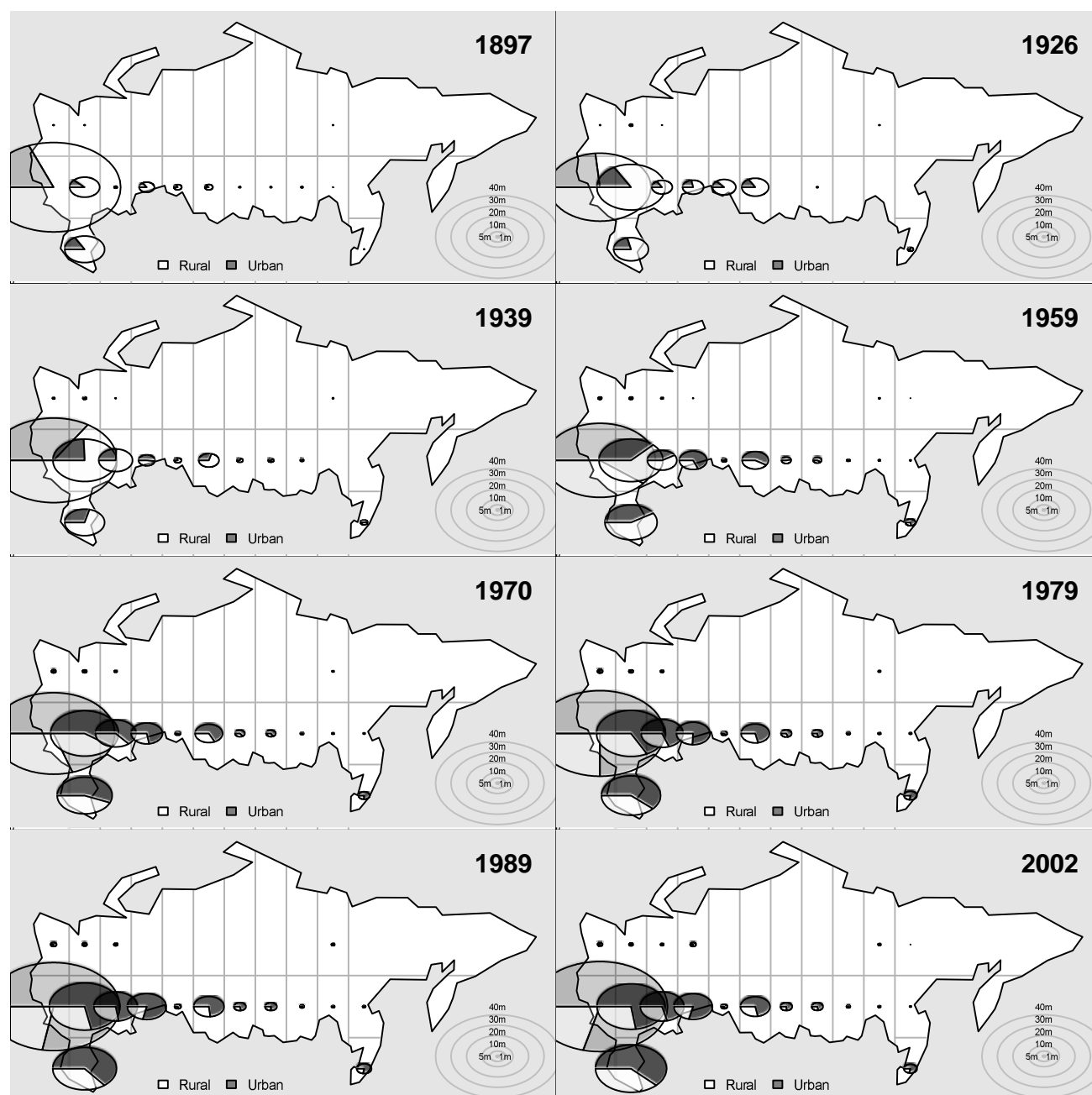


Source: 2002 census.

Note: Volume of shaded area proportionate to city population.

Figure 4 shows this pattern in terms of urban population numbers, with the size of the city reflecting its population. The initial primacy of Moscow and St Petersburg is evident. So, too, is the growth of Russia's eastern cities – a pattern initiated during the Tsarist era and continued under the Soviets. The Soviets also pushed, by both voluntary and forced means, the creation of mining and energy-producing cities in the far north, though their populations tended to be too small to make a visual impression.

**Figure 5: Russian regional populations, 1897–2002**



Source: 2002 census.

Notes: Oblasts combined into rectangular regions; populations centred on oblast capitals.

Figure 5 presents urbanization trends and population sizes according to geographic quadrant, in 10-degree latitude and longitude blocks. There are 24 such blocks in Russia, and they contain an average of slightly fewer than four oblasts (but with a fairly large standard deviation). Oblast data are assigned to the location of the regional capital rather than the geographic centre, as assignment by the latter would create a distorted picture of location: for northern oblasts, both urban and rural populations tend to be clustered near the southern border. All population values for an oblast are assigned to the quadrant in which the capital city is located.

Several features are apparent. Population is concentrated in the west and in temperate climates. This was true in 1897 and remained the case a century later. Population did spread east and south, but the fraction living in the far north was never large. Furthermore, there has been substantial return migration from remote cities since the collapse of the USSR, so that overall there is a modest re-concentration underway.

Western Russia around Moscow and St Petersburg urbanised more rapidly than the remainder of the country during the Tsarist and early Soviet eras, but the differences in terms of percentage urban were never dramatic. Indeed, by the mid-Soviet era and thereafter, many other regions had a higher proportion of the population living in cities. This pattern reflects agricultural potential: historically, Russia has had many small scattered outpost cities in difficult climates or geographic areas without densely populated rural hinterlands. Rural population densities have been greatest in breadbasket regions southwest and southeast of Moscow, and that pattern remains throughout the recorded period.

Figure 6 divides the urban populations of Russia's oblasts into several groups. Figure 6a compares the growth rates of each age segment of each block over the course of the 1897–2002 period. We see that Russian demographic growth tends to follow one of three very distinct patterns, which we term the 'cold', 'heartland', and 'Soviet' trajectories of growth. There is also one outlier region (B05), whose divergent growth patterns reflect certain historical peculiarities of its main city, Omsk.

Figure 6b reports the growth patterns, by age group, for each similarity group. 'Heartland' cities, such as Saratov and Volodga, tend to be located in Russia's southwest. They had stable, large populations well before the first Russian census, and experienced a population boom in the early part of the 20th century, as well as a major influx of working-aged adult migrants. The GPW and Stalinist purges were not kind to the heartland. Growth rates drop dramatically among all age groups under 60. However, heartland cities continued to have a strong self-sustaining population throughout the Soviet era, and witnessed significant immigration in the post-Soviet era.

'Soviet' cities, such as Abakan and Irkutsk, tend to be located in the far south, or near resource deposits in the north. While possessing some small organic population, these cities tended to grow through major influxes of working-age adults, often at the orchestration of the state. While they have since fostered stable populations, the easing of movement restrictions has witnessed outflows from many of these areas.

'Cold cities', such as Anadyr and Khanty-Mansiysk, tend to be located in the north-central and northeast regions. These areas never had a particularly strong local population base, and have consistently had a negative migration throughout the 1897–2002 period.

There is one outlier region. This area, dominated by the population dynamics of Omsk, likewise reflects its particular history. Omsk experienced rapid growth with the completion of the Trans-Siberian railway, becoming a major commercial hub for Siberian commerce and administration. Omsk's fortunes briefly rose further still as it became the capital of anti-revolutionary forces, and home of the imperial gold reserve. However, the Soviet era witnessed a decline, as Novosibirsk took over many of the functions once executed in Omsk.

**Figure 6: Russian urban population growth by region and city type**

Figure 6a: Russian regional urban population growth dendrogram

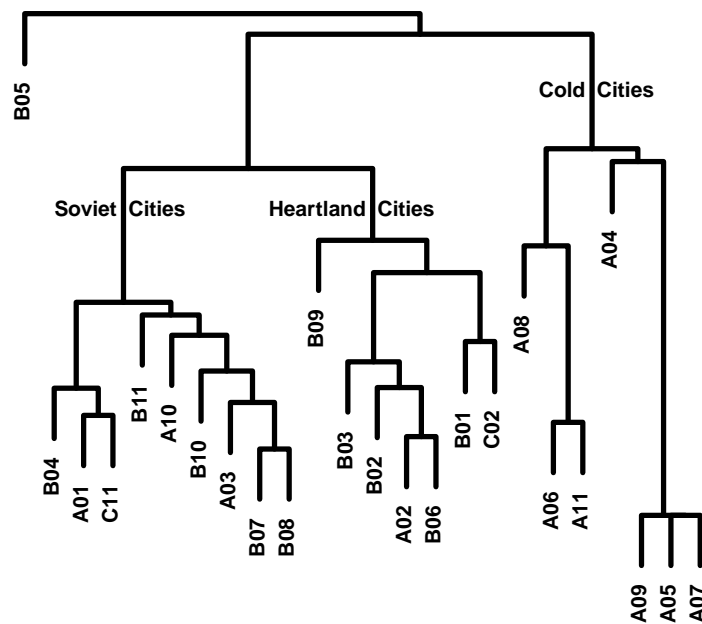


Figure 6b: Russian regional urban population growth pattern for different groups

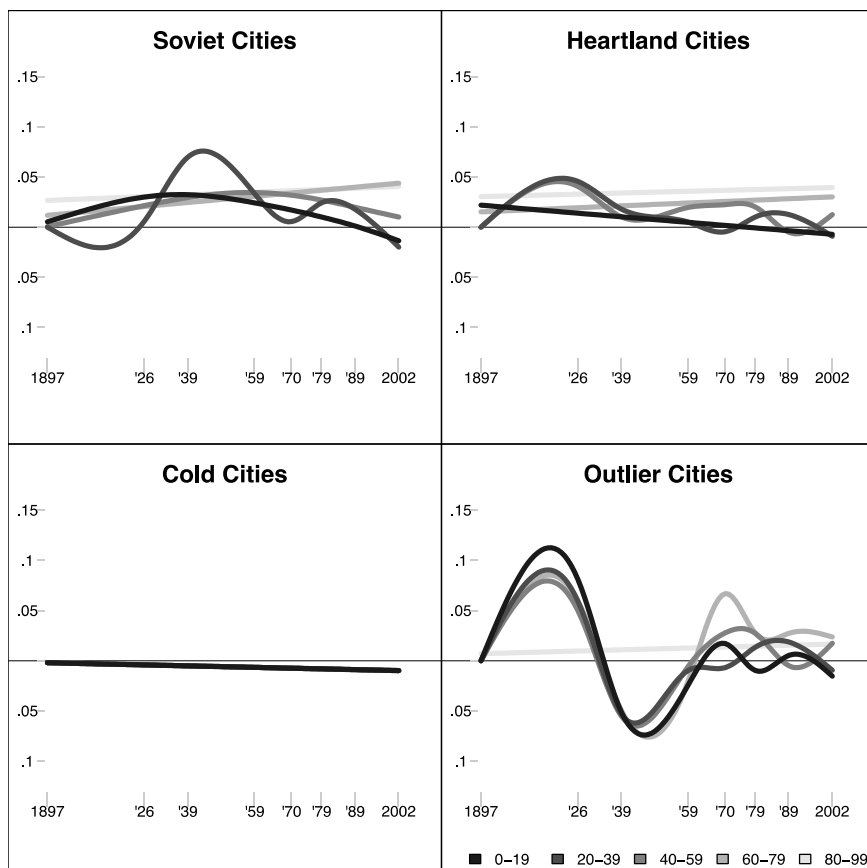
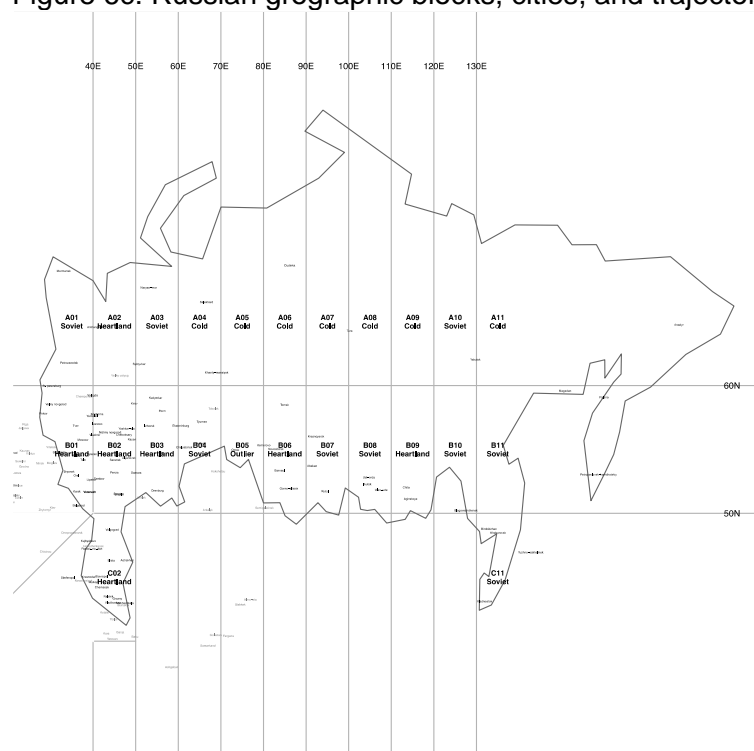




Figure 6c: Russian geographic blocks, cities, and trajectory types

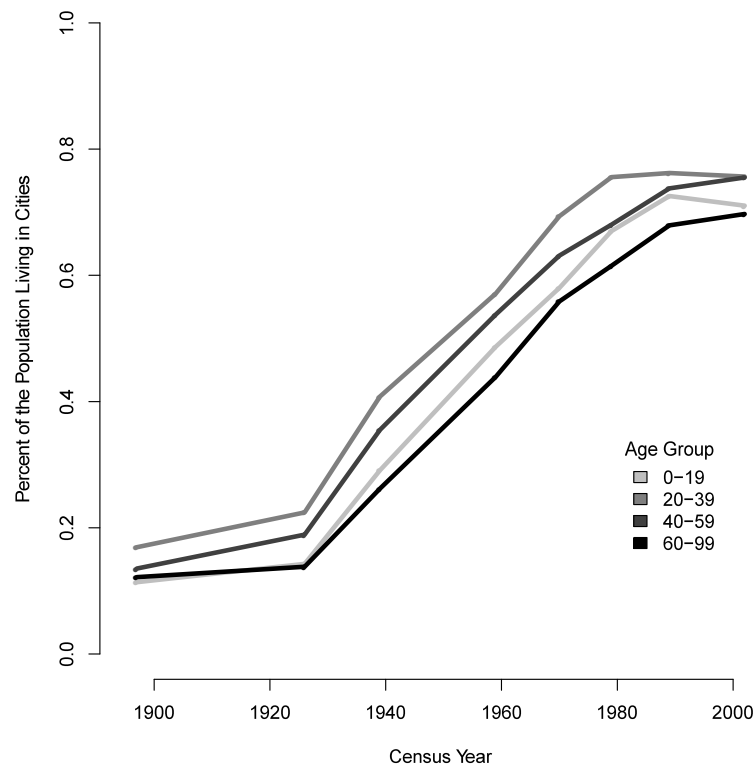


In general, the disaggregated pattern of Russia's urbanization strongly reflects the GPW, the centralised nature of decision-making and allocation of resources (which made Moscow and St Petersburg favoured and hence far more attractive cities than any others), and the rise of new cities with specific industrial purposes. Central planning unquestionably influenced Russia's urban structure, while severe restrictions on population movements, especially to desirable cities, almost certainly prevented Moscow and St Petersburg from becoming even more dominant, and in general would have constrained the primacy of Russia's city system.

### 1.3 Urbanization, natural population growth and age structure

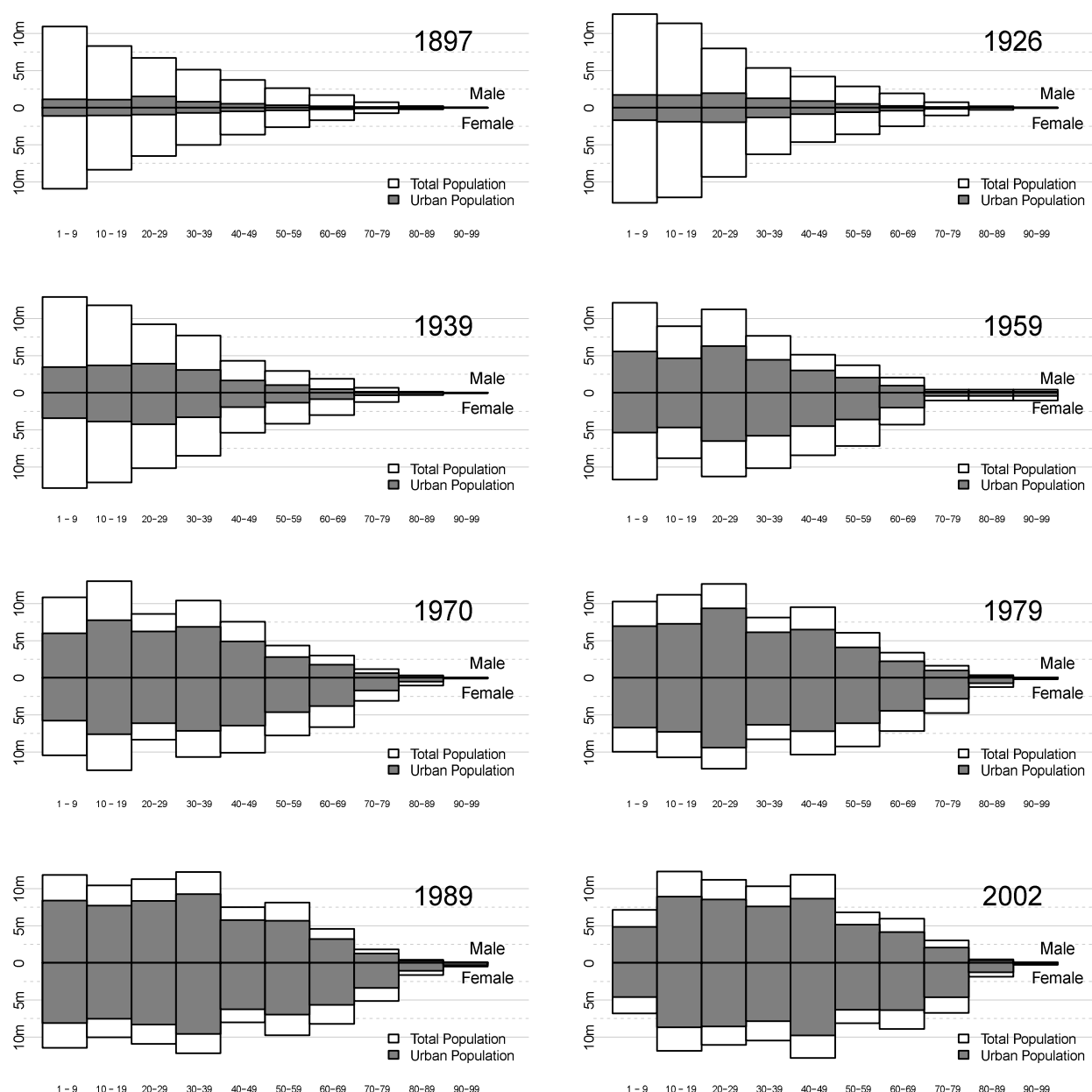
Demographic forces comprise a final set of factors that have had a key impact on Russia's urbanization. As Figure 7 shows, Russia's cities historically have been dominated by working-age adults relative to the national population. That the elderly population is somewhat more rural is hardly unusual: to some extent this reflects urbanization and the tendency of people to move to cities when they are young adults (so that more recent cohorts will be more likely to have settled in cities).

**Figure 7: Urban population by age group, 1897–2002**



The higher proportion of children living in rural areas is only slightly surprising. Either rural fertility is much higher than urban fertility, or urban Russians tend to send children to live with rural relatives (not terribly likely, given the huge advantages cities enjoyed in terms of education and social services), or families were divided by Soviet planners, or several of these factors were at work. Since cities are full of young adults, these forces must be strong enough to offset the natural countering tendency. Figure 8 shows the urban evolution of the Russian population by age in greater detail.

**Figure 8: Total and urban population by age and sex structure, 1897–2010**



1897 has an age pyramid of a typical high-fertility, poor country, as to a lesser degree do 1926 and 1939. Yet, even in these years the urban population pyramid shows a bulge of young adults. The pyramid for 1959 demonstrates the effect of the GPW in two ways. First, the age 40–70 population (aged 20–50 in 1939) is lopsided with a severe loss of men, with the male sex ratio deficit for these groups rising from 2.4 per cent in 1939 to 11.5 per cent in 1959. Second, there is a small wartime birth cohort, and a very large rise in the urban share. The demographic transition starts to take hold in 1970, with a smaller 1–9 cohort than 10–19 group. This transition continues in 1979 but is reversed in the 1980s as the result of pro-natalist policies. The post-war period is also associated with more rapid aging of the urban population as the young adults of the 1930s become pensioners in the 1960s and 1970s. By 2002 the birth crash of the post-Soviet era is felt, foreshadowing shrinking population.

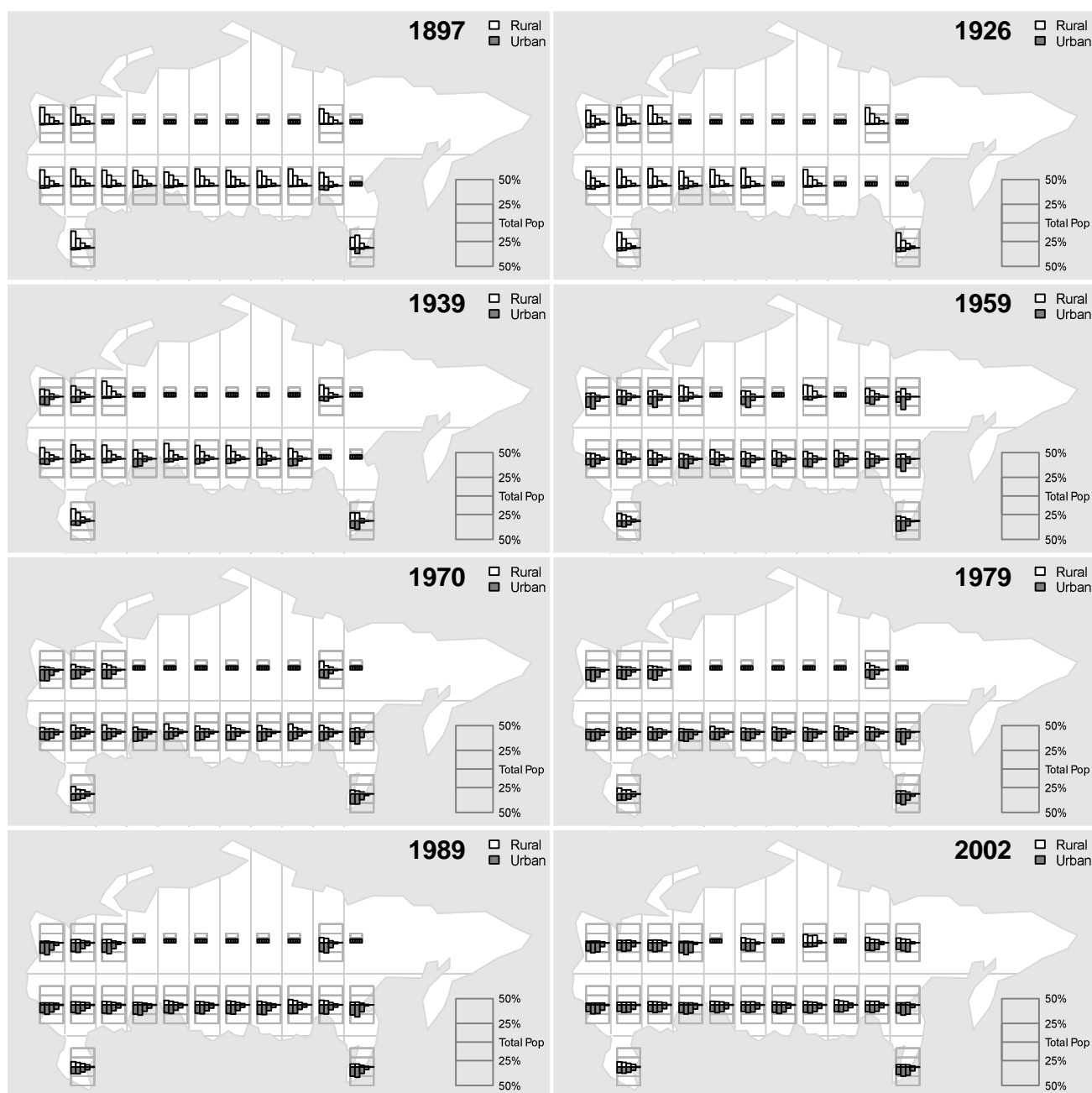
Points worth noting in Figure 8 begin with the rapid aging of Russian society. Before 1970, the largest age cohorts were the youngest (allowing for a blip due to lower war-time births

and very high war-time infant and child mortality). Projected values for 2010 have the largest cohort now aged 50–59, reflecting declining birth rates from the 1960s onward (for which the 1980s pro-natalist surge was not large enough to compensate) and very low GPW-era fertility, combined with high mortality for those born before 1950. The second striking feature is the post-Soviet collapse in fertility, especially in urban areas. For every 100 urban adults aged 40–59, in 1990 there were roughly 120 urban children aged 0–19. By 2000, the relative number of children had fallen to 82; by 2010 it had fallen to less than 54. Ultimately, these ratios are likely to rise again, at least to some degree: with economic recovery, there has been a modest fertility rebound in the past decade.

Figure 9 provides regional detail on the age structure of Russia's urban and rural population. before 1939, Russia is overwhelmingly rural, and also very young. The Soviet industrialisation push then brought many young workers to the cities; as pre-war fertility was high, the numbers of urban children also grew rapidly. This pattern is most apparent in western Russia, with the effect of newly planned cities not yet visible. By the first post-war census, Russia had urbanised substantially, especially in the Urals, western Siberia, and other areas less affected by the GPW. Its cities also had become 'grayer', with a substantial middle-aged population for the first time, especially in more temperate regions. The pattern continued in the 1970 census, which also witnessed a substantial decline of rural population in northern areas. Large elderly populations become apparent in the 1989 census and continue to be important today. However, relative to urban population structures in many Western (post)-industrial countries, the elderly population share is small, reflecting wartime losses (the population that suffered most, aged 20–40, would have begun retiring as early as 1959, and reached peak retirement density in the 1989 census) and very high adult and elderly mortality.

The regional differences highlighted in Figure 9 come as no surprise. Western areas are older and have aged more rapidly than eastern regions (as Heleniak 2009, 2011A emphasises). High male mortality means that the older age groups overwhelmingly consist of women. Rural areas and the south – essentially, the North Caucasus – are younger, reflecting higher fertility that more than compensates for lower elderly mortality. Particularly 'old' regions in recent years include the northwest and much of the Volga and Ural regions.

**Figure 9: Russian regional urban and rural populations with age structure, 1897–2002<sup>6</sup>**



#### 1.4 Russian urbanization issues

The patterns outlined above point to both the idiosyncracies of the Russian – and more importantly, socialist planning – experience, and its commonalities with other experiences. Russia urbanised rapidly like other countries that experienced rapid industrialisation. While two major cities dominated, their primacy was reduced to some degree because of forced

<sup>6</sup> Populations are centred on the centre points of regional aggregations. To aggregate regions, 24 central points were created. Oblasts were assigned to the central point whose distance from the oblast capital was less than the distance to any other centre point. The advantage of this method is that it allows a more flexible assignment strategy for oblasts that fall just outside block boundaries, such as the western Caucasus.

development of a range of smaller cities. Like other Central and Eastern European countries that industrialised, Russia experienced high fertility through the 1950s, which then declined (despite efforts by government to maintain birth rates). This decline resulted in both a slowing of natural population growth and, to some extent, rural in-migration. As noted, it also led to a greying of Russia's cities. Post-war urban population growth ultimately was limited as well both by losses in the GPW, which had both immediate and long-term effects, and by abnormally high adult mortality. Encouragement of migration of ethnic Russians to other USSR constituent republics curtailed the growth of Russia's cities until the 1960s, but by the 1980s the flow of migration reversed. Large repatriation migration flows during the 1990s in turn contributed to urban populations, roughly offsetting by then negative natural population growth, reclassification of many urban areas as rural, and a cessation of net in-migration from rural areas.

To summarise, demographics and wartime losses (Chapter 2), socialist planning (Chapter 3), and the convulsive effects of moving to a market economy (Chapter 4) distinguish Russia's urban transition. It is also an unusually well-documented country, so that features that might well be missed in other industrialising and emerging market countries are captured in official data. Moreover, state control over citizens' movements generally was offset to some extent by easy movement across the borders within the USSR constituent republics.

The other feature of Russia that cannot be ignored is its vastness (it is just under 4600 miles from Kaliningrad both to Vladivostok and to Chicago, for example). Although this paper treats Russia as having a single urban system, this is a major simplification. Frequent border changes further reduce comparability (Kaliningrad is again an example: it was part of Germany until seized at the end of the GPW). We will return to these differences in the chapters that follow. To conclude the introductory discussion of patterns, Figure 10 provides dendograms that offer nearness indicators of different regions' and years' urban growth experiences. In essence, they measure similarity of the demographic patterns between regions and census years. These have been touched on above, and are developed in the following chapters.

**Figure 10: Russian urban growth rates: total and urban populations by age, gender, and urbanization across census years**

Figure 10a: Dendrogram of similarity for total population, 1987–2002

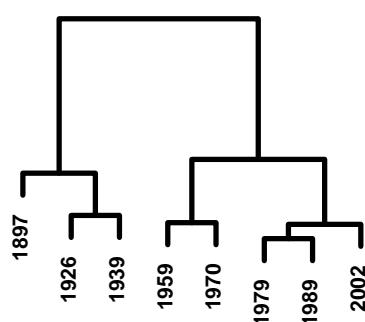
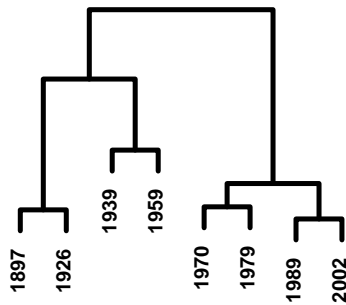


Figure 10b: Dendrogram of similarity for urban population, 1997–2002



The dendrograms show some similarities across both adjacent regions and to a far lesser degree between census years. The largest discontinuity with respect to age, gender, and urbanization is between 1939 and 1959, due to the GPW and subsequent heavy urbanization. The largest discontinuity within the urban population is between 1959 and 1970, during which birth rates fell sharply and in-migration from the countryside decelerated. Overall, the 1970s was also a period of discontinuous change (a phrase rarely associated with the Brezhnev era) as population structure changed with post-war baby-boomers entering the labour force. The period 1959–79 also was an era of social and political change (though these do not matter for the dendrograms): 1959 Russia was just emerging from the shadows of Stalinism and the Great Patriotic War; 1970 Russia was an industrialised society that was ‘modern’ in many respects. It was also urban: by 1970, in no region (as shown in Figure 9) was there a rural majority. And it had begun a transition, under Nikita S. Khrushchev, to a consumer society, starting with the first of several mass housing-construction projects.

As a reviewer commented on an earlier version of this paper, ‘One would have thought that... Soviet urban planning would have had a greater impact on location and rhythm of urban growth in this discussion.’ In the case of creating large cities in remote and harsh areas, the Soviet policy stamp is present, and the return migration in the post-Soviet era reflects a return to more conventional urban patterns: there are no cities of several hundred thousand people in northern Canada, northern Scandinavia, or Alaska, and the Russian far north does not seem destined to have very large cities either. The nascent urban sprawl in large flourishing cities also reflects a pent-up response to Soviet spatial policies. Otherwise, though, the main effects of Soviet policy appear to have worked indirectly, through their tremendous demographic consequences.

## 2. Demographics and war

“Under socialism, the course of urbanization is not distorted by class antagonism, social and racial inequality, the struggle waged by monopolies, and, therefore, it does not result in a crisis of towns. Settling is not distorted so as to contradict to the requirements extended by economic and social progress.”  
(Gokhman *et al.*, 1976, p277)

As Chapter 1 shows, 20th century Russia went from being approximately one-seventh to nearly three-quarters urban. There are many reasons for this transformation. The following chapter addresses the effects of planning, spatial policy, and the consequences of Soviet socialism. However, demographic change, both as the outcome of voluntary individual decisions and in response to war and politically induced famine, had impacts of enormous proportion likely to dwarf deliberate policy.

### 2.1 Defining urban areas

As in many other countries, the concept of urbanization is an elusive one in the Russian context. A brief discussion in English of Russian demographic data appears in Andreev *et al.* (1995), who bluntly describe the urban/rural categorisation as arbitrary and political. There are administrative guidelines for determining whether a settlement is a village, a large village settlement with urban characteristics (*поселок городского типа*), or some sort of city. Urban status requires a population minimum, and also that a specified proportion of the population is engaged in non-agricultural pursuits. However, there is an arbitrariness at the margin, and the criteria have not been constant over time.

Part of the reason for the arbitrariness is the collective nature of Soviet farming. In much (though not all) of Russia, instead of having rural areas dotted with scattered homesteads, agricultural workers live in constructed settlements with apartment buildings alongside fairly densely settled individual homes. These settlements typically have schools, shops, a clinic, a cinema, a monument or two, and some collective or state farm (*kolkhoz* or *sovkhoz*) and possibly government offices.<sup>7</sup> While not urban, their inhabitants are also not isolated, especially in the larger settlements or in those close to major cities. Thus, the dividing line is inherently somewhat arbitrary, and the Russian divisions seem to have been reasonable in practice, though post-Soviet reclassifications were based on tax-status advantages. Lewis and Rowland (1969) handle the question simply by restricting their analysis to towns and cities above 15,000 in population.

Obedkov (2002, pp15–16) provides a detailed description of urbanization criteria in Russia and other former Soviet republics. This short monograph is wonderfully detailed, providing a list of 1086 cities recognised as ‘subjects’ of the Russian Federation, along with their date of incorporation as a city, their date of founding or first mention in the literature, and their former names. Current Russian practice is to award city status to settlements of at least 12,000 inhabitants with at least 85 per cent of the working-age population engaged in non-agricultural pursuits. This is the strictest definition in the former USSR: elsewhere, minimum population size ranges from 5000 to 10,000 and the minimum non-agricultural share ranges from 50 per cent plus one to 75 per cent.

---

<sup>7</sup> These settlements are vaguely reminiscent of county seats found in rural areas in the United States – several settlements such as the tiny county seat of Gatesville along North Carolina’s Inner Banks region are good examples. Key differences are that there are independent houses on the roads connecting villages like Gatesville to nearby towns, and only a small proportion of the population lives in apartment complexes. One also finds rural populations elsewhere clustering in villages, especially in areas with harsh climates that restrict access during parts of the year.



In short, the concept of urban settlement in Russia seems to be somewhat more conservative than in neighbouring states or in many advanced economies. It also appears to have become more strict over time, which means that urban population growth rates and current levels of urbanization are both modestly understated. However, as Pokshishevsky (1972) emphasises, the precise definition is not terribly important since Russians tend to live in larger cities, and even as long ago as the 1960s, fewer than 5 per cent of urban Russians lived in officially designated 'cities' with fewer than 5000 inhabitants.

On the other hand, many Russian demographers and geographers (for example, Pivovarov, 2003; Nefedova and Treivish, 2003) are reluctant to regard smaller cities and many city dwellers as being truly urban. This reluctance to consider smaller urban settlements – with few urban amenities and often very poor services and living conditions – as being truly urban underlies the Gol'ts (2004) redefinition of urban population shares (dramatically downward) on the basis of a geometric average of several defining characteristics.<sup>8</sup> Lappo (2005) offers a more detailed explanation, and notes as well that in the post-Soviet period for many there has been an increase in the importance of 'agrarian occupations' on the periphery of towns and cities – dacha farming in large cities, and small garden plots on the outskirts of smaller towns.

Beyond the sharp rise in poverty following the USSR's collapse and the initial deterioration of distribution chains, Lappo (2005) lists several other reasons for the 'symbiosis' between rural and urban and Russia's towns and cities. These include:

- a rural past – some 330 Russian cities grew out of village settlements
- today's cities have swallowed thousands of smaller settlements (in 1960 alone, Moscow was expanded to incorporate 150 villages)
- many if not most cities have expanded their boundaries to incorporate single-storey dwellings with enclosures (a *dvor*) that include livestock and fowl, along with fruit and vegetable gardens; these regions retain a rural flavour – low density, with minor farming activity
- the huge migration flow to cities from rural areas means that a very high proportion of today's urban residents have rural roots: 'cities are populated, and often over-populated, with a population for whom the city remains alien' (here and elsewhere, translation by the authors).

This gray area hardly distinguishes Russia's cities from those of other transition economies and emerging markets. However, the Soviet focus on military and industrial production rather than providing consumer goods and services may have made the contrast between marginal and dominant cities somewhat more striking than elsewhere.

## 2.2 Historical urbanization: spatial density gradients

The pattern of Russia's demographic transition also has had a strong spatial component. Russia urbanised first in the central, northwest, and Ural industrial area, and then gradually expanded its densities and cities in a southeastward direction. One way to get a sense of the trends in Russian urbanization is to create a Krig interpolation. Kriging, as it is often called, is a technique pioneered a century ago in the mining industry to predict where new ore desposits are most likely to lie, given the location of existing ore desposits (for detail, see ESRI, 2003, chapter 6). This is done using a form of spatial regression, and relies heavily on

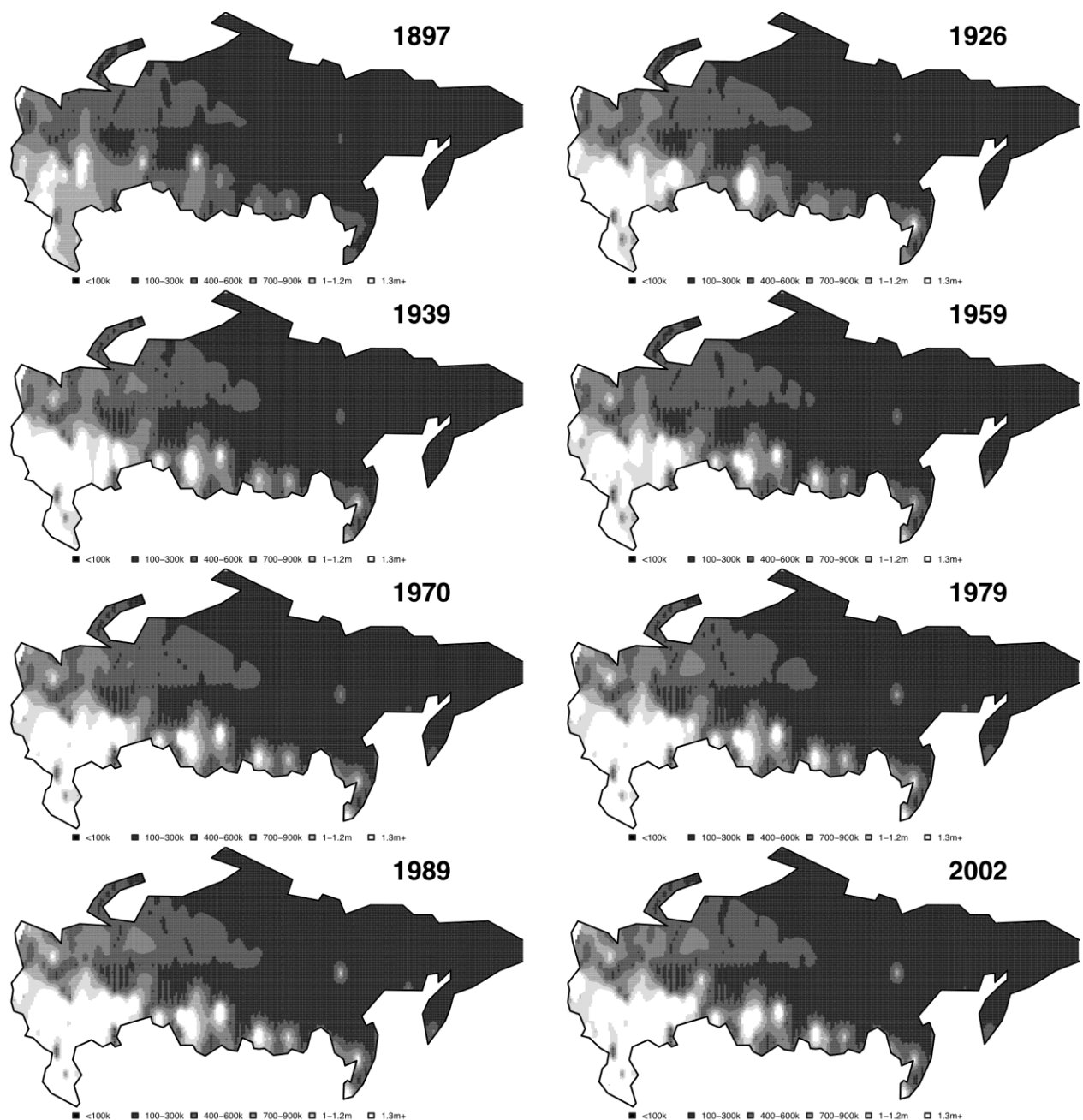
---

<sup>8</sup> Nefedova and Treivish (2003, p76) claim that 'Many smaller cities are located in zones of immature urbanization and marginal semi-urban lifestyle.' While vague, this assessment is undoubtedly shared by many contemporary Russian geographers. Stripped of its value judgments with respect to social behaviours and cultural amenities, one can interpret this statement to reflect a dearth in small cities of human capital (with technical and business skills), effective and entrepreneurial local government, and physical infrastructure or market access necessary to thrive in a post-socialist market setting.

the (generally uncontroversial, though sometimes overly simplistic) assumption of spatial auto-correlation – locations are more likely to be similar to nearby other locations.

Applied to populations, Kriging permits us to estimate where one would expect to find higher population densities, given the population-density estimates available in census data. In essence, it tell us us which areas are more prone to being populated, based on their location, and the population characteristics of other similar locations. Alternately, a Krig estimate can be viewed as a counterfactual, predicting the expected population if one were to encounter an urban area *de novo* at a random spot in Russia. Figure 11, based on each population census, treats each oblast population total (both rural and urban) as a population-density estimate, and hypothesises about what values between those points would be if smooth patterns were observed.

**Figure 11: Krig extrapolations of the Russian population gradient, 1897–2002**



In 1897, the population centre of the empire is firmly in the area around Moscow, with significant population centres to the south (Vorenezh), west (St Petersburg) and east (Nizhny Novgorod). To some extent, the population gradient also emanates outward from St Petersburg in a southeasterly direction. The patterns reflect the historic dominance of Russia by the northwest, and the empire's orientation toward its European regions (Poland and Finland) as well as toward the Ukrainian breadbasket. Although northwest Russia was not well-suited for agriculture compared with regions to the southeast and south, poor road infrastructure almost certainly limited population dispersal.

Over the next quarter-century, Russia experienced major population growth in the areas adjacent to Moscow, as well as massive growth around Novosibirsk. While St Petersburg also grew during this time, the explosive growth around Moscow firmly shifted the centre of population closer to Moscow, reflecting the consequences of the Civil War and the movement of the capital to Moscow. Initial industrialisation was concentrated in or near the two dominant central cities. By 1939 a region of high population density was beginning to connect the two, and was on the verge of adding Volgograd (then Stalingrad) to the nascent conurbation – though, given Russia's vastness, large sparsely populated areas between the cities existed, and in fact still exist.

However, the GPW rapidly reshaped the population dynamics of the region. Even as late as 1959, the populations of St Petersburg and nearby cities remained far below their pre-war levels, and the Moscow conurbation had shrunk back towards its centre. In contrast, non-front-line cities such as Orenburg, Ufa and Chelyabinsk experienced growth. For the rest of the Soviet period, the Moscow conurbation would grow towards these unscathed areas – the Orenburg-Ufa-Chelyabinsk region and the Caucasus. The St Petersburg area would not begin to see significant growth for another half-century. Starting in 1926, we also see the establishment of islands of population in southern Siberia, along the path of the Trans-Siberian railway. These populated islands remain at relatively constant shapes and sizes throughout the Soviet period, undoubtedly maintained by a continued push from the central government. These areas have since seen moderate declines.

From 1959 until the end of the Soviet era the gradient remains virtually unchanged but population densities increase, with gradually increasing preference for southern locations. Then, in 2002 there is a striking contraction of the population toward Moscow, though the basic gradient remains. Note the similarity between 1959 and 2002: it is as though Russia reverted to its pre-'modern industrialisation' phase. One way to view Russian cities is to create a trichotomy of (1) traditional, pre-Soviet 'heartland' cities, (2) far north and east cities built on natural-resource deposits ('cold' cities), and (3) industrial cities created during the Soviet era, and in particular between the mid-1950s through the 1970s. The reversion to 1959 density gradients to a considerable degree reflects the decline of this last group, though Russia remained heavily urbanised overall.

Lappo and Polyan (1999) note a very similar geographic transition. They also emphasise both the military and transportation factors that gave rise to these patterns. Industrialisation pushed east and north to exploit natural resources (minerals and energy); it also moved eastward in anticipation and in response to the GPW. Because of Russia's vast distances, it was not easy to locate new cities far from trunk rail lines. While mining cities did not have the luxury of locational choice, those that grew beyond their mining or energy base needed trunk-rail access in the Urals, Siberia and the Far East.

### **2.3 Natural population growth: changing fertility**

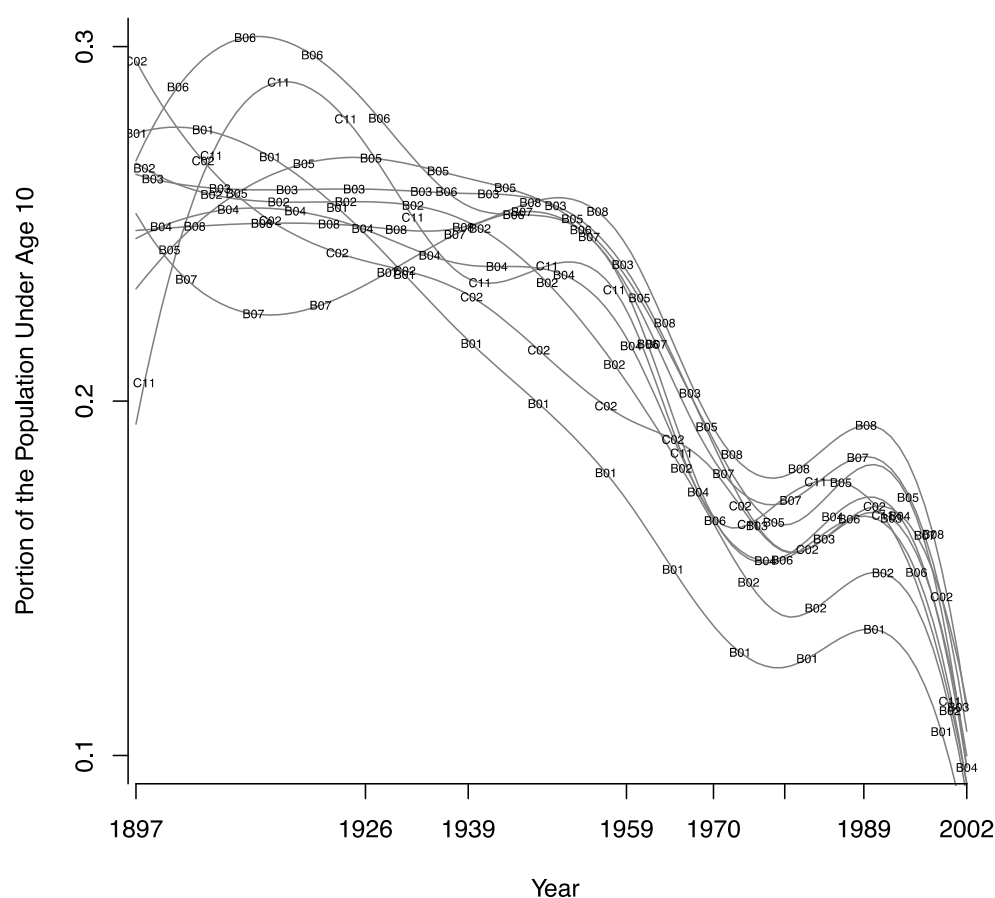
Given its per capita income, Russia underwent a fairly early fertility transition, though the decline was more gradual until the end of the Soviet period than in many Central and Eastern European comparators. Russia also has been characterised by very high mortality,

which was accentuated by the GPW losses, as well as by losses during the Russian civil war (1918–21) and, to a lesser degree, by famines and imprisonments associated with the 1930s.

There has long been a strong fertility gradient: births are higher in the south and east than in the north and west. This pattern continues today, and is in part related to religious differences, as non-Russian-ethnicity Muslim households have higher fertility. The pattern is offset to some extent by higher mortality in the east, and by a higher proportion of adults of child-bearing age in the northwest, but these effects are minor. Fertility is also lower in urban than rural areas. In 1994, near the fertility low point (with a total fertility rate of 1.40 for the Federation), the total fertility rate (TFR) ranged from a low of 1.10 in St Petersburg city and 1.08 in Moscow oblast (surrounding Moscow city) to 1.47 in the Far East region, 1.58 in East Siberia, and 1.73 in the North Caucasus (see Andreev *et al.*, 1997). Within the North Caucasus, TFRs ranged from 1.43 in predominately ethnic Russian Rostov oblast to 2.62 in the mainly non-Russian Daghestan Republic. Virtually no oblasts dominated by ethnic Russians had replacement-level fertility rates. The absolute nadir of Russia's TFR occurred in 1999, when it was recorded as 1.16. Since then, rapid economic recovery and strong pro-natalist policies have resulted in increasing fertility, and in 2009 the TFR hit 1.54 (Shcherbakova, 2011).

The bigger demographic change is the fertility transition. Prior to the 1930s, Russia's fertility was very high – though so, too, was its infant mortality. Because high mortality largely balanced high fertility, rural–urban migration was the dominant source of city growth before the GPW. From the 1950s, however, fertility declined sharply, and urban population growth slowed as well. Figure 12 provides a striking visual presentation, and shows that the post-Soviet fertility collapse occurred in all regions.

**Figure 12: Proportion of population under age 10, various Russian regions, 1897–2002**



Note: Regions as defined in Figure 5 and that have 2 per cent or more of the national population.

Even more striking than the secular decline in fertility has been the huge fertility impacts of cataclysmic events. Birth rates plummeted during the First World War and Civil War (in effect, 1915–21), collectivisation and ensuing famine (1928–34), and the GPW (1941–45). Estimating TFRs in these situations is not trivial, since these catastrophes create a selection bias, as survivors are non-representative (Scherbov and van Vianen, 2001).

**Table 1: Estimates of total fertility rates, historic values**

(1) Year of birth	(2) Completed fertility, 1994 microcensus (births/woman)	(3) Total fertility rate (TFR)	(4) Urban TFR	(5) Rural TFR	(2) Completed fertility, 1979 and 1989 censuses (births/woman)
1900	2.89	7.3			2.95 (1900–13)
1905	2.71				
1915	2.53				2.59
1920	2.11	6.1			
1925	2.11				2.23

1930	2.08	5.0			2.19
1935	1.98				2.04
1940	1.90	3.8			1.97
1945	1.76				1.80
1950	1.83	2.5			1.88
1955	1.86				1.92
1960	1.71	2.56	2.06	3.26	
1965		2.02	1.82	2.58	
1970		2.00	1.77	2.52	
1975		1.97	1.76	2.64	
1980		1.86	1.68	2.51	
1985		2.05	1.86	2.68	
1990		1.89	1.70	2.60	
1995		1.34	1.19	1.81	
2000		1.20	1.09	1.55	
2005		1.29	1.20	1.59	
2009		1.54	1.42	1.90	

Sources: Scherbov and van Vianen, 2001. Data source: 1994 microcensus (columns 1 and 2); Zakharov and Ivanova, 1996 (column 3); RF Federal Service for Government Statistics <http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite/main/population/demography/#> (columns 4 and 5); Avdeev and Monnier (1995) (columns 4,5 and 6; data in column 6 are averages of reported figures).

Table 1 provides TFR data from the 1994 Russian microcensus by year of mother's birth. The numbers are revealing: high-fertility periods notwithstanding, the impact of the periodic catastrophes is to greatly reduce the number of live births women actually had. Women born around 1900 would have had fertility lowered by the disruption of the civil war and collectivisation; those born a decade later were affected by collectivisation/famine and the purges; those born from 1915–25 would have been affected by the war. The consequence is that the impact of the sharp decline in completed fertility associated with industrialisation, urbanization and horrendous housing shortages was largely offset by the shocks that reduced fertility for an earlier generation.

In contrast, these shocks exacerbated the decline in current fertility. Russia's fertility transition had not started beyond a few areas or localities by the time of the 1897 census, and in fact the total fertility rate (which reflects current fertility) remained above 6 live births per woman until 1930. It then plummeted, falling to below 3 births by 1945. Post-war recovery led to a deceleration of the TFR's fall, but not to a baby boom of the sort associated with Western industrialised countries, where a birth surge followed the extremely low depression and wartime fertility in societies for which the fertility transition was already well underway.

Population growth was further reduced by high levels of infant mortality. Estimates from Scherbov and van Vianen (2001) indicate roughly 100 infant deaths per thousand live births from 1925 to 1933 or so, then a decline to below 80, followed by a rise to above 90 at the outset of the GPW, and then a secular decline to 30–40 in the 1945–60 era and around 20 after 1965. Their estimates tend to be well below those of official data (reflecting recollection error), which in turn are known to suffer from problems of underestimation (Anderson and Silver, 1986). The official infant mortality data for the pre-war era are staggering, and worse yet for wartime-era births. RAN (2001, chapter 7) records infant mortality of 177 deaths per

thousand live births in rural areas, peaking at 237 in 1943, and then falling to 105 in 1944 and 78 in 1945. In wartime cities the situation was worse: overall urban infant mortality peaked at 344 in 1942; by 1944 it had returned to 113. Moreover, this reflects huge disparities among cities: infant mortality (and, indeed, general mortality) rates in cities behind the front (*v tylovykh raionakh*) were only about 40 per cent of the average, implying that in frontline cities, infant mortality must have exceeded 50 per cent in many places.

Zakharov and Ivanova (1996) identify the high mortality and low fertility crisis eras as 1915–21, 1928–34, and 1941–47. In total, they attribute to excess mortality, birth ‘deficits’ and emigration during these periods a total population loss of 38 million people within the RSFSR. This figure is of course debatable: the 1939 census was politicised and is of questionable reliability, the internal passport did not apply to rural dwellers prior to the GPW, and no post-war census was taken until 1959. But there can be no doubt that the losses were vast and the Zakharov–Ivanova estimate is not out of line with other figures (in particular, Avdeev and Monnier (1995), the 75-million person loss estimated by Lewis and Rowland (1969), or the 40 million loss to the urban population alone claimed by Pivovarov, (2003)). It is also in line with the conservative estimates of Wheatcroft (1990), which imply about 2.75 million excess deaths in 1933–34 alone, and some 2–4 million unrealised births because of temporarily plunging fertility in the mid-1930s. What it implies is difficult for outsiders to grasp: Russia’s population was reduced by one-quarter to one-third as a result of the series of tragedies between 1914 and 1945.

It is not surprising that these population losses have led to an obsession with population growth and fertility. Abortion was legalised (as part of a surge in women’s rights accompanying the revolutionary fervor) in 1920 but was banned in 1936 by Stalin; it was re-legalised in 1955 with Khrushchev’s ascendancy to power and de-Stalinisation moves. Since abortion was the primary means of birth control in the USSR, and since the average Russian woman could expect to have several abortions during her life in Soviet times (and, to a lesser degree, still can), one would expect the abortion ban to have had a large impact on fertility. That it does not appear to have done so means either that fertility was low for other reasons, that alternative contraceptive measures were available, that there were many illegal abortions, or that some combination of these forces occurred. Most likely, abortion became ubiquitous after the mid-1950s, and contributed to Russia’s low birth rates, especially in urban areas, over the past sixty years. The number of abortions per live birth rose from 1.60 in 1959 to a peak of 2.4 in the late 1960s before gradually declining to 1.6–1.8 in the 1980s, and about 1.9 at the end of the Soviet era (Zakharov and Ivanova, 1996). As fertility was also declining, lifetime total abortion rates (TAR) declined from about 4.2 in 1970 to 2.6 in 1990.

The need for a larger population in such a vast country has been an enduring preoccupation of Soviet and Russian politicians and policymakers. Stalin was obsessed with population growth in the second half of the 1930s. When the long-postponed 1937 census showed paltry population growth it was suppressed and its organisers were arrested. Ironically, to the extent that there was an undercount, it reflected the politicisation of the process imposed by Stalin. The census was a one-day affair, and did not count those who were not permanently residing in the place they happened to be. However, Livshits (1990) argues that the undercount was probably only of the order of 0.5 million for this reason, and that the estimate of 162 million was likely to be more accurate than the USSR figure of 170–172 million implied by civil registration data, to say nothing of the 180 million predicted by Stalin.<sup>9</sup>

---

<sup>9</sup> The first detailed analysis of the suppressed census appears to be Livshits (1990), whose analysis was written in 1972 but not published until 1990. Volkov (1990a) discusses his contribution as well. A detailed discussion appears in Volkov (1990b), available as an online reprint from *Demoskop Weekly* at [http://demoscope.ru/weekly/knigi/polka/gold\\_fund08.html](http://demoscope.ru/weekly/knigi/polka/gold_fund08.html). An excellent English-language summary appears in the Wikipedia article [http://en.wikipedia.org/wiki/Soviet\\_Census\\_\(1937\)](http://en.wikipedia.org/wiki/Soviet_Census_(1937)).

The upshot of this was that another census was conducted in 1939. It generated a USSR population of just over 170 million, in line with Stalin's revised prediction.

As noted, Stalin's contribution to Soviet birth policy was to ban abortion. His successors removed the ban but remained concerned about low birth rates. In 1981 during his waning years, Brezhnev instituted a policy of increasing marginal payments for higher-order births. This appeared to have a modest impact on fertility in the late Soviet era (Avdeev and Monnier, 1995). Given the post-Soviet fertility decline, it is not surprising that birth payments have been revived, and with economic recovery have been increased to very high levels (as of 2011, the bonus for having a second child was Rb250,000, or roughly US\$9200). The extent to which these incentives have mattered is less clear: birth rates rose at a comparable rate in poorer but also recovering Ukraine until 2010, when the global financial crisis hit there particularly sharply (Haub, 2011).

Ultimately, Russian fertility is similar to that of its Northern European neighbours, and is a low outlier only during periods of crisis (for comparative data, see Avdeev and Monnier, 1995). The push to promote fertility thus reflects the consequences of crisis periods rather than an abnormally low birth rate. However, during the past century, only 1913–14, 1946–1991, and 2000–12 can really be regarded as 'non-crisis'. Indeed, The Rosstat (2010, Table 4.3) 52-year age-specific birth rate series from 1958–59 to 2009 shows secular declines in birth rates for both urban and rural women under 25 years, but marked recoveries for women over 25. In urban areas, teenage birth rates peaked in 1990 at 48 per thousand girls aged 15–19, a rate more than twice that of the period 1958–65, and then plummeted to about 24 per thousand by 1999, and have been stable since. For urban women aged 20–24, the peak birth rate year was 1987 (153 births per thousand), but the rate collapsed to 104 by 1993, and then followed a more gradual decline until 2005; since then the rate has stabilised at 75–80 births per thousand. For women aged 25–29, births also peaked in 1987 (at 108), collapsed to 57 by 1993, but then stabilised and began growing in the early 2000s, reaching 88 by 2009. The picture is even more remarkable for women in their 30s: for women aged 30–34 and 35–39, 2009 birth rates (62 and 27, respectively) are at a level not seen since the early 1960s, and are more than twice the post-Soviet nadir values (27 and 9, respectively, in 1994). While some of these increases for older women reflect postponed fertility and rising age of first marriage, it is unreasonable to regard Russian birth rates as abnormal (by international standards) during normal times (good times by Russian standards), such as the early 2000s.

However, the post-Soviet decade was not a normal period in any sense, and birth rates plummeted in both urban and rural areas. Nationally, the post-late-1960s TFR peaked at 2.19 in 1986–97 but fell to 1.16 by 1999 – though a decade later it had risen to 1.54. Comparable figures for urban areas are 1.95, 1.04, and 1.42, respectively (Rosstat, 2010). However, rising mortality did not recede as easily and, coupled with declining fertility and area reclassifications, ultimately resulted in a decline in urban populations, starting in 1992.

## **2.4 Famine, war and ongoing premature mortality**

Russia's demographic history is striking in two respects. The better-known feature is the impact of the cataclysmic events. In terms of mortality, these include the First World War (1914–17), the Civil War, (1918–21), and the post-collectivisation famine (1932–33). Although this was felt far more strongly in Ukraine and Kazakhstan than in the RSFSR, the Stalinist repression that peaked in 1937 was catastrophic (RAN (2001, p195) estimates that mortality of the imprisoned population between 1940 and 1953 exceeded 1.3 million, of whom all but 100,000 died in camps or penal colonies, with nearly half of this mortality occurring in 1942–43 alone), as was the GPW (1941–45), and, to a far lesser degree, the impact of the collapse of the USSR (1992–98). What is striking in all this is that the only prolonged period of normalcy was 1945–91, and that period in turn was beset with



unanticipated stagnation and even slight decline in life expectancy after the 1960s, with Russia falling by the wayside as other (post-)industrial countries experienced large gains.

The second feature is that of low life expectancy. Russia's exceptional mortality in recent years is well known and amply documented, but far less well known is the nation's historically high mortality, especially in urban areas. Since basic medical care and public health measures were standard in the post-war era, and were generally better in urban than rural areas, high urban mortality is generally ascribed to poor individual health-related behaviours and diet. This mortality is important in assessing urbanization, since it meant that very high birth rates and rural–urban in-migration rates were associated with much lower city-growth rates than would have been the case in the absence of high background mortality and a series of cataclysmic events.

Russian life expectancies at birth are astonishingly low by the standards of all but extremely poor countries, and especially given that infant and child mortality is not particularly high. In 1994, one of the very worst years, life expectancy fell to 57.6 years for men (ranging from 54.4 years in East Siberia region and 48.9 years in the Tuva Republic to 60.2 years in the North Caucasus region and 65.5 years in the Daghestan Republic, and 61.1 in ethnic Russian Belgorod oblast) and 71.2 years for women (with a low of 62.9 years in Tuva and a high of 75.0 in the Karachaev-Circassian Republic and 73.9 in Belgorod among the Slavic areas; Andreev *et al.*, 1997). Nationally, for urban (rural) men, life expectancy at birth peaked at 65.4 (63.2) years in 1986–87, declining to 57.7 (56.7) in 1994, and remaining below 60 years until 2006 in urban areas and 2008 in rural areas.

However, a marked recovery is now underway, with male life expectancy reaching 63.5 (60.9) years by 2009 – though still lower than a quarter-century earlier (Rosstat, 2010, Table 2). The same pattern holds for women, though the collapse and hence recovery were less dramatic. Life expectancy for urban women peaked at 74.5 years in 1989, declined to 71.2 by 1994, and passed the Soviet peak in 2008, reaching 75.1 years in 2009. Life expectancies for rural women are slightly lower (73.4 in 2009) and have not passed the Soviet peak (74.4 years in 1986–97). Yet, even today male life expectancies at birth are below 60 years in several oblasts; worst of all is the Tuva Republic (2009 urban male life expectancy of 57.2 years; rural male life expectancy of 51.4 years).

**Table 2: Life expectancy in Russia and comparator nations**

Country	Year	Life expectancy, years							
		Males, at age:				Females, at age:			
		0	15	45	65	0	15	45	65
Russia	2009	62.8	48.7	23.9	12.0	74.7	60.5	32.7	16.4
Brazil	2007	68.8	56.4	30.5	16.1	76.4	63.4	35.1	18.8
India	2002–06	62.6	54.6	28.0	13.6	64.2	58.2	31.1	15.4
China	2001	69.8	57.6	29.6	13.8	72.7	61.0	32.4	15.5
South Africa	2010	52				56			
Belarus	2008	64.7	50.2	24.1	11.7	76.5	61.9	33.3	16.7
Estonia	2008	68.7	54.3	27.2	13.6	79.5	65.0	36.0	18.9
Kazakhstan	2009	63.6	50.4	24.9	12.0	73.6	60.2	32.2	15.9
Latvia	2008	67.0	52.8	26.1	13.0	77.8	63.4	34.6	17.9
Lithuania	2008	66.3	51.9	25.8	13.4	77.6	63.2	34.6	18.1
Ukraine	2009	63.8	49.8	24.4	12.3	74.9	60.8	32.8	16.3

Bulgaria	2008	69.8	55.8	27.9	13.5	77.0	63.0	34.0	16.7
Czech Rep.	2008	74.1	59.5	30.9	15.3	80.5	65.8	36.5	18.8
Finland	2008	76.5	61.9	33.7	17.5	83.3	68.6	39.3	21.4
Slovakia	2008	70.8	56.6	28.5	13.8	79.0	64.6	35.3	17.8
Vietnam	2001	66.9	55.4	28.1	13.0	71.8	59.7	31.6	15.1
Chile	2005–10	75.5	61.4	33.3	17.0	81.5	67.3	38.1	20.4
Indonesia	2001	64.4	53.3	26.8	12.5	67.4	55.7	28.9	14.0
Korea	2006	75.7	61.3	32.6	16.1	82.4	67.9	38.6	20.1
Mexico	2007	72.6	59.3	32.0	16.8	77.4	63.8	35.0	18.2
Germany	2008	77.6	63.1	34.2	17.6	82.7	68.1	38.6	20.7
Sweden	2008	79.2	64.5	35.6	18.0	83.3	68.6	39.2	21.0
USA	2005	74.9	60.6	32.8	16.8	79.9	65.6	36.8	19.5
Japan	2007	79.2	64.6	35.7	18.6	86.0	71.3	42.0	23.6

Sources: Rostat (2010) and WHO database.

These values are put in perspective in Table 2; note that the Russian data come from long after the end of the post-Soviet crisis. Russian women have life expectancies comparable to those of their Chinese and Brazilian counterparts, and greater than those for Indian and South African women. Their mortality hazard is comparable to other former Soviet republics, though the situation among the Baltic states is somewhat more favourable, as it is in Eastern European transition societies such as Bulgaria, Czech Republic and Slovakia. Russian women also have higher life expectancies than in poorer emerging markets such as Indonesia or Vietnam. On the other hand, life expectancies in developed countries (Finland, Germany, Japan, Sweden, USA) are much higher, as is life expectancy in emerging markets with living standards comparable to Russia (Chile, Korea, Mexico).

The real contrast occurs when we compare life expectancies among males. Of the comparator countries, only AIDS-affected South Africa and India have lower male life expectancies than Russia, even though countries such as Vietnam are far poorer. While Belarus, Kazakhstan, and Ukraine differ little, men in the Baltic states and Eastern European counterparts live 4–11 years longer than Russian men, while men in Chile, Korea and Mexico have life expectancies at birth that are 10–13 years greater. Moreover, while high infant mortality reduces life expectancy at birth for the developing countries in Asia, life expectancy for males at age 15 is considerably higher in India (+5.9 years), Indonesia (+4.6 years), and Vietnam (+6.7 years) than in Russia.

It is tempting to blame the decline in life expectancy on the stresses caused by the collapse of the Soviet Union, and to blame Soviet life for the generally low levels of life expectancy even prior to the declines. Both of these beliefs are reasonable, as much research has indicated (for example, see Becker and Bloom, 1998). However, studies by Russian demographers indicate that high mortality, especially in urban areas, has been an ongoing problem that pre-dates the Russian Revolution. Total population life expectancy at birth in 1896–97 was only 31.3 years for men and 33.4 years for women (Andreev, 1990). These rose in urban areas to 42.7 and 49.4 years, respectively, in 1926–27 before declining to 41.2 and 48.2 years in 1938–39. By the mid-1960s, USSR life expectancy had reached 65 years for men and 73 years for women, where it stagnated until declining in the 1990s. Moreover, given Soviet definitions of live birth, which mandate a minimum weight to be considered 'live,' even these dismal figures are likely overstatements (Anderson and Silver, 1986) while, for reasons explained in Anthopolos and Becker (2010), unrecorded infant mortality in rural areas is likely to have added to the overstatement.

While mortality was high in the Russian Empire/USSR as a whole, it was higher still in Russia proper, and within Russia often higher in urban areas (though this probably reflects rural death undercounts), and highest of all in several major cities. In 1896–97 Moscow, life expectancy for men (women) was 23.0 (26.7) years. Conditions were slightly better in St Petersburg but not much. Male (female) life expectancy in 1896–97 was 25.4 (31.4) years, and rose to 31.0 (38.2) years in 1910–11 before plunging to 20.5 (26.3) years in 1920, which witnessed both tuberculosis and typhus epidemics (Biryukov, 1990). It then rose to 41.0 (48.4) years in 1923 but, regardless of the year, life expectancies were far below those prevailing in Western or nearby Scandinavian countries.

Indeed, Russian life expectancy in the period before World War II was not very different from that of neighbouring Finland in the 1840s (about 38.5 for men and 42.5 for women – Kannisto *et al.*, 1999) and below that of neighbouring Norway at any point since 1825 (the nadir occurred around 1835, with life expectancies of about 42 for men and 46 for women. By 1930, life expectancies for both Norwegian men and women exceeded 60 years – Brunborg, 2003). The international datasets compiled by Kinsella (1992) and Prokhorov *et al.* (2007) suggest that 1900 Russian life expectancies lagged behind Northern Europe by an astonishing 20 years, and lagged behind Central Europe (Austria, Czechoslovakia) by roughly 10 years. Moreover, this gap did not close even during non-cataclysmic periods until after the Second World War – and for the past four decades the gap has widened, to more than 15 years for men and more than a decade for women.

The consequence of exceptionally high mortality is that Russia's cities needed far more replenishment than their European, North American or Japanese counterparts. In-migration was critically important because of the fearsome mortality; ultimately, Russia as a whole and its cities in particular grew far more slowly than would have been the case had mortality levels been closer to 20th-century Western norms or even those of relatively prosperous East Asia and Latin America. The distinguished Russian demographer Vishnevskii (2003) has estimated the Russian population 'gap' due to catastrophes (shown here as Figure 13) as reaching nearly 50 million by 1961. However, this does not consider ongoing premature mortality. As a crude approximation (though not outrageous, since most excess mortality occurred prior to or during child-bearing years), and guessing that the average Russian born before 1947 had a life expectancy at most 75–80 per cent as long as that of lower-income European counterparts, then the post-war population easily could have been 30 million greater – and this ignores the widening gap due to differences in net reproduction rates.

**Figure 13: Russian population in the presence and absence of catastrophes, 1926–1961**



Source: Vishnevskii (2003, Figure 5).

Notes: Vertical axis: population (millions). Light line: actual population; dark line: potential population in the absence of catastrophes.

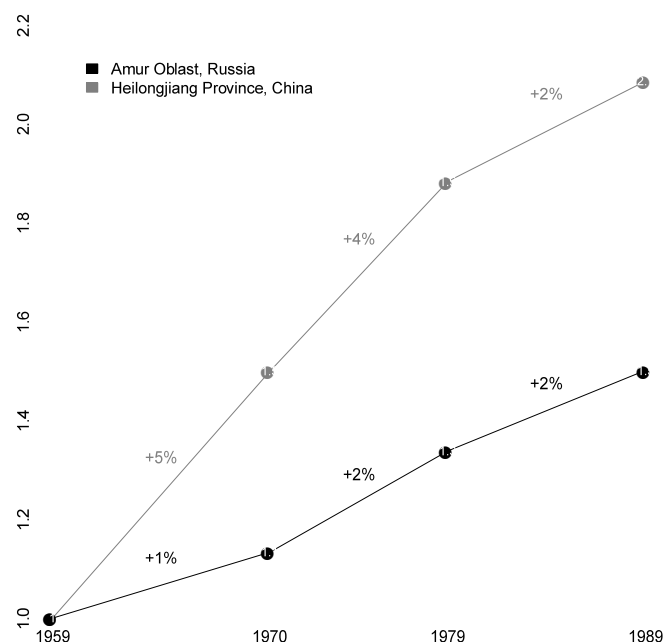
It is accepted as an historical fact that Russia is a sparsely populated country. Yet, a reading of Russian historical demography indicates that this sparse population is not entirely inevitable. Russia in 1960 might well have been a nation of 200 or even 220 million people, rather than having only 120 million. Even if the GPW had been unavoidable (though the huge population losses reflected delusional behaviour on Stalin's part to some degree), it is easy to imagine a 'normal' Russian population reaching 180 million by 1960. What would it have looked like?

Clearly, the urban population would have been considerably greater. Whether the proportion of the population living in cities would have been greater depends on supply elasticities of food and industrial goods with respect to labour. Given that land was not scarce (though good, well-watered soil in warm climates was less plentiful), Russia should have been able to support a much larger population without suffering food shortages and without requiring more intense use of labour in agriculture. The ability of industry to gainfully employ additional labour would have depended in large part on whether there were other binding constraints, as Soviet manufacturing was labour- and energy-intensive by Western standards. It is plausible that skilled labour constraints would have limited the number of new projects, though central planners might have foreseen and overcome that barrier.

One very crude counterfactual might be Heilongjiang, Jilin, and Liaoning provinces in China's northeastern industrial 'rust belt'. While their populations have suffered periodic catastrophes and also have been limited by the one-child policy, these effects are less than those that plagued Russia, and population densities are higher. Despite major efforts until recently to control rural–urban migration in China, all three provinces today are slightly more than 50 per cent urban, much like Russia of the 1960s. In particular, Heilongjiang is a logical counter-factual because it shares most the same characteristics of a Russian city – except for post-GPW Russian history. Heilongjiang is located just on the other side of the river from the Amur oblast, sharing similar climate, natural endowments and a political history involving both Chinese and Japanese imperial control. Both regions' cities experienced similar post-GPW industrialisation pushes by communist central planners, as well as significant resource-extraction efforts (Figure 14). However, Heilongjiang grew far more rapidly during the second half of the 20th century, despite entering with fresh scars from Japanese wartime occupation. Between 1959 and 1979, the Chinese province grew at nearly double the annual rate of its Russian neighbour. It was not until 1980 that the two sides of the Amur river began to experience equal growth rates. Consequently, Heilongjiang had more than doubled its

1959 population by the fall of the Berlin wall; Amur had grown less than half as much (proportionate to its 1959 population) in the same period.

**Figure 14: Population growth-rate comparisons: Chinese and Russian sides of the Amur River, 1959–1989**

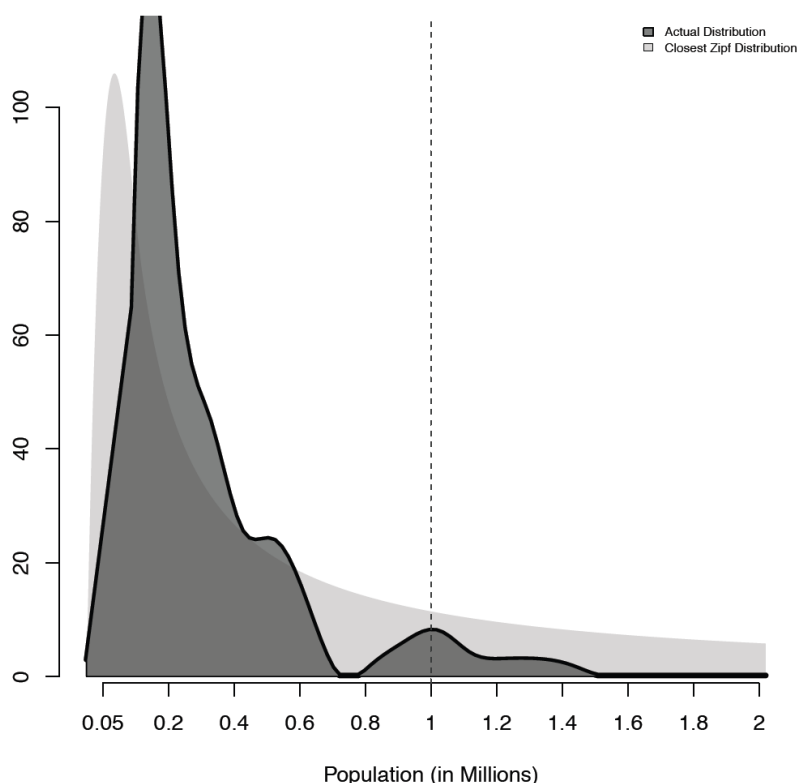


Source: Chinese data are taken from the National Bureau of Statistics of China [www.stats.gov.cn/english](http://www.stats.gov.cn/english), as made available online by the All China Marketing Research Co [www.chinadataonline.org](http://www.chinadataonline.org).)

Notes: The vertical axis and point labels denote the area population as a fraction of its 1959 levels. Line labels report the average annual growth rate for the years between each census point.

Despite the reduced population and population growth, Russia's urban/rural division might not have been greatly affected. What would have been affected is the size and location distributions of cities. Given Soviet determination to control the populations of the largest cities, there would have been more medium and secondary cities, and existing ones would have been larger. Incentives to boost cities into the 'millionaire' (as Russians refer to cities with populations above one million) group, including the right to have an underground metro constructed, might have meant a surge in large cities falling just over this threshold. This millionaire effect is easily seen in Figure 15, which shows a fitted city-size distribution from the late Soviet era.

**Figure 15: The ‘millionaire’ effect: distribution of city populations in Russia, 1979–89**



Source: Rosstat, 2002 census.

A final point: it was not Soviet policy to curb national population growth, and, along with electrification, a leading positive aspect of Soviet socialism was its rigorous introduction of public health measures. These did push up life expectancy, both during the New Economic Policy (NEP) era and during the second half of the 1930s (for a series, see Andreev, 1990). However, policies that repressed consumer demand, along with public policies that increased mortality for political reasons, and in an effort to industrialise as rapidly as possible, kept these gains from exceeding those of Russia’s capitalist neighbours.

## 2.5 Rural–urban migration

Migration in the Soviet era, especially prior to the 1970s, was largely a by-product of crash industrialisation, and was determined by economic planning objectives rather than voluntary labour market flows. Clearly, rural out-migration was vast, especially between the 1920s and 1960. Remarkably, even these vast flows were less than the total numbers of people who sought to move to the cities, and from 1932 onward the USSR imposed an internal passport regime. In particular, authorisation to live in a city (and to enjoy its health services, schools and other public amenities) was restricted to those who had a residency permit – a *propiska*. Housing in the Soviet Union’s cities was generally determined by one’s employer: no conventional rental market existed, and since the large majority of housing was publicly owned and since profit-oriented sales were strongly discouraged, there was no real estate sales market.

Whether rural–urban migration was more rapid under Soviet socialism than it would have been in a non-socialist counterfactual world is difficult to determine. Wages, especially if one includes non-cash consumption value of amenities, were far higher in cities, and led to excess demand among *kolkhozniki* to migrate to the cities. However, housing markets barely functioned (urban housing was in chronic shortage but virtually free to those who got it), land

markets were distorted (thereby dispossessing peasants of the opportunity to accumulate wealth, which also was restricted by constraints on private farming and, especially, animal husbandry), and rural real incomes were depressed by the impact of collectivisation. Taking all these factors together, it seems overwhelmingly likely that Russia urbanised more rapidly under Soviet socialism than it would have done otherwise, controlling for income, since resources were channelled to urban areas, living conditions in the countryside remained primitive, and agriculture was stunted by Soviet policies. On the other hand, had the Russian non-military economy grown more rapidly under 'market counterfactual' conditions, it would have urbanised faster as well.

What we do know is that internal migration was large and critically important to understanding urbanization in the Soviet era. More than half of all of Russians in the 1989 census had changed residence at least once, *excluding* intra-regional moves (Scherbov and van Vianen, 2001). This mobility was high by international standards, especially given the distances moved; as the following chapters indicate, it was also high by more recent Russian standards.

A striking feature of Russian urbanization, and one tied as well to the GPW, is the absolute depopulation of rural areas after 1926. Russia's urbanization was so rapid in the 1930s, its population losses so great during the war, and its fertility decline so great relative to the urban labour demands created by industrialisation from the 1950s onward, that rural populations went into long-run decline. As Harris (1971) notes, the depopulation began in western areas and spread east and south. This depopulation continued even as urban population growth rates declined, from an annual average of 6.5 per cent during 1926–39, to 4.6 per cent in 1958 (after a period of decline and post-war recovery), followed by a secular decline to 1.3 per cent in 1969 (Harris, 1971). As we discuss in Chapter 4, ultimately the decline in the pool of available rural labour meant a decline in the rural net out-migration rate. As Russia went from being 14 per cent urban at the end of the Civil War to 74 per cent urban by the end of the Soviet period, the diminishing numbers of rural out-migrants translated into an even sharper decline in the in-migration rate, since the inflow was diluted by an ever larger urban population.

The pool of potential rural out-migrants dried up all the more rapidly because of the extreme age-specificity of the process. Data reported by Soboleva (1980, p34) indicate that more than 67 per cent of rural–urban migrants in the Russian Soviet Federated Socialist Republic (RSFSR) were aged 15–29. Since only about one-fifth of the population was aged 15–29 in 1970, the implied annual out-migration rate of rural young adults was very high, and at a minimum some 6–7 per cent of the population. Soboleva's (1980, Appendix B) estimate for these age groups ranges from 9.0 to 11.6 per cent per annum, implying that nearly 80 per cent of those who reach age 15 in rural areas would leave by age 30. This figure seems too high to be credible in the long run, but does reflect a vast exodus. Flows from cities to countryside did exist, but by 1970 were less than one-sixth of the rural urban flow.

The decline in the USSR's rural population after 1939 was not felt evenly (Harris, 1971). Between 1959 and 1970, high fertility meant that Central Asia (Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan) experienced rapid growth in both rural (+37 per cent) and urban (+58 per cent) areas. So did the republics of the Transcaucasus (urban population +44 per cent, rural population +17 per cent) and Moldova (urban +76; rural +9). Elsewhere in Russia, Ukraine, Byelorussia and the Baltic states, while urban areas continued to grow rapidly (+31 per cent in the RSFSR), rural populations declined. This decline was by 12 per cent overall for the Russian Federation, but was concentrated in the central region near Moscow (–24 per cent), the Volga-Vyatka region (–22 per cent), the Chernozem (Black Earth) region (–15 per cent) and Western Siberia (–15 per cent).

This rural decline was essential to maintain city-growth rates, especially in the early industrialisation push. Russia's cities have consistently had a very high proportion of the population who are in-migrants (with a *propiska* registration elsewhere, generally from rural areas). Lewis and Rowland (1969) estimate this proportion to have been high (52.5 per cent in 1897 and 49.5 per cent in 1926) even before the industrialisation push, mainly because the base urban population was so small. They then estimate that rural–urban migration accounted for 62.8 per cent of urban growth during 1926–39 and 62.4 per cent during 1939–59.

Thus, a notable feature of Russia's population structural change is actually the obverse of its urbanization, namely rural decline sufficiently great to lead to depopulation. Russia's rural population peaked in 1926. Natural increase was large through the mid-1960s (averaging an increase of roughly 1.5 per cent of population annually in 1951–65, for example), but it was more than offset by larger urban-bound migration and, in the post-war era up to the mid-1980s, substantial losses (though less than those due to migration) due to reclassification (for detailed data, see Ioffe and Nefedova, 1999). The 1990s witnessed a reversal: rural areas were net recipients of population due to in-migration and also due to reclassification. However, net natural increase turned negative in 1992; by 1995 the natural decrease was large enough to offset the gains from migration and reclassification. The rural population since then has been fairly stable: in-migration turned negative again in 2000 (but the losses were small); occasional large reclassification gains, especially in 2004, offset natural losses that themselves were substantially moderated from 2007 onward. In consequence, the decline has abated in the post-Soviet period, and Russia's rural population of 38.2 million in 2010 was only 700,000 less than that in 1990.

Yet, these national data mask striking regional differences. In the 1980s, 'heartland' areas – Central, Volga-Viatka, Volga, Central Chernozem, West Siberia and the North Caucasus – had substantial out-migration (Ioffe and Nefedova, 1999), as did the Northern and East Siberian regions and Kaliningradskaya oblast. In the 1990s, these patterns were reversed in the Centre, Central Chernozem, Volga, North Caucasus, Kaliningrad, and West Siberia, and losses approached zero in the Volga-Viatka region. Rather, the rural losses were concentrated in the post-Soviet era in the Far East, North and East Siberia. However, in many of the areas gaining population, the increases have not meant an increase in the agricultural workforce, at least by native Russians. As in other relatively wealthy countries, farm labour is increasingly imported from poorer, peripheral nations.



### 3. Socialist planning and urban change, 1921–1991

“An important feature of urbanization occurring in the multinational Soviet Union is the fact that Leninist regional policy of friendly co-operation and mutual aid among the peoples provides for development of the centres which consolidate national economy and culture of fraternal peoples and for involvement of national republics and areas into the all-Union economy. The example offered by the USSR shows that under socialist urbanization the nations get closer together, they become mutually enriched spiritually, they help one another to raise their economic and cultural standards.”

(Gokhman *et al.*, 1976, p278)

...в XX веке Россия убедительно подтвердила права называться страной новых городов. Визникает ворпос: нужно ли было в течение сравнительно непродолжительного времени создавать так много городов?

(...in the 20th century, Russia successfully earned the right to call itself the land of new cities. Thus arises the question of whether it was really necessary in such a comparatively short period to create so many cities.)

(Lappo and Polyan, 1999, pp35–36)

#### 3.1 The distribution of Russian cities

Russia has an unusually high proportion of large cities relative to small ones. The pattern of growth of different categories is tracked by Nefedova and Trevish (2003, p77). Defining the largest (‘primate’) cities as those with populations above intermediate size (250,000 today); also defining ‘intermediate’-sized cities as those with populations of 5000–20,000 (19th century), 10,000–50,000 (1897–1926), 20,000–100,000 (1926–1959), 40,000–200,000 (1959–1970), and 50,000–250,000 (1970–present); and defining small urban areas as cities and ‘settlements with urban characteristics’ with less than intermediate levels, they calculate average annual population changes for different categories. The striking result is that in every time period prior to 1989, the largest primate cities grew fastest in relative terms, save for the Civil War period. By way of contrast, the US city system during this period shows no clear pattern of increasing or decreasing primacy (Black and Henderson, 2003).

The explosion in the total number of cities – as Lappo and Polyan (1999) note, roughly 400 of Russia’s 1095 official (1998) cities had enjoyed ‘city’ designation for fewer than 40 years – accompanied faster growth of relatively large cities. Some of these new towns were in satellite areas of larger cities and ultimately were incorporated; others were not, but their presence ensured that the bottom tail of the distribution had many small towns and cities. Fitting the two pieces together is the nature of Soviet urban growth: cities were surrounded by countryside rather than suburbs, and agglomerations – large urbanised regions emating from a central metropolitan area that came to encompass smaller cities – were alien to Russia, with the exception of Moscow and to a much lesser extent St Petersburg. This pattern in turn reflected both the emphasis on building cities to support manufacturing (placed in industrial belts just outside the centre of the main city) and constructing dense housing projects just beyond the industrial belt.

The relatively rapid growth of large cities and the primacy of Moscow and St Petersburg notwithstanding, a peculiar feature of Russia’s city-size distribution is that it does not look particularly primate by international standards when the entire distribution of major cities is considered. The conventional approach to exploring the entire size distribution is to estimate variants of a rank-size equation,  $y = Ax^{-\alpha}$ , where  $y$  denotes a city’s rank in the system in terms of population,  $x$  is city population, and  $\alpha$  is a coefficient to be estimated. If  $\alpha$  equals 1, it follows Zipf’s ‘law’ (Black and Henderson, 2003) that population times rank equals a

constant ( $A$ ). The larger is  $\alpha$ , the more primate a system is: relative to the largest city, values of lower rank  $x$  will be smaller.

In a careful and updated work that examines city-size distributions for 75 countries, Soo's (2005) results indicate that Russia, while more primate than Zipf's law would predict (see Figure 14), is somewhat less primate (though perhaps not in a statistically significant sense) than the USA, UK, Japan or Canada, and is comparable to Australia or Poland. On the other hand, Russia is slightly more primate than Brazil, Indonesia or India. However, this appears to be something of a definitional artifact: when urban agglomerations rather than city populations are used, then the USA is far less primate, as to a lesser degree are Britain, Canada, Germany and India. The conclusion from these regression results is that Moscow and St Petersburg are extreme outliers in the Russian system, while suburbanization in advanced market economies (and India) make the choice of urban unit critical.

### 3.2 Political forces in urbanization

The magnitude of the USSR's economic transition during the Stalin and Khrushchev eras can be difficult for outsiders to grasp. As Avdeev and Monnier (1995, p6) note, in 1928, some 75 per cent of Russia's labour force were self-employed farmers and craftspeople, 18 per cent were manual workers, and only 3 per cent were members of a *kolkhoz* or cooperative. By 1939, only 3 per cent of the labour force remained as own-account farmers, while 47 per cent were members of a *kolkhoz* or cooperative, and 50 per cent were manual workers. This transformation occurred prior to the GPW, which resulted in huge labour losses – especially in agriculture.

The rise of the USSR as an industrial power and the concomitant urbanization that occurred was not felt evenly across the nation. Initial urbanization was strongest in the central region around Moscow, the Urals and the Kuzbas mining region (Harris, 1971). Those areas with favourable agricultural conditions and remote from the centre remained predominately rural, especially prior to the 1960s. During the 1960s, many of these 'late-starter' oblasts experienced very high growth, especially in the Chernozem and Volga-Vyatka regions, and in agriculturally prosperous Belgorod oblast. Mining cities in the north and east, and Siberian and far eastern cities more generally also grew rapidly during this period (Harris, 1971; Pivovarov, 2003).

Thus, the first phase of Soviet industrialisation was associated with development of heavy industrial capacity in existing cities, for the most part. A nearly co-equal objective was electrification (a famous saying of Lenin is that 'Communism is Soviet power plus electrification of the whole country', which, according to the website of the Lenin Museum [http://www.stel.ru/museum/lenin\\_leader\\_russian\\_socialist\\_society.htm](http://www.stel.ru/museum/lenin_leader_russian_socialist_society.htm), was the cry that launched the electrification push as early as 1920, when Russia was still ravaged by civil war).

**Table 3: Urbanization in the USSR and USA (thousands)**

	USSR				USA			
	1897	1926	1939	1959	1900	1930	1940	1960
Population, all urban centres	12,321	22,357	48,862	79,761	24,190	58,319	62,680	106,309
Population, cities 15,000–99,999	7,165	11,379	18,766	29,729	9,880	21,977	24,756	50,512
Population, cities 100,000+	5,156	10,978	30,097	50,032	6,162	15,470	15,538	24,473
Population, cities 500,000+	2,304	4,154	13,733	25,881	8,140	20,872	22,386	31,325
Number of all urban centres	249	384	638	1,019	440	982	1,077	1,899
Number of cities 15,000–99,999	230	346	547	873	402	879	975	1,767
Number of cities 100,000+	19	38	91	146	32	90	88	111
Number of cities 500,000+	2	3	11	25	6	13	14	21
Percentage of total population in urban areas	9.9	13.3	25.3	38.2	39.7	56.2	56.5	69.9

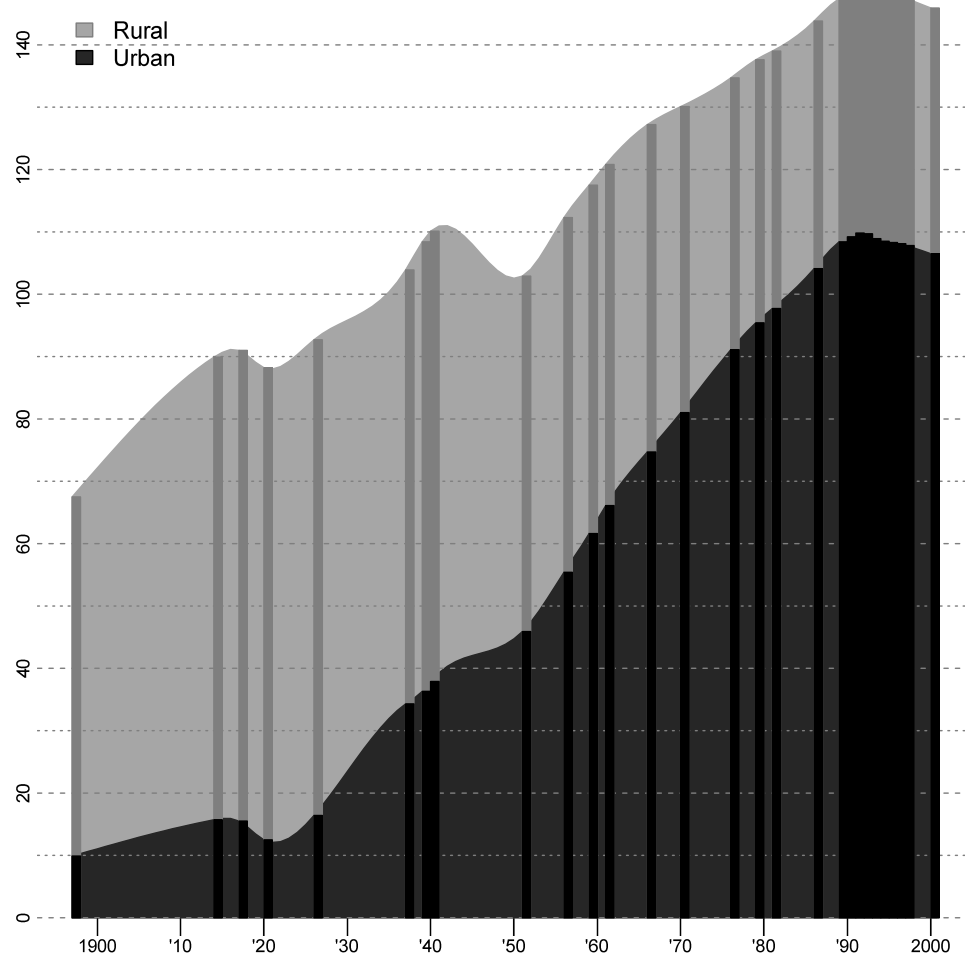
Sources: Lewis and Rowland (1969) for USSR; Gibson (2010, chapter 2) for USA.

Note: USA figures are for cities 10,000+ and, in the first category, cities of population 10,000–99,999.

Table 3's comparison of urbanization in the early Soviet era (during which Russia dominated Soviet cities) and the USA is revealing. The comparison is also relevant because both countries were vast trans-continental nations that emerged as military and ideological arch-rivals during the 20th century, with both experiencing transformative but very different styles of industrialisation and modernisation.

The United States was far more urban and industrialised than either Russia or the Russian Empire/USSR at the turn of the century. Between 1897–1926 and 1900–1930, the US urban population in towns and cities greater than 10,000 people grew at an annual rate of 3.0 per cent, in contrast with 2.1 per cent annual growth in the Russian empire. The reversal of urban fortunes occurred during the industrialisation push before the Second World War when the USA and other advanced capitalist countries were mired in depression. Soviet urban population growth occurred at an annual pace of 6.2 per cent and the proportion of population living in cities nearly doubled. In contrast, urbanization halted in the United States during this period, with the total urban population growing by only 0.7 per cent annually.

**Figure 16: Russian urban and rural population, 1900–2000**



Data source: Pivovarov, 2003, Table 1.

Notes: Vertical bars indicate census years, while the intervening area represents an interpolation of the years between data points.

During the 1940s and 1950s, Soviet annual urban population growth (2.5 per cent) was comparable to that in the US (2.7 per cent) despite the vastly greater war losses. These are shown in the more detailed time series in Figure 16, which indicates that the net population loss of the 1940s was limited to rural areas. Until the revolution, Russia's population was growing steadily, especially in rural areas. The revolution led to population loss, which was felt most heavily in urban areas. As the turmoil of the revolution subsided, the population began to increase steadily, though urban population increased far more rapidly. The 1939 census probably reflects political manipulations, as heavily political pressure was brought to bear after the 1937 census failed to meet Stalinist predictions. The data suggest that this census 'padding' probably occurred in rural estimates. The GPW caused major population decline, though the 1939 overcount is likely to have contributed to the apparent losses. In the cities, this depressed growth, while, in the country, this resulted in population loss that would not be recovered for nearly a decade. Thereafter, Russia's population follows a steady pattern – growing and urbanising at a steady rate throughout the remainder of the Soviet period, and then shrinking at a moderate rate in the first post-Soviet decade.

Also striking is the different structure of urban growth. America's smaller cities grew more rapidly both in the 1930s (1.2 per cent per annum) and during 1940–60 (3.6 per cent per annum) than did larger cities. In contrast, Soviet small cities have consistently – from 1897 onward – grown more slowly as a group than the total urban population. As many

geographers have noted, both Russia and the USSR more generally have consisted of a relatively small number of cities, many of which are quite large.

Looking at urban growth of particular Russian regions in the pre- and early-Soviet era (1897–1926), one finds no urbanization at all in the Chernozem and very little in the Far East; the most substantial urbanization occurs in the North Caucasus, Central region and East Siberia. In the last case, the base was very low (3.7 per cent urban) and farming/pastoral conditions were harsh. In general, Russia remained a very rural place: by 1926 there were still no large regions where even one-quarter of the population was urban. This slow early-20th-century growth of Russia's cities appears to reflect stagnation during the First World War, followed by a decline of nearly 20 per cent during the Civil War (Table 4). Despite very high birth rates, neither urban nor rural areas of Russia gained population in the decade following 1914.

This setting changed dramatically in the next 13 years, when the USSR's urban population as a whole rose by 119 per cent. By 1939, urbanization rates above 40 per cent were recorded in the Northwest and Russian Far East, while most other regions were between 25 and just under 40 per cent urban. The major exceptions were the Chernozem (11 per cent urban) and Volga-Vyatka (16 per cent) agricultural areas. These patterns were generally maintained during 1939–1959, except that the Far East grew much more slowly, while the Central region became the most urbanised (53 per cent) part of the country, and on the whole the fastest growth was recorded in Western Siberia and the Urals, followed by the Volga and Volga-Vyatka regions. This explosive urbanization in the 1930s reflected both crash industrialisation and agricultural collectivisation, which drove many people from the land. To urbanise rapidly during a period of rural upheaval and declining productivity could occur at that time only in a command economy whose directors were willing to suppress consumption, especially by the rural population.

Thus, both the total growth and distribution of urban population in the Soviet era is largely a story of industrialisation and industrial policy. This is no surprise: cities were created to serve industry and grew as industrial enterprises (and mines and power plants) expanded. There were cities that developed as administrative centres, but planners made sure that industry followed. Cities based solely as transport or shipping hubs remained small; unlike in capitalist economies, there were no financial centres or major cities based on tourism. Russia had no Las Vegas.<sup>10</sup> The emergence of the urban-industrial link can be seen in the change over time in statistical correlation. The rank correlations across regions between percentage urban and percentage employed in manufacturing for the Russian empire was only .416 in 1897; the growth in these percentages between 1897 and 1926 had an insignificant correlation of only .361 (Lewis and Rowland, 1969). But their growth over the next 33 years had a correlation of .794, and the 1959–61 correlation was .828. These correlations were especially important for heavily urbanised regions.

Even in the post-war era after the huge industrialisation push, cities at hydroelectric sites were among those that grew most rapidly. Harris (1971) (Table 4) identifies the Russian cities with the highest 1959–70 growth rates. During this period, while industrial growth served as an impetus for the development of some cities, the impetus of hydropower caused the most spectacular developments. The second most important feature was the development of secondary oblast capital cities, especially in republics, autonomous regions and oblasts dominated by ethnic minorities (for example, Cheboksary in the Chuvash

---

<sup>10</sup> This does not mean that Russians had no holidays or tourist facilities. On the contrary, the country was full of sanatoria and nature camps. Rather, there was no tradition of upscale tourism that could lead to the development of large cities of service workers.

Republic or Yoshkar-Ola in Mari-El Republic).<sup>11</sup> Lappo and Polyan (1999) emphasise the importance of construction of regional capitals, and note that as of 1998 one-third of all large cities enjoyed some sort of capital status.

In all, more than half of recognised Russian cities (630 of 1090) emerged after 1917 (Nefedova and Treivish, 2003; see also Lappo and Polyan, 1999). These demographers see Russia's urbanization as occurring in waves that are halted by cataclysms: the pre-WWI initial modernisation wave, the 1926–39 industrialisation wave, and then the final, slower wave that began in the 1950s. While symmetry and crude data suggest that the third wave crashed against the end of the USSR, they regard this as an incomplete story. It is certainly true, as Chapter 4 documents, that there was an exodus from cities in the east and north, and it appears that some of these out-migrants in fact went to rural areas. But this picture of an end to urbanization because of the end of the USSR is misleading for several reasons.

**Table 4: Rapidly growing Russian cities, 1959 and 1970**

City	Region	1959 population (thousand)	1970 population (thousand)	Increase (%)	Characteristic
Bratsk	E Siberia	43	159	259	Hydroelectric site
Tol'yatti	Volga	72	251	247	Hydroelectric site
Balakovo	Volga	36	103	181	Hydroelectric site
Volzhskiy	Volga	67	142	113	Hydroelectric site
Novgorod	Northwest	61	128	111	Chemicals
Belgorod	Chernozem	72	151	109	Diversified admin centre
Saransk	Volga-Vyatsk	91	190	109	Diversified admin centre
Cheboksary	Volga-Vyatsk	104	216	108	Diversified admin centre
Cherepovets	Northwest	92	189	104	Iron & steel works
Salavat	Volga	61	114	88	Chemicals
Yoshkar-Ola	Volga-Vyatsk	89	166	87	Diversified admin centre
Lipetsk	Chernozem	157	290	85	Iron & steel works
Severodvinsk	Northwest	79	145	84	Other industries
Sykt'yvkar	Northwest	69	125	82	Diversified admin centre
Petropavlovsk-Kamchatskiy	Far East	86	154	80	Diversified admin centre

Source: Harris (1971).

First, the era 1970–1990 was characterised by the rise of a consumer-oriented economy. It may not have seemed that way to those living in the West, or even to those in emerging markets, but the Soviet Union of the 1980s was light years distant from the Stalinist era in consumption terms. However, while central planning was effective at mass mobilisation during wartime or for crash heavy industrialisation and electrification, it does poorly in anticipating consumer demand, especially in an increasingly sophisticated environment. The

<sup>11</sup> The development of republics and 'autonomous' regions based on titular nationalities, both among the constituent republics of the USSR and within the RFSFR, is a fascinating topic. The seminal work in English is Martin (2001). Of relevance here is that the effort to deter the development of nationalist sentiment in an anti-Soviet direction, and the determination to create intelligentsia and industrial working classes of all nationalities, resulted in dispersal of resources to some fairly remote and otherwise unimportant towns.

result was declining productivity growth, and hence to increases in growth in demand by urban industries for labour, and especially for unskilled labour coming from the countryside.

Added to this was the simple fact that rural labour surpluses had greatly diminished, as Section 1.3 emphasises. In 1926, Russia had 76.3 million rural inhabitants, or 4.65 people for every city-dweller. By 1950, out-migration and war losses had reduced the rural population to 57.0 million (1.24 rural:urban ratio); this declined by another 9 million to 49.1 million (only 0.61 rural inhabitants per city dweller) in 1970, and then to 38.8 million (0.36 rural:urban ratio) by 1990. Since some people have to remain in agriculture – especially that of the inefficient *kolkhoz* variety – and since many of those in the countryside were elderly, there simply was almost no further scope for rural out-migration by the end of the Soviet era. This is shown graphically in Nefedova and Treivish's (2003) Figure 3: from 1969–75, almost exactly 2.0 per cent of the rural population on net migrated (overwhelmingly to cities rather than to other USSR constituent republics or internationally). This outflow as a share of rural population then declined in an almost linear pattern, reaching zero in 1991 and becoming positive (net inflow) in 1992. But, there is no break in the trend line in December 1991: the end of the USSR simply coincided with the end of a large pool of young rural adults eager to migrate to cities.

It should be reiterated that these events are coincidence, and causality has not been established. To do that would require an analysis of rural productivity, which we are not prepared to provide. Yet, the exodus bordering on abandonment of rural areas near northern cities in the post-Soviet era is testimony to their economic unattractiveness, while the expansion of state social security on favourable terms to rural areas in the 1980s suggests political recognition of the need to encourage people to remain in the countryside. Thus, we are left with the intriguing but unproven possibility that the Soviet Union collapsed because of demographics, not politics. Its politico-economic structure may have been unable to function without a steady infusion of expendable rural labour, and once depleted, the system collapsed.

Of course, this does not explain the years of moderate in-migration to rural areas during 1992–96. Accounting for that appears to be substantial administrative reclassification, as Table 5 shows. As Nefedova and Treivish (2003) explain (as do, earlier and in more detail, Lappo and Polyak, 1999), hundreds of small 'settlements with urban characteristics' (literally, *поселок городского типа*) demanded rural status, as this meant lower utility and communal service fees, lower taxes and larger personal agricultural plots. A smaller number of urban-like villages accorded urban status were upgraded to small-city status – most of these are likely to have been peri-urban villages on the outskirts of large cities that experienced decentralisation. But on net, while Russia's urban population declined in total by 1.3 million people between 1989 and 1999, more than 100 per cent of this decline is accounted for by the administrative reclassification of small urban settlements, suggesting that it is a temporary statistical aberration.

**Table 5: Population in different city-size groups, 1989 and 1999**

City size (population) and status	1989		1999		Population change (%)
	Population (million)	Number of settlements	Population (million)	Number of settlements	
Cities >250,000	54.2	78	52.8	74	-2.6
Cities 50,000–250,000	24.4	252	25.8	264	5.7
Cities 20,000–50,000	11.6	360	11.8	365	1.7
Cities <20,000	4.3	349	4.8	383	11.6
Semi-urban settlements	13.5	2,193	11.5	1,922	-14.8
Rural	39.1	152,900	39.5	No data	1.0

Source: Nefedova and Treivish (2003), Table 1.

It is also important to recognise that much Russian migration was not fully voluntary: studies cited by Mkrtchian (2009) suggest that 'migration organised by the authorities' peaked at about 40 per cent of the total in the late 1940s, and even in the late 1970s and early 1980s accounted for as much as 15 per cent of the total. A considerable but uncertain share of this organised migration involved forced labour (of political prisoners and conventional criminals). After sentences were completed, it was common to prevent convicts from returning to their original homes, forcing them to settle in remote, northern areas.

It is not clear to what extent that deceleration of forced migration contributed to the overall decline, but it may well have been substantial. Mkrtchian's (2009) time series indicates gross migration to urban areas of nearly 7 million people in 1939, with flows in the 4.5–6.2 million range from 1945 to 1980. However, a secular decline set in from the mid-1970s onward, falling below 3 million by 1989. As Russian rural in-migration was fairly stable at about two million persons per year prior to the collapse of the USSR, net urban in-migration declined from about 4 million persons in the early 1970s to 1 million by the end of the Soviet era. While it continued to decline thereafter as well, it is apparent that migration was steadily declining long before the break-up of the Soviet Union. This decline is not a surprise: the potential rural out-migrant pool was steadily shrinking (Table 4) and by the mid-1970s there was only one rural resident for every two urban residents. The age-structure effect (based on tables available on the Rosstat website) further exacerbated the shrinking-pool effect. In 1970, there were 82 rural inhabitants below working age for every 100 urban counterparts, and 80 rural residents above working age per 100 urban residents. In contrast, the rural:urban ratio was only 0.48 for the working-age population, and only 0.34 for the 20–24 prime migration age group. Between 1979 and 2006, the rural:urban population ratio ranged from 0.27 to 0.34 for five-year age groups, 20–24, 25–29 and 30–34. Only with the emergence into the labour force of those born during the 1980s fertility uptick did these ratios begin to rise (modestly).

One effort to estimate the importance of controlled migration is given by Gang and Stuart (1999), who examine the growth of particular Soviet cities between 1939 and 1989. Of the 308 cities in their dataset (174 in Russia), some 77 (46 in Russia) were put under some sort of administrative restriction (all between the 1930s and 1956, though restrictions once in place tended to remain). They then use data on regional fertility and city population structure to estimate natural growth; residual population growth is assumed to be net in-migration.

They estimated that 37.2–39.0 per cent of the USSR urban population between 1959 and 1989 lived in restricted cities. Their weighted estimated annual city in-migration rates rise from 1.12 per cent in 1959 to a peak of 1.94 per cent in 1970, then declining to 0.95 per cent in 1979 and to 0.48 per cent in 1988–89, a decline consistent with other data. Restricted cities did in fact tend to grow more slowly, both in Russia and other constituent republics. Regression analysis from different years indicates that the restrictions mattered, especially in 1970 and 1988–89. Russian cities also attracted migrants relative to other Soviet cities. Economic and housing data for a smaller group of cities also suggest that space constraints were important (as Becker and Hemley, 1998, find in their analysis of fertility). Gang and Stuart are able to distinguish 'total restriction' (closed cities) from those with controlled population expansion, and find that the former experienced less in-migration. Of course, to some extent this reflects endogeneity of restrictions: Soviet planners sought to control growth deemed excessive in large cities.

The compulsory nature of much of Soviet urbanization and migration puts it in contrast to population movements in other societies; as Akhiezer (2000) writes, much of Russia's migration history is that of 'forced resettlement' (*насильственное переселение* – the Russian phrase is a bit more jarring). In the Tsarist era serfs could be sold from one landowner to another; even after serfdom was abolished under Tsar Aleksandr II, restricted



land use and shortages of fertile land forced peasants to head to the city, especially in less fertile regions further north. (For a description of village life in pre-revolutionary Moscow region, see Bradley 1985.) Forced movement continued under the Soviets, including mandatory assignments for Communist Party (CPSU) members, vast movements to develop virgin lands (*целина*), and of course the Gulag (*Главное Управление исправительно-трудовых ЛАГерей*) system. The collectivisation efforts also forced vast numbers of wealthier peasants to the cities – but, as Ahkieser (2000) notes, there were Tsarist antecedents, and pressure for equality within villages was a powerful force in driving relatively prosperous peasants to towns and cities.

To our knowledge, there is no formal analysis of the extent to which population movements to and from Russia's cities were forced, quasi-voluntary or voluntary. Forced population movements include those arrested or exiled to camps or rural areas – but also would include a number sent to work on construction and industrial projects in new cities. Voluntary population movements are the ones conventionally thought of – people moving for reasons of economic opportunity, education or family. Of course, these need not be positive: some of those moving for economic reasons will be leaving dire circumstances for something believed to be less bad. Finally, quasi-voluntary movements include those who resettle in response to work, military or party directives. However, while the net flows of different categories are not established, it is clear that no other advanced, fairly high-income society has had such a large proportion of population movement occur as the result of directives rather than voluntary choices. Our conjecture is that the prolonged period of involuntary location resulted in the gradual improvement of initially unattractive destinations, and hence in the relatively moderate reverse flows once the USSR dissolved.

### **3.3 Housing shortages, militarisation and urban growth**

To an outsider, Soviet cities were completely unlike those encountered in the non-communist world. The communal emphasis meant that private space was tiny and conditions often miserable, while public space was impressive and pleasant. Not surprisingly, Soviet citizens spent much of their lives in public space though, as a consumer society emerged in the 1970s and 1980s, the quality of individual apartments began to improve.

Housing shortages reflected chronic underinvestment in living space. This constraint was modest in the early Soviet years because of population losses and emigration of urban middle and upper classes, which left a fair amount of housing stock to be seized by the state (and then redistributed for far denser residential uses). Ultimately, though, it is likely that the chronic shortages had an impact on urban population growth and fertility. Avdeev and Monnier (1995) detail the decline in higher-order births, which could well have been associated with space constraints. Parity progression ratios (the likelihood of having a higher-order birth  $n$  conditional on having had  $n-1$  live births) decline strongly over cohorts, and the decline is far stronger for urban than rural Russian women. In addition, using a two-stage least squares simultaneous equations model, Becker and Hemley (1998) directly consider variation in per capita urban housing space across oblasts, and find that fertility is strongly negatively related to housing space.

Skimping on housing meant that cities could grow rapidly, since total investments in work-related plant and equipment plus housing were reduced. Limited housing was accompanied by a stunted services sector – restaurants, entertainment and shopping were all restricted relative to non-communist cities, and the stereotype of Russians waiting in long lines for everyday purchases or services was not unfounded.

While cities were superficially attractive, life for many was hard. Housing was poor, consumption was repressed, and vast amounts of time were wasted. Hot water and heating

were (and for the most part still are) provided by central plants. This led to losses due to poorly insulated pipes in very cold climates and also made central space all the more valuable: those living on the outskirts of a city, at the end of the hot-water and heating pipelines, were likely to have cold apartments and cold water. Added to these miseries were the periods of one to two weeks at the start of winter and the end, when hot water for radiators was turned off for entire neighbourhoods as pipes were flushed and converted to regular water use. Of course, an early autumn or late spring cold snap could not be accommodated in such a system, since in large cities it would take several weeks to turn on or off the heating system. The central planners' tendency to turn on heat throughout much of the USSR at the same time (around October 15) meant that northern cities' apartments would be cold in early October, while southern cities' apartments would be stifling in late October and mid-spring. Of course, this was not a terrible problem for those in southern cities, since energy was virtually free to consumers, and the residents of overheated units could simply keep windows open.

The need for crash construction together with central planning made for a drab sameness, with vast numbers of Soviet apartments being virtually identical to hundreds of thousands of others from the same vintage. This is parodied in Eldar Ryazanov's New Year's classic film *The Irony of Fate*, in which an intoxicated groom is accidentally put on a plane to Leningrad, where he goes to his Moscow address, only to be hopelessly confused because the apartment is identical – except for the woman inside it. Other than being far nicer than real Soviet apartments, the film's setting effectively portrays the deadening uniformity of vast residential complexes in all Soviet cities.

It is difficult for those from prosperous market or mixed economies to grasp why the Soviet Union did not create more pleasant living conditions for its citizens. As Yugoslavia of the 1970s exemplifies, there were consumer-oriented communist societies in which daily life was pleasant. However, delivering a wide array of consumer goods with substantial variation in models did not become a top objective until the Gorbachev era. It was also difficult for economic planners to design incentives for the production of an array of attractive consumer goods: socialist planning is better designed to produce tanks, railways or flatbed trucks than consumer goods or attractive housing. As the priorities of the USSR leadership (industrialisation and military capacity) were imposed on the citizenry, cities were made relatively attractive by the expediency of making rural areas even less attractive through collectivisation, low wages and even poorer provision of infrastructure and services. However, this response is incomplete.

Not only did the Soviet Union seek to build its defence capacity, it essentially militarised society after the NEP period (that is, from 1928 onward) to an extent without parallel in Western societies other than during the Second World War and during the fascist eras in Germany and Italy. People could be moved to new cities for work reasons (indeed, the Soviet Russian word for 'business trip,' *kommandirovka*, reflects the involuntary nature of the assignment); both youths and adults had compulsory and semi-compulsory obligations. Soviet citizens were constantly told that they were threatened by imperialist foreign invaders (and, obviously, at times this was true), and so the nation remained on a quasi-war footing throughout its existence. Complaining about shared sacrifices (though borne relatively lightly by the party elite) was muted in the face of existential threats.

A problem with this approach to controlling the population is that constant sacrifices were inconsistent with the materialist ideology of communism, which promised to make life better for workers and peasants, at least relative to alternatives. In part, this was addressed by nonstop propaganda emphasising the miseries of life in capitalist states (to say nothing of conditions in nations oppressed by successful imperialist capitalist regimes). However, the information blockade was imperfect, and Soviet leaders from Khrushchev onward made increasing efforts to provide consumer goods – only to find that the Soviet economic

structure was spectacularly ill suited for the challenge. Nonetheless, as Tsirel (2010) emphasises, the effort was made, and was accompanied by increasingly lax enforcement of restrictions on black-market activities. During the last two decades of its existence, the parallel economy became increasingly important, and by the late Gorbachev era, an urban professional class had come to espouse Western middle-class aspirations rather than Soviet ideals.

The inhabitants of major Soviet cities during the Gorbachev era lived in a different world (albeit perhaps in the same communal housing) as their grandparents did in the 1930s. It is striking to read the Russian academic literature on urbanization: author after author emphasises the transformation of the peasantry into an urban proletariat, refers to Russian city-dwellers as being rural at heart, and attributes the willingness to accept miserable private housing as a reflection of rural conditions of quasi-communal living in the *obshchina*. Of course, this stereotype is not without a basis: the few large cities of pre-revolutionary Russia were composed overwhelmingly of non-natives, and, in particular, to a large extent registered peasants (Bradley, 1985).<sup>12</sup> Domination by the native-born population would not have been common until 1970 or thereafter.

Tsirel (2010) is one of these; his paper is in English, but it is not atypical (and indeed builds on Pivovarov, 2003, who refers to the 'peasantification' of Russian towns and cities, and Vishnevskii, 1998). These authors argue that those most likely to move to the cities in the 1930s were relatively prosperous peasants (the famed *kulaks*) who had been dispossessed during the collectivisation drives. They further claim, and cite studies in support, that former kulaks and their children tended to rise in the CPSU: by (easily) disguising their relative prosperity but clearly being of peasant stock (speech would have given this away), they were ideologically preferred to educated urban intellectuals, who often tended as well to be of non-Russian nationalities.<sup>13</sup> Thus, those who rose to power had little interest in the fineries of modern urban life, and were relatively unaccustomed to private space; they therefore were willing to meet five-year-plan (*pyatiletka*) goals by suppressing consumption on a mass scale.

Pivovarov (2003) also emphasises the inefficiencies of urban growth as a product of central planning. A system that invited 'subjective judgments, political pressure, and corruption' (p54) meant that cities could be developed for reasons unrelated to natural attractiveness, production-cost minimisation, or other features of comparative advantage. By implication, cities built to develop raw material deposits or that had location-based comparative advantages should be able to withstand and even benefit from the shift to a capitalist economy. Others, including to some extent those that depended on input supplies from

---

<sup>12</sup> Bradley (1985, p107) also explains Tsarist-era internal passport laws: "After the emancipation of the serfs the peasant was referred to in the law as belonging to the former tax-paying estate or having a rural station (*sel'skoe sostoianie*). Membership in the peasant commune, the virtually mandatory reception of allotment land, arrears and collective responsibility characterized this rural station, and the passport system and residence permit enforced it. Issued (and renewed) only in the local township office, the passport, valid for the entire empire, and the identification card (*svidetel'stvo*) valid only within thirty *versts* (approximately thirty kilometers) of the place of registration, were essential in obtaining work outside a peasant's own township." The continuity between pre- and post-revolutionary Russia is somewhat striking, though the harshness of rule under Stalin differs in magnitude.

<sup>13</sup> Tsirel (2010, p8) dismisses the pre-existing urban proletariat as a source of Soviet leadership: "In order for the system to function successfully, among those selected based on their 'low origins' it was necessary, somehow, to select the candidates most suited to carry out their job duties. And among these folk elements the former kulaks and their children often turned out to be more suitable candidates than actual members of the urban proletariat, who were not much consumed with ambition or even, to the slightest extent, conversant with urban culture and its associated moral constraints, and, finally, often were drinkers."

uncompetitive producers, would be likely to fail. Put differently, the fates of Russian cities in the past two decades reveal the economic inefficiencies of Soviet central planners.

### 3.4 Social processes in urban Russia

Housing in the USSR was not a priority until the ascendancy of Nikita S. Khrushchev as head of the CPSU in 1953 and his consolidation of power in the next few years. Between 1926 and 1950, 'net living' urban housing space (about 65 per cent of total, excluding entryways and such) per capita actually declined from 5.85 to 4.67m<sup>2</sup>, an astonishingly low figure (Herman, 1971). A housing push was announced in 1957, and during the period 1956–65, housing construction occurred at a pace twice that of 1951–55, and net living space reached 7m<sup>2</sup> per person (and 10.0m<sup>2</sup> gross space). A crash programme naturally meant pre-fab materials, which in turn often meant poor assembly practices. The resulting *khrushchevki* apartments are renowned for their sameness (very few designs: the four- and five-storey brick buildings are instantly recognisable today) and unattractive living features (tiny rooms, wretched kitchens and bathrooms). In the years that followed, pre-fabrication continued to dominate, but the apartment buildings became taller, with *brezhnevki* typically reaching 9–15 storeys. Quality improved modestly but the drab sameness remained. Efforts to make large apartment units (*massifs*) distinct began in the 1980s, but structural quality was often even worse than before.

Although private enterprise was responsible for none of the apartment buildings or complexes that dominated Russian cities, there was private housing in Russia. As of 1928, private housing still accounted for 53 per cent of all urban housing space, though that share declined to 36.6 per cent in 1940 (Herman, 1971). It continued to decline, though was encouraged to some extent in the 1950s (reaching 33.7 per cent of all new urban housing construction) before declining drastically thereafter (to 20.6 per cent in 1966). Yet, these figures are misleading: since no apartment complexes were privately owned, owner-occupied housing was restricted to generally single-storey units in small towns and cities, or to similar units on the outskirts of large cities. They were encouraged mainly because of the space shortages and the unwillingness of individual enterprises, controlling ministries or the central government to devote more resources to housing – even during the boom housing-construction years, the investment level was modest by Western standards.

An important feature of Soviet housing and its cities was the unusual spatial layout, described in some detail by Smith (1996) – and confirmable by anyone who has lived in a Soviet city, since they are remarkably similar. In cities with functioning land markets, scarcity bids up land rents and housing prices in the most valuable locations – generally near the centre (giving rise to standard monocentric city models of urban economics) and along transportation axes and belts. In such locations, since use of space is conserved where rents are high, one finds relatively small housing units and land-saving economic activities, and especially those that can operate in multi-storey units, such as skill-intensive services. This was not the case in Soviet Russia. As Bertaud and Renaud (1997) and Reiner (1991) detail, land values – or their opportunity cost – had little to do with urban structure. The very centre of cities was taken for administrative and public space. Immediately around or intertwined was housing stock that ended up serving the upper end of Soviet society, the *nomenklatura*, consisting of CPSU party members and their families. In older cities, this housing came largely from pre-revolutionary stock and was generally of higher quality, but even central housing built in the Soviet eras tended to be nicer than that further out – though maintenance quality undoubtedly had a lot to do with this.

Beyond that, Soviet cities grew organically, much like trees. Since ring-roads were rare outside Moscow, and since most inter-city transportation was public and hence went through centrally located train and bus depots, Soviet cities had all of the preconditions for the monocentric model. However, in the absence of property markets, new or expanding

enterprises simply acquired vacant or low-use land on the outskirts of the city in which planners had told them to produce. They used this land to build factories, with no concern for economising on space use (subject to their overall land-allocation constraint), and used the remainder to build housing for workers and, in conjunction with local government, built amenities, schools, clinics and shops. This pattern resulted in a system in which land was rarely recycled to higher-value uses, in which industry and housing were interspersed to a degree rarely if ever found in modern market economies, and in which the edge of cities tended to consist of high-rise housing (Bertaud and Renaud, 1997). Indeed, since newer housing had more stories than older housing, and since cities expanded outward as they grew, the highest-density housing was often at the periphery. In contrast, Bertaud and Renaud find that land that might have been valuable for housing adjacent to the centre is often dominated by industry (67 per cent of the ring 7–8km from the centre of Moscow is occupied by industry). Overall they find that 31 per cent of Moscow in 1992 was in industrial use, in contrast with only 5–6 per cent in Hong Kong, Paris and Seoul – where prices reflect scarcity and hence firms economise, and where dominant cities serve as financial and service headquarters rather than industrial centres.

The physical consequences of the absence of a market are extraordinary. Bertaud and Renaud (1997, Figure 1, reproduced here as Figure 17) provide graphic evidence of the differences between Moscow and St Petersburg, on the one hand, and Paris – which by the standards of most Western cities has a densely populated periphery. Furthermore, as Bertaud (1996) shows, this dense periphery is a particular feature of *Russian* communist cities rather than of all cities that had a lengthy communist history: cities such as Budapest, Riga and Warsaw have density gradients that decline with distance from the centre.

**Figure 17: Comparison of Moscow (1992) and Paris (1990)**

Figures 17a and 17b: density gradients (a) and population distributions (b)

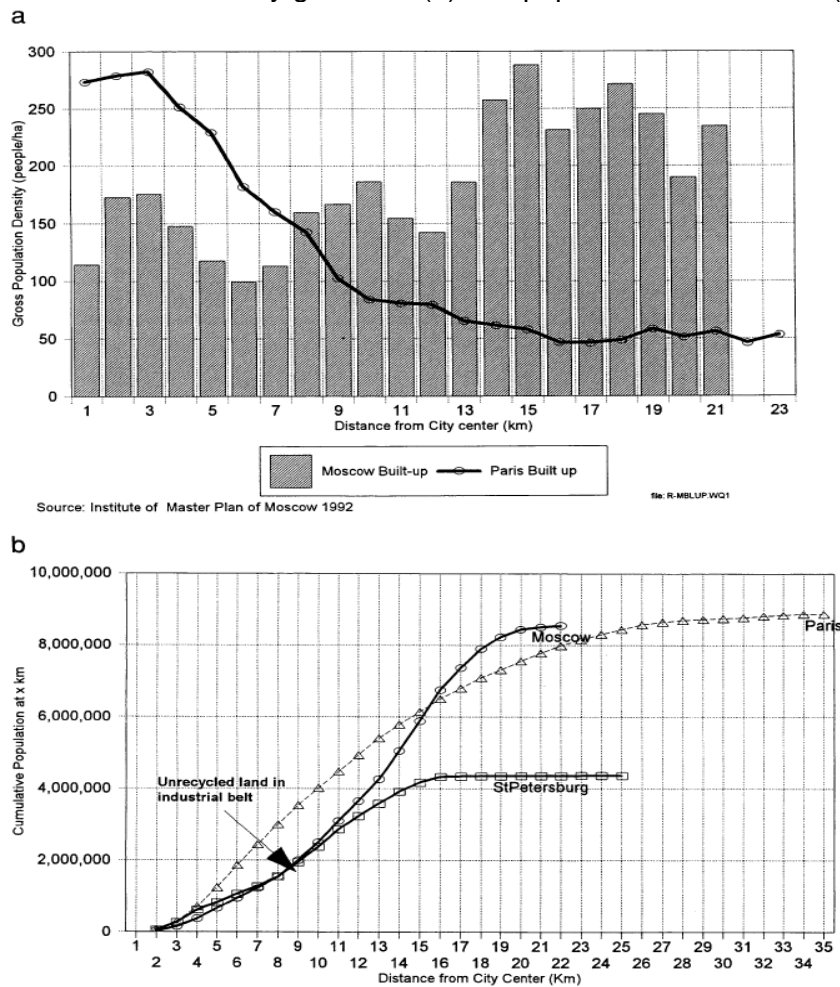
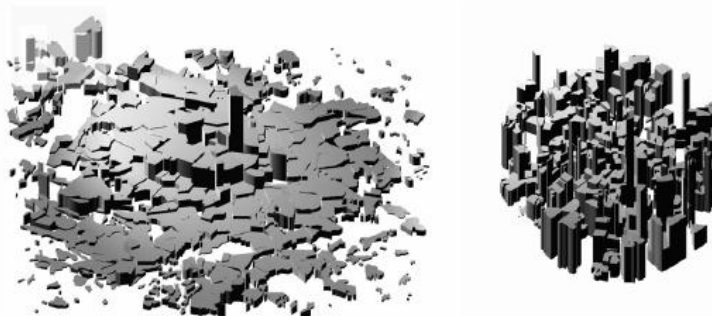


Figure 17c: 3D representations of Paris and Moscow



Sources: (a) and (b) Bertaud and Renaud, 1997, Figure 1; (c) Bertaud and Malpezzi, 2003, Figure 1.

Of the 48 cities analysed in Bertaud and Malpezzi (2003), the only ones outside Russia to have dramatically anomalous density gradients are Brasilia, Capetown, Curitiba, Seoul and to some extent, Johannesburg and Mexico City, including the metro area. The South African cities fit the pattern of high peripheral density because they are only gradually adjusting from an apartheid setting in which poor African townships surrounded more prosperous and largely white core areas. Seoul has substantial public space in the centre and has had severe restrictions on encroachment into its surrounding greenbelt, leading to a ring of high-density, moderate-income peripheral areas reminiscent of Russian peripheries. Brasilia is a

heavily planned capital city, and to some extent is like the South African cities, but without the racial restrictions. Remarkably, one does not find inverse density gradients Eastern Europe or China.

The literature on housing and social change in Russian cities is dominated by research on Moscow and St Petersburg. This is natural: they are the largest and most important cities, they are the best documented, and they are trend-setters. At the same time, their favoured position means that they are qualitatively different in several respects. Fortunately, there is considerable information on a range of secondary cities. Of particular interest, Zhimbiev (2000) provides a detailed history of the development of a major east Siberian city, Ulan Ude, which grew from being a frontier outpost to a city of 400,000 according to the 2010 census. A closed city until 1991, Soviet planners located a wide range of industries, from food processing and other light industry to locomotive manufacturing to machinery to military aircraft (<http://www.uuaz.ru/>).

As elsewhere, as Ulan Ude grew rapidly there were chronic housing shortages. Enterprises built both standard apartments for families and communal dormitory-like structures (with common kitchen and bathroom facilities; families had individual rooms). Individual property rights extended to ownership of a house, and many households built individual houses on the outskirts of the city. However, prior to a revival in the 1960s of interest in traditional (pre-revolutionary) Siberian and North-Central Asian architecture, socialised production meant that it was very difficult to reproduce the painstakingly carved house exteriors that once characterised villages and towns in this vast area. Zhimbiev also provides a rare description of the emergence of squatter settlements in the Uda River floodplain in the 1930s, as factories expanded and workers and their families faced minimal official housing options. These settlements were tolerated (and tacitly encouraged) and, over time, inhabitants' property rights increased.

As it turned out, most privately built housing in the Soviet era appears to have remained in the hands of the original builder or his descendants, and, at least after the Stalin era, housing allocated by enterprises or government bodies became more of a permanent than a temporary transfer (though this was not the case in the early Soviet era). Private property was abolished in the initial revolutionary decrees, but 'personal property', including one house and land that a household could farm was established in the 1936 Constitution (and strengthened in the 1977 Constitution); 'personal ownership' included standard usufructory and control rights, but did not extend to sale or rental for profit (for a detailed discussion see Marcuse, 1996). However, as Zhimbiev (2000) emphasises, people did not know this initially, and, as all land and property could be requisitioned by the state, there was substantial risk in making improvements or building a nice structure, even if one had a permit to do so. When one adds to this the difficulty of securing materials for building and improving housing, it is not surprising that Russians, especially in provincial towns and cities, invested relatively few private resources in housing. Nationally, and including rural areas, only 26 per cent of Russia's 1990 housing stock was individually owned, in contrast with shares in Eastern Europe ranging from 40 per cent in Poland to 84 per cent in Bulgaria (Struyk, 1996).

By the 1970s, housing in Ulan Ude was far superior to that of the shock (as in: striking a blow for socialism; motivated workers during these drives were known as *udarniki*, which today refers to anyone working passionately) construction and industrialisation era of the 1930s. However, while the structures themselves were superior, especially relative to *kommunalki* and shanty settlements, much of the city lacked sewerage, central heating and centrally piped water. On the more positive side, dachas began to emerge in the 1960s, and by the end of the Soviet era, were available to virtually all urban households who wanted a plot on the outskirts for a dacha and vegetable and fruit garden – as nearly everyone did. Dachas may not have been so easily available in those parts of Russia with less ample land but, for the most part, Russia is not land-scarce.

By the Gorbachev reform era, marketisation of housing began to appear. Property rights were generally recognised as being secure, making rental or even sales possible. Risk of losing one's apartment to a renter who refused to leave was not an issue, since only the initial occupant would have a *propiska* for the residence. Since a sale would involve a change in registration, it must have been approved by local authorities prior to the end of the Soviet era. The Gorbachev years were also a period of state bank loans intended to encourage private housing construction and improvements. Although the number of individual houses built was not large, and hence the impact on the number of units available was not great, the policy did further cement individual property rights and laid the basis for individual housing growth along the periphery – that is, to the first seedlings of suburbanization.

Housing privatisation began very slowly in the late 1980s, though in some other socialist countries – notably Bulgaria and Hungary – it had started earlier and was nearly complete by 1990 (Struyk, 1996, provides a detailed discussion of the early privatisation process). Most units were handed over without charge or at fairly nominal charge and, gradually during the 1990s, Russia's non-communal housing stock became mostly private. The gradualness is somewhat surprising until one considers that along with privatisation came much higher communal service charges and building management costs. Moreover, in adjusting to the market economy, few enterprises wanted to be in the real estate management business, much less facing responsibility and costs of providing kindergartens and other social infrastructure and amenities linked to housing.

The fact that housing in the Soviet era was for the most part in government or enterprise hands almost certainly contributed to the low parallel mobility of Russians. That is, while there was substantial mobility from rural areas to cities, especially in the post-Stalin period, apartment-turnover rates within a given city and moves from one city to another were low by Western standards, as Struyk (1996) details. This low mobility tends by outsiders to be ascribed to the internal passport system, but it seems likely that the absence of a housing market, combined with housing shortages, was the binding constraint.

### **3.5 Policies and urban growth**

From 1932 onward, the USSR restricted access to its cities. Urban residents were issued internal passports; eventually, so were their rural counterparts. Restrictions on one's location and residence authorisation (*propiska*) also existed in Tsarist times, while the Russian Empire also restricted its Jewish subjects to a 'Pale of Settlement' that comprised roughly the western fifth of the European portion of the empire, and only a small portion were permitted to live outside the Pale. Although virtually all of the Pale lay outside the borders of today's Russian Federation, urban Russia came to have a large Jewish population.

Rural residents who wished to migrate needed to obtain a passport, and refusal by local authorities to grant them, which appears to have been common prior to the GPW, effectively repressed voluntary out-migration and hence urban growth. It is not difficult to imagine the motivation of local authorities in the 1930s, since out-migration was occurring at a previously unimagined pace, both in response to crash industrialisation and as a consequence of unpopular collectivisation. From the Soviet authorities' standpoint, the primary purpose of the residence restrictions was to maintain an agricultural labour supply and also to some degree to maintain the showcase aspect of Moscow and St Petersburg. These showcase tendencies strengthened the already strong tendency for amenities to rise with city size (and to be far better in Moscow and St Petersburg). Consequently, demand rose with city size, and the Russian urban system's primacy would have been even greater in the absence of mobility restrictions. The other side of this coin is that obtaining permission to move to smaller cities was easier than moving to larger cities.



In the post-war era, labour and housing shortages drove enterprises to build dormitories (*obshchezitiya*, or common-living buildings) to house new workers who, being migrants, did not have permanent housing already.<sup>14</sup> These workers were given temporary, or limited, residential authorisation, and hence were referred to as *limitchiki* (Pivovarov, 2003). At some point, work seniority would probably translate into a right to a permanent apartment, and hence permanent residency status, but this could take years and even decades. During the interim, these workers lived in miserable conditions, and in effect were second-class citizens.

An interesting question is whether the process of central planning had a major impact on Russia's city-size distribution. It certainly did affect the growth of particular types of cities. For example, many cities based on the extraction of minerals and energy resources were built in very uncomfortable areas. In market economies, settlements of this sort tend to be large work-oriented camps, with a high ratio of single men to families. Yet, according to the 2010 census, the number of women and men are nearly equal in mining cities like Norilsk ([http://www.perepis-2010.ru/results\\_of\\_the\\_census/results-inform.php](http://www.perepis-2010.ru/results_of_the_census/results-inform.php)). In many cases, the decision to build cities occurred as a planning dictate, and so towns with social services for a diverse community arose in places that would have remained mining camps in North America or Australia.<sup>15</sup>

Soviet central planning also incorporated ideas of traditional central place theory and hierarchical urban structures at all levels – from vast regions and constituent republics to single urban agglomerations. A detailed description of these approaches is given by Vladimirov and Naimark (2002). Because of unitary control, control over residence rights and labour supply, and the near absence of private real estate ownership, it was easier to impose comprehensive urban plans in Russia than in market economies. Nonetheless, the system did not work perfectly smoothly, both because of unanticipated external shocks, and because of imperfect cooperation of an array of competing interest groups, ranging from regional authorities to various production ministries (Osborn, 1963). What the planning structure did ensure was that inequality was limited: cities of different types were authorised to have specified amenities and public services, and for the most part these commitments were met, at least in later years. Thus, differences in living standards were muted – and hence were more correlated with city size than in the underlying richness or productivity of an area. Planning also ensured that cities of different types looked remarkably alike.

The effective urban planning ministry in the Soviet era was the State Committee for Construction (abbreviated to *Gosstroï*). It was regarded as fairly non-ideological, and engaged in many of the same urban planning debates as in the West (Osborn, 1963). Central cities tended to be preserved, in part for historical reasons, and in part because the buildings represented usable housing and office stock. In addition, the absence of property rights and effective urban planning provided an incentive for production-oriented line

---

<sup>14</sup> Bradley (1985, pp200–201) reports that a substantial proportion of pre-revolutionary Moscow (29.0 per cent in 1882 and 21.4 per cent in 1912) lived either in dormitories or other institutional housing, or in employer-provided quarters. It would appear that for the typical working-class household, pre-revolutionary housing in large cities differed little in quality from early Soviet housing.

<sup>15</sup> As is well known, there was vast use of prison labour in the Soviet Union (and before, though to a lesser degree), and these prisoners often worked on construction projects, as well as in forestry, industry and mining. Many worked in nearby cities in difficult settings in the North and East, and were often engaged in the riskiest activities. By and large, though, this did not deter the Soviets from establishing permanent cities in mining and energy sites based on non-'sentenced' labour. There were several different degrees of sentencing in the USSR and Tsarist Russia, from being simply exiled to remote areas (a fate met by famous Russians from Dostoyevskii to Sakharov) to being loosely imprisoned in a work camp to being sentenced to be an inmate in a 'strict regime' labour camp. The imprisoned population was used in particular for construction projects such as the White Sea – Baltic Sea Canal.

ministries to build on greenfield sites on the edge of cities, as this was quicker and cheaper, leaving city administrations with the task of expanding infrastructure to new areas. In consequence, as noted above, Soviet cities had bizarre population density gradients, often with higher densities near the periphery than in the centre (Bertaud and Renaud 1997; Bertaud and Malpezzi 2003; Smith 1996).

At the city-wide level, central planning meant that there were targets for construction of given numbers of cities of different sizes, with preference for medium-sized cities in the 100,000–500,000 population range (Osborn, 1963). Given the correlation between quality of amenities and city size, a larger number of moderate-sized cities was seen as reducing average cost of infrastructure and amenities per person. Perhaps far more important was the desire to have a dispersed urban population, with all oblasts and other comparable second-level units containing at least one major city.

Of all the cost-related issues, transportation was among the most critical. White (1979) offers a detailed history of the evolution of intra-urban transport for major Russian cities. Briefly, over time major Soviet cities experienced a shift in modal commuting method from walking to tram to trolleybus, to a bus system. In the largest cities, metro systems also became important, though only in Moscow (as of the mid-1960s) did they become the most important means of transportation. Other features are a secular rise in vehicular trips per person, and also a moderate rise in trips per person according to city size (from 280/person in cities of under 250,000 to 380/person in 1 million+ cities, to 620/person in Moscow and St Petersburg, as of the mid-1970s). Private automobile ownership was minimal prior to the 1970s, when the private automobile industry began producing in earnest, but at very low levels by Western standards. The data provided by White (1979) suggest that, as of 1976, the number of trips taken in non-taxi automobiles in the entire USSR was about the same as the total number of public transportation trips in Moscow.

Since Soviet public transportation was slow, especially when there were modal changes, large cities carried inherent inefficiencies. If one thinks of a monocentric city model (and Soviet cities were most definitely monocentric), the total cost of commuting – including capital and operating costs, but consisting mainly of individuals' time – will rise faster than total city size as long as there is some commuting to the centre. To offset these time costs meant building metro systems, but they were horrendously expensive. Thus, rational Soviet planners sought to control the physical size of individual cities. While Los Angeles, Houston and Vancouver arose to challenge New York, Chicago and Toronto, no similar pattern occurred in the USSR, or in Russia since.

Table 6 points to another feature of Russia's planned cities: namely, their tendency to be monocentric with only tiny suburbs and, in most cases, a very small number of satellite cities. As an unweighted average, central cities comprised 80.9 per cent of the population of the entire agglomeration – and this is for the large cities that have been officially designated as having an agglomeration. The core metro areas account for 87.4 per cent of the entire agglomeration – with a few exceptions, there are very few secondary cities nearby. These figures are far higher than in North America, though it is an open question as to how other BRICS countries and emerging market nations compare. Sridhar (2004) reports that about 19 per cent of the 2001 population of Indian cities with more than one million inhabitants lived outside the city proper. While a conclusive comparison cannot be made in the absence of an effort to compare boundary definitions, it seems likely that Soviet cities had smaller satellites and suburban areas than their market economy counterparts.

The absence of significant suburbs and satellite cities in a metropolitan area, other than in Moscow and to a far lesser extent St Petersburg, is one of the defining features of Russian urban structure. In the following chapters we take an initial look at prospects for change as

Russia becomes a reasonably prosperous, reasonably capitalist society. As Chapter 5 discusses, suburbanization is one of the major changes underway.

**Table 6: Large urban agglomerations, population as of January 1997**

Agglomeration	Size (thousand square kilometres)	Agglomeration's urban population (thousand)			Centre as percentage of total	Core metro as percentage of total
		Total	City centre	Core metro area (в ядре агломерации)		
Moscow	8.2	12,713	8,575	10,242	67.5	80.6
St Petersburg	5.2	5,342	4,362	4,861	81.7	91.0
Novosibirsk	3.4	1,715	1,430	1,578	83.4	92.0
Nizhny Novgorod (Nizhegorodskaya)	3.2	2,061	1,430	1,648	69.4	80.0
Ekaterinburg	4.2	1,870	1,356	1,553	72.5	83.0
Samara	3.3	1,577	1,236	1,388	78.4	88.0
Omsk	4.1	1,237	1,167	1,176	94.3	95.1
Chelyabinsk	3.0	1,432	1,135	1,303	79.3	91.0
Perm	2.8	1,202	1,095	1,166	91.1	97.0
Ufa	3.9	1,163	1,094	1,106	94.1	95.1
Kazan	2.1	1,296	1,089	1,114	83.0	86.0
Rostov-na-Donu	3.6	1,431	1,014	1,145	70.9	80.0
Volgograd	3.2	1,357	998	1,317	73.5	97.1
Krasnoyarsk	3.0	1,024	919	942	89.7	92.0
Saratov	3.1	1,139	902	1,128	79.2	99.0
Voronezh	3.8	1,025	898	974	87.6	95.0
Tol'yatti	1.0	761	677	754	89.0	99.1
Ulyanov	2.2	712	660	684	92.7	96.1
Izhevsk	2.1	677	653	653	96.5	96.5
Vladivostok	0.9	806	641	685	79.5	85.0
Krasnodar	3.4	821	635	763	77.3	92.9
Irkutsk	2.5	974	631	692	64.8	71.0
Yaroslavl	3.6	734	630	639	85.8	87.1
Khabarovsk	3.0	664	609	617	91.7	92.9
Novokuznetsk	1.6	1,344	600	618	44.6	46.0
Barnaul	3.2	722	597	715	82.7	99.0
Orenburg	3.4	572	553	561	96.7	98.1
Penza	3.3	603	548	554	90.9	91.9
Tula	3.8	1,139	535	581	47.0	51.0
Ryazan	3.0	560	525	548	93.8	97.9
Naberezhno-Chelny	1.5	798	525	519	65.8	65.0
Kemerovo	2.0	641	515	532	80.3	83.0
Astrakhan	3.0	578	507	515	87.7	89.1
Tomsk	2.3	535	500	508	93.5	95.0
Tyumen	3.2	553	492	515	89.0	93.1
Kirov	3.0	725	491	544	67.7	75.0

Source: Vladimirov and Naimark (2002), Table 3.

## 4. Post-Soviet urban change

“Urbanization in capitalist countries is of a spontaneous character due to the spontaneous development of capitalist economy. The attempts to regulate the growth and structure of towns are very limited and the results are not fruitful. Uncontrollable character of urbanization facilitates unproportional development of its negative traits and is the main factor responsible for the aggravating crisis of the capitalist cities which, in turn, is a most spectacular aggravation of the general crisis of capitalist system.”

(Gokhman *et al.*, 1976, p279)

### 4.1 Post-Soviet cities: mobility and urbanization in one country

A major shock with the end of the USSR was the changing nature of migration and urbanization. In the ensuing two decades, living standards gradually came to depend more and more on cash incomes rather than non-cash amenities and transfers. Human mobility was defined by the state to a far less important degree. As White (2007, 2009) emphasises, migration thus became part of a more general strategy to ensure the wellbeing of individual families. An important result has been the emergence of temporary migration for work purposes, especially by younger working-aged men. These migrants tend to view their stays as temporary, and indeed make periodic, extended return trips to see families. These migrants tend to come from rural areas and small towns or cities, and especially from those where job prospects are poor. Such migration grew in importance in the late Soviet period, but its nature has changed substantially in the post-Soviet environment. A high proportion – perhaps a majority – come from poorer states of the former USSR. While the initial post-Soviet wave of migration from Kazakhstan, Central Asia and the Caucasus was dominated by Russians and other Europeans returning ‘home’, by 2002 the flows were dominated by economic migrants from Uzbekistan, Tajikistan, Kyrgyzstan and Ukraine. Like the EU, the USA and other wealthy market economies, Russia and Kazakhstan today have large immigration-processing bureaucracies (for the RF Migration Service home page, see <http://www.fms.ru/>) aimed at monitoring and registering flows from the low-income periphery.

The post-Soviet era has also been one of further isolation of rural areas and small towns. White (2007) in her analysis of individual interviewees, refers to a sense among many that they have been ‘marooned,’ losing contact with those who have moved to larger cities. While we do not have definitive comparative data to illustrate the point, it certainly appears that thriving cities have pulled much further ahead of lagging areas – generally smaller cities and rural areas.

For urban areas taken as a single unit, the movement from socialism toward a market economy has been met with widely varied degrees of success in different cities. Brady *et al.* (2004) provide an excellent typology of contemporary Russian cities with respect to their response to the transition period; the discussion in Lappo and Polyan (1999) is consistent with these divisions. Within those cities that are successfully developing, it is worth distinguishing several categories.

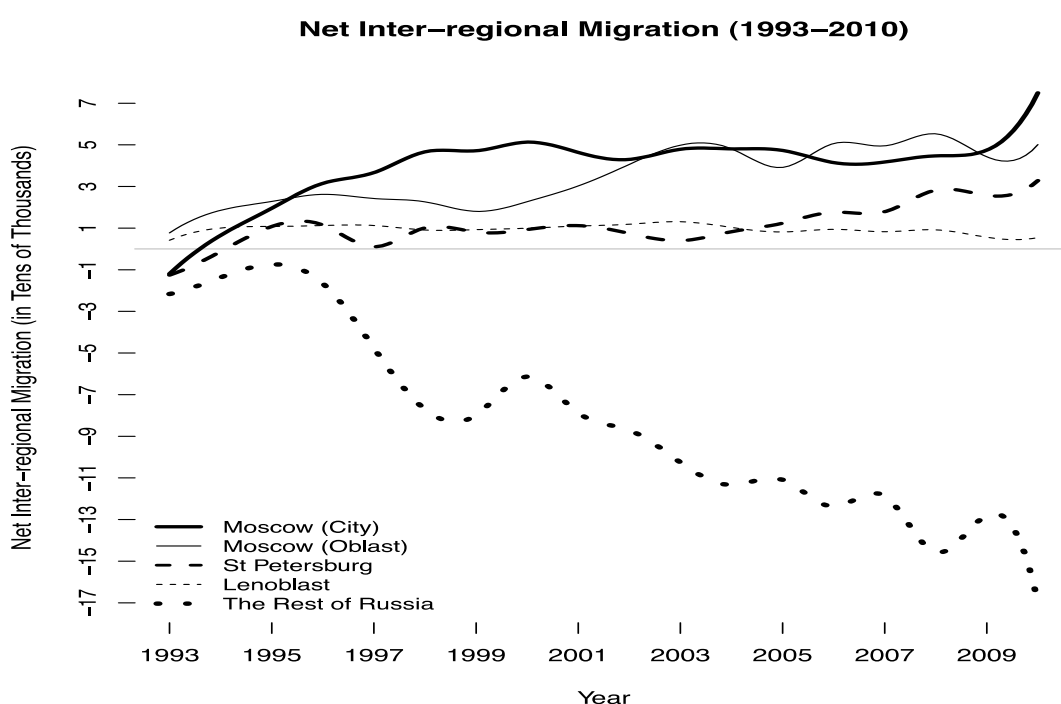
Moscow, which has stood apart from the rest of Russia for centuries, does so even more today. As Brady *et al.* (2004) note, Moscow in the early 2000s received as much direct investment as the next 14 cities taken together (see also Axenov *et al.*, 2006, p44). While Moscow accounts for only 6 per cent of the nation’s population, one-quarter of all taxes collected come from Moscow. It serves as the headquarters for nearly all major companies, and is the centre of Russia’s highly centralised government structure. Per capita income is far higher in Moscow than elsewhere in Russia: the Rosstat website [http://www.gks.ru/bgd/regl/b11\\_14p/lssWWW.exe/Stg/d01/11-02.htm](http://www.gks.ru/bgd/regl/b11_14p/lssWWW.exe/Stg/d01/11-02.htm) reports that 2009 per

capita income in Moscow reached Rb679,441 (approximately US\$23,000), just over three times the national average.

St Petersburg also stands apart from other Russian cities, like Moscow in terms of sheer size, but also in terms of importance and favourable economic climate. Not only is it a major manufacturing centre (and one that has successfully transitioned from military-oriented production to a range of consumer and industrial goods), it is also the 'northern capital' with important government functions, and is the nation's major external trade hub. Its proximity to the West, vast cultural amenities (to say nothing of a metro system designed to withstand nuclear attack), and role as a centre of higher education all make it an attractive site for foreign investments. Leningrad's 2009 per capita income was Rb320,916 – well above the national average, but only half that of Moscow.

Not only are these cities dominant, they have become more so in the pos-Soviet era. Between 1995 and 2002, nominal Russian per capita GDP rose nearly six-fold (Rosstat database cited above), and rose another 273 per cent between 2002 and 2009. Moscow's per capita GDP increased 11.6 times in the first period and by 297 per cent between 2002 and 2009; comparable figures for St Petersburg are 7.14 times and 345 per cent, respectively. Their surrounding regions also exhibited more rapid growth: 6.14 times and 380 per cent growth for Moskovskaya oblast and 7.53 times and 359 per cent for Leningradskaya oblast. Figure 18 shows the result: the two major cities and their surrounding oblasts were large magnets for migrants from the rest of the nation throughout the period.

**Figure 18: Inter-regional migration to Moscow and St Petersburg, 1993–2010**



Despite their dominance, Moscow and St Petersburg were not the only Russian cities to thrive. As Brady *et al.* (2004) discuss, several inter-regional and regional centres with populations above 500,000 have experienced successful growth. While many of these cities suffer significant unemployment, they have become increasingly important administrative centres, especially in light of the decentralisation that occurred in the 1990s. With the exceptions of Omsk and Chelyabinsk, industrial sectors have contracted in these cities, but service sectors have expanded greatly. Ekaterinburg also has become an important financial centre, while Novosibirsk has become increasingly focused on both rail and air transport, as

well as being a scientific and cultural centre. Ekaterinburg and Novosibirsk have the nation's largest airports after Moscow and St Petersburg, and Novosibirsk's Tolmachevo airport in particular has focused on becoming a regional hub (<http://tolmachevo.ru/aeroport/press/2011-07-04>).<sup>16</sup> The dominant airline there is S7, which has emerged as one of Russia's top airlines and in 2010 became the 13<sup>th</sup> member of the Oneworld airline alliance, led by British Airways and American Airlines.

While many industrial cities with a single dominant enterprise or industry have struggled, there are some that have been successful in adapting to the market economy (most obviously, in energy, extraction and processing of oil and gas, metallurgy – that is, export-oriented sectors). These cities include metallurgical centres such as Lipetsk, Cherepovets, and Staryi Oskol, the oil and gas centres of western Siberia, and energy centres such as Novokuibyshevsk and Sosnovyi Bor.

The same can be said of industrial cities (with a manufacturing share in the workforce of 20 per cent to 40 per cent) that have a more mixed profile (Bradye *et al.*, 2004). While virtually all of these cities have experienced industrial contraction relative to the Soviet era, their diversity has meant that some sectors have been successful and compensated for declines elsewhere. The successes typically include medium-sized enterprises in energy, chemicals or metallurgy. This group also includes some smaller regional centres with relatively favourable investment conditions, and that have received federal or international loans for infrastructure redevelopment, such as Novgorod, Vladimir and Yaroslavl.

Service centres have had a mixed record as well (Bradye *et al.*, 2004). They tend to be smaller, with transport, port, customs and recreation/tourist functions. Port cities include Novorossisk, Taganrog, Astrakhan, Vyborg and Nakhodka. Tourist centres also tend to attract migrants, as they are often located in otherwise depressed areas.

Science cities and formerly closed cities merit particular attention.<sup>17</sup> These cities typically were created in the 1940s and 1950s with the aim of accelerating technological development for industry and military purposes. This number includes 22 'closed' cities that appeared neither on Soviet maps nor in official statistics. Most of these cities found the 1990s to be a very difficult period, since defence spending was slashed radically, and the scientific enterprises were unaccustomed to producing goods and services for which there was market demand. Nonetheless, some of these centres have recovered and have found niche high-tech markets, especially in more recent years, as Russia's higher-end markets recover (in part with state assistance).

On the other hand, science cities in Russia started the post-Soviet era with distinct disadvantages relative to their American or other developed country counterparts, since none had any prior commercial experience. While a lack of commercial experience is probably common to the technical staff at locations like Los Alamos, NM, Oak Ridge, TN, or

---

<sup>16</sup> Perhaps the best way to get a sense of the extraordinary concentration of Russia's cities in terms of economic primacy is to consider air-travel data, which are available online at Anna Aero <http://www.anna.aero/european-airport-traffic-trends/#>. In 2010, Moscow's airports (Domodedovo, Vnukovo, Sheremetyevo) totalled 50.8 million passengers (comparable to Frankfurt's 53.0 million), St Petersburg was second with 8.4 million; the remainder included Ekaterinburg (2.7 million), Novosibirsk (2.1 million), Kaliningrad (1.6 million – 2009), Samara (1.5 million), Rostov-na-donu (1.4 million), Khabarovsk (1.4 million) and Vladivostok (1.3 million); 2001 figures were 56.3 million for Moscow (vs. 56.4 million for Frankfurt), 9.6 million for St Petersburg (comparable to Stuttgart), followed by 3.3 million for Ekaterinburg, 2.6 million for Novosibirsk, and 1.7 million each for Rostov-na-donu and Samara.

<sup>17</sup> The Russian term is ZATO, for 'closed administrative-territorial formation' (*закрытое административное-территориальное образование*). For a discussion, see Lappo and Polyan (1999, p41).

Lawrence, CA, many staff members retire early or move to private-sector firms (or grant-based research in universities) in the US military-industrial complex, and hence are linked to their old labs. Increased commercialisation is thus not as traumatic an event.

As of 2008, Russia had 18 officially designated ‘science cities’, but these comprise only a fraction of the 69 cities and settlements that belong to the noncommercial Union of Science Cities. Some 29 of these science hot spots are in Moscow Oblast, giving them a huge locational advantage. For the most part, Russia’s science cities have avoided collapse of the sort associated with some other secondary cities, and in fact some – mostly those near Moscow – have grown rapidly (Table 7). However, relative to other non-mining cities in the Far East and East Siberian interior, Biysk’s ability to maintain its population may be the most impressive feat of all.

**Table 7: Russian science cities: population growth in the post-Soviet era**

City	Oblast	City website	Population		
			2010	2002	1989
Biysk	Altai krai	<a href="http://www.gorod.biysk.ru">http://www.gorod.biysk.ru</a>	220,466	218,562	233,238
Chernogolovka	Moskovskaya	<a href="http://www.chernogolovka.net/">http://www.chernogolovka.net/</a>	20,986	20,284	18,488
Dubna	Moskovskaya	<a href="http://www.naukograd-dubna.ru/">http://www.naukograd-dubna.ru/</a>	223,902	215,727	158,294
Fryazino	Moskovskaya	<a href="http://www.fryazino.info/">http://www.fryazino.info/</a>	55,449	52,436	53,317
Koltsovo	Novosibirskaya	<a href="http://www.naukograd-koltsovo.ru/?newlang=0">http://www.naukograd-koltsovo.ru/?newlang=0</a>	11,479	9,570	7,946
Korolyov	Moskovskaya	<a href="http://www.korolev.ru/">http://www.korolev.ru/</a>	183,452	142,568	
Michurinsk	Tambov		98,758	96,093	124,396
Obninsk	Kaluga	<a href="http://www.admobninsk.ru/">http://www.admobninsk.ru/</a>	104,798	105,706	100,178
Petergof	St Petersburg	<a href="http://mo-petergof.spb.ru/">http://mo-petergof.spb.ru/</a>		64,791	(1992) 83,800
Protivno	Moskovskaya	<a href="http://www.protvino.ru/">http://www.protvino.ru/</a>	37,708		
Pushchino	Moskovskaya	<a href="http://www.pushchino.ru/">http://www.pushchino.ru/</a>	20,263	19,964	19,479
Reutov	Moskovskaya	<a href="http://www.reutov.net/">http://www.reutov.net/</a>	87,195	76,805	68,326
Troitsk	Moskovskaya	<a href="http://www.admtroitsk.ru">http://www.admtroitsk.ru</a>	37,708		
Zelenograd	Moskovskaya	<a href="http://www.zelao.ru/en/">http://www.zelao.ru/en/</a>	223,902	215,727	158,294
Zhukovskiy	Moskovskaya	<a href="http://www.zhukovskiy.ru">http://www.zhukovskiy.ru</a>	104,800	101,300	

Sources: Census data.

Notes: The Wikipedia ru.naukograd site is extremely useful. For a complete list and detailed information on unofficially designated science cities, see the Union of Science Cities website <http://www.souznaukogradov.ru/>.

To summarise, in the post-Soviet era, cities thrived where they could produce goods at quality sufficient to compete in world markets, and have favourable transportation cost/infrastructure. Thus, science cities near Moscow did well, as did industrial cities



producing goods for which the technology needed to be cutting-edge, rather than simply meeting local demand. A second set of cities thrived where they were diversified enough that, in a constantly changing economic environment, there would always be someone poised to take advantage of opportunity. Thus, small cities in large agglomerations, diversified cities, and large towns did well, while company towns did poorly.

A third group of cities thrived where they could easily link to profitable other locations. Cities with good transportation infrastructure or geographic proximity did well, while remote cities did poorly. These successful cities include small cities in large agglomerations – essentially, the cities near Moscow and St Petersburg (for example, Vsevolozhsk, the subject of Chapter. 5). Many of these outlying towns and cities serve as transport, supply and logistics hubs to the centre, and provide goods consumed in the centre city. A fourth set of cities were those able to take advantage of location. Thus, places with good climate and natural resources did well. In particular, these include small cities in rural areas of southern Russia with favourable climatic conditions (Alekseevka in Belgorod oblast is given as an example in Bradye *et al.*, 2004) for agriculture, and hence for food- processing industries.

Finally, some cities combined stable institutions, a favourable investment climate, and locational advantages sufficient to attract foreign direct investment. These cities tend to be characterised by a favourable transport and geographic location, good conditions for the development of new entrepreneurs, and above all a helpful rather than bureaucratic local government. Success in attracting foreign investment is also associated with increased local tax payments (foreigners are less likely to evade), and with supportive local government one gets a virtuous circle, as subsequent investors find the environment attractive as well. The town of Chudovo in Novgorod oblast is cited by Bradye *et al.* (2004) as a good example, and it appears from the economy section on the general information [www.mychudovo.ru](http://www.mychudovo.ru) site that two of the town's five major employers, including the largest, are the Finnish wood products enterprise UPM and the British confectioner Cadbury. The city government website <http://gorod-chudovoadm.ru/> contains exceptionally detailed budgetary information, as well as on private management companies (for example, <http://kapri-plus.ru/index.php>) contracted to provide what appears to be most municipal services.

On the other side is an array of cities and towns that have fared poorly. This group tended to rely on government subsidies, government contracts or government boundaries separating the domestic market from international competitors. Of note are the following.

- Industrial centres dependent on a sector especially hit by the post-Soviet economic crisis, especially if defence related, or in coal mining regions – which have not done as well as other extractive areas – such as the Kuzbass.
- Single firm or industry *monogoroda* or 'company towns', especially those with weak structural links to suppliers or buyers, or that produce uncompetitive products – for example, textiles in Ivanovo or Yuzha, or machine construction (Yartsevo in Smolensk oblast has a stable population but the city's English language website hints at desperation [http://yartsevo.ru/about\\_eng.htm](http://yartsevo.ru/about_eng.htm)).
- Small cities far from regional centres, and facing high transportation costs or poor transportation links. Largely located in the north and east, these towns tend to depend on forest products, but poor infrastructure makes their products uncompetitive.
- Secondary tourist resorts for domestic holidaymakers in the Soviet era. These regions tend to lack effective marketing plans, while upper-middle-class residents of large cities now head to Turkey, Black Sea resorts and Europe for holidays. Many of these small towns are located near major cities (for example, the ancient towns of the 'Golden Ring' around Moscow) and are no longer attractive relative to foreign alternatives.



- Small cities whose major industries are parts suppliers to larger firms, and/or that are located in extreme climatic conditions. These regions and firms in them received supplemental state benefits in the Soviet era. Today, they suffer from higher costs in the absence of subsidies, along with often dreadful living conditions.
- Lappo and Polyak (1999) also single out small county (*raion*) centres in uncompetitive agricultural areas and far from major urban centres.

To sum up, Russia and its cities have had vastly divergent experiences in adjusting to capitalism. Many people and many cities have thrived. Cosmopolitan young professionals in large cities have much more in common with their Central and Western European counterparts than they do with the lives of their parents and grandparents in the same cities. They are equally divorced from the struggles of non-professionals and of those living today in declining cities. Beyond Moscow and St Petersburg, many cities in the Urals and Western Siberia are thriving, as are those in favourable agricultural areas. In essence, there are two urban Russias today.

Lappo and Polyak (1999, p43) emphasise the weak correlation between transportation centrality and urban size, which appears to be a peculiar consequence of central planning. In market settings, the terminus for a great transport trunk line (railway or pipeline) is normally a fairly significant city, especially if it is a natural port. While there are cities in Russia that follow this rule (most obviously, St Petersburg; also Novosibirsk as the gateway to Siberia, analogous to Denver in the USA), there are also cities that do not conform. Thus, the 3000km Baikal–Amur railway (BAM) ends at the Pacific Ocean in between Sovetskaya Gavan' (Soviet Harbor, population 31,700 including surrounding villages) and the urbanised settlement of Vanino (population 21,600). Even the larger port of Nakhodka is surprisingly small. Meanwhile, the BAM itself passes through a stretch of more than 1900km, from Chita to Blagoveshchensk, without a city. The combination of vast distances, limited road and railway lines in the east and north, and arguably poorly chosen routes together make it very difficult for remote cities to thrive – they either become fairly large in response to determined government effort, or they wither.

It is important to consider the fate of Russian cities in transition relative to other cities, both in other formerly socialist economies and elsewhere. Turok and Mykhnenko (2006) examine population change during 1960–2005 in the 310 European cities in 36 countries (including European Russia) with recent populations over 200,000. Their broad conclusions are as follows.

1. Large-city population growth steadily decelerated (and actually became negative during 1995–2000) before modestly reversing trend during 2000–05.
2. Eastern European cities initially grew faster than those further west but shrank markedly during 1995–2005, accounting almost entirely for overall European cities' population declines in this period.
3. Small and medium-sized cities consistently grew more rapidly on average than large cities during 1960–95, but the trend sharply reversed during 1995–2005.
4. There is a slight but statistically insignificant movement toward warmer climates.
5. There is no discernable difference in growth between cities located in core vs. peripheral areas.
6. Of the 310 cities, 42 are 'resurgent' in the sense that a substantial period of decline has been reversed, but the dates of recovery vary widely.

Among Russian cities, none are regarded by Turok and Mykhnenko (2006) as being in decline that is continuous (in contrast to, e.g., Leipzig or Merseyside) or long-term (e.g., Budapest, Chemnitz or Le Havre); 28 are listed as being in medium-term decline; 18 are regarded as experiencing recent decline; 2 (Voronezh and Velikiy Novgorod) have experienced a 'growth setback'; none are in any sort of resurgence; and 8 (Moscow, Kazan, Togliatti, Cheboksary, Belgorod, Sterlitamak, Nizhnekamsk and Staryi Oskol) have

experienced continuous growth. However, those regarded as being in medium-term or recent decline seem to encompass a heterogeneous group with very different prospects.

More striking still is the contrast between 56 Russian and 89 Eastern European city counterparts (Turok and Mykhnenko, 2006). These East European cities include 1 in continuous decline, 3 in long-term decline, 45 in medium-term decline, 16 in recent decline, 15 experiencing a growth setback, none that are resurgent, and 9 (Tirana, Minsk, Hrodna, Brest, Skopje, Warsaw, Bialystok, Khmel'nitski and Bila Tserkva) experiencing continuous growth. Thus, if the transition has been hard on Russia's main cities, it has been considerably harder, on average, on those of its western neighbours in the former 'socialist camp'. While there are several reasons for the difference, two that stand out are the greater natural resource bases of many Russian cities along with the natural growth effect of ethnic Russians returning from the 'near abroad'.

#### **4.2 Adjustment to the market economy: housing and use of space**

The end of the USSR and the move to a market economy almost immediately led to the question of distribution of the nation's housing stock. While privately owned housing was not unimportant, in major cities the majority was owned – officially – by an enterprise or public institution. In practice, since housing was heritable and in the late Soviet period occupants almost never lost residence rights, housing property rights had already been ceded to nominal tenants. Thus, transferring ownership rights to tenants was a straightforward and non-controversial step. The exception to this general statement is the case of communal apartments, which even as recently as 2008 accounted for about 6 per cent of all Russian housing, and 15 per cent of that in St Petersburg (Belkina and Nozdrina, 2009). Privatisation of a *kommunalka* initially meant converting it to a cooperatively owned unit and selling it to a single owner (and likely realising substantial capital gains), therefore requiring the consent of all co-owners and also requiring them to move and scatter. Difficulties in achieving unanimous consent probably explain the slow disappearance of communal units.

Far more difficult has been the move toward unsubsidised prices for 'communal services' such as electricity and water, and building-repair charges. The typical (now condominium-like) apartment building in a Russian city still contains residents from a range of income classes. Elderly pensioners with little disposable income are unable to pay for building and courtyard (*dvor*) remodelling, and in any event have no reason to support paving or repaving the *dvor* to convert it from a playground and laundry area to a car park. At the same time, young professionals and businesspeople envision converting Soviet structures to European ones, which entails exterior as well as interior-apartment remodelling.

The process of adjustment to market has been awkward but not surprising. Low-income households are gradually moving away from central areas. The wealth-redistribution effect has been substantial (and since, on average, those living in the centres of large cities were relatively privileged, it has also been inegalitarian), though to our knowledge the magnitude remains unquantified. What we do know is that new housing construction overwhelmingly has been aimed at upper-middle-class to high-income Russians; substantial apartment renovations (probably even more important than new construction) have also been concentrated at the upper end. Thus, 25 years ago, even those among the social elite lived in housing that would not appeal to Western Europeans, the distribution of housing quality today looks much more like that of a market economy, with both glamorous areas and Russian *banlieue* equivalents.

Patterns of housing investment are detailed in Belkina and Nozdrina (2009). The impression one gets from the gross statistical data is that of a large rise in average living space in the late Soviet and post-Soviet years (to 21.5m<sup>2</sup> per capita, as opposed to a 'European

standard' of 35m<sup>2</sup>).<sup>18</sup> Furthermore, after a decade of minimal housing investment in the 1990s, by 2008 gross housing investment (63.8 million m<sup>2</sup>) had virtually regained its Soviet peak. The number of new apartments, which had declined from about 700,000 in 1992 to half that number in 2000 and 2001, rose to about 800,000 in 2008; average size rose from about 60m<sup>2</sup> at the end of the Soviet era to 85m<sup>2</sup>. Construction of private non-apartment homes has risen secularly from about 50,000/year in 1992 to 200,000 in 2008; average size of these units has risen from about 90m<sup>2</sup> to 140m<sup>2</sup>. Despite the emergence of a mortgage credit market, only about 9 per cent of home and apartment buyers receive mortgage loans. Limited mortgages in turn provide further impetus for new units to be aimed at middle- and upper-middle-income markets, thereby raising average size.

This apparently rosy scene is marred by the huge rise in inequality and housing prices in Russian cities. Even using urban averages (as reported in Belkina and Nozdrina, 2009), and even before the boom of the early 2000s, years of suppressed construction followed by the depression of the 1990s meant that housing was scarce, and so prices were high.<sup>19</sup> As of 2004, the average new housing price per square metre was \$717 (\$67 per square foot); by 2007 prices had surged to \$1851 (\$172). These latter prices are high by US standards for all but large or rapidly growing cities, and imply that an 85m<sup>2</sup> apartment in an average location and quality would be worth about \$157,350.

For an upper-middle-class family with net monthly income of \$1000–2000, costs of this magnitude (to say nothing of \$260,000 for an average new separate house) are staggering. The modest use of mortgages and the poorly developed rental market add to the constraints. Belkina and Nozdrina (2009) estimate what they term a 'housing affordability index' (equal to the average market value of a 'standard' apartment in terms of size and quality to the median household income) that gives the number of years it would take to earn enough income to buy an apartment if one had no other expenses. While an affordability index of 3 is conventional for most cities in North America, they estimate 2006 values ranging from 5.6 (Astrakhan) to 6.5 (Togliatti) to 7.8 (Kazan) to 10.0 (Pskov) to 12.4 (St Petersburg) to 14.0 (Moscow – despite the fact that incomes there are far higher). Less surprising than the extreme figures are those of the secondary cities: in contrast with developed market economies, Russia's housing market continues to generate substantial scarcity-based rents.

From what we know of large cities in other formerly socialist countries, the experience of large Russian cities is not atypical. Manufacturing employment has declined as a proportion of the total and has begun moving from the central cities (Medvedkov and Medvedkov, 2005; Tosics, 2005). A positive externality is that air pollution in central cities plummeted after the fall of socialism, though the growth of private automobile ownership to some extent offset these environmental gains. Employment structures also began looking more like those at least in East Asian if not Western European cities – manufacturing has declined, as has

---

<sup>18</sup> This rise was not uniform, as some cities continued to grow while others lost population and hence had growing space per capita. Even in the immediate post-Soviet period when housing investment collapsed, significant population losses due to emigration, population aging, fertility collapse and rising mortality more than offset immigration and in-migration inflows. Thus, Rosstat reports a decline in Russia's urban population from 109.4 million in 1991, the last year of the USSR, to 103.8 million in 2007, where it stabilised through 2009

[http://www.gks.ru/free\\_doc/new\\_site/population/demo/demo11.htm](http://www.gks.ru/free_doc/new_site/population/demo/demo11.htm).

<sup>19</sup> One might reasonably question how a country can experience surging housing prices and increased average space per person and per new unit even during a recession. There are two broad answers. First, inequality surged in Russia, and new home buyers were generally winners rather than losers from the transition. Second, there was a spatial mismatch: demand for housing rose in Moscow, St Petersburg and a few other cities during the 1990s, and declined elsewhere. However, new construction occurred mainly where demand grew and hence average price of new units increased. Thus, housing prices increased in real terms even in the 1990s – but surged far more in the 2000s.

defence-related R&D and basic science; service sectors of all sorts have boomed, as has construction in non-moribund regions. Land and property rental rates began reflecting scarcity values, leading to high prices in the centre. Suburbanization followed in many large cities in the former USSR and Eastern Europe, though generally nowhere near the extent of Western counterparts.

### 4.3 Social processes in contemporary urban Russia

As we have seen, Soviet urban agglomerations were dominated by central cities. Suburbanization, especially of the sort standard in North America, Great Britain, Japan, Sweden or Australia, was virtually unknown. Smaller cities, and those in the south and east, typically had a ring of privately owned single-family dwellings at the periphery, but the proportion of urban Russians living in such housing was small. Beyond that ring lay a ring of country summer homes with small gardens – dachas, somewhat analogous to the Scandinavian *sommarstuga*.

This pattern began to change with the break-up of the Soviet Union and the emergence of private land and real estate markets, as well as the spread of private automobile ownership. The suburban ideal and disdain for central city life common in the USA, and the fact that its central cities typically contain less than half of an urban agglomeration's population, still seems strange to Russians (for example, Varivochnik, 2004). But in reality, as is discussed in the following chapter, Russia's large cities are beginning to suburbanise noticeably in the post-Soviet era. This is occurring most rapidly in Moscow and St Petersburg, but other successfully growing cities are exhibiting a similar tendency.

Makhrova *et al.* (2008) detail the structural changes underway in Moskovskaya (Moscow) oblast, the region that entirely surrounds Moscow. With a moderately growing (just under 1 per cent per annum) population of just over 7 million that is more than 80 per cent urban (for detailed data, see the website of the Federal Government Statistical Service (FSGS) for Moskovskaya oblast: <http://msko.fsgs.ru>), Moskovskaya oblast contains many self-standing cities in addition to suburbs. But, as Makhrova *et al.* detail, agricultural production in the region has collapsed, going from roughly 13 per cent of gross regional product in 1990 to less than 4 per cent in 2005, to less than 0.8 per cent in the first half of 2011 according to FSGS data.

The decline of agriculture around Moscow mostly reflects movement toward a market economy, increasing the supply of food brought in from more distant but lower-cost regions and leading to the decline of production in Moscow's less suitable climate and soil. However, it also reflects an explosion in the construction of suburban settlements as well as second homes and dachas. While we have not constructed data for other major urban areas comparable to those provided by Makhrova *et al.* (2008) for Moscow region, it seems likely that the mass proliferation of low-density, upscale units around Moscow is atypical of Russian cities (Figure 10.8 in Medvedkov and Medvedkov, 1999, showing relative suburban populations in four major Russian cities, is suggestive supporting evidence). Incomes in Moscow are far higher than elsewhere, and overall suburban housing in Russia is a luxury good (in the sense that demand rises proportionately faster than income across groups or over time) largely tied to automobile ownership. In addition, Moskovskaya oblast has a much better-developed ring and arterial road system than in other cities, in effect opening up much more land for potential suburban development (and upscale dachas and second homes). The presence of many research centres in Moscow's periphery also means that there is a base professional population in the region, along with at least some amenities and infrastructure.

While Moscow and St Petersburg are suburbanising and while a consumer society has come to much of urban Russia two decades after the end of the Soviet Union, an

underappreciated and striking feature of contemporary Russia is the vast difference in lifestyles between its urban and rural populations. Demographers and sociologists may bewail the ‘village’ nature of Russian urban life, but the data suggest otherwise. A major survey of 3200 households in 10 cities led by Zh. Zayonchkovskaya emphasises these differences (Table 8). Cell-phone ownership is standard for all but the bottom quintile, but beyond that a majority of households have washing machines, and home computers, automobiles and microwaves are common outside the bottom quintile. While a comparable survey was not conducted for rural dwellers or residents of small towns, it is obvious that Russians in large cities today live lives dramatically different, at least materially, from their rural kin.<sup>20</sup> Even more obvious is that ownership of consumer goods today is far greater than in even the best times of the Soviet era. Part of Russia, though hardly all, has become a consumer society.

**Table 8: Material living conditions of Russian households in major cities, 2006**

Category (self-defined social class)	Percentage of respondents in category	Auto-mobile (%)	Home computer (%)	Washing machine (%)	Micro-wave oven (%)	Cell phone (%)	Foreign travel (%)
Live very well	2.5	63	57	75	67	87	20
Well off – no major material problems	19.0	57	56	77	58	85	7
‘Average’	58.0	33	33	58	36	74	2
Economic difficulties	17.5	20	19	38	17	52	2
‘Live very poorly’	1.8	22	16	19	14	35	0

Source: Florinskaya, 2008 (cities surveyed: Belgorod, Kazan, Krasnodar, Nalchik, Nizhnii Novgorod, Novosibirsk, Orenburg, St Petersburg, Smolensk, Vladivostok; for details see Zayonchkovskaya and Nozdrina, 2008).

#### 4.4 The market and migration

As we have seen above, there have been large winners and losers in the adjustment process. On net, Russia, both urban and rural areas, ‘won’ in the post-Soviet realignment. Iontsev and Ivakhniouk (2001) estimate total net immigration of 3.35 million between 1992 and 2000, or about 2 per cent of the total population – a contrast from the upheavals of the Revolution and Civil War era 70 years earlier, when about 2.50 million, or 2.7 per cent of Russia’s population emigrated, or during the GPW, when nearly 4 million people emigrated (not all voluntarily).<sup>21</sup> However, from 1992 to 2000, natural population change experienced a

<sup>20</sup> Rosstat data on poverty confirm these patterns. Only 7.5 per cent of Russia’s 2010 population but 12.5 per cent of those categorised as having little property (*maloimushchie naselenie*) lived in settlements of fewer than 1000 people ([http://www.gks.ru/free\\_doc/new\\_site/population/urov/urov\\_53.htm](http://www.gks.ru/free_doc/new_site/population/urov/urov_53.htm)). In contrast, 18.4 per cent of Russians lived in cities of more than one million people, but they comprised only 7.4 per cent of the asset-poor population.

<sup>21</sup> The flows from the near abroad were especially great during the 1990s, and abated with the Russian financial crash of 1998. Although Russia’s economy has grown dramatically since 2000 and the country is now a large importer of relatively inexpensive foreign labour, repatriation of large numbers of ethnic Russians in the 1990s and economic recovery elsewhere – especially Kazakhstan

net loss of 6.80 million, in contrast with growth of 7.70 million during the period 1981–91, and a net loss of 9.95 million during the GPW era. Thus, while Russia's population grew from 139.0 million in 1980 to 148.7 million in 1991, it shrank to 145.3 million by 2000. While population ageing played an important role, the collapse of birth rates and surge in mortality that followed the collapse of the USSR were the main factors (Becker and Bloom, 1998). In this sense, Vladimir Putin was not exaggerating when he referred to the fall of the Soviet Union as a catastrophe. And, as it turns out, certain classes of cities were affected most of all; in addition to the groups presented above, there were strong regional interaction effects.

We know from the data that there has been very large migration from the north and east to Russia's more vibrant large cities in the south and west. At the regional level, the dramatic trends appear in Table 9, while Figure 19 shows regional net migration changes for the five-year intervals 1990–95 to 2005–10. The post-Soviet years form a fairly smooth transition: out-migration from the far north and east abates, and in-migration to the northwest goes from being negative to positive.

**Table 9: Russian net regional migration flows, 1978–88 and 1989–99 (thousand people)**

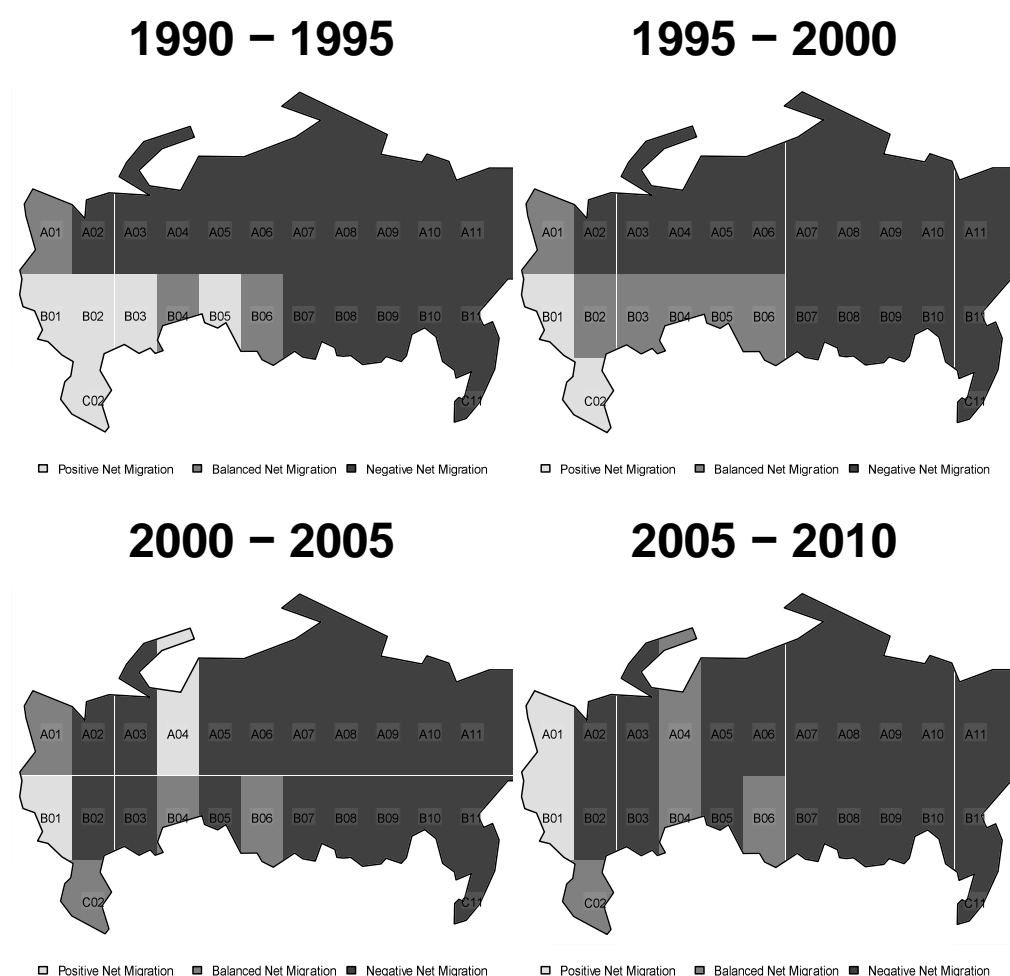
Economic region	1979–1988	1989–1999
Russian Federation	1819	3217
<i>North</i>	40	-618
North-West	443	238
Central	1025	1212
<i>Volgo-Vyatka</i>	-226	192
<i>Central Black Earth</i>	-142	542
<i>Volga</i>	-21	802
North Caucasus	64	865
<i>Ural</i>	-558	383
Western Siberia	812	266
<i>Eastern Siberia</i>	42	-213
<i>Far East</i>	333	-863

Source: Iontsev and Aleshkovski (2006).

---

– in the 2000s were deterrents to continued rapid immigration. For details on Kazakhstan–Russia flows, see An and Becker (forthcoming).

**Figure 19: Net inter-regional migration, 1990–95 to 2005–10**

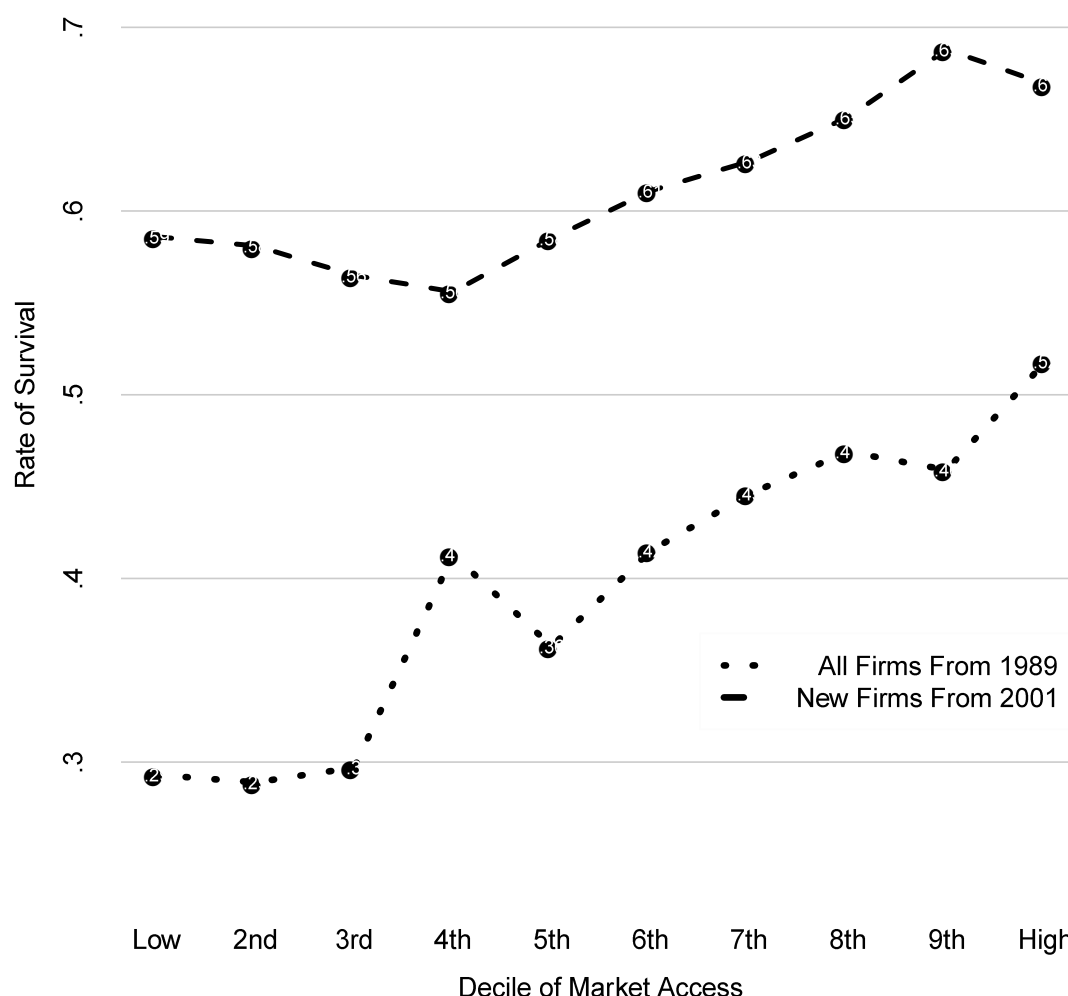


At the individual level, the causes of these movements appear to be straightforward. Wages were higher, unemployment was lower, and amenities were superior in attracting regions. In a remarkable paper that uses the 1985–2004 Russian Enterprise Registry Longitudinal Database, Brown *et al.* (2008) construct a measure of spatial isolation for each *raion* (county). They hypothesise that with the collapse of the USSR, industry will shift toward locations with good market access, and in fact this pattern shows up strongly in both cross-tabs and regression analysis. They further find that market access has a large, positive effect on firm productivity, and especially for manufacturing (rather than extractive-industry) firms.

These findings lead to a grim trade-off between spatial efficiency and equity. While then Prime Minister (and now President) Putin announced a vast national transport system development programme to be carried out between 2010 and 2015 (officially announced at <http://government.ru/eng/docs/1383/>, the commitment envisioned equals about US\$400 billion), this did not address the issue of where the investments were to be made. On the one hand, Brown *et al.* (2008) estimate that the returns to infrastructure development will be highest in the Central region around Moscow – in effect, making the region into a true agglomeration, similar to the Washington, DC – Boston corridor or southern California regions of the USA, Tokyo–Kyoto in Japan, or the London–Manchester corridor in England. On the other hand, the areas in most dire need are further away, and are more remote (Figure 20).



**Figure 20: Russian firm entry and exit by market-access deciles**



Source: Brown *et al.* (2008).

The high degree of inter-regional inequality has led to the emergence of what elsewhere is referred to as fiscal federalism. Equalising forces were strong in the Soviet era, and may have culminated under Mikhail Gorbachev when pension payments were extended to rural households, in essence ensuring a large transfer to poor and rural areas. Regional transfers were formalised in the 1990s with the creation of a Fund for the Financial Support of Regions (FFSR; Bradshaw and Vartapetov, 2003). FFSR is important because of the strong concentration of tax-generating enterprises and households, especially in Moscow and St Petersburg. Moves toward a market economy also led to a substantial rise in regional inequality during the 1990s, but this increase appears to be accounted for almost entirely by Moscow and some of the mining areas (for detailed figures, see Bradshaw and Vartapetov, 2003). Rapid economic growth in the transition era has occurred in those regions with production, market or political comparative advantages; as these were already high-income areas, inequality increased. There is clear evidence from Bradshaw and Vartapetov (2003) that the FFSR reduced regional inequality but, as it amounted to only 1.5 per cent of GDP in 1999, its impact is inherently limited.



The current low level of internal migration within Russia certainly has attracted attention from its demographers (see in particular Zayonchkovskaya, 1999). It is also of policy importance, since inter-regional migration can be a powerful force for inequality reduction. Mkrtchian (2009) suggests that lower levels of migration in Russia may reflect its vast size, and the tendency not to register intra-oblast moves unless clearly permanent. Since oblasts are large – typically the size of European countries – much migration occurs within oblasts and goes unrecorded in some data. Great distances also raise the psychic cost of migration. When one adds in differences in definition of internal migrants and registration systems (Mikhailova, 2009), it is difficult to draw conclusions from a comparison of Russia and other European states – though Mikhailova concludes that, data problems aside, both gross and net Russian population movements are low.

Mkrtchian's (2009) response is to compare 2003 inter-regional gross migration rates for working-aged populations in Russia, the USA, Canada and Australia. On this count, the Russian rate (6.2 persons per thousand) is about one-fifth that of the USA and one-third that of Australia, but two-thirds that of Canada. An alternative measure is to compare the proportion of the population living in the region in which they were born. Data from 1980 (compiled by Zayonchkovskaya, cited by Mkrtchian, 2009) indicate that just under one-third of Americans and one-quarter of Russians lived outside their region of birth. However, this difference is almost certain to have grown, given Russia's internal migration slowdown. On the other hand, in large cities the share of native-born population is less. The 2006 ten-city survey (see Table 4, from Zayonchkovskaya and Nozdrina, 2008) found that the never-migrated population share in the survey ranged from 49 per cent (Krasnodar) to 67 per cent (Nizhnii Novgorod); in 2002 census data for the same cities, the range was 47–65 per cent.

Others, notably Friebel and Guriev (2000, 2005), have questioned not why massive reallocation occurs, but rather why it appears to be happening so slowly. Their model, for which they find support from RLMS panel data, suggests that firms hinder workers' ability to move. In essence, many of Russia's urban (and rural) labour markets were historically oligopsonistic, with few employers who paid workers partially in non-monetary forms – and, during the 1990s, often were in arrears. These constraints hindered workers' ability to migrate, especially in light of the distances and costs involved, and therefore resulted in far less labour mobility than in, say, neighbouring Poland. Reduced mobility in turn helps explain the rise of skilled-labour shortages and wage premia in some areas while high unemployment persists elsewhere.

It is virtually certain that a great deal of migration does not get registered (Savulkin 2009; White 2007), especially in the case of increasingly important temporary migration, and these undercounts make the post-Soviet decline in migration seem all the greater. Savulkin (2009) describes current migration and registration law in detail. Briefly, citizens are supposed to register when they move, but in effect there is no reason for temporary migrants to do so. This is especially the case for the large proportion of temporary migrants who remain within their oblast and continue to regard their 'home' rather than their current residence as the point of origin. Indeed, since quality of social services vary with city size and category, and since residence rights are inherited, virtually no one would ever risk losing Moscow or St Petersburg amenities by openly moving to another city (Savulkin, 2009).

Those emigrating to Russia (or seeking temporary work) from former USSR states or other countries face a more difficult experience. Immigrants of Russian (and, to a lesser degree, other Slavic or Tatar) ethnicity are fairly readily granted citizenship or refugee (*vynuzhdenyi bezhenets*) status. Others face the choice of applying for long-term residency, or, as of 2007, having their employer register them as temporary workers. However, in the latter case, the immigrant is still obligated to register with the Visa and Registration Office (OVIR) and the Tax Inspectorate. Employers are of course obligated to make payments to pension, medical and other social funds for registered workers, and pay a fixed fee to hire foreigners.

Consequently, strong incentives remain for employers not to report, and to hire undocumented immigrants. On the positive side, from 2007 temporary immigrants are no longer tied to an individual firm, but rather receive a general work-permit card upon registration.

The upshot of these gradually liberalising policies has been that employers continue to evade reporting and paying social taxes (an estimated 40 per cent: Savulkin, 2009), but, according to data from the Centre for Migration Research analysed by Zayonchkovskaya (2007), <http://migrocenter.ru/science/science027.php>, the proportion of migrants who have registered has risen from 54 to 85 per cent, and 76 per cent have work permits. Between 2007 and 2009 there was a 10 per cent decline in the number of migrants but a 30 per cent decline in migrant work permits. A survey of 1500 migrants found that 90 per cent had migration registration cards, but only 60 per cent had bothered to extend them beyond the initial three months granted (Chapkovskii, 2010). The proportion with legal work permits also appears to have declined (to 47 per cent; another 14 per cent had falsified documents). The reason appears to be straightforward: cost of registration was nearly US\$300 (Rb7500) as of the spring of 2009, and that amount was reported as having doubled in the summer. This heavy tax creates an ideal situation for the emergence of an equilibrium of few legal registrants and endemic bribery of tax and customs officials. Thus, life for legally registered temporary immigrants remains one of sporadic harassment and humiliation by various authorities, to say nothing of fear of random violence for those who are not ethnic Russians.

What is clear is that official migration has declined dramatically from late Soviet levels (for a graph, see Zayonchkovskaya, 2007). White (2007, p.892) notes that in 1989 there were 4.7 million internal migrants; in 1993 there were 2.9 million; in 2004 there were just under 2 million. The consensus seems to be that there really has been a decline in total migration, but that the fall would be far less dramatic if unregistered temporary migration were considered. This uncertainty reinforces the need for large, ongoing household surveys – larger than the important but limited RLMS longitudinal survey since 1993 <http://www.cpc.unc.edu/projects/rlms-hse> and more frequent than the one-time NOBUS 2003 survey – that do not exist at present.

Instead, there have been a series of small-to-medium surveys that supplement official registration data. White's (2007) qualitative interviews lead her to conclude that much migration is step-wise, with those from rural areas and small towns going to larger cities, and those from these destinations going to provincial capitals, while those from provincial capitals head to Moscow and St Petersburg. Migration to larger cities is often associated with seeking higher education, and hence is highly age-specific. Tertiary education in Russia if anything is more important in the post-Soviet era than in the past, and almost surely is associated with upward mobility for those from small towns and villages – known as the 'depths' or 'remoteness' – the *glubina*.

Young, upwardly mobile adults at or just beyond university age also have a second advantage over others: they can live in cramped dormitories (*obshchezhiya*) rather than securing housing. On average, housing costs in large cities will be especially burdensome for prospective migrants from remote areas who cannot rent out their own housing for comparable amounts. Of course, in market conditions, high rents can be a temporary phenomenon, stimulating growth in supply. Little public construction of low- or moderate-income housing and little downward filtering, even in smaller cities that are thriving, may serve more effectively than the *propiska* system to deter migrant families. Instead, growing cities get students and single, temporary migrants who will live in dormitories or barracks, much as in China's boom cities.

#### 4.5 Leaving extreme conditions

Depopulation of the Russian North and Far East has been a topic of extensive analysis, both in academic circles and in the popular press. Mkrtchian (2009) offers a striking figure that shows population estimates for 2002 based on mandatory registration data with those from the 2002 census. Virtually all oblasts east of the Urals, in the Volga region, and in the north other than near St Petersburg had experienced population losses that were unrecorded prior to the census in excess of 3 per cent; unrecorded gains appeared in the south, and especially the North Caucasus. Prior to the breakup of the USSR, the Ural, Volga-Viatka, Central Chernozem and Volga regions were sources of out-migration; the remaining areas of Russia were net recipients from 1979 to 1989 (Zayonchkovskaya, 1999). This pattern radically reversed in the early 1990s, with dramatic out-migration from the Far East and North dominating, and with modest net out-migration from East Siberia (which benefited from mining and energy development). The most dramatic losses were in the extreme (*krainy*) North and Far East oblasts and districts (*okrugs* and *raions*) that did not benefit from extractive industries' investments. As Zayonchkovskaya (1999) reports, the Chukotka Peninsula lost one-third and Magadan oblast one-quarter of their populations during 1993–96; Kamchatka lost 13 per cent, Sakhalin Island lost 11 per cent, and Murmansk oblast lost 7 per cent.

These inter-regional movements are analysed in detail by Heleniak (2011b), who compares the 1989 and 2002 censuses. During this period, a striking pattern was that men appeared to be more mobile than women, with relative shares of men increasing markedly in Moscow (from 81.4 men per 100 women in 1989 to 91.2 in 2002) and decreasing considerably in Siberia and the Far East. Heleniak (2011b, Figure 7.10) also demonstrates a very strong relationship between net migration during this period and the percentage change in the adult population with tertiary education. He goes on to calculate 'education years' (adult population times mean years of schooling), which in the 1989–2002 intercensal period rose by 5.4 per cent overall. However, for Moscow the increase was 21.7 per cent, while huge decreases were recorded for some of the peripheral regions. Population growth, aging, educational changes and migration flows all play a role in changing education years, but the general trend is consistent with flight of the highly educated population from extreme areas toward the centre. This loss of human capital threatens to weaken further the outlying northern and remote eastern areas that lack natural resource bases.

That highly educated professionals would be more likely than those with fewer skills to try to escape remote and climatically unpleasant areas is hardly surprising. In addition, as Heleniak (2009) notes, many of those living in extreme areas also have limited attachment to their region. Similar to those who move to remote areas in Canada, Australia or the USA, many were attracted for higher wages (specifically, a stated 'northern coefficient' applied during the Soviet era) and other employment and relocation-related benefits. With the collapse of the USSR, these benefits withered, reducing incentives to stay other than in resources-based cities that continued to pay very high wages. Adding to the complexity of the situation was the fact that a fairly high proportion (nearly 20 per cent, with over 15 per cent having been born outside of the RSFSR) of the northern regions' population were not ethnic Russians. These people had to make citizenship choices, which in turn related to early retirement, which was not an entitlement if they chose non-Russian citizenship. Moreover, even for RF citizens, real pensions and other social benefits plummeted in the 1990s, and were often in arrears. Heleniak (2009) estimates that 44 per cent of all residents of the Russian North were born outside the Northern regions, and so would have had relatively weak emotional attachment alongside declining financial incentive to remain. Not surprisingly, vast numbers left.

With the demise of the Soviet Union, there were considerable population flows toward more prosperous and pleasant regions and cities. Overall urbanization hardly changed. While the

Soviet system was inefficient, arbitrary, and cruel in many ways, it got the rate of urbanization roughly 'right.' However, it also made many cities in remote areas far larger than they would have been had citizens had more say in deciding where to live. Russia's high mortality, due in large part to cavalier treatment of large numbers at various stages of the USSR's history, also meant that population overall was far smaller than it could have been.

Finally, it is important to recognise that many, but by no means all, of post-Soviet Russia's urbanization patterns are idiosyncratic artefacts of the Russian and Soviet past. Throughout the industrial and post-industrial world, populations are greying, secondary cities with declining industries are losing population to primary cities, and globalisation is changing spatial cost structures in ways that affect the dynamics of urban distributions. Put differently, much of the shifts seen in the past two decades would have occurred whether or not the USSR had disintegrated. This collapse probably accelerated the erosion of secondary cities without successful economic bases, both because ill-prepared industries failed more rapidly when exposed to global markets, and because the implosion of the welfare state in the 1990s further reduced purchasing power of these cities. The Russian welfare state has largely been restored, but the 1990s shock was an irreversible one.

## 5. Post-Soviet suburbanization: St Petersburg case study

The term ‘suburbanization’, unpacked from its North American association with wealth and socio-spatial homogeneity, signifies the increasing share of urban populations living in the periphery of urban agglomerations, and often but not invariably in comparatively low-density settings. This process has been a salient feature in the urban evolution of most Western European and North American cities in the post-war period and has become a highly visible phenomenon in the spatial reorganisation of many transition economies in Eastern Europe. This chapter explores the transformation of the St Petersburg agglomeration. On the basis of over 200 individual interviews, it analyses how residents experience these trends, and how they affects their decision-making process. It also provides a logistic regression analysis of the respondents’ decisions, using a matched-sample decision to compensate for limited sample size.

As one of the state’s fastest-growing economic centres, St Petersburg offers a window into the particular characteristics of post-Soviet residential deconcentration in Russia’s metropolises and the changing morphology of its fringe towns and settlements.<sup>22</sup> Data from a survey of 210 suburban and urban households inside and outside St Petersburg proper<sup>23</sup> allow us to construct a multi-dimensional image of Russian suburbanites. These results enable a comparative analysis of ways in which this urban sprawl has transformed the quintessential Soviet form and functions of the city’s suburban belt. In particular, we find as follows.

1. The vast majority of suburban respondents are well-educated, highly mobile younger couples with children, who retain their urban jobs, continue using city-based services and become daily commuters.
2. Housing price, size, distance from the metro, and the quality of apartment building’s communal courtyards (green spaces for recreation in the centre of apartment building clusters) are statistically significant predictors of people’s decision to suburbanise.
3. In-migrants to St Petersburg in the last decade are more likely than more settled metropolitan residents to purchase suburban homes.
4. The findings also suggest an increasing socio-spatial polarisation between suburban towns (*prigorod*) and settlements (*poselok*)<sup>24</sup>. Automobile owners are more likely to settle in a satellite town instead of a settlement and are also more likely to consume more living space, lower-quality open space, and have longer commutes than new residents of fringe settlements.

In contrast with the city-decentralisation experience in advanced market economies, the onset of relatively high-income suburbanization in St Petersburg has been quite rapid, both

---

<sup>22</sup> For simplicity and consistency, we refer to St Petersburg throughout the chapter. The city was renamed Petrograd during the First World War (1914) and then Leningrad (1924) before being renamed St Petersburg in 1991. The city itself has oblast-level status. It is surrounded by Leningrad Oblast, which has not been renamed (but which is commonly shortened to *Lenoblast*), and which contains all suburban regions.

<sup>23</sup> Conducted by Kseniya Benderskaya in July–August 2010 in the fastest-growing suburban districts of Vsevolozhsk and Pushkin as well as in St Petersburg city. We gratefully acknowledge financial support from Duke University.

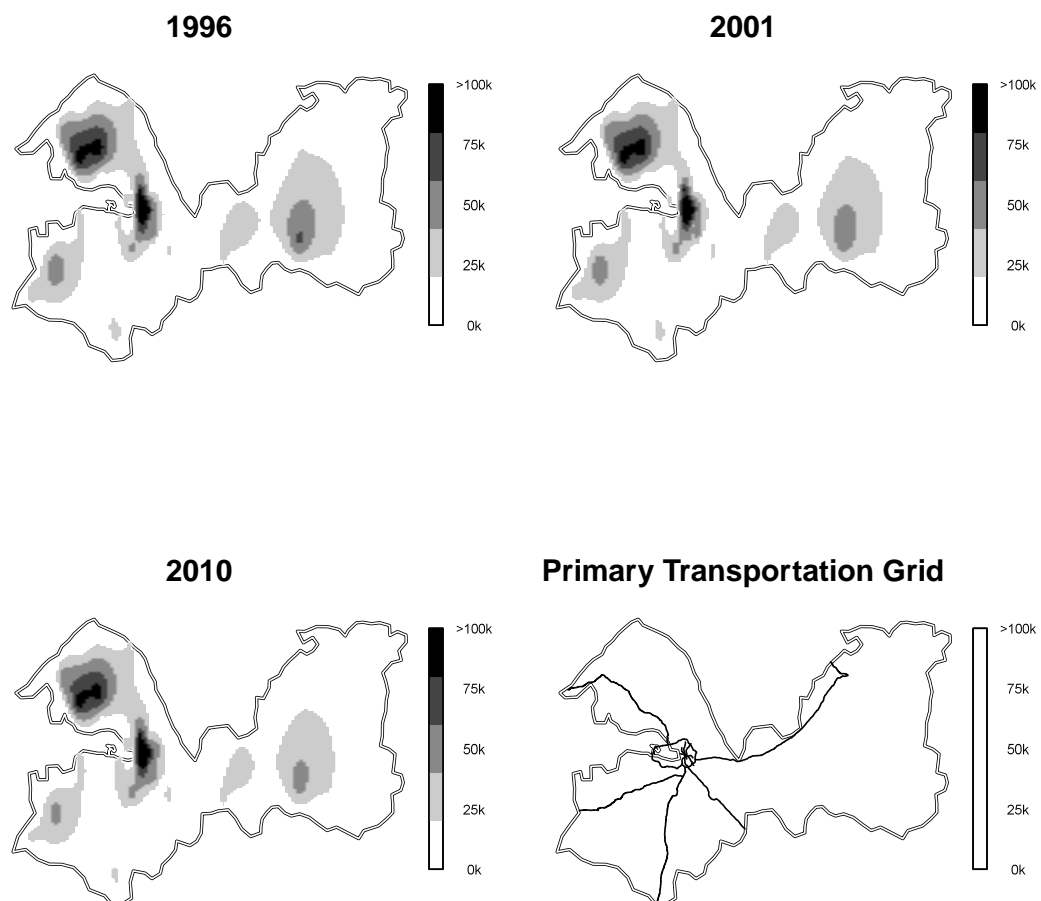
<sup>24</sup> The Russian term *prigorod* translates into English as ‘suburban town’. In Russia, a *prigorod* is usually located immediately outside a large city and has a population of 12,000–100,000 people, though it rarely approaches the upper limit. A *prigorodny poselok* is a fringe semi-urban settlement that can be either urban or rural in nature. The former contains over 3000 inhabitants, 85 per cent of whom are involved in non-agricultural labour. The latter must contain over 2000 people, with the majority of workers participating in agricultural activities. For the purposes of this study, the important difference between a suburban town and suburban settlement is in their levels of infrastructural and social developments. Suburban towns tend to have better transportation access and more social and engineering infrastructure. Settlements are typically less developed in those areas and offer fewer urban amenities (Lappo, 2005).

because of the near absence of land-acquisition constraints, and because of the rapid emergence of automobile ownership among prosperous urban Russian households.

### 5.1 St Petersburg's decentralisation: an overview

Among the relatively few scholars to study Russia's fringe settlements, Ioffe and Nefedova (1998) in their study of Moscow's environs underscored the historic absence of suburbanization in Russia's metropolises. Their analysis of changes in population densities, land-use and residential developments in the capital's suburbs from 1960 to 1998 emphasised the decayed state of these places brought on by Russia's economic restructuring. In contrast, our picture of suburbanization in St Petersburg comes after a decade of impressive recovery. Because of this recovery, there are large population movements to the outskirts, and the social groups involved include new actors in contrast with the 1990s. Population growth in the region is summarised in Figure 21.

**Figure 21: Leningrad oblast population gradient, 1996–2010**



Source: Rosstat.

With a population of over 4.6 million, St Petersburg is not only the second largest city in Russia but also the second most densely populated metropolis in Europe.<sup>25</sup> Its surrounding suburban territories belong to a separate administrative region called Leningrad oblast and are not legally subject to the city's jurisdiction. Although this suburban region has one third as many inhabitants as the city, its population density is negligible compared to that of its metropolitan neighbour (20 vs 7600 people/km<sup>2</sup>).

Not until the beginning of the 21st century did St Petersburg exhibit the first clear signs of residential suburbanization. As the city recovered from the post-Soviet crisis (1992–96), followed by nationwide economic default in 1998, the average price of housing rose by 30–40 per cent annually after 2000, with 60 per cent increases during 2006–2008. According to St Petersburg's Centre for Developmental Strategies, the city's shortage of quality housing, its high costs, and people's rising demand for modern dwellings have spurred a construction boom of multi-family high-rise estates on the cheaper land of the metropolis's fringe territories. Since enactment of Russia's first Land and Real Estate Privatisation Code in 2001, private-sector firms have been constructing approximately 800,000 square metres of housing each year, with the exception of the recession year of 2008 (personal interview with Anna Sabinina, Colliers International). Since the average residential unit is approximately 50m<sup>2</sup>, this implies construction of new housing for approximately 16,000 households annually.

According to an interview with a St Petersburg real estate agent from *NVD Nedvizhimost*, Lenoblast sold over one million square metres of residential space in 2009, which was more than St Petersburg's annual output during the apogee of its construction capabilities in the 1970s and 1980s (Interview with *NVD Nedvizhimost*, 27 July 2010). Although this output is a relatively small fraction of Lenoblast's multi-family housing stock, which was a little under 30.5 million square metres at the end of 2007, the geographical distribution of this new mass housing is significant. About three-quarters of present-day residential construction in the oblast is limited to the four closest suburban districts of Vsevolozhsk, Pushkin, Vyborg and Gatchina (Leningrad Oblast Ordinance #193, 2008). As far as the primary consumers of these new dwellings are concerned, the city's Institute of Urban Planning confirms that approximately 80 per cent of the homebuyers in this area were already St Petersburg residents (Project: Development of Urban Agglomeration in St Petersburg's Strategic Transport Zones, 2007).

Another visible indicator of suburbanization is a significant increase of daily commuters from Leningrad Oblast into the city for work, education and recreation. The St Petersburg Government (2008) reports that over the 2003–07 period, commuter ridership on public and private transport more than doubled, though the population of the city itself declined by about 8.4 per cent. According to the drafters of St Petersburg's Master Plan in 2005, over 95 per cent of all daily commutes between Lenoblast and the city took place within a radius of 25 kilometres from the administrative boundary of the city, an area that encompasses the rapidly growing suburbs in the north and west. The scale of economic and social interactions between the city and its periphery also are reflected in the daily urban in- and out-flows of over 630,000 people and the congested roads connecting St Petersburg and its Lenoblast hinterland (*Peterburg v tsifrah*, Transportation: Table 3).

Over the past decade, private developers and suburban government officials have embraced the emerging trend of counter-urbanization (the process by which people and employment move out of large settled areas to smaller ones: Van den Berg, 1999) as a locomotive for modernising St Petersburg's surrounding 'village'. However, this rapid and chaotic process

---

<sup>25</sup> According to Lappo (2007, p19, cited in Benderskaya, 2011), St Petersburg has a population density of 7600 people per square kilometre, which is also the population density of Athens, Greece. In contrast, London has a population density of 5000 people per square kilometre.

has isolated traditionally working-class settlements, characterised by limited urban amenities, into socially stratified spaces, forming separate enclaves for wealthier newcomers and the struggling locals.

Both available data and media reports as well as recent (2010–2011) interviews with suburban civic activists reveal Russian suburbia to be a place of residential reorganisation, social contestation and privatisation of public space. This chapter articulates the modern structural and social changes in the 'Northern capital's' countryside and discusses the impacts of rapid suburbanization on the living conditions of indigenous residents. Contrary to initial expectations that suburbanization would be most pronounced and concentrated in more 'urbanised' suburban towns, which are characterised by better social and transport infrastructure for newcomers, we find that the greatest social, functional and physical transformations have actually occurred in the periphery's rural territories, despite their infrastructural shortcomings.

Since Soviet suburbia consisted of settlements with varied degrees of industrialisation and development, the current reclamation of previously abandoned or closed suburban factories by modern industrial firms is making the less industrialised, rural settings more appealing to the suburbanising populations. In other words, the more industrial the old suburbs become, the less attractive they are for relatively upscale urban 'colonisers'. The latest trend of high-density residential construction on re-zoned agricultural lands surrounded by villages has typified the shift in buyers' location preferences. Since suburban towns were originally better-endowed with urban amenities such as schools, clinics and utilities than their neighbouring farming collectives, the current suburbanization in the form of residential high-rises and retail buildings creates a greater socio-spatial polarity (and local government funding conflicts) between the local villagers and the new upper/middle-class households, given that the new suburbanites demand and get better services.

In consequence, the rural parts of areas nearby St Petersburg proper have undergone greater transformations than the urban settlements, and suburbanization's effect on the wellbeing of local residents in terms of social segregation, exclusion and dispossession is much more acute in rural areas. The process underway in St Petersburg is somewhat reminiscent of suburbanization in the American south, or in booming, relatively wealthy cities in China, Southeast Asia or Latin America. In all of these cases, urban expansion at some point leads to the emergence of high-income suburbs that expand into low-income rural areas. For various reasons, central cities become decreasingly attractive to wealthy households in relative terms, and suburban areas become more attractive.

The reasons for this shift in what urban economists call the differential elasticity of land and housing bid-rent gradients (the willingness of different income or wealth classes to pay for comparable-quality housing at different distances from the city centre) vary from place to place, but appear to have some common features. In general, the income elasticity of demand for central-city relative to suburban residential space will depend on the relative desirability of the locations (the amenity effect, which covers everything from physical attractiveness to crime to school quality), on income elasticities of demand for both housing space and green space, and on the costs of commuting from suburban to central areas. These costs include both time and monetary costs. As arterial and ring-roads improve, those with private vehicles find that commuting costs diminish. Thus, growth in private auto ownership plus road-infrastructure improvement serve as powerful suburbanization incentives.

Improvements in suburban accessibility because of rising auto ownership and road improvements have been important in St Petersburg and elsewhere. Schooling quality differentials continue to deter suburbanization, while demand for green space works in the opposite direction. Rapidly rising incomes of professionals is also an important underlying



factor, since it has enabled private vehicle ownership, expansion of internet use, and the rise of legal services: these last two forces have greatly reduced suburban housing search costs and increased security of tenure.

These features do not distinguish St Petersburg from many other Asian, East European and Latin American wealthy cities. The pace and ubiquity of vehicles and computer use do make a difference: St Petersburg has 'modernised' at an astonishing pace. However, the most striking differences are driven by hold-over Soviet features. Of particular note are the continued high level of communal living in St Petersburg proper, and the ease with which developers can acquire suburban land tracts, which in turn reflects Soviet-era policies of land ownership and governance.

## 5.2 Housing in St Petersburg: the fuel for out-migration

St Petersburg's housing situation and its residents' new drive to settle outside the city cannot be understood independent of Soviet planning. The literature on housing in large Soviet cities highlights three aspects that are central to our conception of the preconditions for post-Soviet suburbanization. The first concerns the ownership status of dwellings. In Soviet Russia, virtually all housing units in metropolitan areas were built and owned either by the state or by housing cooperatives formed by state enterprises. Private homes did exist as a small fraction of total Soviet housing stock, but they were restricted to smaller cities, generally with populations of less than 100,000 people (Morton, 1974, cited in Benderskaya, 2011).

As Section 3.4 discusses, by far the most predominant (and virtually the only) type of residential unit in the large Soviet city was the apartment, which could be subdivided among families, a practice that highlights the second key feature of metropolitan housing under state communism, communal apartments, or *kommunalki* (described in detail at the Communal Living in Russia Virtual Museum <http://kommunalka.colgate.edu/> and <http://old.kommunalka.spb.ru/>). As Muzdybaev (1995, cited in Benderskaya, 2011) notes, the central government's emphasis on rapid urban industrialisation and concurrent development of cities as incubators of material and cultural growth produced a persistent gap between population growth and the construction of new living quarters to house the workers and their families.

Established by Bolshevik authorities in the early 1920s, *kommunalki* are apartments in which space is divided among different households; in many cases each family unit was assigned to a separate room, part of a room, or even a walkway. The kitchen, toilet and laundry facilities were shared spaces for the clustered families (Vihavainen, 2005). Emblematic as the physical embodiment of social collectivism, this housing-distribution system was used by authorities to mitigate severe housing shortages in the cities throughout the entire Soviet era.

St Petersburg, often referred to as the '*kommunalka* capital' of Russia, had (and still has) the highest proportion of communal apartments of any Soviet city. This partly reflects the city's large endowment of pre-revolutionary bourgeois and working-class apartment buildings, some containing up to 12 rooms, which were readily convertible to *kommunalki*. Until 1960, pre-revolutionary apartment buildings (many of which were located in and around the city centre) constituted about 70 per cent of total living space, while only 10 per cent of urban families were offered quarters in newly developed housing of St Petersburg's outer districts (Andrusz, 2002, cited in Benderskaya, 2011).

Although the government intended this system to be a temporary solution to the housing crisis, the war and budgetary prioritisation of the military-industrial complex over housing construction expanded this practice into the 1960s. At that point, CPSU leader Nikita

Khrushchev implemented a national plan for mass production of multi-family apartment blocks using the cheapest materials and technology available at the time. Addressing the XXII Party Congress, Khrushchev voiced the following ideological discourse that was to move to the forefront of government's agenda:

"The Soviet must create modern and comfortable family housing as the material basis for communism. These accommodations will provide material and cultural abundance for the entire population. Every proletarian family should have its own fully-equipped flat."

(Krushev, quoted in Andrusz, 2002, p1)

In order to reinforce popular faith in communism's ability to provide fundamental commodities such as housing, Khrushchev mandated the large-scale construction of high-rise apartment blocks in all Soviet cities (and thereafter termed *khrushchevka* apartments). With new mass-production technologies available in the construction sector, St Petersburg acquired modern housing for 942,000 (one-third) of its residents between 1966 and 1970 (Agopova, 2008, cited in Benderskaya, 2011). *Khrushchevki* were reasonably suited to their era, but by the late Soviet period were generally regarded as at best marginally acceptable housing – though better than *kommunalki*. Nor did the housing boom of Khrushchev or his successors meet St Petersburg's housing needs. Even on the eve of the Soviet collapse, communal apartments made up 35.8 per cent of the entire housing capital in St Petersburg. While smaller households tended to live communally, it was still the case that up to 20 per cent of the city's population, or just under one million people, were living communally at the end of the Soviet period (Buckly and Gurenko 1997).

#### *5.2.1 Living conditions in Soviet St Petersburg: Kommunalkas and mass-produced Khrushchevka apartments*

The transformation of elite, pre-revolutionary, spacious and centrally located housing into overcrowded working-class housing complicated the socio-spatial arrangement of St Petersburg's current housing supply. Until Khrushchev's large-scale industrialisation of housing production, most of the old residential quarters were concentrated in or around the historic centre. Since the Soviet Union lacked a market economy to assign land value based on distance from the urban core and because state enterprises never had to worry about rents, a large portion of St Petersburg's industrial belt was organised around the historic centre. Such an arrangement meant that *khrushchevki* had to be built in the outlying areas of the city, while the administrative and social functions were concentrated in the centre and surrounded by an industrial belt.

These conditions resulted in a social topography that appeared egalitarian, but, with the exception of the *kommunalkas*, the metropolis in reality was a socially stratified space. Soviet social scientists claimed (for example, Kozlovsky, 1995; Utkin, 1987; Fedotova, 1989; cited in Benderskaya, 2011) that the congregation of the party's highest-ranking officials and professionals crammed into *kommunalkas* alongside proletarian workers underscored classless solidarity and cosmopolitanism in residential space. However, these claims ignored the major differences in quality between these groups and living arrangements for those not in communal dwelling space – and few privileged members of society (*nomenklatura*) lived in *kommunalkas*. Whereas people of political power lived in individual 'old bourgeois' apartments at the heart of St Petersburg, families in *kommunalkas* were placed with complete strangers, and under abysmal, highly unsanitary conditions. Yuri Vdovin, a resident of a communal apartment since 1973, summarises communal living:

"The only thing that is worse than living in a communal apartment is living in a prison, barracks, or a dormitory. But people who live in prisons, barracks, or dormitories are there temporarily [laughs]. We're here for good."

(Bransten, 2003, p1, cited in Benderskaya, 2011).

The process of assignment to dwelling space in Soviet Russia varied over time and space. Those with political pull ended up with better housing as did those who had alternatives and could wait out bad options. Newcomers to the most desirable cities took what they could get, while those working in the most powerful enterprises and government ministries tended to have better housing options than those employed by less important entities. Nonetheless, there was a large random component to the allocation process – if one's position in the queue came up during a period of new building, assigned housing would be better than during periods of extreme shortage. It is likely (not rigorously documented, but almost certainly the case) that the correlation between social standing and housing quality increased over time, for a given city, with far more assignments based on next availability during the crash industrialisation period relative to the late Soviet era.

Since the central communal apartments were intended to be 'temporary' housing for an 'impermanent' shortage, one would expect the structures in the post-Soviet city centre to have been reclaimed by people with political and economic power at some point, especially if housing were marketised. And so it happened in many central apartment buildings, but especially in cities with less severe housing shortages, and hence more individual family units and fewer *kommunalkas*, as these proved difficult to restructure. Even in St Petersburg, government distribution of housing provided members of the *nomenklatura* with individual flats in the historic centre. Ultimately, in the USSR's 'classless' society with modest differences in cash incomes, residential location was a major indicator of status. The size, proximity to the metro station and the city centre as well as the quality of one's home spoke not of the tenants' cash incomes, but rather of their social connections.

In the USSR, social status did not necessarily correspond to a person's monetary assets. The Soviet wage system limited wage dispersion across occupations, which meant that highly skilled professionals earned little more than ordinary clerks and secretaries. Furthermore, many goods and services could not be purchased by cash (or cash alone), making one's personal connections and possession of tradable, scarce resources (such as admission to a good school, access to good medical care, holidays, imported goods, and housing) of critical value. Hence, connections and non-cash positions proved more important than cash income in determining residential location in the Soviet era. In cities such as St Petersburg, the government and state enterprises' monopoly on the distribution of scarce housing made the allocation process a 'reward system of the Soviet society'. It was 'rationed out on the basis of occupational work and influence' (Wharton 1977, cited in Benderskaya, 2011).

Families that occupied newly built apartments in the outer districts were typically segregated by the employer of one of the working family members, with high-priority industries receiving more desirable residential units, or whole-building clusters. Living near the city centre increased residents' access to centrally concentrated services. St Petersburg's perpetual housing deficit made the acquisition of an individual flat a source of wealth in general, even if the unit in question was of low quality. The Soviet economy restricted consumer choice and did not offer a wide range of options. After the Soviet period, those who found themselves in the sole, undisputed possession of a central city apartment received in effect a huge windfall as market prices came to reflect scarcity value.

Most Soviet citizens found it a blessing just to have an individual apartment with modern infrastructure amenities; they learned to accept the less 'civilised' aspects of their homes as the norm. More recently, the nation's transition to a market economy provided the modern consumer with options and has not only made apartment quality a crucial consideration, but also has 'Westernised' the definition of comfort standards. Rising incomes have increased demand for housing; since inequality in St Petersburg and elsewhere has increased dramatically with the collapse of the USSR, demand for upscale housing has grown particularly rapidly. Neither the quality nor the quantity of Soviet housing stock proved

capable of satisfying demands for higher living standards, and the result was both the renovation and indeed, gentrification (Makhrova and Tatarinceva, 2006) of central-city housing and the construction of upper-income units on cities' peripheries.

The quality of living conditions even in 'better-off' neighbourhoods during the Soviet era matters for the residential structure of St Petersburg today. The new residential districts that emerged in the 1960s and thereafter (called micro-districts, or *mikroraiony*) were initially comprised of 4–5-storey prefabricated apartment blocks but, by the late 1970s, construction enterprises were erecting 9–16-storey high-rises. As the main political proponent of quick prefabricated apartment construction, Khrushchev often stressed the need to sacrifice quality for quantity. If the average living space for an American in the 1980s was approximately 60 square metres and 40–50 square metres for Western Europeans, Soviet authorities considered 9 square metres to be the per capita norm for an urban dweller. In order for a Peterburgian even to get on the waiting list for more spacious accommodations, the applicant's ration at the time of request had to be at or below 7 square metres, and *khrushchevki* apartment boxes contained flats designed to provide households with the minimum per capita space of 9–10 square metres.

Although each family was usually able to get their own flat, Khrushchev's emphasis on cutting costs of building materials was more than obvious – the rooms, bathrooms and kitchens were too small for comfort, the ceilings were just a little over six feet, the walls were thin, and the entire size of a one-room apartment was about 30 square metres, or about 323 square feet (Vihavainen, 2005, p2). A noteworthy feature missing from these dwellings is a closet, which became a growing inconvenience as Soviet citizens gradually gained access to broader consumption baskets. Although the apartments constructed following the '*khrushchevki* decade' were of higher-quality materials, their tenants still complained about the kitchens and bathrooms being too small.

Despite these functional shortcomings of the high-rise concrete boxes, St Petersburg's apartments had a zero vacancy rate and millions of provincial Russians were willing to take the lowest-rank jobs in the city in order to be allowed to stay in the city and register for any available housing accommodations. The relative exclusivity of the city's varied retail, cultural establishments, and hubs of higher education lured newcomers with promises of upward mobility. It was a home to some of Russia's brightest minds, and the professional environment became a magnet for young and ambitious students.

In the 1980s, mass-produced apartments constituted about 65 per cent of the city's housing stock. Even with most residents living in such cramped and drab boxes, 95 per cent of Peterburgians interviewed in a mass survey in 1986 reported that they did not want to move to smaller cities (especially to those with fewer than 500,000 people). These results emphasise the high social value of access to urban amenities (Lebina, 2003b, p54).

Given these conditions, it is important to note the implications of housing constraints on typical urban households. Registered marriages in St Petersburg often outstripped the number of housing units produced in the corresponding years. Wharton (1975, cited in Benderskaya, 2011) reports that 'to discourage new households from forming, newlyweds or singles who wish[ed] to live apart from their extended family [would] frequently be denied a place on the [waiting] list'. According to Vishnevskii's (2003) analysis of Russia's urban households, the largest proportion of newlyweds ended up sharing apartments with the groom's parents. The systematic denial of individual housing to exclusively nuclear families made it common for several generations to grow up in the same apartment; it also underlies Becker and Hemley's (1998) econometric finding that space constraints depressed fertility.

The combination of chronic housing shortages and the absence of a real estate market tied households to the same location for years; they also predetermined individuals' time

constraints. A Peterburgian real estate agent interviewed in the summer of 2010 emphasised that most of the people living in the outlying districts spent about two hours each day on commuting to work and back:

“What made distance from the centre such an integral issue for typical Soviet families is the fact that, besides spending two hours on transportation, people...NO, [rather] **women**, would have to spend extra hours in line at the stores, which were also located in the central parts of Petersburg. By the time they got home to make dinner, they will have spent most of their day on their feet.”

(Interview with NVD Nedvizhimost', 27 July 2010)

This statement suggests that the state's restriction on both the location and quantity of everyday goods and services magnified the residents' time constraints, and made the desirability of inner-city housing more pronounced in Soviet Russia than in market-based economies (Alexeev, pp1258–59, cited in Benderskaya, 2011).

Superficially, it is surprising that a metropolitan society with high preference for living close to the inner city and with a legacy of socio-economic isolation of peripheral settlements has lurched toward suburbanization at the onset of the 21st century. What made the underdeveloped countryside with high transportation costs and few urban amenities a viable residential option for various segments of Russia's urbanites? Rising incomes, private vehicle ownership and improving road-transport infrastructure all matter, but do not tell the complete story. Alongside these factors, the formation of a market for existing, Soviet-era apartments, and workers' wage adjustments to market-based values – and the consequent very large increase in income inequality and incomes of professionals – have created consumer demand for suburban residences. A final, critical component of the story is emphasised by Axenov *et al.* (2006), who note that the emergence of private-sector services and the ensuing deconcentration of commercial hubs has raised the value of housing in the outlying districts.

### *5.2.2 Privatisation of the housing stock and liberalisation of the real estate market*

Russia's transition from planned to market economy at the end of the 20th century changed housing from being a strictly rationed good, independent of a person's ability to pay, to a market good that can be bought and sold. In 1991, Russia's first privatisation legislation allowed all tenants of state-leased individual housing units<sup>26</sup> to claim legal ownership of their apartments free of charge.<sup>27</sup> According to Vihavainen's (2005) study of St Petersburg real estate, 61.1 per cent of all housing in the city was privatised by 2003. By 2010, most of the individual apartments eligible for privatisation had been transferred to the full control of their former tenants.

Works on Russia's nascent real estate market (Baburin, 2005; Kirilov, 2007; and Nozdreva 2007, cited in Benderskaya, 2011) emphasise that the residents not only inherited a tight supply of existing residential units, but neglect of capital maintenance during the Cold War years resulted in even greater material depreciation of the housing stock. In 1991, 19 per cent of St Petersburg's housing was of pre-revolutionary age, and over 9 million square metres of the total residential space had not been repaired substantially for over 100 years – a stark contrast with the recommended major capital maintenance every 30 years (Alexeev, cited in Benderskaya, 2011).

---

<sup>26</sup> This legislation specified that communal apartments or properties scheduled for demolition could not be privatised. However, the current privatisation law in the Russian Federation allows tenants of communal housing to gain ownership of their individual rooms, with no claims to the kitchen, bathroom and other shared space.

<sup>27</sup> *Law on the Privatisation of the Housing Fund (Zakon o privatizatsii zhilishchnogo fonda)*, article 2.

According to the informal rule of once-a-generation major renovation, some of the mass pre-fabricated housing of the 1960–1980 period also needed infrastructural renovation by the 1980s and 1990s. However, not only did such renovation not take place, but alongside the demolition of over 400,000 square metres of pre-World-War-II housing space, Mikhail Gorbachev's rule was characterised by a decline in new housing production (Golubchikov, 2004). This further diminished the already limited supply of decent urban apartments on the eve of privatisation.

In the first decade of Russia's transition to a market economy, not only were its supply and quality of housing the worst among the industrialised nations, but people's earnings also fell far below their Soviet levels. Unlike in Western housing markets, where the ratio of housing price to yearly salary was around three or four, the cost of an average-sized flat in St Petersburg rose to 30 times more than an average household's yearly income. Russia's economic collapse of the 1990s was so severe that over a quarter of the population fell below the poverty line, while the average earners were spending 90 per cent of their incomes on food and utility payments. Consumers' low purchasing power, high housing prices fuelled by restricted supply (and high returns to renovation of central city housing stock), undeveloped credit markets, and ambiguous land privatisation laws served as compelling reasons for the delayed formation of the suburban housing market. From the perspective of many Russians, the market system of housing allocation was no better than central planning in terms of meeting consumers' demand for decent living space at affordable prices.<sup>28</sup>

Since 2000, Russia has experienced impressive economic recovery, driven in large part by rising prices of energy and raw materials' exports, and in the case of St Petersburg by development of a transport hub, services and manufacturing as well. Real GDP per capita surpassed Soviet levels around 2006, and in St Petersburg today is well above the Soviet peak.<sup>29</sup> Concurrently, enactment of the first comprehensive federal Land Law in 2001 has allowed commercial and residential developers to invest in new housing and retail construction. St Petersburg's growing concentration of elite retail and office space in the historic centre and the already dense surrounding high-rise districts limited developers' options for vacant land. Competition for available space in the city drove up the prices of new apartments by such a large factor that investors could make a profit only by targeting the urban elite, thereby inducing developers to search for land suitable for projects aimed at slightly less wealthy groups.

While 'elite' suburbanization has also occurred, the elite is not the predominant group in terms of numbers, and the new residential communities we investigate in St Petersburg's suburban territories are designed to house slightly lower strata. Characterised by modern, high-rise apartment buildings, lush lawns, security systems and shiny playgrounds, developers labelled these estates as 'economy-class' housing, intended to attract Russia's 'new' middle class (which, statistically, would be upper-middle class). Academic dialogues regarding the characteristics and size of Russia's so-called middle class presented such a vast range of opinions and measurement methodologies that social scientists have begun to

---

<sup>28</sup> Transparent land-privatisation laws are important for the emergence of new housing construction and for the privatisation of commercial real estate. The privatisation law of 1991 allowed for the privatisation of buildings and physical property but not of the land on which it was located. Such complications discouraged many commercial and residential developers from investing in Russia's real estate sector throughout the 1990s.

<sup>29</sup> The comparison is difficult to make with precision, but it is likely that St Petersburg as a whole reached its Soviet peak a year or two earlier. In ruble and, especially, dollar terms, it has since far surpassed earlier peaks: by 2008–2011, per capita regional GDP exceeded US\$11,000. For recent data, see the city website: <http://st-petersburg.ru/en/statistics/Economy/Macroeconomic%20environment/Gross%20Regional%20Product%20%28GRP%29.aspx>.

call this group the 'elusive' class (Wilson, 2004, cited in Benderskaya, 2011). While it is safe to say that this new middle class does not comprise the top 5 per cent of the income or wealth distribution, it comprises the second and third deciles, and perhaps even part of the top decile of these distributions.

Although neither academic experts nor real estate agents could clearly define this 'class' of homebuyers, two of their qualities were easy to observe. They formed the core demand for St Petersburg's suburban housing, which consists of apartments that sell for 15–20 per cent less than the average price of urban flats. Considering that the urban market prices relative to incomes are still extremely high, these new suburban homes are still much too expensive for average Russian families.

Before exploring the nature of these new suburbanisers, we turn to an examination of the 'indigenous' population in neighbouring Lenoblast, and then in Section 5.4 explore the impact of suburbanization on the region. We then turn to an in-depth empirical analysis of these 'elusives'. By gaining more insight about consumer tastes and preferences in the housing sector and factors that influenced their decisions to suburbanise, we can create a platform for thinking about their collective impact on suburbia's existing populations and land-uses, both in Russia and in other upper-middle-income countries.

### 5.3 Suburban life in Vsevolozhsk

With over seventy years of vastly differential investment into urban and suburban development and legal restrictions on mobility between the two spaces, the boundary adjoining St Petersburg and the immediate countryside was physically and psychologically obvious in the Soviet era, and remained so in the first post-communist decade. As Kvartal Estate real estate agent Sergey Lushkin explains,

"It seems that just a few years ago, the road one kilometer away from St Petersburg into the Southern Vsevolozhsk, one could see fields stretching to the left and right. These cabbage and vegetable fields were well-kept, and the cow pastures extended all the way to the horizon."  
(Golybeva, 2001, cited in Benderskaya, 2011)

The visual discontinuity between the high-density, towering apartment buildings at St Petersburg's city boundary and the sparsely populated low-rise landscape just beyond is now an artefact of the 20th century. Creation of a diverse middle-class housing market has galvanised an ensuing proliferation of business investments, making relatively cheap rural land an attractive location for big-box shopping centres (*gipermarkety*, or hypermarkets), car dealerships and office parks. The completion of the ring-road that encircles St Petersburg and runs through the suburban areas of Lenoblast has eased the commute between the two regions as well (Figure 22).

This process resembles the fringe gentrification one finds in emerging market economies as well as wealthy Western European and North American cities, and is characterised by relatively wealthy urban professionals' 'takeover' of a low-density peri-urban region and their imposition of modern amenities on the local landscape. Since the suburban towns have much more developed modern infrastructure, amenities and transportation options than nearby rural farmland, one might expect the former to attract a higher degree of new residential construction and businesses, as in the Washington, DC area. However, home-value comparisons of similar dwellings in our survey and the amount of capital investment into the suburban territories' business sectors shows the opposite to be true in St Petersburg.

The basis for this conclusion regarding patterns of suburban real estate investment is a set of semi-structured interviews with several real estate agents and civic action leaders in the



St Petersburg region. In particular, we focus on changes in Lenoblast's suburban Vsevolozhsk District, or *raion* (the Russian-language *raion* website is available at <http://www.vsevreg.ru/>; the Lenoblast site [www.lenobl.ru](http://www.lenobl.ru) has an English-language section). We conclude that a key factor in the pattern of suburbanization is the greater ease of land acquisition in rural areas rather than adjacent towns, with this ease in turn related to patterns of corruption. In terms of consequences, since the difference in modern development was much greater between the city and its *rural* surroundings versus the gap between the city and *urban* settlements on the periphery, the impact of middle-class newcomers on the rural landscape seems more acute. The indigenous locals and the new suburbanites exhibit class-specific geographies: the new suburbanites both self-segregate and dispossess the older residents of social goods through the privatisation of public space.

**Figure 22: Leningradskaya oblast**

### Ленинградская область

Территория 85 908,8 кв. км. Значительную часть занимают низменности и низменные равнины. Самая высокая точка над уровнем моря - Вепсовская возвышенность, 291 м. 1800 озер. Общая протяженность всех рек – ок. 50 тыс. км. Самые крупные реки - Нева, Свирь, Волхов, Вуокса. 55,5% территории области занимают леса



Source: Leningradskaya Oblast website: <http://lenobl.ru/guide>.

### 5.3.1 Vsevolozhsk raion in the Soviet era

Bordering St Petersburg in the northeast and situated on the Karelian Isthmus that connects Russia and Finland, Vsevolozhsk's rich natural endowments of vast pine forests, taiga flora and water sources have made it part of the city's so-called greenbelt. With 294,500 hectares (1137 square miles) in area and roughly 262,000 inhabitants today (but only 215,000 in 2002), only 16.3 per cent of the land is currently used for human settlement; the rest is protected forest or farmland. The decentralisation of administrative power was one of the initial post-Soviet political reforms in the 1990s transition period, and this district was carved into 20 municipal sections. Each of these municipalities is designated as being either urban or rural, with the rural sections each encompassing a dozen or so little villages. Vsevolozhsk district contains eight urban and twelve rural municipalities, and, as of January 2010, 62.4 per cent of usable land was zoned for agricultural use.

Vsevolozhsk's towns and farms served as economic appendages to rapidly industrialising St Petersburg after World War II, and the restriction of their economic activities to blue-collar



work fostered a hierarchy between these small towns, both in Vsevolozhsk and elsewhere, and their neighbouring metropolis. The towns typically operated at the bottom stages of the processing industries, and their economic activities focused on extraction of raw materials or heavy manufacturing. Beyond a mix of light and heavy industry, Vsevolozhsk *raion* contained farmland, military training zones and parkland for recreational use.

The urban part of Vsevolozhsk developed in the 1960s around large cement and machine-building industrial complexes, textile factories and paper- and paint-production facilities. Vsevolozhsk city (2010 population: 46,000) emerged out of settlements clustered next to a railway station constructed prior to the GPW, and industrialised rapidly after the war. However, Vsevolozhsk city and other urban areas in Vsevolozhsk District (VD) never fully developed. Ill'in (1982, cited in Benderskaya, 2011) notes that these towns' dependence on one or two state-run enterprises meant that all of the administrative decisions regarding investment into urban development came from the state ministries that controlled those industries. Executing the ministries' demands were enterprise directors, whose top priority was to maximise their factories' outputs. Investments into services for the workers were a matter of secondary importance. The enterprises' role as providers of housing, urban amenities and services for their workers meant the towns would acquire these necessities, but in a very drawn out and indeterminate way. Housing – living quarters for workers' households – received top priority, while developments such as paved roads, libraries and hot-water access followed years later if at all. Towns would be granted funding for certain amenities if their factories met production quotas. In the case of underperforming factories, funding originally allotted to their town could be transferred to a place with more productive workers. In the case of VD's urbanised area, there was even less pressure to provide many amenities and services, since residents were expected to travel to St Petersburg for them. This combination of centralised-planning-driven expansion and stunted infrastructure ensured that VD's urban areas remained backwaters despite their proximity to one of the USSR's great cities.

Vsevolozhsk's rural settlements were zoned for agricultural activities and its peasant households were required to participate in collective farming, organised to supply food products for both Lenoblast and St Petersburg. State-owned *sovkhozy* and collective *kolkhozy* farming enterprises (in practice, virtually identical) employed the residents on publicly owned land and imposed output quotas. However, each household was allowed to keep a third of a hectare of land for personal gardening. Specialising in livestock, vegetable and potato production, agriculture was by far the most extensive land-use in VD. Even as of 2011, most land directly bordering the metropolis still belongs to rural rather than urban settlements.

Although the state and collective farms provided villages with essentials such as schools and clinics (which would be shared by several villages), the residential densities of these agricultural communities were too low for cost-efficient installation of water pipes, electricity, gas pipes and other infrastructure. Rural dwellers usually lived in small wooden houses, and their settlements were served by simple dirt roads. Although each village had its own council, the most important political and economic decisions were taken by the large farm managers.

Approximately 14,000 hectares of VD were used by the USSR Defence Ministry to house military training camps. The largest of these zones is the Rzhevsk Polygon, a closed territory located in the southwestern part of the district. Movchan *et al.* (1980, cited in Benderskaya, 2011) argue that the notoriously low density and poor quality of roads in this section of the district can be explained by the state's incentive to protect the military complex from civilians driving through the secret area. The post-Soviet demobilisation of these military sites in Vsevolozhsk has erased this function completely from St Petersburg's suburban territories, and has opened this land for residential and commercial development.

Finally, VD has been a prime area for dachas and other recreational uses. Proclaimed by the Ministry of Health as the 'Greenest City in the Soviet Union', Vsevolozhsk city (the VD administrative centre) and its surrounding areas have been attractive summer country-house spots for St Petersburg's bourgeois class since Tsarist times. While ecologically diverse and naturally attractive, much of VD's land is unsuitable for farming. Thus, the best-performing enterprises in St Petersburg were allotted a certain number of hectares of land in the suburban countryside, and enterprises set up either a gardening collective or a summer home (dacha) community as a reward to their most valuable employees. Both of these community types forbade permanent residence, but once the worker received a plot of land from an employer, he or she could use it indefinitely and even delegate its management to his or her children as a bequest.

This system ended up providing approximately 45 per cent of St Petersburg's families with either dachas or garden plots. To put this in perspective, during the summer of 2010, the number of people in Vsevolozhsk *raion* more than doubled to over 600,000 from the urban holidaymakers. Makhrova (2007, p17) argues that Russia's metropolitan residents are less motivated to suburbanise than their American and Western European counterparts because the Soviet plot-distribution system in the scenic countryside has provided them with seasonal access to environmental amenities unavailable in an urban setting. This would be especially important in the Soviet era when dachas were an important source of high-quality and varied foods, and when larger families meant that there was adequate labour for one's own plots. The anecdotal evidence in today's market economy is that urban professionals have more mixed attitudes toward spending time in their dachas.

### *5.3.2 Vsevolozhsk raion in the post-Soviet era: From brownfield to greenfield*

Relative to the towns on St Petersburg's fringe, agricultural and other rural lands underwent a greater degree of transformation in terms of current land-use patterns. As the USSR's collapse resulted in deindustrialisation and the major restructuring of large enterprises that did remain intact, it is reasonable to expect that Vsevolozhsk's industrial towns would be attractive brownfield sites for residential and commercial infill, and for a new generation of industries. According to an interview with an agent from NVD Nedvizhimost', a realty specialising in suburban residential and commercial real estate,

"St Petersburg's residential developers became interested in building on suburban land because it was much cheaper to buy land, deal with the privatization and registration procedures, and the local officials welcomed their business. St. Petersburg's administration was much more protective of the little available land reserves they had."

(Interview with NVD Nedvizhimost', July 27, 2010).

With a significant gap in infrastructure development (termed 'land preparedness', or *podgotovnost' zemli*, by Russian engineers) between rural and urban parts of VD, those real estate agents interviewed emphasised that it is cheaper for developers to work on suburban land with existing utilities, which many agricultural parcels lack. Thus, it was not surprising that the agents reported that, based on their experience in the suburban housing market, suburban residential infill projects were the modal development pattern at the beginning of the 2000s. However, in more recent years there has been a noticeable shift away from individual apartment-building projects in existing neighbourhoods of urban towns to grand-scale, almost Soviet-like construction of whole micro-districts on vast stretches of formerly agricultural land. This practice of erecting whole new communities, or residential microcosms, is most prevalent on rural tracts of land that border the KAD (the Russian initials for 'ring-road') that provides direct access to the city.

What has created this development shift toward greenfield spaces? Obviously, the KAD beltway made new stretches of rural land more accessible and hence attractive. At the same time, the initial post-Soviet de-industrialisation of the district's large, inefficient state-run enterprises was halted and reversed. Vsevolozhsk's urbanised sites with pre-existing industrial infrastructure have attracted not only domestic businesses (such as St Petersburg's downsized or reorganised heavy industry that is being driven out of the historic centre as land values rise there) but also foreign companies such as Ford Motors, Nokian Tires, Merloni, and over 20 other multinationals (*Ekonomicheskii Rost, Doklad 2009*). Most strikingly, Vsevolozhsk's annual report on the state of its economic wellbeing in 2008 declared that all available brownfield space in the old industrial settlements had been exhausted.

As these old suburban working-class towns re-industrialised, their attractiveness to middle-class housing consumers with children waned. Besides the fact that 30 out of 41 apartment high-rises completed in Vsevolozhsk District in 2010 were located in rural settlements, the participants' responses to the relevant questions in this study's household survey buttress this claim. Specifically, one of the most common responses to the question 'What do you consider the top three advantages/benefits of living in the suburbs?' was 'fresh air and better ecology'. The following statement typifies the consumer sentiment regarding this variable.

"Well, we had the choice to either buy an apartment in Kolpino [an outlying district in St Petersburg] or here. But all the flats in Kolpino were next to busy roads or intersections. And I thought to myself, 'I wouldn't even be able to open the window here if I didn't want to choke from exhaust fumes. I would rather commute to the city than have my child breathing fumes every day'."

(Interview 128)

These sentiments, along with Vsevolozhsk residents' complaint letters to the Lenoblast Governor Vladimir Serdiukov reveal their discontent with the local *raion* administration's unrelenting desire for more industrial investment. Several petitions have been signed to close down a powerful businessman's aluminum factory that operates in a zone designated for warehouse and logistics use. Calling themselves 'Anti-Sabash' after their enemy, Aleksandr Sabash, this civic action group has gathered thousands of local supporters and drew the attention of both St Petersburg's and local media (*Moya Grazhdanskaya Pozitsia*, <http://blog.trud.ru/users/1953651/blog/page8.html>). This evidence strongly suggests that middle-aged professionals with children who choose to settle in the suburbs partly because of the area's high environmental assets are reluctant to settle in the re-industrialising towns. This pattern is consistent with upper-middle-class suburbanization in both emerging-market and rich countries. Presumably, it is reinforced by the low quality of services and amenities in these towns.

While the industrial areas of VD have recovered, exposure to global competition has had a negative effect on the region's large agricultural enterprises and farms. Since most of Vsevolozhsk's rural settlements were managed by collectivised farm enterprises, dramatic economic contraction in agribusiness resulted in an 'upgraded' land-use designation from strictly agricultural to commercial and residential uses as well. More than half of Vsevolozhsk's *kolkhozy* have already failed, and vast tracts of well-located land have reverted into the local governments' land reserves. From 2005 to 2007, over 50 per cent of VD's pastureland has been converted to alternate uses, and grazing land has been reduced to half its original extent. A similar decline in farmland use in the areas surrounding Moscow is noted in the preceding chapter.

The rural settlement of Kudrovo is a classic example of the types of changes the rural periphery is currently experiencing. Less than a kilometre away from the St Petersburg–Lenoblast border, Kudrovo in 2007 contained only 80 residents according to official records. Once housing over 200 households, the break-up of the local *kolkhoz* and government plans

for building the ring-road have drained 110 hectares of land from this rural settlement. Only a few minutes away from a subway station, this territory has already attracted big-box retailers such as IKEA and MEGA, along with several elite auto dealerships.

In addition, two residential ‘mega-projects’ for self-sufficient high-rise communities are currently in the middle stages of construction. Known as ‘New Okkervil’ and ‘Seven Capitals’, these two residential complexes plan to add about 200,000m<sup>2</sup> of housing to the area’s residential capital. According to Kudrovo’s five-year-old Master Plan, by 2025, this territory expects to house over 40,000 residents and plans to invest in 12 kindergartens, a medical centre, and five schools. The ‘Seven Cities’ project design creates seven different sections, each representing the style and culture of a major European city. Intended to attract ‘middle-class’ and elite customers, an average one-room apartment is expected to sell for \$120,000–130,000, which is lower than average housing prices in St Petersburg.

The current living conditions of Kudrovo’s original residents are nothing short of abysmal. In a television interview, one of the local women expressed the dire straits of village life by saying, ‘All our houses are rotten, and our pensions are insufficient to repair them. We would be ready and grateful to move even into *khrushchevki*’ (Ratnikov, 2001, cited in Benderskaya, 2011). Their only grocery kiosk has been inoperative for the past four years, and the only school suffered a similar fate. The original residents were hoping that the new developers would buy out their lands and property or pay for their relocation to even the most modest apartments on the market. However, project managers chose to build their estates right next to the village’s wooden homes in hopes of avoiding unnecessary complications.

Remarkably, even corporate giant Gazprom is now considering Kudrovo as a possible site for a new administrative building. According to the *St Petersburg Times* (2011) this investment could bring an estimated \$1 billion a year in tax revenues for Lenoblast. The idea that Gazprom is even considering locating in Kudrovo after its original plan to build in the metropolis’s historic districts demonstrates the growing prestige of underdeveloped suburbia.

## 5.4 Suburbanization and its consequences

The construction boom on the outskirts of St Petersburg has severely affected the original inhabitants. While industrial development has brought jobs to the suburban towns, upper-middle-class and upper-class housing have had fewer direct benefits: commercial ventures that follow sell goods and services of little value to the indigenous population (though there may be modest employment benefits). As Vsevolozhsk councilman Sergey Vasiliev expressed in his complaint letter to Russian President Dmitry Medvediev, “the area’s newfound attractiveness for real estate developers has encouraged oblast politicians to chase after every potential business investor instead of focusing on improving the living conditions of the their struggling constituents.” (Open Letter 42/98, 14 November 2008)

Telephone interviews with the district’s civic activists, local blogs and newspaper archives enable us to present a picture of the effects of urban sprawl on the average suburban resident. Geographical polarisation of urban newcomers, insufficiency of existing infrastructure and privatisation of public space appear at the forefront of everyday concerns for Vsevolozhsk’s rural and urban dwellers. Since land-use changes have been more pronounced in post-Soviet rural settlements compared to towns, these impacts are most dire for the traditionally marginalised rural populations.

### 5.4.1 Geographical polarisation in urban and rural suburbia

It is difficult to overstate the socio-spatial segregation of Vsevolozhsk's predominantly working-class natives and the suburbanising professionals. The settlement patterns of these 'colonisers' are characterised by individual residential infill projects in VD's towns and by mass-scale greenfield development in rural areas. St Petersburg's earliest suburban developers chose to locate their apartment buildings in more 'civilised' towns and positioned their projects near the local five-storey *khreshchevka* blocks, which secured access to the necessary utilities. Understanding that urbanites interested in suburban housing were searching for affordable but quality living quarters and well-kept green spaces around their high-rises, developers typically created gated communities or monitored access to their properties. As general director of Garant-Development Company Dmitry Al'hov pointed out, "These [development] firms did not have the personal resources or access to sufficient credit markets to assemble housing on unprepared tracts of farmland. They were searching for plots with decent transportation access and connection to modern amenities. Even though the new high-rises would be on the same streets as the Soviet era panel housing, the firms marketed their projects as microcosms of social homogeneity." (Novostroiki v Lenoblasti, 15 August 2008)

Al'hov's observation about the use of wealth status as an attribute of housing quality resonates with the general sentiments of our suburban survey participants. When asked to list the top three benefits of living in suburbia, 93 out of 110 interviewees expressed the importance of having neighbours who contributed to the social harmony in their community and maintained the high quality of their shared outside and inside spaces.

Whereas the Soviet apartment clusters were virtually identical in structure and appearance (even if their interiors varied considerably, according to the occupant's social class) across the district's urbanised landscape, the modern suburban towers that now share streets with drab and dated *khreshchevki* are a clear marker of wealth differentials. This new commercial housing is often structured as mixed-use developments, with small street-level offices, dining or fitness services to be used by its residents.

Field observation (Benderskaya) while navigating through these high-rise buildings also confirms the physical and perceived inaccessibility of the new dwellings. Economy-class projects visited for the survey had physical structures that usually formed self-enclosed yards, which were accessible through an archway on either the main street or a side street. Although some buildings were gated with three-metre fences and others had no such restrictions, the high level of security in virtually all new communities make them uninviting to random visitors. Whether there was a guard, signs for security cameras, a concierge or some combination of the three, it became clear that the newcomers had entered Vsevolozhsk with suspicions about the quality of their neighbours.

Although Russia's modern up-scale real estate market has socially coded residential property into 'elite', 'business' and 'economy' classes in terms of their exclusivity, quality and prices, even the last type is unaffordable for the vast majority of local households, and actually caters to St Petersburg's upper-middle class. Vsevolozhsk's *raion* administration has publicised the new construction as a remedy for the district's historic housing shortages. However, as our survey and real estate agents confirm, the town's original dwellers are priced out of this housing market. With average monthly salaries of about \$600–700, a one-room apartment selling for \$100,000–120,000 is beyond their purchasing power.

Nonetheless, industrial recovery also has led to a low-end housing boom in VD's urban areas. During the decade 2000–10, the proportion of communal housing and workers' dormitories (*obshchezhitia*) increased from 7.4 to about 10.0 per cent of the district's housing stock. Although Vsevolozhsk's statistics for average per capita living space show an increase in this value from 11.6 to 15.0 square metres, these numbers overestimate space

available for working-class housing. Adding to the confusion are different population counts for the town of Vsevolozhsk (49,000 versus 80,000 people) from different ministries (*Obespechennost' Naseleniya...*, Table 3.15). Since neither new affordable dwellings nor mortgage systems are available to the local populations, it is likely that the poorer migrants from remote areas in Lenoblast rent rooms in the apartments of old residents. This *de facto* growth of communal living has created what the locals call a 'town of contrasts', with oases of wealth amidst aging and cramped working-class communities.

#### 5.4.2 Polarisation in rural settlements

As noted, the VD administration has focused on reviving its industrial base, attracting both domestic and transnational corporations. The completion of the ring-road KAD in 2007, which cut through Vsevolozhsk and provided freight transport with direct access to the Baltic ports, was a major impetus for the re-industrialisation of the old factory towns. The response of real estate investors was to shift their projects to the vast fields of the former state farms. Unlike the individual housing projects in the existing urbanised neighbourhoods, these large-scale developments had several investors and were planned to become self-sustaining mini-towns. This socio-spatial segregation of former agricultural territories is even more extreme than the residential polarisation in urban towns and settlements.

Whereas most locals in relatively urbanised areas of Vsevolozhsk live in mass-produced housing with access to essential utilities and indoor plumbing, their rural counterparts reside in wooden 'barracks' with water wells and outhouses. 'It's as if time had ceased there,' commented real estate analyst Aleksandr Belikov, 'and the living conditions there may remind visitors of life in the Middle Ages.' Almost incredibly, areas located just 500 metres away from the nation's northern capital have intermittent access to only a single modern utility, electricity. Many younger residents have left their villages, leaving a population of the marginal segments of Russian society, retired state-farm workers and illegal immigrants from Central Asia (*Leasing i Nedvizhimost'*, par.6). Perhaps in the next decade or so, the modern suburban complexes will swallow and 'gentrify' the village. For now, the villagers live side by side with the three-billion-dollar residential complex designed to represent seven European capitals.<sup>30</sup>

#### 5.4.3 Insufficiency of existing infrastructure

The new suburban construction has been met by protests from the host communities. A leading complaint concerns developers' intensive use of existing utility lines without regard to the system capacity and risk of collapse. Moreover, added capacity costs get spread evenly, and existing residents have found themselves paying higher utility bills to compensate for the extra energy/services needed to power their neighbourhood. Whereas the newcomers have the financial means to afford these rising utility bills, their local counterparts often struggle to make the payments. This growth in utility prices has been especially detrimental for senior citizens, some of whom now have to spend over half of their monthly pensions on such payments (*Vsevolozhskii Portal: Gorod Vsevolozhsk*, par.8).

According to Lenoblast's 2009 official report on the state of Vsevolozhsk's utility networks, the vast majority of the district's heat, water and gas pipes has not undergone regular maintenance and has not experienced capital upgrades in the 50 years of their existence (*Doklad: Zhilishchnoe Kommunal'noe Khozyajstvo 2009*, par.1). The added intensity of newcomers' utility use has caused frequent system shutdowns and downgraded the quality of these amenities for existing users. Coinciding with the zenith of new construction outputs in Vsevolozhsk in 2007, three of Vsevolozhsk's town councilmen organised a civic protest

---

<sup>30</sup> See <http://www.semstolic.ru/forum/> or <http://novostroy.su/index.php5?class=search&module=objects&objectId=777> for details and photos.

against the *raion* authority's ignorance of the issues with suburban commercial construction. Numbering in the hundreds, locals stood outside in freezing air for hours, expressing their discontent over the 'Peterburgian infill' (*uplotnenie Peterburzhitsami*; see the web discussion site *Gorod Vsevolozhsk: Chto eto takoe?* <http://realvsev.my1.ru/publ/1-1-0-5>). Councilman Vasiliev's statement emphasises the gravity of suburbanization's impact:

"The Raion Administration no longer oversees issues with utilities provisioning. The town municipalities are not yet involved, and their relationship with Vodoteplosnab [heat and water system monopoly] has not been firmly established. But, Vodoteplosnab, which exists in a state of near bankruptcy, fixes problems with water and heat – here and there – and serves their own best interests in privileging the wealthier residences. The locals' housing, much of which has been managed by former Soviet enterprises, has been stripped of formal representation. Old residents who privatized their *khrushchevkas* are powerless against Vodoteplosnab."  
(*Gorod Vsevolozhsk: Chto eto takoe?*, 2)

The largely unregulated proliferation of modern suburban developments along with rapid population growth also has resulted in a shortage of social services and infrastructure. Planning for schools, polyclinics and daycare centres generally has meant increased use of existing public infrastructure in response to population growth. While promising either to pay for or to build new schools and kindergartens, Vsevolozhsk's developers tended to have finished their high-density apartment clusters without making contributions to the capacity of local services.

Indeed, the majority of the population surveyed had moved to the suburbs with young children, and more than half complained of the extreme shortage of daycare centres/kindergartens in Vsevolozhsk. According to 2009 district education statistics, excess demand for daycare has created a waiting list of 4500 children (*Doklad 2009: Effektivnost' Sistemy Obucheniya*, par.2). More than a score of the wealthier interviewees expressed their distaste for the evolving system of bribes in this public sector. As one of the new suburban mothers said, 'If you want your child to attend local daycare, it's not a problem – if you are willing to pay 600 dollars, *not rubles*, a month to someone high up in the administration' (Interview # 28, 08/27/2010). According to her experiences and confirmed by parents' open letters to the municipal administration, the waiting list is district-wide, and a child could be assigned to a rural kindergarten an hour away from the family's current location (*Sobolenko: LenObllnform 2010*, letter 2).

It is not surprising that the working-class local families are much more affected by this shortage than the newcomers. Over 87 per cent of parents with children in our survey sent their children to daycare centres and schools (about half of which were private) in St Petersburg rather than Vsevolozhsk. These suburbanites tend to work in the city and own a car. Local families are much less likely to have such material resources, a sentiment that was emphasised at the mass protest in 2007.

"Every day I think about what is going to happen to our kids and us.... Land that legally belongs to the district and meant for public use is sold off by government officials to stuff their pockets. They don't use that land to build kindergartens, schools, hospitals. In the last 3 years, a single kindergarden was built for 150 kids. How long before the 22 more [such centres] can be built? How many generations of kids will not be able to go to local daycare? (*Gorod Vsevolozhsk: Chto eto takoe?*, 5)

Although many of Vsevolozhsk's local families have experienced deteriorating access to key public services, rural households are probably most disadvantaged by these changes. In Soviet times, the directors of state and collective farms provided funds for the schools and clinics to be shared by adjacent villages. After the collapse of these state-run agricultural enterprises, many of the villages' schools and health clinics were closed, and their rural patrons were sent to the closest available institutions. Since average rural households



employed in agribusiness earn only about 57 per cent of the average Vsevolozhsk urban factory wage, they have even fewer material resources to pay for emergency services in overcrowded clinics.

#### 5.4.4 *The privatisation of public space*

Among suburbanization's major effects on Vsevolozhsk's locals, the privatisation of public space is perhaps the most insidious – while receiving minimal media attention. The quasi-legal or downright illicit means by which powerful businesspeople acquire exclusive access to lakes, 'protected' forests/parks and sand quarries have damaged Vsevolozhsk's rich endowments and public recreation options. Both rural and urban dwellers suffer from newcomers' takeover of lakes for use in gated communities, though rural residents tend to be closer to these natural resources and therefore use them more often.

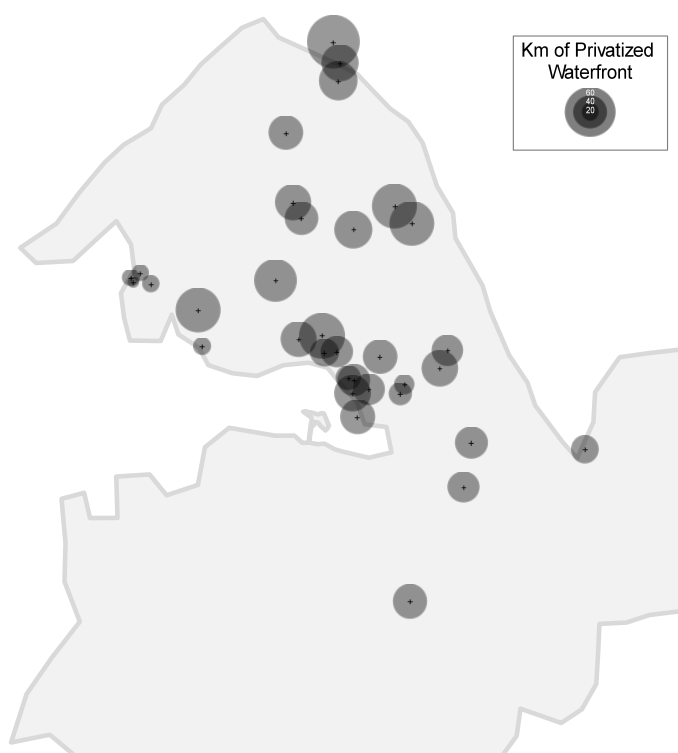
Although the most egregious assaults on suburban St Petersburg's natural environment have come from developers of elite and business-class residential communities (rather than developments for residents of economy-class communities interviewed in our survey), the examples presented below are both commonplace and typical in terms of ecological impact. Even though the lists of 'captured' shorelines, lakes and historic landscapes are large, developers' attacks on Vsevolozhsk's greenbelt are if anything under-reported. Using the online environmental monitoring websites organised by local conservancy groups, the ensuing descriptions detail the manner in which construction has dispossessed many long-time residents.

According to the postings listed on [www.Pomoyka.org](http://www.Pomoyka.org), a locally organised website for reporting raids on and captures of suburbia's water resources, there have been 129 reported cases of such conduct across the city's periphery (Figure 23). In Toksovo *raion's* settlements, St Petersburg's former Chief Prosecutor Ivan Sidouk and 'Friend of Putin' Boris Rotenberg are alleged to have blocked off and built residential units on 30 per cent of Lake Chepoyarvi's shoreline. Furthermore, Rotenberg's development has allegedly dug a large canal from the lake all the way to the foot of his own estate. The two owners of this elite, low-density residential community have even appropriated several public streets that ran close to the shoreline. Repainting these streets to match the colour scheme of their properties, this once-accessible family recreation spot is still off-limits to the local villagers and visitors (*Pomoyka.org*: *Karta Vodozachvatov*, 22 May 2008).

In many cases, opponents of greenfield development claim that even developers who *lease* land for residential construction in scenic rural sites erect tall fences to restrict public entrance to shorelines. Federal law forbids such actions, but a determined developer will not be deterred, as the case of River Volch'ei shows. Less than a decade ago, local families and dacha residents could stroll freely along the shore. In 2008, the developer put up an official-looking sign that declared a 100-metre long pathway to the shore a 'protected territory' that was off-limits to the public. The developer went on to hire 24-hour guards and watchdogs. 'What makes these businessmen's conduct even more absurd,' stated the interviewee 'is the fact the homeowners not only store their personal boats in these 'protected' waters but also drive four-wheelers along the shore' (telephone interview with a regional 'Green Patrol' member, 2 March 2011).



**Figure 23: Privatised rivers and lakes near St Petersburg**



Source: <http://www.pomoyka.org/index.php?part=special&type=133>.

Note: The larger the circle, the greater the length of privatised shoreline.

Living in what were once considered the Soviet Union's greenest settlements, Vsevolozhsk's native residents regard their century-old colonies of pine and fir trees to be a great source of regional pride. During the late Soviet era, various historic and natural preservation organisations worked to create official public parks from the former 19th-century estates of Russia's gentry. According to Vasiliev, in 1993, VD councilmen identified a total of 32 national parks, reservations, wetlands and historic forest-parks/estates as sites of special protection, covering about 23 per cent of the *raion*'s total land at that time. However, the combination of administrative reforms and the alleged greed of local officials in the 1990s left these lands without special legal protection (Councilman Vasiliev, electronic letter to President Putin, *Ob Ugroze Zelenoi Zone Peterburga*, 21 January 2008). Residential developers' recent take-overs of Kensha Park, Rumblevo Park and Koltushev Heights emphasise the disconnect between the private interests of wealthy suburbanites and the locals' desire to maintain their natural environment.<sup>31</sup> With increasing re-industrialisation and shifting land-use of farm tracts, many locals view the new housing developments in their parks as an attack on Vsevolozhsk's 'lungs' (*Krevel* 'Kamennye Djungli', 2010).

To date, Vsevolozhsk District has not taken measures to regulate and restrict construction in its 32 park areas. In some parks, such as Rumblevo, over 70 per cent of the territory has been taken over by high- and low-density housing construction for urbanites' permanent residence. In other cases, sand quarries were illicitly mined on sites such as the Koltushev

<sup>31</sup> Kensha Park was a five-hectare 19th-century estate of prominent landowner, Robert Kensh, who planted picturesque alleys of firs and pines, and a nursery for decorative plants. Its location close to the Vsevolozhsk town's railroad stop made the air-purifying powers of this forest an even greater asset for the locals. However, in 2008 the VD administration gave influential developer SpetzStroi permission to build 17 four-storey houses on a parcel in this public park. Instead of forbidding the developer to harm the century-old trees that were up to 0.7 metres in diameter, the administration created a system of payment for each tree cut down. For a mere \$5.40 each, SpetzStroi singlehandedly destroyed 45 pines and firs that had survived even the Siege of Leningrad.

Heights, which contain basins formed during the last Ice Age and are invaluable resources for the scientific community and the area's biodiversity. The current construction boom in St Petersburg's suburbia pushed many 'entrepreneurial' contractors to cut their building costs by stealing tons of sand and gravel for laying concrete roads or making panel sidings. (*Yuzhnii Luch* 7, 22 July 2009).

St Petersburg's suburbanization in many respects is not unique. The gentrification process inherently has winners and losers, and aggressive building by large developers, without concern for environmental impact or the welfare of initial inhabitants, is commonplace in nearly every country where rapid development is underway. What distinguishes the expansion of the St Petersburg metro area into Vsevolozhsk Raion and other parts of Lenoblast is the ease with which land can be acquired – a legacy from the Soviet era when powerful party officials and enterprise directors could act with little hindrance, compounded by deteriorating agricultural regions and easily corrupted officialdom. In addition, St Petersburg's suburban areas are also distinguished by organised opposition, including both elected officials and pressure groups. The original citizens of Vsevolozhsk may be unsuccessful, but they are not as voiceless as their counterparts in less educated or more repressive settings. (Indeed, the criticism of greenfield expansion on St Petersburg's periphery is largely taken uncritically from opposition sites and conversations with anti-expansion activists. There is little if any push-back on the developers' side, quite likely because the opposition at present is not strong. The positive aspects of the developments can be gleaned from the numerous realtors' and developers' websites, some of which are referenced above.) Thus, in the long run, metropolitan St Petersburg may end up looking much like metro Stockholm or Helsinki – and the angry dispossessed on the periphery will be forgotten.

### **5.5 Who suburbanises and why?**

The recent boom in Lenoblast's real estate market and the growth of St Petersburg's middle class demonstrate that there is a substantial class of new suburbanites who are wealthy enough to afford new housing, with modern conveniences and substantially greater space, though not necessarily at the prices that prevail in St Petersburg proper, even in less desirable districts. However, the urban exodus also could reflect the motivations of those, like post-industrial Western professional counterparts, who move to take advantage of environmental amenities. St Petersburg's chronic housing shortages and its legacy of cramped, multigenerational households make both motivations probable.

As Muzdybaev (1995, cited in Benderskaya, 2011) documents, St Petersburg's new housing supply in the early 1990s declined to 37 per cent of its output in the previous two decades, exacerbating the already acute housing shortage of the Soviet era. Not only does St Petersburg have the highest proportion of communal housing among all former Soviet cities, but over 70 per cent of its mass apartment blocks are structures of the Khrushchev and Brezhnev eras (Makhrova, 2007, pp17–23). An interview with a St-Petersburg-based Bagatelle Real Estate agent (4 August, 2010) revealed that apartments of those eras dominate the secondary market for the economy-class segment. Since these mass-produced flats are typically inferior in quality to pre-revolutionary and Stalin-era structures, it is reasonable to anticipate that St Petersburg's modernising (especially in the sense of acquiring automobiles) and burgeoning middle class would be made better off by purchasing new, larger and cheaper homes beyond but in close proximity to the city. Furthermore, completion of the city's first ring-road allowed for an easier commuting option between the city and its southern and southwestern suburbs (*Lubopytnye Facti*, SPbGU, 21 November 2007) and helped to make those desires achievable.

There is a small but limited amount of research on suburbanization in formerly socialist economies but, to our knowledge, little of it formally contrasts comparable suburbanites and

their central-city counterparts. To address that, Kseniya Benderskaya conducted fieldwork in St Petersburg and Vsevolozhsk in the summer of 2010, aiming to determine the social profiles of typical suburbanites and the particular socio-economic factors that galvanised the expansion of the housing market outside the city. She organised and conducted a household survey of 210 50-minute interviews with recent suburban and urban homebuyers. The Vsevolozhsk *raion* household sample was limited to residents of apartment complexes built during 2000–2010.

Although St Petersburg's surroundings now include a diverse array of residential enclaves such as affluent 'cottage villages' and other forms of single-family dwellings, these units at the top end of the market are far smaller in number than high-rise apartment units, and are not considered in our survey. In contemporary Russia, 'cottage house' or *kottedzh* is something of a misnomer: it typically signifies a well-built, brick house of at least 1300 square feet with all the necessary utilities for permanent residence. The current price range for a bottom-end 'economy class' *kottedzh* in Lenoblast's St Petersburg suburbs ranges from about US\$250,000 to US\$500,000. These residences are sold with individual land parcels. According to Vasily Kogolovsky of *Real Estate Bulletin*, these elite clusters of individual homes function as holiday residences or even second homes for the upper echelons of Petersburg's society. Their owners usually live in the city and cannot be considered permanent suburbanites, as they continue to maintain city-centre apartments.

**Figure 24: Residential complex – new koltushi (economy class) in Vsevolozhsk District**



Source:

[http://images.yandex.com/yandsearch?text=новые%20колтуши&p=27&img\\_url=www.unisto-petrostal.ru%2Fimages%2Fkoltushi\\_houses%2Fkoltushi-glav.jpg&rpt=simage](http://images.yandex.com/yandsearch?text=новые%20колтуши&p=27&img_url=www.unisto-petrostal.ru%2Fimages%2Fkoltushi_houses%2Fkoltushi-glav.jpg&rpt=simage).

Real estate analysts of *PoselkiSPb* emphasise that over 70 per cent of suburban residential developments are constructed in the Soviet fashion of multi-family high-rise apartment blocks (*mnogoetazhki*) and are targeted toward Russia's 'middle-class' consumer (Figure 24). These dwellings are labelled 'economy class', which encapsulates a price-range and a list of amenities intended to provide affordable and modern living quarters. St Petersburg's Institute of Modern Development reports (<http://www.insor-russia.ru/ru/>) that Lenoblast has been compensating for the city's housing shortage by constructing close to a million square metres of new *economy* class housing space each year since 2003 (excluding 2008). Since Vsevolozhsk and Pushkin *raions* are the leading loci for new economy-class apartments in

Lenoblast (89 per cent of total economy-class construction), our survey targets the residents of these particular districts.

To prevent selection bias in the sample population, we randomly selected seven different apartment complexes in four micro-districts of Vsevolozhsk and four complexes in two micro-districts in Pushkin. Using door-to-door interviews, Benderskaya's response rate was approximately 69.8 per cent (for details, see Benderskaya, 2011). This very high degree of participation from suburban responders allowed her to complete a 'snowball' survey by collecting the names of and contacting 78 of their friends who had recently searched for a home but chose an urban residence; amazingly, all 78 agreed to be interviewed. The rationale for this snowball approach is straightforward: while our focus is on St Petersburg's suburban residents, it is necessary to put these respondents in context in order to understand what distinguishes them from their peers. To do that, Benderskaya asked respondents to name others who were faced with a similar decision to make with respect to housing, but who decided to remain in the city centre. Since people tend to associate with others like themselves, this creates a survey sample consisting of groups of people who are similar, except with respect to housing location and characteristics. This household survey, in addition to interviews with three Russian real estate agents, information from Lenoblast's statistical bank, and municipal ordinances of suburban and city administrations, comprises the primary quantitative and qualitative evidence for this case study.

Because the survey's snowball design resulted in the contrast of two socio-economically similar population samples (friends of suburbanites are likely to be similar in age, education and marital status), and since there was little variation in the sample suburbanite population, demographic factors should not matter in the regression analysis for the simple reason that the sampled group is highly homogenous in these characteristics. This does not mean that demographic characteristics are unimportant: in a survey of the general population, the remarkable homogeneity of the new suburbanisers and hence the importance of belonging to a specific group would become apparent. We therefore provide basic descriptive statistics to create a snapshot of the types of families interviewed with an initially random selection procedure. Combining the results of this econometric analysis with descriptive statistics from the survey allows us to construct a more thorough understanding of the socio-spatial reorganisation process in both St Petersburg and its periphery.

The verbal responses from these interviews were translated into numerical values for several variables, and a logistic regression model was formed to assess the effects of respondent characteristics on the probability of suburbanising. This model compares urban and suburban responders with respect to housing expenditures, space consumption, proximity to the nearest metro station and courtyard quality to assess the effect of those variables on people's decisions to move into the suburbs. Since economy-class housing varies across those same variables according to the size and location of the suburbs, Benderskaya (2011) in a second logistic regression model explores factors that influence the probability of living in a larger town or a less-developed settlement within a suburban *raion*.

There is no reason to believe that the trade-off between commuting costs and preference for cheaper housing and suburban amenities that drives densities and land- and housing-rent gradients in the standard monocentric city model will not apply in the St Petersburg metro area. In this model, those with tastes for suburban characteristics will be the ones who move out, as will those with high tolerance for commuting, or who face lower commuting costs. Specifically, holding all other variables constant, we hypothesise that likelihood of suburbanization increases with:

- the further the consumer is willing to locate from the nearest metro station
- stronger preferences for additional space
- stronger preferences for living on lower storeys

- higher valuation of courtyard quality outside one's apartment building
- greater housing-search costs or distaste for search
- automobile ownership, relative to being strictly reliant on public transport.

Obviously, automobile ownership is not entirely exogenous: those who live in suburban areas have greater incentive to purchase automobiles. Nonetheless, most commuting still takes place by public (or, in the case of *marshrutkas*, quasi-public) transport, so that auto ownership mainly reflects wealth and general demand for private transport. Courtyard quality and access also reflect the number of children. Since these proximate determinants of residential location reflect underlying demographic and income characteristics, Box 1 provides regression results from separate regressions over proximate and indirect factors. We did not ask income or wealth questions as respondents would have been reluctant to answer such questions.

The only hypothesis that is somewhat surprising in the Western context is the fifth one. Suburban residential complexes are advertised electronically, and have well-defined and fairly homogeneous characteristics. Property rights are also well established, and transactions are with large developers. In contrast, finding a unit in the city is more likely to involve visiting a number of heterogeneous units over a large area and dealing with idiosyncratic owners of individual properties. Moreover, while neighbours and neighbourhoods in suburban areas are both homogeneous and well known, this is not the case in urban apartment units, necessitating considerable investigative effort before one buys a unit.<sup>32</sup>

The results of our household survey indicate that there is a greater proportion of suburbanite respondents aged 25–34 than the proportion of this age group among their urban counterparts. This age cohort captures approximately 43.9 per cent of the suburban interviewees and only 34.6 per cent of the urban participants. Whereas the 25–34 age cohort had the highest frequency in the suburban sample population, the 35–44 age bracket captured the greatest proportion of urban interviewees. Since real estate prices rose dramatically during the period 1999–2009, it is not surprising that the first waves of high-income young professionals were more able to afford central-city housing than their younger counterparts who followed a few years later.

Still, age concentration is great, and over 80 per cent of the respondents in either group belong to one of those age categories. Comparing these results with the age structures of the actual populations of St Petersburg and the suburban districts, only about 30 per cent of the city and 39 per cent of the suburban population belong to this cohort. The sample population of suburban buyers is disproportionately younger than the population of St Petersburg and of the overall populations of Vsevolozhsk and Pushkin. A Petrostal Real Estate agent in St Petersburg confirmed this, noting that their clientele in the suburban housing market tends to be younger (and of child-bearing age) than their patrons in the city (14 August 2010).

The education levels and automobile ownership of both suburban and urban respondents exceed both St Petersburg and the suburbs' average proportions of university graduates and car owners. Whereas about 43 per cent of the city's and 27 per cent of the suburban adult population had a university or technical-institute degree in 2010, the survey participants were

---

<sup>32</sup> An obvious question is why developers do not buy up entire apartment complexes in central St Petersburg, renovate them, and re-sell them to homogeneous, higher-income buyers. To the extent that this can be done, it would have the potential to be profitable. However, since this would mean breaking up communities, it is unlikely that a developer could convince all residents in a building to sell. The more common outcome in generally well-off central areas of cities in the former Soviet Union is that professional-class residents will cover building-upgrading costs for the entire unit.

more educated still: some 64 per cent of suburban and 65 per cent of St Petersburg respondents had advanced degrees. The vast majority of all the households in our sample also owned at least one car, and a quarter of those had more than one. Auto ownership and education should be strong predictors of suburbanization because both indicate the resources (i.e., quick, reliable transportation and wealth) necessary to make a suburban lifestyle practical. However, even among those groups with an abundance of both, some choose to suburbanise while others do not. Clearly, there remain some characteristics and circumstances that differentiate those who can suburbanise from those who do; we explore these factors below.

Approximately half of the suburban and urban residents in this survey reported having at least one child living in their apartment (48.3 per cent and 55.1 per cent, respectively). Nearly 60 per cent of the 132 suburbanites were married, and the rest of the households were almost equally distributed among the single, cohabiting and divorced/widowed classifications. The observations in the urban population sample reveal almost identical proportions of marital status and children as their counterparts.

### 5.5.1 Logistic regression analysis

In order to gauge the magnitude of the effect and statistical significance of various respondent characteristics on the probability of living in the suburbs, we use a logistic regression function to match the categorical nature of the dependent variable. The dependent variable is  $\ln \frac{p(Y_i=1)}{1-p(Y_i=1)}$  where  $p(Y_i=1)$  is person  $i$ 's probability of being located in the suburbs over the last decade (2000–2010). Variables include proximity of housing unit to the nearest metropolitan station, space/size of the apartment, floor of the apartment, dummy variables for quality of courtyards, and a person's migration status (whether a respondent is an in-migrant to St Petersburg over the last decade).

The results of this logistic regression model (Box 1) confirm that the housing price per square metre at the time of purchase is a negative and significant predictor of a householder's decision to purchase housing outside St Petersburg: a 1 per cent increase in the price of one square metre of housing at time of purchase reduces the log-odds of suburbanization by approximately 11.8 per cent. Housing price matters regardless of location, but per-square-metre costs are on average lower in suburban than central-city locations (Table 10). The difference in average price per square metre between urban and suburban housing is Rb3120, or \$104 (approximately 5.4 per cent of average price per square metre). This difference does not seem large, though presumably it is reduced by (likely) perceived higher quality of new construction. It is also worth mentioning that the suburban price distribution is skewed right, with the average value significantly higher than the median. The exact opposite is true for St Petersburg housing prices, which are skewed to the left by a small number of extreme outliers.

These results indicate that the urban housing-price premium is quite modest, but that Russian young professionals are highly price sensitive. The small price premium reflects the fact that over 70 per cent of the St Petersburg residents in the sample bought housing in what St Petersburg's administration ranks as the least attractive communities according to infrastructure conditions, municipal finances, road density, availability of services and environmental amenities. Kirovskiy, Frunzenskiy, Nevskiy, Kalininskiy and Krasnosel'skiy districts are located in the city's outer ring and are collectively labeled as *spalniki*, or densely populated bedroom communities (*Results of Socio-economic Development Ratings of St. Petersburg's Residential Districts*, PetroStat 2010). According to a Bagatelle Real Estate agent, in any given year the average price of suburban housing should virtually match the average price of apartments in these *spalniki* but still be 20–25 per cent lower than in the more prestigious neighbourhoods around the central business and retail districts.

**Table 10: Descriptive statistics for prices of suburban and urban housing**

	Price (rubles) per square metre	
	Suburban	Urban
Average price/m <sup>2</sup>	57,600	60,720
Median price/m <sup>2</sup>	49,930	74,960
Standard deviation	1,299	2,214

The survey data also show that, although suburbanites pay a lower price per square metre of living space, they often end up paying a higher total price for their flats. Their average apartment cost Rb3,096,000 (US\$103,200) with a median value of Rb2,980,000 (US\$99,330), whereas urbanites spent Rb3,256,870 (US\$108,562) on average, with a median of 2,675,000 rubles (US\$89,166). This reflects the importance of demand for living space, which is also confirmed by the logistic regressions. The estimated coefficient indicates that a one-square-metre increase in space consumed would increase a household's log-odds of suburbanization by approximately 6.5 per cent. Survey data show that the median living space in suburbia is 63.40 square metres and only 44.18 square metres in the city. The correlation between space and suburbanization is very significant and likely to be a key factor in future studies on how extra living space affects suburbanites' birthrates, a crucial topic for Russia's depopulating areas.

A third factor of relevance is distance to a metropolitan (subway) station. One might expect that, in addition to having longer commutes, suburban residents would face longer walking times to metro stations. This turned out not to be the case (Table 11). However, shorter walks are valued, and the logit model finds that an increase of one minute in travel time would decrease the log odds of moving to the suburbs by .122 times. These results suggest that people whose jobs are in central St Petersburg and value proximity to work locations are more likely to buy a flat in the city. Though the individual travel times are more varied in the suburban sample, it is important to point out that several towns and settlements in Vsevolzhsk District of Leningrad Oblast are actually much closer to metropolitan/train stations than St Petersburg's bedroom communities.

**Table 11: Descriptive statistics for travel time to the metro station**

	Suburban sample	Urban sample
Average time to the metro (minutes)	12.5	12.5
Median time to the metro (minutes)	10.0	12.5
Standard deviation	7.1	3.5

Traditionally, Russians have valued communal spaces – with extended families in the village *obshchina*, and in large *dvor* courtyards in the urban context. The *dvor* was one of the most salient aspects of Soviet community planning and is typically enclosed by a ring of towering apartment blocks. This green space contains a playground for children as well as benches for their parents and elderly residents. However, lack of state-coordinated repair and upkeep of such public spaces since the collapse of the USSR has compromised the conditions of these courtyards in the majority of urban neighbourhoods built between the 1950s and 1980s.

The recent boom in automobile use has become an equal if not greater threat as recreational spaces have been converted into extra parking lots. One of the suburban interviewees expressed the importance of being surrounded by a well-kept yard by saying that she 'could finally open the windows looking out into the courtyard and instead of seeing



a dilapidated, graffitied playground, it is nice to see neatly planted bushes and spacious walkways' (Interview 126, 22 July 2010). Although this variable is not a dominant predictor of people's residential choice of location, the results of the logistic regression show that suburbanites value quality courtyards by an order of magnitude more than their urban counterparts do.

It is noteworthy that migrant newcomers to the St Petersburg metro area have increased likelihood of locating in suburban regions. The logit regression estimates, with significance at the 10 per cent level, that individuals who have migrated to St Petersburg since 2000 would be 203 per cent more likely to suburbanise than the more settled metropolitan residents (found by exponentiating the 1.078 *native born*, which refers to those born outside St Petersburg and Lenoblast, coefficient in Box 1 and subtracting one). We emphasise that these newcomers are not low-skill economic refugees from the Caucasus, Central Asia or Vietnam. Rather, over one-third of the total suburban households surveyed confirmed their recent migration to St Petersburg, either from the former Soviet Union (primarily Kazakhstan, Uzbekistan, Estonia and Lithuania) or from other parts of Russia, over-representing cities of the Northwestern Region. While we did not record ethnicity, it was apparent that the vast majority were ethnically Russian.

In reporting these results, we emphasise the provisional nature of the findings and inexact parameter values because of the small sample size. On the other hand, the matched sample implied by the snowball and the very high response rates bolster our confidence in the findings other than with respect to characteristics that differed little. By virtue of contacting the suburbanites' friends or colleagues, the two populations exhibited similar socio-economic indicators and made it difficult to compare demographic differences that exist between larger urban and suburban group samples.

As a final caveat, our dataset lacks two key variables – family/individual income and profession. The incorporation of these factors into the logistic regression model would have provided empirical evidence that these suburbanites belong to the middle-class segment. Such questions were part of a pilot survey but made many respondents uncomfortable. Without this information, it is possible only to make educated assumptions about their wealth based on their car ownership and abilities to purchase \$90,000–\$130,000 homes (given the virtual absence of mortgage lending in this segment of the market). From anecdotal evidence in interviews, it was quite common for respondents to sell their smaller city apartments, add their own savings, and buy a new home in Lenoblast.

## **5.6 The future of the periphery of Russia's large cities**

The new suburban respondents to our survey represent a young, well-educated, mobile and family-oriented population, with preferences for more spacious housing and environmental amenities. They look little like the longstanding residents of Lenoblast's towns and small cities, and are even more distinct from the rural population. On the other hand, they look a great deal like their city counterparts, except that they have stronger preferences for space. They are also slightly younger (which explains why they have fewer children – but, also, schooling is better in St Petersburg proper).

Suburban St Petersburg, Moscow or Novosibirsk seem destined to end up looking much like the peripheral areas of Paris, Jakarta, Johannesburg, Mexico City or a city in the southern United States. For the foreseeable future, many suburban residents will be poor or lower-middle class – industrial workers or (often elderly) farmers. They will be segregated from communities that cater to younger, highly educated, prosperous professionals. In the Russian context, these young suburbanisers, while not rich by Western standards, have behaviours very much like their Western and Central European counterparts. They own cars and computers, take foreign vacations and work in the modern service sector. They marry



(probably at higher rates than other Europeans) and plan to have one or two children. They are not terribly interested in dacha farming – cheap flights to Turkish resorts offer a better way to spend summer vacations. And most will feel very little connection to their poorer longstanding neighbours. The physical isolation of the new suburban communities will further accentuate this class segregation.

Some six decades ago, Northwestern University economist Charles Tiebout set out to explain the proliferation of heterogeneous suburbs emerging around the city of Chicago. In what became known as the Tiebout (1956) model, he hypothesised that people chose residential suburbs in order to consume both housing and a set of local public goods (roads, schooling, infrastructure) and amenities. The transformation of the St Petersburg suburbs in Lenoblast seems quite similar. The difference is that some micro-regions will function as fairly independent units, while other – largely poorer – settlements will have virtually no political power and receive very few public goods. However, the rise of local pressure groups like Pomoyka may limit this pessimistic outcome: even the poor and elderly in places like Lenoblast have a large number of educated, technologically savvy, engaged citizens who are fighting back and demanding a share of Russia's growing prosperity.

During the Soviet era, Russian urban housing policy evolved from that of seizure and redistribution of bourgeois stock to crash construction projects to meet extremely rapid urbanization to a stable system in which a very few had good housing (by the standards of advanced capitalist nations), a broader number with higher social status had mediocre but tolerable housing, and a large number had uninspired, cramped housing with erratic communal services. Private space was of secondary importance in a socialist society, and resources diverted to its production were limited in order to focus on increasing industrial capacity.

With the end of the USSR, privatisation of housing stock created a vast wealth transfer. The resultant emergence of private rental and purchase markets, along with shrivelled demand due to the economic implosion of the 1990s and, in many places, substantial emigration and population decline, kept housing shortages from being a major social issue in the first post-Soviet decade. With sustained economic recovery, this situation is beginning to reverse. Public services and housing supply for the relatively poor in major Russian cities have become political issues. As the national government has accumulated a huge sovereign wealth fund, it clearly could go on a major housing investment push aimed at non-professional classes – that is, the traditional Russian proletariat.

In principle, the Putin Administration is committed to this expansion. However, there is no history in Russia of developing reasonably high-quality, good-access 'affordable housing', and the private sector has no incentive at present to develop the sub-*econom* market. Mortgage markets remain modest, interest rates are high, and the vast array of institutions and financial incentives and guarantees that have encouraged moderate-income housing in many advanced capitalist countries remain absent. If the present government is serious about developing these institutions, suburbanization and expanded housing stock can reach a broader population in St Petersburg and elsewhere. Until then, it will continue to accentuate the difference between the professionals who comprise Russia's new 'middle class' and the remainder of the nation.

### Box 1: Logistic regression of suburbanization choice

Suburbanization choice (Moved = 1)	Spatial variation model	Demographic model
Intercept	3.674 (2.28)	4.481* (2.115)
Price per km <sup>2</sup>	-.118*** (.025)	
Commute time to Metro	.123** (.044)	
Gender (female = 1)	-1.005* (.513)	
Preference for lower storey	-.138* (.065)	
Preference for floor space	.065** (.021)	
Native born (Yes = 1)	1.108 (.246)	
Time spent on housing search	-.676 (.412)	
Access to quality courtyard	2.251** (.737)	
Preference for quality courtyard	2.055* (.868)	
Not college educated		.9 (.605)
No children		2.016*** (.611)
Single		.163 (.777)
Divorced		.735 (.831)
Cohabiting		.098 (.64)
Number of observations	210	210
Pseudo R <sup>2</sup>	.522	.495
Log likelihood	-65.6***	-68.233***
<hr/> * P Value ≤ 0.05      ** P Value ≤ 0.01      *** P Value ≤ 0.001		

## 6. Post-Soviet, post-transition

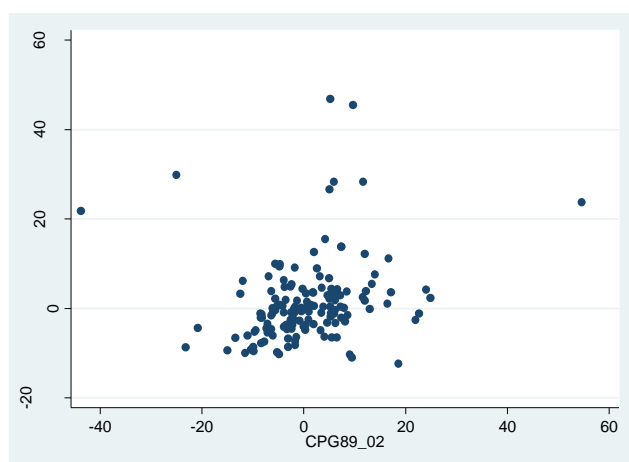
Russia's urbanization today has remarkably little in common with that of its troubled past. This disconnect can be seen formally in Table 12 and Figure 25. Only 4 per cent of the variation in the growth rates of the 148 largest cities between 2002 and 2010 can be explained by their growth in the previous intercensal period. The relation of current to earlier growth is even weaker, and there is no relationship whatsoever with growth before 1979. Even very recent growth, between 2005 and 2010 (using a mix of census and vital registration data) is only loosely correlated with that of the preceding four-year period, and is hardly related at all to growth during the 1997–2001 period.

**Table 12: City growth-rate correlation over time**

Dependent variable: city growth rate:	Explanatory variable: city growth rate:	Coefficient	<i>t</i> -statistic	$R^2$	Number of observations
2002–2010	1989–2002	0.176	2.39	0.04	148
2002–2010	1979–1989	0.086	2.09	0.03	147
2002–2010	1970–1979	1.234	1.46	0.00	147
2005–2010	2001–2005	0.320	7.32	0.28	141
2005–2010	1997–2001	0.571	3.21	0.07	140

Data sources: Russian and USSR censuses, various years; USSR and RF Goskomstat.  
Note: OLS regressions of current on past city growth.

**Figure 25: Russian city growth, 2002–10 (vertical axis) and 1989–2002 (horizontal axis)**



Data sources: Russian and USSR censuses, various years; USSR and RF Goskomstat.

**Table 13: Fastest-growing Russian cities, 2002–2010**

Number	City (Город)	Oblast/ Republic/Krai	2002– 10 growth rate (%)
1	Khimki	Moskovskaya	46.88
2	Balashikha	Moskovskaya	45.47
3	Norilsk	Krasnoyarsk krai	29.85
4	Yakutsk	Sakha (Yakutia)	28.33
5	Korolev/Kaliningrad	Kaliningradskaya	28.32
6	Zheleznodorozhnyi	Moskovskaya	26.63
7	Makhachkala	Dagestan Rep.	23.77
8	Grozny	Chechnya Rep.	21.79
9	Krasnodar	Krasnodar krai	15.49
10	Tyumen	Tyumen skaya	13.86
11	Ulan-Ude	Buryat Rep.	12.65
12	Stavropol	Stavropol krai	12.20
13	Moscow	Moscow city	11.16
14	Novoshakhtinsk	Rostovskaya	10.00
15	Kemerovo	Kemerovskaya	9.88
16	Lyubertsy	Moskovskaya	9.55
17	Vladimir	Vladimirskaya	9.37
18	Shakhty	Moskovskaya	9.14
19	Mytishchi	Rostovskaya	8.99
20	Surgut	Tyumenskaya	7.61
21	Nakhodka	Primorskii krai	7.18
22	Tomsk	Tomskaya	7.15
23	Krasnoyarsk	Krasnoyarsk krai	6.79
24	Elektrostal'	Moskovskaya	6.37
25	Tula	Tulskaya	6.17
26	Belgorod	Belgorodskaya	5.44
27	Nishnevartovsk	Tyumenskaya	5.40
28	Chelyabinsk	Chelyabinskaya	4.85
29	Voronezh	Voronezhskaya	4.83

Data source: Russian censuses, 2002 and 2010.

Table 13 hints at some of the forces underlying the disconnect between urban growth in the Soviet era and even the initial transition era, on the one hand, and current urban growth on the other. Today's rapidly growing cities are overwhelmingly either in the Moscow conurbation (7 of the 29 fastest-growing cities), in regions of natural-resource extraction, or in the North Caucasus. These patterns reflect responses to global market incentives, and there is no reason to doubt that the market-oriented adjustment they reflect will not continue in the future.

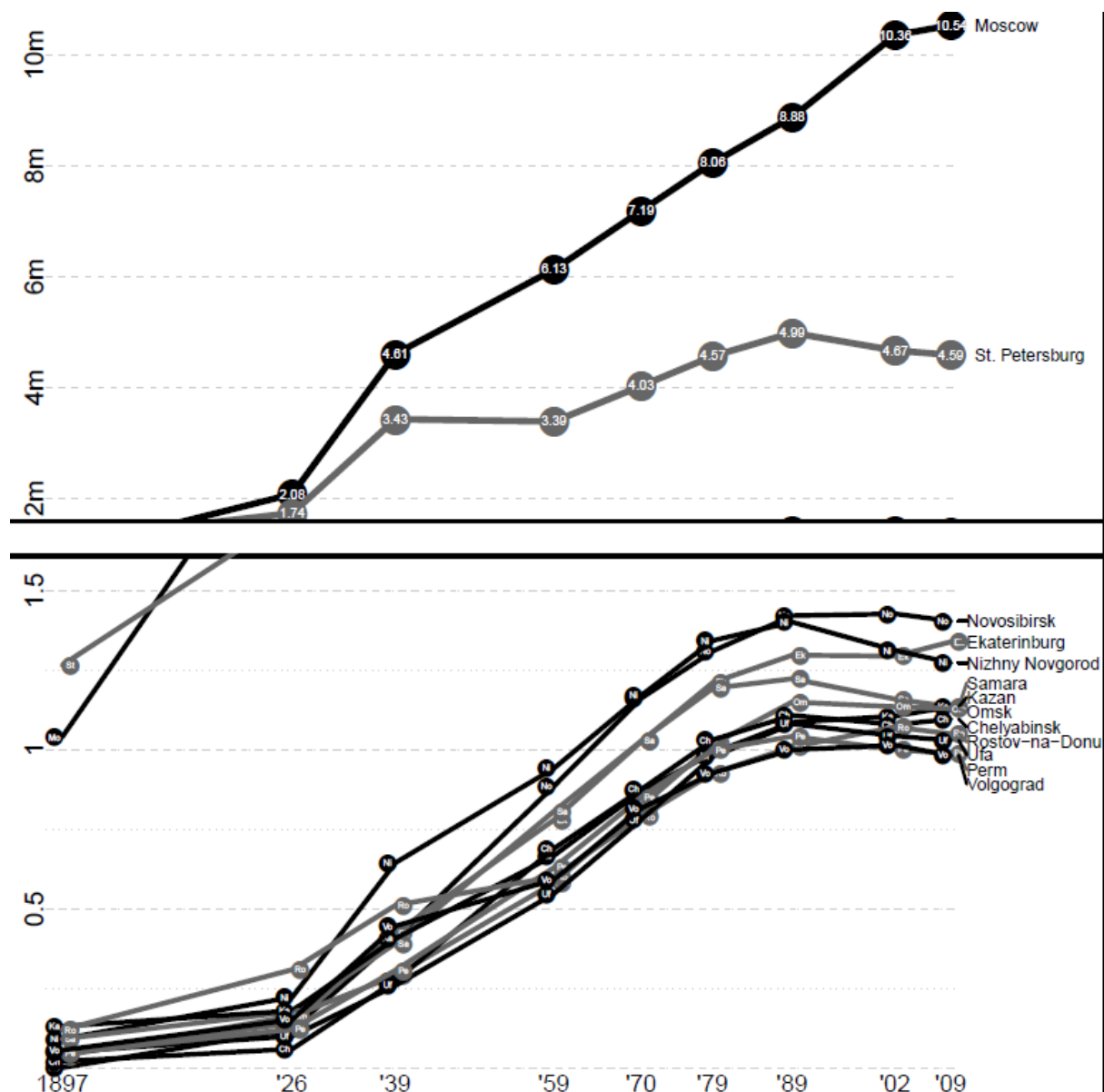
What, then, are the interesting questions facing Russian urbanization? The topic of Chapter 5, suburbanization, surely is among the most interesting. Moscow has become dominant to an astonishing degree, resulting in both growth of independent but nearby cities under its

economic umbrella as well as growth of professional-class suburbs. St Petersburg is of secondary economic importance, but nonetheless has experienced a very strong suburban push. But what of Russia's tertiary cities – the remaining 'millionaires'? Little is written about them and, as a group, they hardly seem dynamic in the new market environment (Figure 26).

Our guess is that Ekaterinburg and Kazan, and perhaps Novosibirsk, Samara and Rostov-na-Donu will experience renewed growth in the coming decade, and will consequently experience both substantial residential construction – largely high-rise apartments – and suburbanization. But this point at present is merely a conjecture. It is important to analyse relative growth of outlying *mikroraiony* (micro-regions, or neighbourhoods) using 2010 census data, and to estimate the evolution over time in housing-price gradients. This is time consuming but no longer difficult: Russia's internet is flooded with commercial real estate firms' sites as well as those of individual buyers and sellers (sites like [www.avito.ru](http://www.avito.ru) are similar to Craigslist in the United States, but have more real estate offerings). Local Russian government sites are also highly informative and full of data (in particular, about events such as local highway construction and planned transport links). In short, the information exists to conduct serious analyses of Russia's urban structure and its citizens' willingness to pay for different locations and amenities – indeed, the information explosion is simply overwhelming.

At the same time, it is important to examine those cities whose future is less bright. Clearly, many of the old Soviet stars are no longer bright. This is perhaps most obvious for the less successful millionaire cities, and it is also true for some of the other large cities without a clear modern economic base – Saratov and Orenburg come to mind (Table 14).

**Figure 26: Population trajectories of Russia's 'millionaire' cities (as of 2002), 1897–2010**



Data source: Russian and USSR censuses, various years; USSR and RF Goskomstat.

Note: All population values in millions.

**Table 14: Population trajectories of large Russian cities, 1897–2010**

			Population (thousand)								
			1897	1926	1939	1959	1970	1979	1989	2002	2009
1	Krasnoyarsk	Krasnoyarsk Krai	27	72	190	412	648	795	869	912	955
2	Voronezh	Voronezhskaya Oblast	81	122	344	447	660	781	882	849	846
3	Saratov	Saratovskaya Oblast	137	220	372	579	757	854	902	873	829
4	Tol'yatti	Rep. Tatarstan	6	6	0	72	251	505	629	702	721
5	Krasnodar	Krasnodar Krai	66	153	193	313	460	557	619	645	712
6	Izhevsk	Udmurt Rep.	0	63	176	285	422	551	635	632	611
7	Yaroslavl	Yaroslavskaya	72	116	309	407	517	595	629	613	607

		Oblast									
8	Ulyanovsk	Ulyanovskaya Oblast	42	66	98	206	351	462	624	636	603
9	Barnaul	Altai Krai	21	74	148	303	439	534	599	603	597
10	Irkutsk	Irkutskaya Oblast	51	108	250	366	451	547	573	593	580
11	Khabarovsk	Khabarovskii Oblast	15	52	207	323	436	526	598	583	580
12	Vladivostok	Primorskii Krai	29	108	206	291	441	549	631	592	578
13	Tyumen	Tyumenskaya Oblast	30	50	79	150	269	356	476	511	575
14	Novokuznetsk	Kemerevo Oblast	0	4	166	382	496	544	583	550	563
15	Orenburg	Orenburgskaya Oblast	72	123	172	267	344	458	517	549	525
16	Ryazan	Ryazanskaya Oblast	46	51	95	214	350	450	512	522	510
17	Naberezhnye Chelny	Rep. Tatarstan	0	4	9	16	38	305	505	510	509
18	Penza	Penzenskaya Oblast	60	92	160	255	374	482	522	518	507
19	Tula	Tulskaya Oblast	115	155	285	351	462	513	536	472	494

Data source: Russian and USSR censuses, various years; USSR and RF Goskomstat.

Nonetheless, most of Russia's large cities are not in crisis – while many are stagnant or in gradual decline, others are growing. Rather, the real crisis lies with Russia's *monogoroda* – cities based on a single industry. These cities are described in detail in IRP (2008). Even excluding ZATOs and urbanised villages, by the end of the 1980s there were more than 400 *monogoroda*, comprising about 40 per cent of all Russian cities. About one-third of these are dominated also by a single employer. Most of these cities have populations between 20,000 and 100,000 – but, as of 2007, seven single-employer-dominated cities had populations over 250,000.

Large cities include non-ferrous mining and metals-processing cities such as Norilsk (2010 population, 203,000), iron and steel centres such as Staryi Oskol (221,000), oil cities such as Surgut (307,000), and cities dominated by chemical producers such as Novomoskovsk (131,000). IRP estimates that 20 per cent of 'mono-profile' cities are dominated by the timber-pulp-wood industry, 17 per cent concentrate on machine construction and heavy industry, 14 per cent are food-processing cities, 11 per cent are dominated by electric power and the energy sector, 6 per cent emphasise ferrous or non-ferrous metallurgy, and 32 per cent have other emphases. In total, IRP (2008, p18) estimates that *monogoroda* account for about 25 per cent of Russia's urban population and up to 40 per cent of GDP.

The populations of most *monogoroda* have been declining, though this pattern is not observed in all cases. Obviously, the fates of these cities are tied to those of the dominant industry and, often, a single firm. While this was at most a minor problem under socialist planning, Russia's move to a global market economy greatly increases risk, especially for firms that do not specialise in energy production, transportation, mining or metals processing. Natural resources remain extractable regardless of the underlying economic and political systems, so it is unsurprising that natural-resource-based cities would recover relatively quickly.

The second structural weakness is the nature of social-service obligations. Historically, local government and dominant enterprise were closely intertwined, with industries in *monogoroda* providing all sorts of social amenities – indeed, carrying out a range of activities that in more normal environments would be the responsibility of local governments alone.

But local governments in these cities tend to be weak, with limited experience in generating and collecting tax revenue, administering services, and, above all, in activities related to economic development. The *naukogoroda* science cities are to some degree an exception to this but, generally, dominance by a single industry has meant that local governments have been passive administrators rather than active promoters of local economic growth.

Stunted local governments and imbalanced production structures make Russia's *monogoroda* at great risk of continued decline. The problems also feed on one another: the dominant industries have non-productive expenditure obligations that they either shirk (thereby causing deterioration in living standards) or meet (thereby adding to costs and reducing competitiveness). Local government's failure to bring in new industries means that alternative tax bases do not develop. While Kodrzycki and Muñoz (2009) in their study of both 'resurgent' and failing US industrial cities point to the importance of partnership among business, local government and local universities to achieve recovery in old industrial cities, it is clear that effective collaboration of this sort rarely exists in Russia's decaying *monogoroda*.

There is a great deal more work to be done on understanding growth patterns and best-practice strategies in Russia's large industrial cities as well as its *monogoroda*. To the casual observer, there also appears to be considerable variation in local government economic development strategy and administrative quality. The question worthy of investigation concerns the extent to which these efforts on the part of local government make a difference. Kodrzycki and Muñoz (2009) argue that effectiveness of local government can make a huge difference in the outcome of US cities, but we have no idea whether this is true as well in Russia: there may be other, more severely binding constraints.

A final policy-relevant question concerns the adaptation of Russia's cities to market conditions. As discussed in Chapters 3 and 4, Soviet cities misused space egregiously. However, once cities are built, it is difficult to convert industrial space to residential use. But, how difficult? Have Russian cities been successful in converting land from one use to another, in moving heavy industry toward the periphery, in increasing residential and commercial density of central areas? How have market-driven trends been reinforced or disrupted by increasing private automobile ownership? In short, we need to know how land-use, population-density and land-price gradients have evolved in different sorts of cities during the past two decades.

These topics are of interest not only to those who work on Russia and other formerly socialist economies. The Russian experience is something of an unnatural experiment, and gives researchers insight into how rapidly institutions and markets can respond to the removal of exceptional distortions. In addition, there are topics of interest primarily to those who focus on Russia and its economic history. In this regard, we are struck in particular by two themes that merit further research. The first concerns the impact of forced resettlement and the Gulag system on Russian urbanization during the period 1930–1960. The RAN (2001) study indicates that these effects may have been huge, but the impact on particular regions and types of cities remains to be analysed. A second theme is suggested by Gorbachev (2002) in his analysis of rural–urban migration in central Russia during the post-war era. We have concentrated in this paper on the impact of economic change on urbanization. However, Gorbachev's study points to the obverse: population losses and rapid urbanization led to the hollowing-out of parts of rural Russia. This, too, is a story worth exploring.

Russia's urban future will almost certainly include a thriving Moscow conurbation, continued strength of St Petersburg and its regional base, development of secondary modern services and transport centres in some of the regional 'millionaire' cities, and rapid growth of cities



based on metals and minerals extraction and processing. It also will see a set of cities dealing with long-term decline. These will be disproportionately remote (northern or far eastern), from areas with social unrest in the northern Caucasus, formerly closed cities that served the Soviet military-industrial complex, or cities dominated by industries that are not competitive in the global economy. Each of these categories is well represented in Table 15, which lists Russia's cities that lost 5 per cent or more of their population between 2002 and 2010.

**Table 15: Most rapidly declining Russian cities, 2002–2010**

№	City (Город)	Oblast/ Republic/ Krai	2002– 10 growth rate (%)	Population (thousand)		
				1926	1970	2010
1	Nalchik	Kabardino-Balkarskaya Rep.	–12.37	13	146	240
2	Maikop	Rep. Adygei	–10.99	53	110	144
3	Nevinnomyssk	Stavropol krai	–10.30	0	85	118
4	Zlatoust	Chelyabinskaya	–10.26	48	180	175
5	Rybinsk	Yaroslavskaya	–9.96	60	218	201
6	Rubtsovsk	Altai Krai	–9.82	16	145	147
7	Berezniki	Permskaya	–9.54	7	146	156
8	Petropavlovsk-Kamchatskii	Kamchatskaya	–9.34	2	154	180
9	Leninsk-Kuznetskii	Kemerovskaya	–9.20	20	128	102
10	Murmansk	Murmanskaya	–8.69	9	309	308
11	Taganrog	Rostovskaya	–8.62	86	254	258
12	Murom	Vladimirskaya	–8.58	23	99	116
13	Achinsk	Krasnoyarsk krai	–8.24	18	97	109
14	Dzerzhinsk	Nizhegorodskaya	–7.74	9	221	241
15	Nizhnii Tagil	Sverdlovskaya	–7.44	39	378	362
16	Elets	Lipetskaya	–7.35	43	101	108
17	Kovrov	Vladimirskaya	–6.73	27	123	146
18	Prokop'evsk	Kemerovskaya	–6.58	11	274	210
19	Dmitrovgrad	Ul'yanovskaya	–6.49	18	81	122
20	Seversk	Tomskaya	–6.47	0	0	108
21	Pervoural'sk	Sverdlovskaya	–6.39	9	117	124
22	Kamyshin	Volgogradskaya	–6.33	18	97	120
23	Komsomol'sk-na-Amure	Khabarovsk Krai	–6.09	0	218	264
24	Kamensk-Uralskii	Sverdlovskaya	–6.08	5	169	175
25	Angarsk	Irkutskskaya	–5.38	0	203	234
26	Ivanovo	Ivanovskaya	–5.25	111	420	409

Data source: Russian censuses, 2002 and 2010.

The unknown – because it is influenced in large part by political decisions – concerns the extent to which Russia's naturally declining cities will shrink. No government happily presides over cities in decline, but the degree of intervention varies greatly. In Britain or the United States, local governments get development policy advice and some funding, while a

modest level of need- and blight-based transfers ensure that a city's incomes decline gradually rather than precipitously in most cases. Russia in the 1990s experienced huge declines in transfers from the centre and, for some cities, in demand for the goods and services they produced. Transfers have since recovered, and the Putin administration has indicated a commitment to increase these much further. However, rescuing declining cities will divert resources that could be spent developing vibrant areas that ultimately will spur economic growth.

This trade-off is a difficult one, and especially so in Russia, where many cities today (or at least the fact of their large size) reflect past political and military decisions rather than a confluence of economic forces. It seems unlikely that future Russian governments will abandon the nation's declining cities and focus exclusively on prospering areas. The former are too numerous, and may well be more supportive of incumbent governments than the citizens of thriving areas – who, after all, will be younger, more mobile and better educated, and hence less dependent on state transfers. In consequence, the politically based decisions of the Soviet era are likely to be validated and reinforced to some extent in the coming years. Barring a ruthless cold shoulder toward the regions in decline, Russia's past will cast a long shadow into the future, bringing slower urban adjustment and slower economic growth.

## References

- Akhiezer, A.S. 2000. The dialectics of urbanization and migration in Russia. *Общественные науки и современность (Social Sciences & Contemporary Life)* 1 78–89 (in Russian).
- An, Galina, and Becker, Charles M. In press. Uncertainty, insecurity, and emigration from Kazakhstan to Russia. *World Development*.
- Anderson, Barbara A. and Silver, Brian D. December 1986. Infant mortality in the Soviet Union: Regional differences and measurement issues. *Population and Development Review* 12(4) 705–738.
- Andreev, E.M. 1990. Life expectancy and causes of death in the USSR. In Volkov, A.G. (ed.). *Demographic Processes in the USSR*. Nauka, Moscow (in Russian).
- Andreev, E., Scherbov, S. and Willekens, F. 1995. *Sources of Information on the Population of Russia*. Demographic Report 19. Faculty of Spatial Sciences, Groningen, The Netherlands.
- Andreev, E., Scherbov, S. and Willekens F. 1997. The population of Russia: Fewer and older. Demographic Report 22. Faculty of Spatial Sciences, Groningen, The Netherlands.
- Andrusz, G. 1996. Structural change and boundary instability. in Andrusz, Gregory, Michael Harloe, and Ivan Szelenyi (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.
- Andrusz, Gregory 2002. Cooperatives and the Legacy of State Socialism. In: Lane, David (ed.): *The Legacy of State Socialism and the Future of Transformation*. Lanham: Rowman & Littlefield, 2002.
- Andrusz, Gregory, Harloe, Michael and Szelenyi, Ivan (eds) 1996. *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.
- Anthopolos, Rebecca and Becker, Charles M. April 2010. Global infant mortality: correcting for undercounting. *World Development* 38(4): 467–481.
- Avdeev, Alexandre and Monnier, Alain 1995. A survey of modern Russian fertility. *Population: An English Selection* 7: 1–38.
- Axenov, Konstantin, Brade, Isolde and Bondarchuk, Evgenij 2006. *The Transformation of Urban Space in Post-Soviet Russia*. Routledge, London.
- Baltic Palette II 2004. Transport corridor networks summary report. University of Griefswald YepaT project for TACIS. Griefswald, Germany.
- Bater, J.H. 1980. *The Soviet City: Ideal and reality*. Edward Arnold, London.
- Bater, J.H., Amelin, V. and Degtyarev, V. 1998. Market reform and the central city: Moscow revisited. *Post-Soviet Geography* 39 1–18.
- Becker, Charles M. and Bloom, David E. (eds) 1998. Special issue on mortality and demographic change in the former USSR. *World Development* 26(11).

- Becker, Charles M. and Hemley, David D. 1998. Demographic change in the former Soviet Union during the transition period. *World Development* 26(11).
- Belkina, Tatiana D. and Nozdrina, Nadezhda N. 2009. Housing construction: Reality and prospects. *Национальные Проекты (National Projects)* 4(35) (in Russian).
- Benderskaya, Kseniya 2011. Suburbanization in St Petersburg: The socioeconomic ramifications of residential deconcentration in the 21st century. Unpublished BA honors thesis. Program in International Comparative Studies, Duke University, Durham, NC.
- Bertaud, Alain 1996. Spatial structures of central and eastern European cities. In: Andrusz, Gregory, Harloe, Michael and Szelenyi, Ivan (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.
- Bertaud, Alain 2006. The spatial structures of central and eastern European cities: More European than socialist? Unpublished paper, International symposium on post-communist cities. Russian and East European Centre, University of Illinois at Urbana–Champaign, Urbana, IL. See [www.alain-bertaud.com](http://www.alain-bertaud.com).
- Bertaud, Alain and Stephen Malpezzi 2003. The spatial distribution of population in 48 world cities: Implications for economies in transition. Technical paper. World Bank, Washington, DC.
- Bertaud, Alain and Renaud, Bertrand 1997. Socialist cities without land markets. *Journal of Urban Economics* 41 137–151.
- Biryukov, V.A. 1990. Mortality trends and peculiarities in urban areas of the USSR. In: A.G. Volkov (ed.). *Demographic Processes in the USSR*. Nauka, Moscow (in Russian).
- Black, Duncan and Henderson Vernon 2003. Urban evolution in the USA. *Journal of Economic Geography* 3(4) 343–372.
- Blinnikov, Mikhail, Shanin, Andrey, Sobolev, Nikolay and Volkova, Lyudmila 2007. Land market, commercial real estate, and the remolding of Moscow's urban fabric. *Geojournal* 92(10) 53–70.
- Boren, Thomas 2005. *Meeting-places of Transformation: Urban Identity, Spatial Representations and Local Politics in St. Petersburg, Russia*. Department of Geography, Stockholm University.
- Boym, Svetlana, 1994. *Common Places. Mythologies of everyday life in Russia*. Harvard University Press, Cambridge.
- Bradley, Joseph 1985. *Muzhik and Muscovite: Urbanization in late imperial Russia*. University of California Press, Berkeley, CA.
- Bradshaw, Michael J. and Vartapetov, Karen 2003. A new perspective on regional inequalities in Russia. *Eurasian Geography & Economics* 44(6) 403–29.
- Bradye, I., Pterskii, D.S. and Shul'tse, M. November 8–21, 2004. Shifts in the system of urban resettlement [переселение] in Russia in the transformation period. *Demoskop Weekly* (electronic version of *Naselenie i Obshchestvo*) 177–178 (in Russian).
- Brown, D.L. and Schafft, K.A. 2002. Population deconcentration in Hungary during the post-socialist transformation. *Journal of Rural Studies* 18(3): 133–144.

- Brown, David, Fay, Marianne, Lall, Somik V., Wang, Hyoung Gun, and Felkner, John 2008. Death of distance: economic implications of infrastructure improvement in Russia. *EIB Papers* 13(2) 127-146.
- Brunborg, Helge 2003. Mortality projections in Norway. In: Bengtsson, Tommy and Keilman, Nico (eds). *Perspectives on Mortality Forecasting*. Swedish National Insurance Board, Stockholm.
- Buckley, Robert M. and Gurenko, Eugene N. 1997. Housing and income distribution in Russia: Zhivago's legacy. *World Bank Research Observer* 12(1) 19-32.
- Buckley, Robert M. and Gurenko, Eugene N. 1998. Housing demand in Russia: Rationing and reform. *Economics of Transition* 6(1) 197-209.
- Buckley, Robert M. and Kalarickal, Jerry 2005. Housing policy in developing countries: Conjectures and refutations. *World Bank Research Observer* 20(2) 233-257.
- Champion, Tony 2001. Urbanization, suburbanization, counterurbanization and reurbanization. In: Paddison, R. (ed.). *Handbook of Urban Studies*, pp143-161. Sage, London.
- Chapkovskii, Filipp 12 February 2010. 47% of migrants have legal permission to work – 14% falsified documents. Slon.ru, migration discussion, (in Russian). See [www.slون.ru/articles/262494/](http://www.slون.ru/articles/262494/).
- Coolidge, Jacqueline and Kisunko, Gregory 2007. *Survey of Land and Real Estate Transactions in the Russian Federation: Statistical analysis of selected hypotheses*. Working paper 4115. World Bank Policy Research, Washington, DC.
- Cziplaka, John, Gelazis, Nida and Ruble, Blair A. (eds) 2009. *Cities after the Fall of Communism*. Woodrow Wilson Centre Press, Washington, DC.
- Deichmann, Uwe and Henderson, J. Vernon September 2000. *Urban and Regional Dynamics in Poland*. Policy research working paper 2457. World Bank, Washington, DC.
- Demko, George J., Ioffe, Grigory and Zayonchkovskaya, Zhanna (eds) 1999. *Population under Duress: The geodemography of post-Soviet Russia*. Westview, Boulder, CO.
- ESRI, 2003. *ArcGIS 9: Using ArcGIS Geostatistical Analyst*. ESRI, Redlands, CA. See [www.dusk.geo.orst.edu/gis/geostat\\_analyst.pdf](http://www.dusk.geo.orst.edu/gis/geostat_analyst.pdf).
- Evans, Alfred Jr 2000. Economic resources and political power at the local level in post-Soviet Russia. *Policy Studies Journal* 28 114-133.
- Fitzpatrick, Sheila, 1999. *Everyday Stalinism. Ordinary life in extraordinary times: Soviet Russia in the 1930s*. Oxford University Press, New York.
- Florinskaya, Yulia F. The influence of material location and housing conditions on Russian population mobility. *Социологические Обследования (Sociological Investigations)* 6: 140-155, 2008.
- Friebel, Guido and Guriev, Sergei 2000. Should I stay or can I go? Worker attachment in Russia. Discussion paper 2368. CEPR, Washington, DC.

- Friebel, Guido and Guriev, Sergei 2005. Attaching workers through in-kind payments: Theory and evidence from Russia. *World Bank Economic Review* 19(2) 175–202.
- Gaddy, Clifford and Ickes, Barry, no date. Bear traps: Can Russia avoid the pitfalls on the road to sustainable economic growth? Unpublished monograph. CRIFES, Pennsylvania State University, University Park, PA. See [www.crifes.psu.edu/papers/bearcrifes.pdf](http://www.crifes.psu.edu/papers/bearcrifes.pdf).
- Gang, Ira and Stuart, Robert 1999. Mobility where mobility is illegal: Internal migration and city growth in the Soviet Union. *Journal of Population Economics* 12(1) 117–134.
- Gel'man, Vladimir 2003. In search of local autonomy: The politics of big cities in Russia's transition. *International Journal of Urban and Regional Research* 27 48–61.
- Gerasimova, Katerina (2002) Public privacy in the soviet communal apartment. In: Crowley, David and Susan, Reid (eds). *Socialist Spaces: Sites of everyday Life in the Eastern Block*. Berg, New York.
- Gibson, Campbell 2010. *American Demographic History Chartbook: 1790 to 2000*. See [www.demographicchartbook.com](http://www.demographicchartbook.com).
- Gioryachko, M.D. 2006. Heterogeneity of territorial structure as a marker of integration and disintegration processes (based on the example of the Khanty-Mansiysky Autonomous Region). *Regional Research (Региональные Исследования)* 3(9) 16–27 (in Russian).
- Gokhman, V., Lappo, G., Mayergoiz, I. and Mashbits, J. 1976. Geographic aspects of urbanization and its peculiarities in countries with different social systems. *GeoForum* 7(4) 271–283.
- Gol'ts, G.A. 1–25 January 2004. Official according to statistics and real urbanization. *Demoskop Weekly* (electronic version of *Naselenie i Obshchestvo*) 141–142 (in Russian).
- Golubchikov, O. 2004. Urban planning in Russia: Towards the market. *European Planning Studies* 12(2) 229–247. *International Journal of Urban and Regional Research* 29(3) 550–563.
- Gorbachev, O.V., 2002. *Heading to the City: Rural migration in central Russia (1946–1985) and the Soviet model of urbanization (На Пути к Городу: Сельская миграция в Центральной России (1946–1985 гг.) и советская модель урбанизации)*. Moscow Pedagogical State University, Moscow (in Russian).
- Goskomstat SSSR (Государственный Комитет СССР по Статистике: USSR State Committee for Statistics), *Демографический Ежегодник СССР 1990 (USSR Demographic Yearbook 1990)*. Moscow: Finansy i Statistika, 1990 (in Russian).
- Government of the Russian Federation 2007. *Land Code of the Russian Federation: According to the conditions for July 1, 2007*. Prospect, Moscow (in Russian).
- Government of the Russian Federation 2008. *The Concept of Long-term Socioeconomic Development of the Russian Federation for the Period until 2020 (Rossiyskoi Federatsii na period do 2020 goda)* (in Russian). See [www.ifap.ru/ofdocs/rus/rus006.pdf](http://www.ifap.ru/ofdocs/rus/rus006.pdf).
- Hamilton, F.E., Kaliopa, Ian, Andrews, Dimitrovka and Pichler-Milanović, Nataša (eds) 2005. *Transformation of Cities in Central and Eastern Europe: Towards globalization*. United Nations University Press, Tokyo.

Harris, Chuncey D. 1971. Urbanization and population growth in the Soviet Union, 1959–1970. *Geographical Review* 61(1) 102–124.

Haub, Carl 22 April 2011. Russian birth rate continues to rise. *Behind the Numbers* blog. Population Reference Bureau Washington, DC: See [www.prbblog.org/index.php/2011/04/22/russian-birth-rate-continues-to-rise/](http://www.prbblog.org/index.php/2011/04/22/russian-birth-rate-continues-to-rise/).

Heleniak, Timothy 2009. The role of attachment to place in migration decisions of the population of the Russian North. *Polar Geography* 32(1–2) 31–60.

Heleniak, Timothy 2011a. Migration and mobility in Russia. Unpublished background paper for the World Bank program on growth and regional development in Russia. Department of Geography, University of Maryland, College Park, MD.

Heleniak, Timothy 2011b. Mapping Russian census 2002. Unpublished paper. Department of Geography, University of Maryland, College Park, MD.

Heleniak, Timothy 2011c. International comparisons of population mobility in Russia. Unpublished paper. Department of Geography, University of Maryland, College Park, MD.

Herman, Leon M. 1971. Urbanization and new housing construction in the Soviet Union. *American Journal of Economics & Sociology* 30(2) 203–219.

IRP (Institut Regional'noi Politiki) (Regional Policy Institute) 2008. *Single Industry Cities of Russia: How can the crisis be overcome? (Моногорода России: как пережить кризис?)*. IRP, Moscow.

Ioffe, Grigory and Nefedova, Tatyana, 1998. Environs of Russian cities: the case study of Moscow, *Europe-Asia Studies* 50(8) 1325–1356.

Ioffe, Grigory and Nefedova, Tatyana 1999. Rural population change and agriculture. In: Demko, George J., Ioffe, Gregory and Zayonchkovskaya, Zhanna (eds). *Population under Duress: the Geodemography of post-Soviet Russia*, chapter 11, Westview, Boulder, CO.

Ioffe, Grigory and Nefedova, Tatyana 2001. Land use changes in the environs of Moscow. *Area* 33(3) 273–286.

Iontsev, Vladimir and Aleshkovski, Ivan 2006. Determinants of internal migration in contemporary Russia. Poster presented at the European Population Conference (Liverpool). Department of Population, Moscow State University, Moscow.

Iontsev, Vladimir and Ivakhniouk, Irina 2001. International migration of population and development: Contemporary trends in Russia. Paper presented at the 24<sup>th</sup> IUSSP general conference, Salvador, Brazil.

Kagalovsky, Y.K. 1989. The pressing problems of state finances in the USSR. *Communist Economies* 1(4) 447–454.

Kalinina, N.V. 1986. On the question of social guarantees in the provision of housing. In: Shatalin, S.S. (ed.). *System Modeling of the Process of Intensitivation of Social Production (Sistemnoe modelirovanie protsesa intensivatsii obshchestvennogo proizvodstva)*. Institute of Economic Forecasting, USSR Academy of Sciences, Moscow (in Russian).

Kalinina, N.V. 1990. Guaranteeing housing in the USSR: A few suggestions for reforming the housing provision system. Working paper. Institute of Economic Forecasting, USSR Academy of Sciences, Moscow (in Russian).

Kalinina, N.V. 1991. Housing and housing policy in the USSR: A brief description of the system and its current changes. In: Tosics, I., Hegedus, J. and Turner, B. (Eds). *Housing Reform in Eastern Europe*. Routledge, London.

Kannisto, Vaino, Nieminen, Mauri and Turpeinen, Oiva 1999. Finnish life tables since 1751. *Demographic Research* 1 (article 1).

Kinsella, Kevin 1992. Changes in life expectancy 1900–1990. *American Journal of Clinical Nutrition* 55 1196S–1202S.

Kodrzycki, Yolanda and Muñoz, Ana Patricia 2009. *Lessons from Resurgent Cities*. Federal Reserve Bank of Boston, Boston.

Kornai, Janos 1990. The affinity between ownership forms and coordination mechanisms. *Journal of Economic Perspectives* 4(3).

Kornai, Janos, 1993. *The Socialist Economy: The political economy of communism*. Princeton University Press, Princeton, NJ.

Kosareva, N.B. and Stryuk, R. 1993. Housing privatisation in the Russian Federation. *Housing Policy Debate* 4(1) 81–100.

Kosareva, N.B., Pchelinchev, O.S. and Ronkin, G.S. 1990. Toward a housing reform: Analysis and forecast. *Voprosy ekonomiki (Economic Problems)* 8, Moscow.

Lappo, G.M. 7–20, November 2005. The Russian city – a symbiosis of the urban and rural. *Demoskop Weekly* (electronic version of *Naselenie i Obshchestvo*) 221–222 (in Russian).

Lappo, G.M. and Polyak, P.M. 1999. Results of urbanization in Russia at the end of the 20th century. *Mup Poccuu (Russia World)* 4: 35–46 (in Russian).

Lebina, N.B. 2003a. Living quarters: Communism in a separate apartment (*Zhil'e: Kommunizm v otdel'noi kvartire*). In: Lebina, N.B. and Chistikov, A.N. (eds). *Obyvatel' i reformy. Kartiny povsednevnoi zhizni gorozhan*. Dmitrii Bulanin, Sankt-Peterburg (in Russian).

Lebina, N.B. 2003b. Housing: From commune to communal housing (*Zhil'e: ot kommuny k kommunalke*). In: Lebina, N.B. and Chistikov, A.N. (eds). *Obyvatel' i reformy. Kartiny povsednevnoi zhizni gorozhan*. Dmitrii Bulanin, Sankt-Peterburg (in Russian).

Leningrad Oblast 1987. LenNIPI, *General Plan of Leningrad and Leningrad Region until the Year 2005*. Genplan, St Petersburg. See [www.lenobl.ru](http://www.lenobl.ru).

Lewis, Robert A. and Rowland, Richard H. 1969. Urbanization in Russia and the USSR: 1897–1966. *Annals of the Association of American Geographers* 59(4) 776–796.

Livshits, F.D. 1990. The 1937 population census. In: Volkov, A.G. (ed.). *Demographic Processes in the USSR*. Nauka, Moscow (in Russian).

Makhrova, A.G. 2007. Changing housing markets in Russian cities: Case study of Moscow, St. Petersburg and Kazan. *Geographische Rundschau. International Edition* 3(1) 28–35.



Makhrova, A. and Molodikova, I. 2007. Land market, commercial real estate, and the remolding of Moscow's urban fabric. In: Stanilov, K. (ed.). *The Post-Socialist City: Urban form and space transformations in Central and Eastern Europe after socialism*. Springer, Dordrecht, the Netherlands.

Makhrova, A.G. and Tatarinceva, A.A. 2006. The development of gentrification processes and reconstruction of the area of central Moscow in the post-Soviet period. *Regional Research (Региональные Исследования)* 3(9) 28–41 (in Russian).

Makhrova, A.G., Nefedova, T.G. and Treivish, A.I. 2008. *Moscow Oblast Today and Tomorrow: Tendencies and perspectives of spatial development (Московская область сегодня и завтра: тенденции и перспективы пространственного развития)*. Novyi Khronograf, Moscow (in Russian).

Maloyan, G. 2005. The spatial elements of Russian urbanization. *Demoscope Weekly* 209–210 (in Russian).

Maloyan, Garrik, 16 February 2007. Faces of suburbanization in St. Petersburg. *Demoscope Weekly* 99–100 67–81 (in Russian).

Marcuse, Peter 1996. Privatization and its discontents: Property rights in land and housing in the transition in Eastern Europe. In: Andrusz, Gregory, Harloe, Michael and Szelenyi, Ivan (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.

Martin, Terry (2001). *The Affirmative Action Empire: Nations and nationalism in the Soviet union, 1923–1939*. Cornell University Press, Ithaca, NY.

Medvedkov, Olga and Yuri Medvedkov 2005. Moscow in transition. In: Hamilton, F.E., Kaliopa, Ian, Andrews, Dimitrovska and Pichler-Milanović, Nataša (eds). *Transformation of Cities in Central and Eastern Europe: Towards globalization*. United Nations University Press, Tokyo.

Medvedkov, Yuri and Medvedkov Olga 1999. Turning points and trends in Russia's urbanization. In: Demko, George J., Ioffe, Gregory and Zayonchkovskaya, Zhanna (eds). *Population under Duress: the Geodemography of post-Soviet Russia*, chapter 10. Westview, Boulder, CO.

Mikhailova, Tatiana 2011. Looking for multiple equilibria in Russian urban system. Working paper 10/08E. Economics Education and Research Consortium, Moscow.

Mikhailova, Tatiana 2009. Migration and mobility of population in Russia. Unpublished monograph. NES, Moscow.

Mkrtchian, Nikita V. 2009. Analysis of migration mobility in Russia. *SPERO* 11: 149–164.

Mosienko, N.L. 2010. The urban agglomeration as an object of sociological research. *Регион: экономика и социология (Region: Economics & Sociology)* 1 163–178 (in Russian).

National Research Council, 2002. *Successes and Difficulties of Small Innovative Firms in Russian Nuclear Cities*. National Academy Press, Washington, DC.

Nefedova, Tatyana and Treivish, Andrei 2003. Differential urbanization in Russia. *Tijdschrift voor Economische en Sociale Geografie* 94(1) 75–88.

Nezavisimyi Institute Sotsial'noi Politiki (Independent Institute of Social Policy) no date. *Social Atlas of Russia's Regions: Portraits – Leningrad Oblast*. NISP, Moscow (in Russian). See [www.socpol.ru/atlas/portraits/len.shtml](http://www.socpol.ru/atlas/portraits/len.shtml).

Obedkov, A.P., 2002. *The Geography of Cities and Processes of Urbanization in Russia* (География Городов и Процессы Урбанизации в России). Republic of Komi Ministry of Education and the Komi Republican Institute of Educational Development and Manpower Training, Syktyvkar (in Russian).

Osborn, Robert J. 1963. How the Russians plan their cities. *Society* 3(6) 25–30.

Petersburg NIPIGrad (closed joint stock company) 2002. Developing suggestions on definition of the Saint-Petersburg suburb zone borders. ZAO Petersburg NIPIGrad, St Petersburg.

Petersburg NIPIGrad (closed joint stock company) 2007. Concept of the Master Plan of St Petersburg. Unpublished. ZAO Petersburg NIPIGrad, St Petersburg.

Peterburgkomstat, 2004. *St. Petersburg in 2003 (Sankt-Peterburg v 2003 godu)*. Peterburgkomstat, St Petersburg (in Russian).

Pivovarov, Iurii L. 2003. The urbanization of Russia in the twentieth century: Perceptions and reality. *Sociological Research* 42(2) 45–65.

Pokshishevsky, V.V. 1972. Urbanization in the USSR. *GeoForum* 9/72 23–32.

Pokshishevsky, V.V. 1980. Soviet cities: Progress in urbanization in the seventies. *GeoJournal* supplementary issue 1 35–44.

Prokhorov, B.B., Gorshkova, I.V., Shmakov, D.I. and Tarasova, E.V. 2007. *Social Health and Economics* (Общественное здоровье и экономика). MAK Press, Moscow (in Russian). See [www.ecfor.ru/index.php?pid=books/proh04](http://www.ecfor.ru/index.php?pid=books/proh04).

Puzanov, Alexander and Lee, Lisa 1997. Monitoring Russia's experience with housing allowances. *Urban Studies* 34 1789–1818.

RAN (Russian Academy of Sciences) 2001. *The Population of Russia in the 20th Century: Historical Sketches. Vol. 2 1940–1959. (Население России в XX веке – исторические очерки. том 2. 1940–1959 гг.)*. Russian Political Encyclopaedia, Institute of Russian History, Moscow (in Russian).

Reiner, Thomas 1991. Land and housing in the USSR during the Gorbachev years. *Soviet Geography* 30(10) 683–700.

Rosstat (Federal State Statistics Service) 2010. *The Demographic Yearbook of Russia 2010*. Rosstat, Moscow.

Rubins, Noah. Recent development: the demise and resurrection of propiska: freedom of movement in the Russian Federation. *Harvard International Law Journal*; 39 (545), Spring 1998. See [www.nelegal.net/articles/oldpropiska.htm](http://www.nelegal.net/articles/oldpropiska.htm).

- St Petersburg Government 2007. *The Concept for the Socio-economic Development of St Petersburg until the Year 2025 (Kontseptsiya sotsial'no-ekonomicheskogo razvitiya Sankt-Peterburga do 2025 goda)*. St Petersburg (in Russian). See [gov.spb.ru/law?doc&nd=8453965&nh=0&ssect=0](http://gov.spb.ru/law?doc&nd=8453965&nh=0&ssect=0).
- St. Petersburg Government 2008. *St. Petersburg and Leningradskaya Oblast in Figures 2008 (Sankt-Peterburg i Leningradskaya Oblast v Tsifrakh 2008)* St. Petersburg (in Russian).
- St Petersburg Government 2010. *Results of Socio-economic Development Ratings of St Petersburg's Residential Districts in 2008*. PetroStat, St Petersburg (in Russian). See [www.gov.spb.ru/day/statistika/stat](http://www.gov.spb.ru/day/statistika/stat).
- St Petersburg State University November 2007. Interesting Facts: General statistics on the socio-economic situation in St Petersburg (*Lubopytnye fakty*). SPBGU. *Vestnik* 108.
- Savulkin, Lev 2009. Legislation that regulates the migration processes and man-made barriers to mobility. Unpublished. St Petersburg State University, St Petersburg.
- Scherbov, Sergei and van Vianen, Harrie 2001. Marriage and fertility in Russia of women born between 1900 and 1960: a cohort analysis. *European Journal of Population*; 17(3) 281-294.
- Shcherbakova, Ekaterinain 21 February– 6 March 2011. The number of newborns increased to 1790 thousand, and the crude birth rate rose to 12.6%. *Demoscop Weekly* 455–456 (in Russian).
- Senyavskii, A.S. 2003. *Russian Urbanization in the Twentieth Century (Урбанизация России в XX веке)*. Nauka, Moscow (in Russian).
- Simyagin, Yu.A. 1994. Counterurbanization or correction of the 'excesses' of the past? (Russian administrative-territorial transformations, 1989–1992) *Социологические Исследования (Sociological Research)* 10 148–150 (in Russian).
- Smith, David M. 1996. The socialist city. In: Andrusz, Gregory, Harloe, Michael and Szelenyi Ivan (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.
- Soboleva, Svetlana, 1980. *Migration and Settlement 8. Soviet Union*. International Institute for Applied Systems Analysis, Laxenburg, Austria.
- Soo, Kwok Tong 2005. Zipf's law for countries: A cross country investigation. *Regional Science & Urban Economics* 35(3) 239–263.
- Sridhar, Kala Seetharam (2004) *Cities with Suburbs: Evidence from India*. Working paper 23/2004. National Institute of Public Finance and Policy, New Delhi.
- Sternik, G. 2007. Ten years of Russia's real estate market. *Demoscope Weekly* 293–294 (in Russian).
- Sternik, G. 2004. Russia's real estate market at the turn of 2003–2004. *Demoscope Weekly* 189–190 (in Russian).

- Struyk, Raymond J. 1996. Housing privatization in the former Soviet bloc to 1995. In: Andrusz, Gregory, Harloe, Michael and Szelenyi, Ivan (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*. Blackwell, Oxford, UK.
- Struyk, Raymond, Puzanov, Alexander and Kolodeznikova, Anastasia 2001. Administrative practices in Russia's housing allowance programme. *Urban Studies* 38 1045–1067.
- Szelenyi, I. 1996. Cities under socialism and after. In: Andrusz, G. Harloe, M. and Szelenyi, I. (eds). *Cities after Socialism: Urban and regional change and conflict in post-socialist societies*, pp286–317. Blackwell, Oxford, UK.
- Szymanska, Daniela and Matczak, Andrzej 2002. Urbanization in Poland: Tendencies and transformation. *European Urban & Regional Studies* 9(2) 39–46,
- Tasan-Kok, T. (2006) Institutional and spatial change. In: Tsenkova, S. and Nedovic-Budic, Z. (eds). *The Urban Mosaic of Post-Socialist Europe: Space, institutions and policy*. Physica-Verlag, Heidelberg.
- Tiebout, Charles 1956. A pure theory of local expenditures. *Journal of Political Economy* 64(5): 416-424.
- Tosics, Ivan 2005. City development in Central and Eastern Europe since 1990: The impacts of external forces. In: Hamilton, F.E. Kaliopa, Ian, Andrews, Dimitrovska and Pichler-Milanović, Nataša (eds). *Transformation of Cities in Central and Eastern Europe: Towards globalization*. United Nations University Press, Tokyo.
- Trutnev, Eduard K., Valletta, William and Yakoubov, Mikhail O. 2004. Progress and problems in reforming urban land use and development regulation in the Russian Federation. *Urban Studies* 41(7) 1269–1282.
- Tsenkova, S. and Nedovic-Budic, Z. (eds), 2006. *The Urban Mosaic of Post-Socialist Europe: Space institutions and policy*. Physica-Verlag (Springer), Heidelberg.
- Tsirel, S.V. 2010. Urbanization under Stalin and the decline of Soviet science. *Sociological Research* 49(2) 21–36.
- Turok, Ivan and Mykhnenko, Vlad 2006. *Resurgent European Cities?* Working paper 2. Centre for Public Policy for Regions, University of Glasgow, Glasgow.
- Urbanistika (Urbanistics Institute of the RF Ministry of Regional Development) 2000. Enhancing Synergy: Integration of strategic policies of the City of St Petersburg and the Leningrad Region in the context of the Northwest Region. Urbanistics Institute for TACIS, St Petersburg
- Utekhin, Ilya, 2001. *Sketches of Communal Life (Ocherki kommunal'nogo byta)*. OGI, Moscow.
- Van den Berg, L. 1999. The urban life-cycle and the role of market-oriented revitaliation policy: Western Europe. In: *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*, pp539–558. Urban Institute Press, Washington, DC.
- Varivochnik, I.V. 8–21 November 2004. A nation of suburbs: The 'American dream' today. *Demoskop Weekly* (electronic version of *Naselenie i Obshchestvo*) 177–178 (in Russian).

- Vihavainen, Rosa 2005. *Housing in Russia: Policies and practices*. Unpublished. Department of Sociology, University of Helsinki, Helsinki.
- Vishnevskii, Anatolii March–April 2003. Demography of the Stalinist epoch. *Naselenie i Obshchestvo* 70 (in Russian). See [www.infran.ru/vovenko/60years\\_ww2/demogr5.htm](http://www.infran.ru/vovenko/60years_ww2/demogr5.htm).
- Vladimirov, V.V. and Naimark, N.I. 2002. *Problems in the Development of a Theory of Spatial Redistribution in Russia* (Проблемы Развития Теории Расселения в России) (in Russian). URSS, Moscow.
- Volkov, A.G. 1990a. Step toward the truth (in Russian). In: Volkov, A.G. (ed.). *Demographic Processes in the USSR*. Nauka, Moscow.
- Volkov, A.G. 1990b. The 1937 population census: conjectures and truth (Перепись населения 1937 года: вымыслы и правда). In The USSR 1937 Census. History and Materials. *History of Statistics* (История статистики), Issue 3-5 (part II), pp. 6-63 (Moscow: Express-information) (Перепись населения СССР 1937 года. История и материалы. Экспресс-информация. Серия. Выпуск 3-5 (часть II). М., 1990/ С. 6-63)
- Wheatcroft, S.G. 1990. More light on the scale of repression and excess mortality in the Soviet Union in the 1930s. *Soviet Studies* 42(2) 355–367.
- White, Anne 2007. Internal migration trends in Soviet and post-Soviet European Russia. *Europe-Asia Studies* 59(6) 887–911.
- White, Anne 2009. Internal migration, identity and livelihood strategies in contemporary Russia. *Journal of Ethnic and Migration Studies* 35(4) 555–573.
- White, Paul M. 1979. Planning of urban transport systems in the Soviet Union. *Transportation Research – A* 13A 231–240.
- Zakharov, Sergei V. and Ivanova, Elena I. 1996. Fertility decline and recent changes in Russia: On the threshold of the second demographic transition. In: Julie DaVanzo (ed.). *Russia's Demographic Crisis*. RAND, Santa Monica, CA.
- Zayonchkovskaya, Zhanna 1999. Recent migration trends in Russia. In: Demko, George J., Ioffe, Gregory and Zayonchkovskaya, Zhanna (eds). *Population under Duress: The Geodemography of post-Soviet Russia*, chapter 6. Westview, Boulder, CO.
- Zayonchkovskaya, Zhanna A. 2007. Russia's new migration policy: Impressionistic results and new problems (in Russian). Centre for Migration Research. See [www.migrocenter.ru/science/science027.php](http://www.migrocenter.ru/science/science027.php).
- Zayonchkovskaya, Zhanna A. and Nozdrina, Nadezhda N. 2008. Migration experience of the population of Russia's regional centres. *Социологические Исследования* (Sociological Investigations) 4 98–112 (in Russian).
- Zhimbiev, Balzhan 2000. *History of the Urbanization of a Siberian City: Ulan-Ude*. WhiteHorse Press for the University of Cambridge, Mongolian and Inner Asian Studies Institute, Cambridge, UK.

## Internet sources

Ekspert Severo-Zapad 13.12.2004. *V svobodnom padenii*. See [www.expert.ru/sever/current/47stema1.shtml](http://www.expert.ru/sever/current/47stema1.shtml) [20.12.2004].

gazeta.ru 28.2.2005. *Eto strashnee, chem povyshenie kvartplaty*. See [www.gazeta.ru/realty/2005/02/28\\_a\\_246146.shtml](http://www.gazeta.ru/realty/2005/02/28_a_246146.shtml) [24.3.2005].

gazeta.ru 23.3.2005. *Dostupnogo zhil'ya ne bylo, net i ne budet*. [http://www.gazeta.ru/realty/2005/03/23\\_a\\_257655.shtml](http://www.gazeta.ru/realty/2005/03/23_a_257655.shtml) [24.3.2005].

Gerasimova, Katerina 2000. *Istoriya kommunal'noi kvartiry v Leningrade*. See [www.kommunalka.spb.ru/history/history1.htm](http://www.kommunalka.spb.ru/history/history1.htm) [19.10.2004].

Guzanova, Alla 1998. *The Housing Market in the Russian Federation: Privatization and its implications for market development*. See [www.14wds.worldbank.org/servlet/WDS\\_IBank\\_Servlet?pcont=details&eid=000009265\\_3980429111141](http://www.14wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000009265_3980429111141) [24.8.2004].

Höjdestrand, Tova 2003. *The Soviet-Russian Production of Homelessness*. See [www.anthrobase.com/Txt/H/Hoejdestrand\\_T\\_01.htm](http://www.anthrobase.com/Txt/H/Hoejdestrand_T_01.htm) [12.1.2005].

Informacionno-analiticheskoe agentstvo Rway, 2.10.2004. *Rynok dostupnogo zhil'ya. Koncepciya formirovaniya*. IUE (The Institute for Urban Economics). See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [5.1.2005].

Kvartirnyi ryad 2.9.2004. *Overview of Legislation on Housing and Utility Sector in the Russian Federation*. See [www.urbaneconomics.ru/eng](http://www.urbaneconomics.ru/eng) [13.9.2004].

Kvartirnyi ryad 28.10.2004. *Esli u vas ploho topyat – subsidii vam ne poteryat'...* See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [5.1.2005].

Kvartirnyi ryad 27.1.2005. *Zhil'ye – molodym! Kto zab'et pervyi gvozd'?* See [www.moskv.ru/](http://www.moskv.ru/) [31.1.2005].

Mir i dom 26.10.2004. *Kogda v tovarishchah soglas'ya net*. See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [5.1.2005].

Moskovskaya sreda, 22.7.2004. *Dostup k zhil'yu otkryt. Kak utverzhdayut specialisty – dlya treti rossiyan*. See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [4.1.2005].

Nedvizhimost' i stroitel'stvo Peterburga, 28.3.2005: *Porazhenie nemcev v Kolomne*. See [www.estate-gazeta.ru/vdp\\_8219.html](http://www.estate-gazeta.ru/vdp_8219.html) [1.4.2005].

Novaya gazeta 24.3.2005. *A 'Dusmannom' ne probovali?* See [www.novayagazeta.spb.ru/](http://www.novayagazeta.spb.ru/) [24.3.2005].

Novye izvestiya 1.3.2005. *Strana na schetchike*. Politicheskii zhurnal. See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [14.3.2005].

Politicheskii zhurnal 10.3.2005. *Zrya stoyali... Za zhil'em teper' vseh poshlyut na rynek. Ili nademonstraciyu*. See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [14.3.2005]  
*Zhilishchnaya reforma stoit 200 milliardov rublei v god*. See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [14.3.2005].

*Povliyat' na kompaniyu mozžno i nuzhno. Hotya eto trudno.* 2004. See [www.urbaneconomics.ru/publications.php?folder\\_id=104&mat\\_id=438](http://www.urbaneconomics.ru/publications.php?folder_id=104&mat_id=438).

Praim-TASS 20.1.2005. *Mogut li uchastnikov ipoteki vykinut' na ulicu za dolgi? Eshche raz o novykh zhilishchnykh zakonah.* See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [24.1.2005].

RosBiznesKonsalting 24.12.2004. *Sovet Federacii odobril novuyu reakciyu Zhilishchnogo kodeksa Rossiiskoi Federacii.* See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [4.1.2005].

Rossiiskaya gazeta 2.6.2004. *Novyi Zhilishchnyi kodeks prezentuet predstavitel' pravitel'stva v Gosdume Sergei Kruglik.* See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [21.12.2004].

Rossiiskaya gazeta 1.3.2005. *Ipoteka obretaet real'nye kontury.* See [www.rg.ru/2005/03/01/zhilishnyj-kodeks.html](http://www.rg.ru/2005/03/01/zhilishnyj-kodeks.html) [20.3.2005].

Rossiiskaya gazeta 2.3.2005. *Zhilishchnyi kodeks: den' pervyi.* See [www.rg.ru/2005/03/02/zjilye-kodeks.html](http://www.rg.ru/2005/03/02/zjilye-kodeks.html) [20.3.2005].

Rossiiskaya gazeta 11.3.2005. *Bednost' ne porok, a shans na novosel'e.* See [www.rg.ru/2005/03/11/zhiliyo.html](http://www.rg.ru/2005/03/11/zhiliyo.html) [20.3.2005].

*The St Petersburg Times* 1.2.2005. *Khrushchyovki' Housing Gets 13bn Make-Over.* See [www.sptimes.ru/archive/times/1040/news/b\\_14725.htm](http://www.sptimes.ru/archive/times/1040/news/b_14725.htm) [2.2.2005].

*The St Petersburg Times* 13.1.2011. *City could lose Gazprom taxes* See [www.sptimes.ru/index.php?action\\_id=2&story\\_id=33392](http://www.sptimes.ru/index.php?action_id=2&story_id=33392) [2.2.2005].

'Stroim vmeste': *Zhilishchnyi kooperativ: istoricheskaya spravka.* See [www.gck.ru/about/history.act](http://www.gck.ru/about/history.act) [3.11.2004].

Struyk, Raymond, Lykova, Tatiana, Petrova, Ekaterina and Sivaev, Sergei (2003). *Participation in a Decentralized Housing Allowance Program in a Transition Economy.* See [www.urbaneconomics.ru/eng](http://www.urbaneconomics.ru/eng) [13.9.2004].

'Svoi dom' – Ipotechno-hakopitel'naya programma. See [www.svoy-dom.info/](http://www.svoy-dom.info/) [12.11.2004].

UNECE (United Nations Economic Commission for Europe) 2004. *Country Profiles on the Housing Sector – Russian Federation.* United Nations, Geneva. See [www.unece.org/env/hs/cph/russia/welcome.htm](http://www.unece.org/env/hs/cph/russia/welcome.htm) [15.10.2004].

ZhSK 'Vash Vybor' 2004. See [www.ycvv.spb.ru/](http://www.ycvv.spb.ru/) [12.11.2004].

Zhurnal ZhKH 11.3.2005. *Novyi poryadok upravleniya mnogokvartirnymi domami.* See [www.urbaneconomics.ru/publications](http://www.urbaneconomics.ru/publications) [31.3.2005].

## **Laws**

Zakon o privatizatsii zhilishchnogo fonda v Rossiiskoi Federatsii, N 1541–1, 4.7.1991.

O tovarishchestvakh sobstvennikov zhil'ya. Federal'nyi zakon, N 72–F3, 15.6.1996.

O vvedenie v deistvie Zhilishchnogo kodeksa Rossiiskoi Federacii, N 189–F3, 29.12.2004.

Zhilishchnyi kodeks Rossiiskoi Federatsii, N 188–F3, 29.12.2004.

## Recent Publications by IIED's Human Settlements Group

### **WORKING PAPER SERIES**

All working papers can be downloaded at no charge. For a complete list, see <http://www.iied.org/human-settlements/group-publications/publications>

### **URBAN POVERTY**

[Urbanization, gender and urban poverty: paid work and unpaid carework in the city](#) – Cecilia Tacoli (2012)

[Engaging with the urban poor and their organizations for poverty reduction and urban governance](#): An issues paper for the United Nations Development Programme - David Satterthwaite, Diana Mitlin and Sheela Patel (2011)

[Appropriateness of the Sri Lanka poverty line for measuring urban poverty: The case of Colombo](#) - Kulasabanathan Romeshun and Geetha Mayadunne (2011)

[Capital, capacities and collaboration: the multiple roles of community savings in addressing urban poverty](#) – Diana Mitlin, David Satterthwaite and Sheridan Bartlett (2011)

[Understanding pro-poor housing finance in Malawi](#) - Mtafu A.Z. Manda, Siku Nkhoma and Diana Mitlin (2011)

[Interrogating Urban Poverty Lines – the Case of Zambia](#) - Miniva Chibuye (2011)

[Assessing the Scale and Nature of Urban Poverty in Buenos Aires](#) – Jorgelina Hardoy with Florencia Almansi (2011)

[Broadening Poverty Definitions in India: Basic Needs in Urban Housing](#) - S. Chandrasekhar and Mark R. Montgomery (2010)

[Poverty lines in Greater Cairo: Underestimating and Misrepresenting Poverty](#) – Sarah Sabry (2009)

[Poverty Lines and Lives of the Poor: Underestimation of Urban Poverty, the case of India](#) – Meera Bapat (2009)

[Community Finance: the News from Asia and Africa](#). Report of a workshop held in November 2007 – Asian Coalition for Housing Rights (2008)

[Urban Poor Funds; Development by the People for the People](#) – Diana Mitlin (2008)

[Building Homes, Changing Official Approaches: the Work of Urban Poor Federations and their Contributions to Meeting the Millennium Development Goals in Urban Areas](#) – Celine D'Cruz and David Satterthwaite (2005)

[Catalysing Pro-Poor Development; the Role of Savings and Savings Organizations: Key Issues arising from an International Workshop on Housing Finance and Poverty](#) – Diana Mitlin (2005)

[The Under-estimation of Urban Poverty in Low- and Middle-income Nations](#) – David Satterthwaite (2004)



## RURAL–URBAN

[International migration and over-indebtedness: the case of Filipino workers in Italy](#) - Charito Basa, Violeta De Guzman and Sabrina Marchetti (2012)

[Climate change, adaptation strategies and mobility: evidence from four settlements in Senegal / Changements climatiques, stratégies d'adaptation et mobilités. Evidence à partir de quatre sites au Sénégal](#)- Mohamadou Sall, Al Assane Samb, Serigne Mansour Tall and Aly Tandian (2011)

[Rural migration in Bolivia: the impact of climate change, economic crisis and state policy](#) - Carlos Balderrama Mariscal, Nico Tassi, Ana Rubena Miranda, Lucía Aramayo Canedo, Iván Cazorla (2011)

[Not only climate change: mobility, vulnerability and socio-economic transformations in environmentally fragile areas in Bolivia, Senegal and Tanzania](#) – Cecilia Tacoli (2011)

[International Migration, Social Change and Local Governance in Ourossoqui and Louga, Two Small Urban Centres in Senegal](#) – Mohamadou Sall, Serigne Mansour Tall, Aly Tandian, Al Assane Samb, Abdou Khadre Sano and Souleymane Sylla (2010)

[Migration, Local Development and Governance in Small Towns: Two Examples from the Philippines](#) – Charito Basa and Lorna Villamil with Violeta de Guzman (2009)

[Migration and Small Towns in China: Power Hierarchy and Resource Allocation](#) – Bingqin Li and Xiangsheng An (2009)

[Migration and Small Towns in Pakistan](#) – Arif Hasan and Mansoor Raza (2009)

[Urbanization and Rural Development in Viet Nam's Mekong Delta: Livelihood Transformations in Three Fruit Growing Settlements](#) - Hoang Xuan Thanh, Thi Thu Phuong Dinh, Thu Huong Nguyen and Cecilia Tacoli (2008)

[Toward Synergistic Rural–Urban Development: the Experience of the Rural–Urban Partnership Programme \(RUPP\) in Nepal](#) – S.F. Momen (2006)

[Rural-Urban Migration in China: Policy Options for Economic Growth, Environmental Sustainability and Equity](#) – Gordon McGranahan and Cecilia Tacoli (2006)

[Livelihood Diversification and Rural–Urban Linkages in Vietnam's Red River Delta](#) – Anh, Dang Nguyen, Hoang Xuan Thanh and Cecilia Tacoli (2005)

[Rural–Urban Change, Boundary Problems and Environmental Burdens](#) – Gordon McGranahan, David Satterthwaite and Cecilia Tacoli (2004)

## WATER AND SANITATION

[Groundwater, Self-supply and Poor Urban Dwellers: A Review with Case studies of Bangalore and Lusaka](#) – Jenny T. Gronwall, Martin Mulenga and Gordon McGranahan (2010)

[Urban Water and Sanitation in Ghana: How Local Action is Making a Difference](#) - Kanton I. Osumanu, Lukman Abdul-Rahim, Jacob Songsore and Farouk R. Braimah with Martin Mulenga (2010)

[Improving Water and Sanitation Provision in Buenos Aires: What can a Research-oriented NGO do?](#) – Florencia Almansi, Ana Hardoy and Jorgelina Hardoy (2010)

[Water Service Provision for the Peri-urban Poor in Post-conflict Angola](#) – Allan Cain and Martin Mulenga (2009)

[Water and Sanitation in Urban Malawi: can the Millennium Development Goals be Met? A Study of Informal Settlements in Three Cities](#) – Mtafu A. Zeleza Manda (2009)

[Lessons from Karachi: The role of Demonstration, Documentation, Mapping and Relationship Building in Advocacy for Improved Urban Sanitation and Water Services](#) – Arif Pervaiz, Perween Rahman and Arif Hasan (2008)

[Local Water and Sanitation Companies and the Urban Poor](#) – Gordon McGranahan and David Lloyd Owen (2006)

[Informal Water Vendors and the Urban Poor](#) – Marianne Kjellén and Gordon McGranahan (2006)

[Governance and Getting the Private Sector to Provide Better Water and Sanitation Services to the Urban Poor](#) – Gordon McGranahan and David Satterthwaite (2006)

## **URBAN CHANGE**

[Africa's Urban Transition and the Role of Regional Collaboration](#) – Gordon McGranahan, Diana Mitlin, David Satterthwaite, Cecilia Tacoli and Ivan Turok (2009)

[The Transition to a Predominantly Urban World and its Underpinnings](#) – David Satterthwaite (2007)

[Urban Environments, Wealth and Health: Shifting Burdens and Possible Responses in Low and Middle-income Nations](#) – Gordon McGranahan (2007)

[Outside the Large Cities: the Demographic Importance of Small Urban Centres and Large Villages in Africa, Asia and Latin America](#) – David Satterthwaite (2006)

[A Pro-poor Urban Agenda for Africa: Clarifying Ecological and Development Issues for Poor and Vulnerable Populations](#). A Report for the Ford Foundation - Joel Bolnick, Happy M Kayuni, Richard Mabala, Gordon McGranahan, Diana Mitlin, Sikhulile Nkhoma, John Oucho, Amal Sabri, Sarah Sabry, David Satterthwaite, Mark Swilling, Cecilia Tacoli, Richard I C Tumbulasi and Mirjam van Donk (2006)

## **CLIMATE CHANGE AND CITIES**

[Community-driven Disaster Intervention: Experiences of the Homeless People's Federation Philippines, Incorporated \(HPFPI\)](#) – Jason Christopher Rayos Co (2010)

[Towards Pro-poor Adaptation to Climate Change in the Urban Centres of Low and Middle-income Countries](#) – Caroline Moser and David Satterthwaite (2008)

[Climate Change and Urban Children: Impacts and Implications for Adaptation in Low and Middle-Income Nations](#) – Sheridan Bartlett (2008)

[Adapting to Climate Change in Urban Areas: the Possibilities and Constraints in Low- and Middle-income Nations](#) – David Satterthwaite, Saleemul Huq, Hannah Reid, Mark Pelling and Patricia Romero Lankao (2007)

## **URBANIZATION & EMERGING POPULATION** (Joint series with the United Nations Population Fund)

[Urbanisation and Development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses](#) – Ivan Turok (2012)

[Urbanization, gender and urban poverty: paid work and unpaid carework in the city](#) – Cecilia Tacoli (2012)

[Trends and Processes of Urbanisation in India](#) - Amitabh Kundu (2011)

[China's Post-Reform Urbanization: Retrospect, Policies and Trends](#) - Anthony G.O. Yeh, Jiang Xu and Kaizhi Liu (2011)

[Brazil's Early Urban Transition: What can it Teach Urbanizing Countries?](#) – George Martine and Gordon McGranahan (2010)

[Planning for High Density in Low-income Settlements: Four Case Studies from Karachi](#) – Arif Hasan, Asiya Sadiq and Suneela Ahmed (2010)

[The Food Price Crisis and Urban Food \(in\)security](#) – Marc J. Cohen and James L. Garrett (2009)

[Is Urbanization Contributing to Higher Food Prices?](#) – Jesper Stage, Jørn Stage and Gordon McGranahan (2009)

## **OTHER HUMAN SETTLEMENTS PUBLICATIONS**

[Assessing the Costs of Adaptation to Climate Change. A Review of the UNFCCC and Other Estimates](#) - Martin Parry, Nigel Arnell, Pam Berry, David Dodman, Samuel Fankhauser, Chris Hope, Sari Kovats, Robert Nicholls, David Satterthwaite, Richard Tiffin and Tim Wheeler (2009)

[Population Dynamics and Climate Change](#) edited by José Miguel Guzmán, George Martine, Gordon McGranahan, Daniel Schensul and Cecilia Tacoli (2009) (A joint UNFPA-IIED publication)

## **EARTHSCAN BOOKS**

[Adapting Cities to Climate Change: Understanding and Addressing the Development Challenges](#), edited by Jane Bicknell, David Dodman and David Satterthwaite (2009)

[The New Global Frontier: Urbanization, Poverty and Environment in the 21st Century](#), edited by George Martine, Gordon McGranahan, Mark Montgomery and Rogelio Fernández-Castilla (2008)

[Scaling Urban Environmental Challenges: From Local to Global and Back](#), edited by Peter J Marcotullio and Gordon McGranahan (2007)

[The Earthscan Reader on Rural–Urban Linkages](#), edited by Cecilia Tacoli (2006)

[Water and Sanitation in the World's Cities 2006: Meeting Development Goals in Small Urban Centres](#), prepared for UN–Habitat by IIED (2006)

[Empowering Squatter Citizen: Local Government, Civil Society and Urban Poverty Reduction](#), edited by Diana Mitlin and David Satterthwaite (2004)

[Water and Sanitation in the World's Cities: Local Action for Global Goals](#), UN–Habitat Report prepared by Gordon McGranahan and David Satterthwaite (2003)

[Air Pollution and Health in Rapidly Developing Countries](#), edited by Gordon McGranahan and Frank Murray (2003)

[The Citizens at Risk: From Urban Sanitation to Sustainable Cities](#) – Gordon McGranahan, Pedro Jacobi, Jacob Songsore, Charles Surjadi and Marianne Kjellén (2001)

[Environmental Problems in an Urbanizing World: Finding Solutions for Cities in Africa, Asia and Latin America](#) – Jorge E Hardoy, Diana Mitlin and David Satterthwaite (2001)

[Cities for Children: Children's Rights, Poverty and Urban Management](#) – Sheridan Bartlett, Roger Hart, David Satterthwaite, Ximena de la Barra and Alfredo Missair (1999)

[The Earthscan Reader in Sustainable Cities](#), edited by David Satterthwaite (1999)

[The Environment for Children](#) – David Satterthwaite, Roger Hart, Caren Levy, Diana Mitlin, David Ross, Jac Smit and Carolyn Stephens (1996)

[Squatter Citizen: Life in the Urban Third World](#) – Jorge E Hardoy and David Satterthwaite (1989)

## **ENVIRONMENT AND URBANIZATION**

A twice-yearly journal published since 1989, this is one of the most cited and widely distributed international journals on urban issues. Each issue has a special theme and includes 9–14 papers and some include a guide to the literature on that theme. It also has a special section of papers on climate change and cities (since 2007), profiles of innovative NGOs (in some issues) and Book Notes – which includes summaries of new books, research reports and newsletters and how these can be obtained (including those in Spanish, French and Portuguese).

For more details, see <http://www.environmentandurbanization.org/>

The on-line edition is at <http://eandu.sagepub.com/> The full text of all papers in all issues (from the first issue in 1989) are available on-line at this site and all but the issues from the last two years are available at no charge. From this site, subscriptions and back issues can be purchased and searches made. There is also a list with the theme of each issue.

*Environment and Urbanization Briefs*: A five page summary of each issue of Environment and Urbanization is available in print and electronically; to receive this, e-mail

Hannah.Bywaters@iied.org. All Briefs can be downloaded from  
<http://pubs.iied.org/search.php?s=EUB>

HOW TO OBTAIN WORKING PAPERS: Printed versions can be obtained from Earthprint Ltd, PO Box 119, Stevenage, Hertfordshire SG1 4TP, UK; T: +44 1438 748 111; F: +44 1438 748 844; E-mail: [customerservices@earthprint.com](mailto:customerservices@earthprint.com); Web: [www.earthprint.com](http://www.earthprint.com) for US\$ 20 each plus postage and packing. All working papers are free to download at [www.iied.org](http://www.iied.org).

HOW TO OBTAIN BOOKS: These are available from Earthscan Publications, 8–12 Camden High Street, London NW1 0JH, UK; E-mail: [earthinfo@earthscan.co.uk](mailto:earthinfo@earthscan.co.uk); Web: [www.earthscan.co.uk](http://www.earthscan.co.uk); also available in bookstores. In the USA, available from Earthscan, 22883 Quicksilver Drive, Sterling, VA 20166-2012, USA. The Earthscan website also has details of Earthscan representatives and agents in all other countries.

HOW TO OBTAIN ENVIRONMENT AND URBANIZATION: Since 2006, *Environment and Urbanization* has been published by Sage Publications, and subscriptions and back issues can be ordered from them at: <http://eau.sagepub.com/>

Order on-line for:

The Americas: <http://www.sagepub.com/journalsSubscribe.nav?prodId=Journal201733>

Rest of the world: <http://www.sagepub.co.uk/journalsSubscribe.nav?prodId=Journal201733>

Free subscriptions are available to NGOs and teaching/training institutions in Africa and in low- and middle-income countries in Asia and Latin America that have difficulty obtaining foreign exchange; contact IIED ([eandu@iied.org](mailto:eandu@iied.org)).

## **IIED – HUMAN SETTLEMENTS GROUP** **UNFPA – POPULATION AND DEVELOPMENT BRANCH**

**IIED** is an independent, non-profit organization promoting sustainable patterns of world development through collaborative research, policy studies, networking and knowledge dissemination. The Human Settlements Group works with partners to help establish better governed, more sustainable cities in low- and middle-income nations, able to offer secure shelter, access to services, and reduced vulnerability to environmental hazards. The Group publishes the international journal *Environment and Urbanization*, Working Paper Series and books on urban environment and development issues, as well as a wide variety of articles in academic and other journals.

**UNFPA**, the United Nations Population Fund, is an international development agency that promotes the right of every woman, man and child to enjoy a life of health and equal opportunity. UNFPA supports countries in using population data for policies and programmes to reduce poverty and to ensure that every pregnancy is wanted, every birth is safe, every young person is free of HIV/AIDS, and every girl and woman is treated with dignity and respect.

This working paper has been produced as part of a cooperative work programme between UNFPA and IIED on urbanization and emerging population issues.



International Institute  
for Environment and  
Development  
3 Endsleigh Street  
London WC1H 0DD  
United Kingdom  
Tel: +44 207 388 2117  
Fax: +44 207 388 2826  
Email: [humans@iied.org](mailto:humans@iied.org)  
<http://www.iied.org>

