Chapter 4:
Socio-Demographic Trends in Siberia
The result of socio-economic consequences is manifested in demographic changes. Unfavourable demographic situation results in detrimental circumstances for the progress of nation such as a decline in the size of the working population, a drastic increase in the costs of providing social support to the networking population, loss of defense potential and disruption of the geopolitical balance.

This chapter focuses on the demographic factors and their implications on the Siberian societies. It can be seen that phenomena like depopulation affect Russia and amplify in the case of Siberia, while there are other socio-demographic phenomena like deterioration of quality of life of indigenous people peculiar to Siberia.

**Demographic Situation in Russia**

Geographically Russia is a large country even after its disintegration. It is regularly slipping positions on the population tally. Soviet Union had ranked third in population, Russia now drops lower every year, declining from sixth place in 2001 to seventh in 2002 and eighth in 2003 to ninth (after Nigeria) in 2004.

With respect to mortality, Russia is markedly inferior to other countries, even worse in number of countries of the Commonwealth of Independent States (CIS) (Grebnev, 2004).

In 1995, the nation ranked 135th in the world in male life expectancy, among women it was the 100th.

Rising alcoholism accompanied by the Russian pattern of drinking has been identified in studies as a major contributory factor to the decline in male life expectancy.

An anti-alcohol campaign spearheaded by Mikhail Gorbachev in the second half of the 1980s led to a slight improvement in male mortality rates (in the age group 15-64) but by 1994 twice as many Russian men in the same age-group died as in 1986 (Bacon and Wyman 2006).
Graph 3. Estimates of mid year population 1994-2003 in 1000's

Mid Year Population estimates: 1999-2003

Source: Russian Federation- Demographic Year Book 55th issue, Department of Economic & Social Affairs.

Table 5. Region-wise Population of Russia:

<table>
<thead>
<tr>
<th></th>
<th>145,166,731</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Russia</td>
<td>106,003,702</td>
</tr>
<tr>
<td>Asian</td>
<td>39,129,729</td>
</tr>
</tbody>
</table>

4 federal districts of The European part of Russia constitute 74% of population of Russia. While the bulk of area in the Asian part of Russia (3 federal districts) houses on 26% of its population.

**Table 6. Region wise Population Growth rates**

In 2006, the regions with the highest population growth rate were

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chechenya</td>
<td>1.79%</td>
</tr>
<tr>
<td>Aginsky Buryatia</td>
<td>1.19%</td>
</tr>
<tr>
<td>Ingushetia</td>
<td>1.16%</td>
</tr>
<tr>
<td>Yamalo-Nenets</td>
<td>0.73%</td>
</tr>
<tr>
<td>Daghestan</td>
<td>0.65%</td>
</tr>
<tr>
<td>Yugra</td>
<td>0.62%</td>
</tr>
<tr>
<td>Tyumen</td>
<td>0.48%</td>
</tr>
<tr>
<td>Altay Republic</td>
<td>0.45%</td>
</tr>
<tr>
<td>Tyva Republic</td>
<td>0.30%</td>
</tr>
<tr>
<td>Moscow</td>
<td>0.22%</td>
</tr>
</tbody>
</table>

The regions with lowest growth rate were

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koryakia</td>
<td>(-2.68%)</td>
</tr>
<tr>
<td>Magadan</td>
<td>(-1.78%)</td>
</tr>
<tr>
<td>Evenkia</td>
<td>(-1.68%)</td>
</tr>
<tr>
<td>Taymiria</td>
<td>(-1.60%)</td>
</tr>
<tr>
<td>Pskov</td>
<td>(-1.56%)</td>
</tr>
<tr>
<td>Smolensk</td>
<td>(-1.25%)</td>
</tr>
<tr>
<td>Tambov</td>
<td>(-1.22%)</td>
</tr>
<tr>
<td>Tula</td>
<td>(-1.21%)</td>
</tr>
<tr>
<td>Novgorod</td>
<td>(-1.17%)</td>
</tr>
<tr>
<td>Kurgan</td>
<td>(-1.16%)</td>
</tr>
</tbody>
</table>

Ethnic Composition of Russia:

Results of the most recent census in 2002, counted over 160 separate ethnic groups. Of the total populations of 145 million, 80 per cent are Russians. Six other ethnic groups had populations of more than a million. Tatars number over 5 million with Ukrainians not far behind. Bashkirs and Chuvash number just under million each and the Chechens and Armenians just over a million mark. Another 11 groups consist of more than 50,000 people each. When the Soviet Union ceased to exist at the end of 1991 more than 25 million ethnic Russians suddenly found themselves living abroad, in one of the 14 non-Russian Soviet republics leaving each of the new nations a mélange of ethnicities, family affiliations and identities. Across the non-Russian republics of the Soviet Union, Russians made up 16 per cent of the population as a whole, 24 per cent of the urban population and 30 per cent of the population in capital cities.

Diagram 4. Ethnic Composition of Russia

Graph 4. Age-Wise Sex Ratio:


According to 2006 estimates, the sex ratio is 0.86 male(s) per female. The age-wise distribution of the population shows that the male to female ratio declines significantly after the age-group of 64 years.

Graph 5. Age-wise distribution of population of Russia:

Table 7. Significant Demographic Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>9.95 births/1,000 population</td>
</tr>
<tr>
<td>Death rate</td>
<td>14.65 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>15.13 deaths/1,000 live births</td>
</tr>
<tr>
<td>Net migration rate</td>
<td>1.03 migrant(s)/1,000 population</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>-0.39%</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Year</th>
<th>LIVE BIRTHS</th>
<th>DEATHS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Increase</td>
</tr>
<tr>
<td>1999</td>
<td>1,214,689</td>
<td>8.3</td>
</tr>
<tr>
<td>2000</td>
<td>1266800</td>
<td>8.6</td>
</tr>
<tr>
<td>2001</td>
<td>1,311,604</td>
<td>9</td>
</tr>
<tr>
<td>2002</td>
<td>1396967</td>
<td>9.6</td>
</tr>
<tr>
<td>2003</td>
<td>1,477,301</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Variations in Russian Demography since the Soviet-Disintegration

Since the disintegration in the 1990s the socio-demography of Russia has undergone variations. In subsequent years the depopulation problem has worsened significantly. In 1988, a woman in Soviet Union had an average of 2.2 children, while according to available 2006 data, she has only 1.2 children. The sharp drop in the birth rate, the drastic rise in the death rate especially among men and the onset of depopulation are precisely tied in the time to the economic crisis of the 1990s. certain sociological surveys that were conducted in that period including those by VTsIOM (the Russian Center For Public Opinion Research) have confirmed that whereas earlier people named the housing problem as the factor that limited the desired number of children in the family, in the first half of the 1990s, people increasingly cited the decline in living standards, unemployment and other factors which are directly related to the economic crisis.

With 25 million ethnic Russians finding themselves abroad in the early 1990s identity related- dilemmas were widespread. They were worried that now they were part of a small country with an uncertain future. Many Russians returned to Russia in 1990s in a reversal of trend hundred of years of expansion outwards. Between 1989 –the date of last census and 2001, there was a total immigration to Russia from the other former Soviet republics of more than five and a half million people, and a net immigration of just under four million. The phenomena peaked in 1994.

In the soviet era, citizens traveling between regions were required to carry internal passports and had to acquire residence permits to move to most of the major cities. Even in the case where such permission was not required, residence registration was a precondition for receiving social services. There were no penalties for people failing to register their residence carried with it many disadvantages as unregistered residents were unable to receive services for residents, pensions, medical services etc. The passport system, which had been applied in the Soviet Union was eliminated, and this relieved the migration process. The elimination of limitations on the flow of interregional population undoubtedly had an effect on this phenomenon (Kumo, 2007). After the break up of the Soviet Union, freedom of movement was enshrined in the Russian constitution and federal law now contains no restrictions on migration. Control over citizen’s internal
passports, residential registration (propiska) and visas for foreigners was temporarily loosened in the immediate post-collapse period (1992-4), making it easy for citizens to relocate and emigrate and simple for foreign entry. The Russian authorities during the 1990s tightened immigration controls and transferred the responsibility in 2002 to Ministry of Interiors. Net immigration of four million went someway in offsetting the decline in population caused by emigration, low birth rates and high death rates (Bacon and Wyman, 2006). Since then the restrictions have become stricter. The legal right to move is enshrined in the constitution, Russians are still not free to relocate wherever they would like to live and work. Residence restrictions in cities like Moscow, together with resource constraints, poorly developed job and housing markets, and the absence of social safety nets, obstruct personal mobility.

Graph 6. Fertility Rates in Russia


37 Source: Russian Federation- Demographic Year Book 55th issue, Department of Economic & Social Affairs.
When the Soviet Union disintegrated in 1991, infant mortality was 17.8 per thousand live births, but in 1993, it had risen to 19.9 and in 2001, it rose again to 20.1. Because of the slowdown in fertility during the transition period, Russia as a whole and many of its regions are "aging" quite rapidly. Post-Soviet fertility rates now typically no longer compensate for aging populations. New market barriers, such as the cost of housing, food, and other essentials combine with the old bureaucratic barriers (such as the continued use of residency permits in Moscow) hinder migration. For these reasons many migrants from the North, from conflict zones, and from CIS countries have had to opt for destinations that were both poor and cheap.

The birth rate which was already low has fallen sharply since the final years of the Soviet Union: in 1990 it was 13.4 per thousand people, but by 1999, it declined to 8.3.

The inevitable acceleration in population decline reflects the narrowing of the reproductive base (the number of people of reproductive age) and the increase in the reproductive losses (the number of deaths) as a result of rapid rise in the average age.

Recovery

Although there was a slowdown in positive economic trends in 2001, on the whole, a certain amount of progress was made in certain sectors in 1999-2001. There is a persistent trend towards natural population loss, the result of the number of deaths exceeding the number of births.

In terms of natural increase (loss), however, positive changes were noted in comparison with the two preceding years.

In the first half of 2001 the national population loss came to 484,900, verses 522,700 in the first half of 2000. Compared with the corresponding period in 2000 the number of births rose to 3.4 percent, while the number of deaths fell by 0.6 percent.

The positive changes in the demographic changes result both from economic recovery and from structural changes in the make up of the population (Kashepov, 2004).
<table>
<thead>
<tr>
<th>Year</th>
<th>Population at the End of Period in 1,000s</th>
<th>Annual Rate of Increase Per 1,000</th>
<th>Total Increase in 1,000s</th>
<th>Natural Increase in 1,000s</th>
<th>Net Immigration in 1,000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-1955</td>
<td>112,266</td>
<td>17.5</td>
<td>9,321</td>
<td>9,160</td>
<td>161</td>
</tr>
<tr>
<td>1956-1960</td>
<td>120,766</td>
<td>14.7</td>
<td>8,500</td>
<td>9,515</td>
<td>-1,015</td>
</tr>
<tr>
<td>1961-1965</td>
<td>127,189</td>
<td>10.4</td>
<td>6,423</td>
<td>7,067</td>
<td>-644</td>
</tr>
<tr>
<td>1966-1970</td>
<td>130,704</td>
<td>5.5</td>
<td>3,515</td>
<td>4,180</td>
<td>-665</td>
</tr>
<tr>
<td>1971-1975</td>
<td>134,690</td>
<td>6</td>
<td>3,986</td>
<td>4,180</td>
<td>-195</td>
</tr>
<tr>
<td>1976-1980</td>
<td>139,165</td>
<td>6.6</td>
<td>4,338</td>
<td>3,730</td>
<td>607</td>
</tr>
<tr>
<td>1981-1985</td>
<td>144,080</td>
<td>7</td>
<td>4,807</td>
<td>3,939</td>
<td>869</td>
</tr>
<tr>
<td>1986-1990</td>
<td>148,543</td>
<td>6.1</td>
<td>4,707</td>
<td>3,649</td>
<td>1,058</td>
</tr>
<tr>
<td>1991</td>
<td>148,704</td>
<td>1.1</td>
<td>161</td>
<td>104</td>
<td>57</td>
</tr>
<tr>
<td>1992</td>
<td>148,673</td>
<td>-0.2</td>
<td>-31</td>
<td>-207</td>
<td>176</td>
</tr>
<tr>
<td>1993</td>
<td>148,366</td>
<td>-2.1</td>
<td>-308</td>
<td>-738</td>
<td>430</td>
</tr>
<tr>
<td>1994</td>
<td>148,306</td>
<td>-0.4</td>
<td>-60</td>
<td>-870</td>
<td>810</td>
</tr>
</tbody>
</table>

Source:
May be that these as yet rather small positive changes in the economy and in the living standards have proved to be sufficient to hold back the second wave of worsening demographic indicators set off by the financial crisis of 1998 (the first and main wave of demographic storm came between the beginning of the 1990s and 1994).


<table>
<thead>
<tr>
<th>Indicators</th>
<th>Natural Population movement (in thousands)</th>
<th>Rates per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births</td>
<td>623.5</td>
<td>644.2</td>
</tr>
<tr>
<td>Deaths</td>
<td>1146.2</td>
<td>1129.1</td>
</tr>
<tr>
<td>Deaths including Infants</td>
<td>9.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Natural Loss</td>
<td>522.7</td>
<td>484.9</td>
</tr>
<tr>
<td>Marriages</td>
<td>349.7</td>
<td>400.0</td>
</tr>
<tr>
<td>Divorces</td>
<td>305.8</td>
<td>366.0</td>
</tr>
</tbody>
</table>

Source:
Kashevov, A (2004),
"Socio economic determinants of the demographic situation in Russia", *Russian Social Science Review*. Vol. (45), no. 2, 67
The life expectancy of total population in Russia as of 2006 was estimated at 67.08 years. On average females in Russia live longer than males, as the life expectancy for males are 60.45 years and females 74.1 years. Since 1999 the indicators have moved in different directions for males and females. In 1999, the life expectancy for males was 59.9 years and females 72.4 years. The life expectancy has improved when comparing 2006 and 1999 (Kashepov, 2004).

Dmitry Medvedev, Russia's Deputy Prime Minister quoted the marginal improvements in demographic statistics in his Speech in 2007 at the Session of the Presidential Council for Implementing Priority National Projects and Demographic Policy in Kremlin: "In January 2007, 14.7 percent more children were born than in January 2006, and that amounts to 16,000 babies. And in a number of regions this figure is much higher than the Russian average. For example, in the Lipetsk region the birth rate increased by 25
percent, by 23 percent in the Ivanovo region, and by 18 percent in the Voronezh region. In January 2007 the death rate was 9 percent less than last year’s."

Assessments of Demographic Transition Theory in the case of Russia

The most influential paradigm in Russian demography today is the theory of 'demographic transition'\(^{38}\), according to which Russia is making the transition from the traditional type of population reproduction (high birth, high mortality rate, low average life span) to the modern type of reproduction (low birth rate, low mortality rate or one that is rising slowly as the population ages, long life-span). National crude birth, death, natural increase rates all have declined appreciably since the turn of the century. As is to be expected from demographic transition theory, crude death rates dropped earlier than crude birth rates and the most rapid natural increase occurred in the earlier years of the 20\(^{th}\) century and then declined to quite low levels by the 1980s (Lewis and Rowland 1995). However we must pay attention to the contrast between the circumstances of the depopulation phenomena. Demographically, Russia seems to be part of the West, inasmuch as its low birth rate (9.95 births/1,000 population according to the 2006 estimate). Socio- economically it is indisputably part of the world’s semi-periphery and most precisely a part of Eastern European group of emerging market countries (Treyvish, 2001). Life expectancy for both men and women in Russia is far lower than in any western country. Among males, the change has been truly astonishing: the figure declined from 64.9 years in 1987 to between 57.1 and 58.3 in 1995. In 1999 it increased marginally for males to 59.9 and substantially for women 72.4. Male-female difference has been highest in the world. Maximum life expectancy in the post- World War II period occurred in the mid –to late 1960’s (64.6 for men in 1964-65 and 73.54 for women in 1967-68). From then until the beginning of the 1980’s, life expectancy declined steadily, with small fluctuations. It stood at 62.0 for men

\(^{38}\) Demographic transition theory contends that as societies undergo socio-economic development, they experience a transition from high fertility and mortality to low fertility and mortality, with mortality declining first and subsequently fertility, as the transition unfolds, societies also typically shift from slow population growth to more rapid or explosive growth in the intermediate phase, before reverting to slow growth
and 73.31 for women in 1983-84. In other words, in over about two decades, men’s life expectancy fell by 2.6 years, while women’s remained practically unchanged (-0.23) (Demchenko et al, 2004).

Graph 8.

Source: Vishnevsky (1995)
The birth rate in Russia experienced two transitions - in the early 1960’s and early 1990’s. The fertility rate fell from 2.6 children per woman in 1960 to replacement level (2.1) by the late 1960’s, where it hovered until 1990 (Vishnevsky, 1995).
The rapid growth in birth rate that was observed in Russia, in the 1980s, is not likely (especially since the age structure of the population also changed). Like in a number of developed countries, like Russia until 1991, had gone through a considerable part of the “demographic transition”, the birth rate has remained at the corresponding level (14.6-12.1 per thousand in Russia in 1989-91, as compared to 14.4 per thousand in the United States in 1998). However, the ‘demographic transition’ paradigm does not explain why not only the general birth rate coefficient (the number of babies born for every thousand
population) but also the quoted birth rate coefficient (the provisional of children that, given a particular rate of reproduction, one woman might have in course of her child bearing years or to put it in another way, the intensity of the birth rate), fell precipitously at the beginning of the 1990s in Russia and in several other former Council for Mutual Economic Assistance (CMEA) and former Soviet Union countries, down to the levels that are considerably lower than those in western Europe and almost half that of the United States.

In most of the economically developed countries, the birth rate dropped over several decades, as living standards rose together with the proportion of the urban population, levels of education, the level of women's employment and hence the shaping of an attitude favoring small families, whereas, in Russia the birth rate fell precipitously at the beginning of the 1990s as living standards declined drastically.

Another factor that does not fit the 'demographic transition' theory is the drastic rise in the death rate and the shortening of the life span in Russia and a number of neighboring countries during the 1990s. In developing countries where a demographic transition really is taking place, these indicators move in the opposite direction in the recent decades (Kashepov, 2004).

**Future Demographic Trends:**


Source: *FAOSTAT, 2005*
Based on Russia’s current condition, depopulation is quite likely to cause the social, economic and political degradation of the country, reducing it to a second-rate power with a dying population—Putin’s primary fear (Demchenko et al, 2004). In July 2000 in his first state union address President Vladimir Putin warned that Russia could lose another 22 million citizens over the next 15 years and degenerate from its superpower status. “We are facing the serious threat of turning into a decaying nation,” he declared. In March 2002, the State Statistical Committee (Goskomstat) predicted that by the end of 2050 the Russian population would shrink by 30%, from 143.6 million to 101.9 million. Through 2015, the annual number of deaths can be expected to exceed the number of births by 850,000 to 900,000 (with fluctuations of 200,000 to 300,000 depending on changes in the age structure of the population). This is not only because the predicted excessive death rate is expected to continue, but also because the population will age at a significant rate, especially after 2007 (Demchenko et al, 2004).

Putin outlined the main goals of Russia’s demographic policy in 2006 in his Address to the Federal Assembly. He expressed concern over the fact that 700,000 people on average die in Russia every year. He spoke of creating conditions to encourage women to give birth, of measures to bring down the high death rate, and of developing a more competent system for managing migration flows. In 2007, during a Session of the Presidential Council for Implementing Priority National Projects and Demographic Policy, Putin fine-tuned on the long term objectives of the demographic policy. He suggested creation of a National Demographic Policy which will among other aims, attempt to improve peoples’ attitudes about self care and implement practical steps to upgrade living standards. The Policy intended to be a holistic approach towards a developmental policy that fosters better living conditions by implementing efficient healthcare, building kindergartens, children’s play areas, ports facilities, and ensuring housing designs conducive for family living. ‘The Plan for Demographic Development Through 2015’ has been approved by the government of the Russian Federation. The aim of this policy is to gradually stabilize the size of the population and to establish preconditions for subsequent demographic growth. It emphasizes that to achieve that goal, it will be necessary to mobilize and make use of
all the components that determine population dynamics—birth rates, death rates, and the migration. Stabilizing the size of the population means, moreover, not achieving zero population decline but having a real opportunity to prevent reproductive losses (in particular by reducing excessive death rates (severkhsmertnost). Any other statement of the goal of demographic policy in a fifteen-year time span is utopian, because such a short period of time is not sufficient to overcome the inertia of demographic processes and/or to change the present gender-age proportions of the population (Demchenko et al, 2004).

Challenges for Russia:

Regional divides:

Presently population of Russia is scattered over a vast land mass in large but isolated cities and towns. Inadequate road, rail, air, and other communication links restrict efforts to connect those population centers, promote interregional trade, and develop markets. The post-Soviet period saw a sharp decline in overall standard of living. The United Nationals Human development program estimated that in purchasing parity terms (Adjusting the national incomes for relative prices), as of 2000 Russia’s per capita gross national product was $8377. This was at par with countries such as Libya, Malaysia and Mexico. Other economic effects were the dramatic reduction in state subsidies for basic services such as rents, public services, rent and energy. The hyperinflation of 1992 and collapse of the rouble led to a rise of 2500 per cent price levels and the wiping out of personal savings. Income inequality has also sharply increased since the end of Soviet Union. By the 1997, the ration between the incomes of the richest and the poorest 10 per cent was around 13:1. While some regions like the gas exporting Tyumen Oblast and federal region, Moscow incomes had risen, living standards had fallen by considerably more than the national average. The ‘new poor’ and ‘new rich’ emerged. Among the ‘new poor’ many professional people fell under the purview—teachers, academics, scientists—whose wages did not match the rising costs of everyday life. On the other hand, a small but highly visible proportion of population reaped the monetary benefits of
the economy opening up in the mid-1990s. The prosperity has been unequal no doubt, as Russia figures as 3rd in the tally of number of billionaires behind the United States and Germany (Bacon and Wyman, 2006). The divide widens when inequalities are measured in terms of 'access to political power'. Post-Disintegration some classes like the business elite have had de facto control of local networks of influence and resources.
The inequality is pronounced even in terms of the regions: Some regions are extremely large but sparsely populated (Sakha Republic is one third the size of Europe but has a population of 1 million) and others are small and densely populated (Moscow has a population of over 8 billion). In addition there is a possibility of grouping regions together informally through some generalizations:

- The donors regions: sufficiently rich to be net donors to the federal budget
- Northern region: refers to broadly to remote, poor regions with harsh climatic conditions, low levels of population density and little industrial development
- The 5 Islamic republics and
- The rust belt, those industrialized regions in decline in 1990s and therefore more likely to vote in opposition to the regime

**Healthcare Crisis:**

Russia faces grave concerns like alarming increase in tuberculosis (TB), extremely high levels of alcoholism and the growing problem for drug abuse and HIV-AIDS. Recent estimates show that the number of Russians with TB at 88 per 1,00,000 people, contrasting with the European or American rate of 4 to 10 TB sufferers per 100,000. The number of those infected fell in 2001 by 3.2 persons among the general population and by 13 percent in the prison system. Aggravating the crisis is that deep seated problems that plague Russia's public health care system which include shortages in medical supplies, a decaying infrastructure and poorly trained and demoralized physicians and nurses (Powell, 2002). Putin's Speech in 2007 at the Session of the Presidential Council for Implementing Priority National Projects and Demographic Policy in Kremlin provided ample evidence for the same: "Today approximately 85 percent of the equipment in
medical establishments is out of date and in all of Russia only about 30 medical facilities provide up to date obstetric assistance that corresponds with modern requirements.”

In the Soviet era, the entire population was required to undergo annual screenings for diseases- children at school and adults at work. But universal screening came to an end with the collapse of communism. The new system of compulsory (employer-supplied) medical insurance does not require that citizens be rested for TB during their annual check-ups. In fact, few people pay an annual visit to the doctor. As a journalist remarked in the April 16, 2002 Izvestiia, “The universal preventive examinations that were regarded as one of the great achievements of Soviet medicine died along with Soviet medicine itself (Powell, 2002).”

Alcoholism and its associated diseases are the third leading cause of death; only cardiovascular disease and cancer take more lives. According to the WHO, Russia has a yearly 38.7 suicides per 100,000 people, the second-highest suicide rate in the world. Since 1999, the number of “drug users” has been put at anywhere from 2 million to 5 million. Estimates for “drug addicts” have ranged from more than 1.5 million to 4 million. On August 6, 2002 a health ministry official declared that the non-medical use of drugs and psychotropic substances had “skyrocketed more than twenty fold in 10 years.” Whatever the actual number of drug users including Injecting Drug Users (IDUs), in Russia, public health and internal affairs officials clearly regard the increase in drug use as threatening social stability and even national security. Of particular concern is the upsurge of IDUs, fueled primarily by cheap heroin that is placing many more drug abusers at risk of contracting HIV/AIDS.39

Until very recently, roughly 90 percent of all new HIV infections were among 16-to 29-year-old IDUs. Between January 1, 1987 (when the AIDS virus first appeared in the Soviet Union) and December 31, 2000, Eighty Three Thousand and Fifty Four individuals were diagnosed as HIV positive. In 2001 the number of registered cases doubled, reaching 177,354. On August 6, 2002, Vadim Pokrovski, head of the Federal center for the Prevention and Treatment of HIV/AIDS (the AIDS Center), put the figure for registered HIV-positive citizens at 206,000. But the figure for those “registered” with

39 The Customs Service contends that heroin, which enters Russia largely from central Asia, has become the “unconditional leader of the Russian drug market.”
the state is misleading. Experts acknowledge that to determine the actual number of HIV-positive individuals, some sort of multiplier—suggestions cluster around 6 to 10 must be used, since those most likely to become infected avoid contact with the authorities. In particular, IDUs evade testing since they can be arrested simply for using drugs. WHO says the “true number” of Russian infections is 7 to 10 times the figure for those officially registered. In July 2002 when reporting that 205,000 cases of HIV had been registered, Pokrovskii added that the total number infected “could be eight to ten times higher.” Individuals frequently share syringes or needles to inject so-called Russian heroin, a cheap homemade mixture of liquid opium and vinegar or acetic anhydride. The substance often has a cloudy, muddy color to clarify it; users add several drops of their own blood to the “communal” pot from which they all partake. They then inject it into their own bodies, along with HIV or traces of any other communicable disease present in the group. More importantly, Russia has the world’s highest rate of growth for new HIV cases although the rate allegedly is declining. Between 1996 and 2001, the number of new infections increased on average by 2.4 times annually. It is unclear whether the slowdown is real or the authorities are underreporting new cases. Still the government spends little money on HIV/AIDS education and prevention. In 1996 the ministry of Health received no funds to administer such programs. In 1997 the federal budget called for a mere $8 million to be spent on AIDS prevention and treatment, and in 2002 Russia’s entire anti-AIDS budget came to about $6 million, of which $3.3 million was assigned to treat those with full-blown AIDS (Powell, 2002).

Russia has also shown an expansion of sexually transmitted infections (STIS), a development with horrendous consequences, especially for young people. The result is seen, in part, in the huge number of birth defects afflicting Russian infants: in 2001, 14000 of the 20000 children who died before reaching their first birthday were born to mothers who suffered from STI. The largest risk group for STIS is children and teenagers, the principal “beneficiaries” of the sexual revolution. The incidence of syphilis among girls under the age of 14 increased 140 times between 1990 and 1997, and it continues to rise. Indeed, a prominent physician asserted in 2002 to Nezavisimaia gazeta that “it is not prostitutes but adolescents who constitute the largest risk group for syphilis (Powell, 2002).”
Demographics of Siberia

Siberia has a total population of 35.6 million (2002). Siberia has population density of only 3 persons per square kilometer. The oblasts with the highest population densities are Chelyabinsk Oblast and Kemerovo Oblast, with 41 and 30 persons per square km, respectively. Koryak Autonomous Okrug has population density of less than 0.1 per square kilometer.

About 70% of Siberia's people live in cities. Novosibirsk is the largest city in Siberia, with a population of about 1.5 million, followed by Yekaterinburg (1.3 million, Urals), Omsk (1.1 million), Chelyabinsk (1.07 million, in the Urals), Krasnoyarsk (0.91 million), Barnaul (0.60 million), Irkutsk (0.59 million), Kemerovo (0.52 million), Tyumen (0.51 million), Tomsk (0.48 million), Nizhny Tagil (0.39 million, Urals), Kurgan (0.36 million), Ulan Ude (0.36 million), Chita (0.32 million). Most city people are crowded into small apartments. Many people in rural areas live in simple, but more spacious, log houses.

Soviet policy places a city in a superior position to the countryside. Urbanisation has long been the goal of society. Marxist-Leninist theory gives the urban proletariat the leading role in building communism, with the cities transmitting positive, modern characteristics to the rural areas. (Chinn, 1977) to Lenin "the cities represent the centres of economic, political and spiritual life of the people and are the main forces of progress.

Putin's Speech in 2007 at the Session of the Presidential Council for Implementing Priority National Projects and Demographic Policy in Kremlin expressed the need to return to a new concept of rural way of life: "We need to maintain the rural way of life but in a new and modern form, giving it the infrastructure, roads and transport it needs and ensuring that rural areas are connected to the gas network." Secondly he emphasized on "the state's interest duty to create the conditions that will enable more and more solid ventures to develop in agriculture and in the rural areas in general."
Another proposal in Medvedev's Speech in 2007 at the Session of the Presidential Council for Implementing Priority National Projects and Demographic Policy in Kremlin was to provide targeted support to young families in Russia to purchasing housing in Siberia, the Far East and other sparsely populated regions.

Table 11. Urban Rural Distribution in Russia- A comparative picture with Siberian Districts

<table>
<thead>
<tr>
<th>Region</th>
<th>inhabitants</th>
<th>% Urban</th>
<th>% total Russian population</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSSIAN TOTAL</td>
<td>147,739,000</td>
<td>73</td>
<td>100</td>
</tr>
<tr>
<td>Central</td>
<td>29,817,000</td>
<td>83</td>
<td>20</td>
</tr>
<tr>
<td>Urals</td>
<td>20,436,000</td>
<td>74</td>
<td>14</td>
</tr>
<tr>
<td>North Caucasus</td>
<td>17,758,000</td>
<td>56</td>
<td>12</td>
</tr>
<tr>
<td>Volga</td>
<td>16,905,000</td>
<td>73</td>
<td>11</td>
</tr>
<tr>
<td>West Siberia</td>
<td>15,108,000</td>
<td>71</td>
<td>10</td>
</tr>
<tr>
<td>East Siberia</td>
<td>9,128,000</td>
<td>71</td>
<td>6</td>
</tr>
<tr>
<td>Volgo-Vyatka</td>
<td>8,424,000</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>North-west</td>
<td>8,034,000</td>
<td>87</td>
<td>5</td>
</tr>
<tr>
<td>Central Black Earth</td>
<td>7,872,000</td>
<td>62</td>
<td>5</td>
</tr>
<tr>
<td>Far East</td>
<td>7,463,000</td>
<td>76</td>
<td>5</td>
</tr>
<tr>
<td>Northern</td>
<td>5,861,000</td>
<td>76</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: http://www.abdn.ac.uk/cspp/SC3A-Population-1.shtml
Map 39. The Cities of Siberia, With 80,000 Inhabitants And Above

The areas of circles and font size indicate population. The red lines are railways; the thick one roughly represents Trans-Siberian Railway.

Tomsk was the most populated city of Siberia in the 20th century, but now is only the 9th biggest, because Trans-Siberian Railway was built in 200 km to the south of it. Omsk took the lead for some time and then Novosibirsk (founded in 1893) became the biggest city.
Table 12. Occupational Structure

<table>
<thead>
<tr>
<th>Region</th>
<th>% Labour Force</th>
<th>% Russian mean Services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industrial</td>
<td>Agricultural</td>
</tr>
<tr>
<td>Far East</td>
<td>44</td>
<td>10</td>
</tr>
<tr>
<td>East Siberia</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>West Siberia</td>
<td>44</td>
<td>13</td>
</tr>
<tr>
<td>RUSSIAN MEAN</td>
<td>43</td>
<td>15</td>
</tr>
</tbody>
</table>


Table 13. Population according to Administrative regions

1----Urals Federal District, population 14.4 million

<table>
<thead>
<tr>
<th>Oblast/Okrug</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurgan Oblast</td>
<td>1.02 million</td>
</tr>
<tr>
<td>Sverdlovsk Oblast</td>
<td>4.49 million</td>
</tr>
<tr>
<td>Tyumen Oblast</td>
<td>3.26 million</td>
</tr>
<tr>
<td>Khanty-Mansi Autonomous Okrug,</td>
<td>1.5 million</td>
</tr>
<tr>
<td>Yamalo-Nenets Autonomous Okrug</td>
<td>550,000</td>
</tr>
<tr>
<td>Chelyabinsk Oblast</td>
<td>3.6 million</td>
</tr>
</tbody>
</table>

2----Siberian Federal District, population 20.28 million

<table>
<thead>
<tr>
<th>Region</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altai Krai</td>
<td>2.6 million</td>
</tr>
<tr>
<td>Altai Republic</td>
<td>202,947</td>
</tr>
<tr>
<td>Buryat Republic, Ulan Ude,</td>
<td>981238</td>
</tr>
<tr>
<td>Chita Oblast</td>
<td>1,155,346</td>
</tr>
<tr>
<td>Irkutsk Oblast</td>
<td>2.77 million</td>
</tr>
<tr>
<td>Republic of Khakassia</td>
<td>575,400.00</td>
</tr>
<tr>
<td>Kemerovo Oblast</td>
<td>2.90 million</td>
</tr>
<tr>
<td>Krasnoyarsk Krai</td>
<td>2.97 million</td>
</tr>
<tr>
<td>Novosibirsk Oblast</td>
<td>2.69 million</td>
</tr>
<tr>
<td>Omsk Oblast</td>
<td>2.08 million</td>
</tr>
<tr>
<td>Tomsk Oblast</td>
<td>1.06 million</td>
</tr>
<tr>
<td>Tuva Republic</td>
<td>305,510</td>
</tr>
</tbody>
</table>

3----Far Eastern Federal District (Russian Far East)\(^{40}\), population 7.02 million

\(^{40}\) The only Far Eastern region that is sometimes counted as part of Siberia
Ethnicity of Siberian People

Nowadays, the majority of the Siberian population (close to the average measured over all of Russia of 79%) consists of Russian (or Russified Ukrainians) people. Their language is Indo-European. In certain Oblasts (e.g. Tuva), Slavic population is as low as 20%.

Most non-Slavic groups are Turkic. According to Alaska Native Knowledge Network, there are 30 indigenous peoples living in Russia, totaling approximately two hundred and ten thousand people. They are: the Aleuts, Dolmans, Itelmens, Kets, Koryaks, Mansi, Nanais, Negidals, Nenets, Nivkhs, Nganasans, Oroks, Orochs, Lapps, Selkups, Tofalars, Udeges, Ulchis, Khanty, Chukchi, Chuvans, Evens, Evenkis, Eskimos, Enets, and Yukagirs. Some year ago the Shors, Veps, Kumandins and Teleuts were also added to this list. All these peoples are small in number. The smallest are the Enets (350) and Oroks (450). The most numerous are the Nenets (29,894) and Evenkis (27,531). These indigenous nationalities live not only in the Far North, but also in the Far East and Siberia. As a group they are generally referred to as the "peoples of the Russian North." Most of them lead a nomadic life and engage in traditional forms of subsistence economy (Hairullin, 2006).

Ethnographers divide the people of Siberia into 6 groups of linguistic criteria:

*Finno- Ugrian groups*, include the Khanti and Mansi who live in the middle and lower reaches of Ob River.

*The Samodian* speaking nationals include the Nenetsi, Ngasanas (Tavgis), Entsi and Selkups.

*The Turkic* peoples who are typically concentrated in south West Siberia and include the Siberian Tatars, Altayans, Khakhasi, Shores, Tuvanians (Soyots), Karagasis (Toflars) as well as the Yakuts and Dolgans, who live much further north.
The Mongolian linguistic group, whose only representatives are the Buryats.

The peoples of Tungus group who inhabit East Siberia and the South Far East and include the Tungus.

The Evenks (Lamuts), the Negidals and series of small ethnic group living in the lower reaches of Amur River.

The Maritime Territory and the Sakhalin Island are home to indigenous people such as the Nanais, the Ulchi, the Udegheis, the Orochi and the Oroki.

Finally the Paleo-Asiatic peoples so called because they are the most ancient inhabitants of descendants of North and Northeast Asia. Among them are the small peoples of the extreme North-East the Itelmens (Kamchadals), the Kuryaks, The Chukchis and The Yukagirs, The Nivkhi (Gilyaks) from the Northern part of Sakhalin and the lower Amur River and Kets.

In addition to these, small groups of Aleuts speaking languages belonging to Eskimo families live in the extreme North East.

Although Eskimo languages form a branch of a larger family (Eskimo-Aleut), but their only (proven) relatives are the Aleut dialects.

Many languages are regarded as a standalone family, because no other languages are proven to be relative (Yukaghir).

Others are grouped together for example, Uralic (Samoyedic, Ugric, Yukaghir; roughly 100,000 speakers).

Turkic, Mongolian, Tungusic/Manchu-Tungus languages are sometimes taken together under the term ‘Altaic’.
Map 40. Distribution map of Finno-Ugric\textsuperscript{41} languages

\begin{figure}
\centering
\includegraphics[width=\textwidth]{map.png}
\caption{Distribution map of Finno-Ugric languages.}
\end{figure}


\textsuperscript{41} A grouping of languages in the Uralic language family, comprising Hungarian, Finnish and Estonian, and related languages. It comprises the Finno-Permic and Ugric language families.
Almost indigenous peoples of Siberia belong to the Mongoloid race. Very little trace is left of the ancient Europoid peoples who dominated the southern and western part of Siberia in the centuries before Christ.

The Siberian people can also be divided on the basis of cultural and economic factors, between the cattle breeders and agriculturists of South Siberia and the hunters and fishermen and reindeer herdsmen of the north.

However, the Yakuts, who belong to the northern peoples, are closer to Southerners in their culture and economic culture of their life. Conversely the traditional way of certain small ethnic groups such as Udegheis and Orochi in the south and the Shortsi is closer to that of the Northerners.

The People of south Siberia developed in favorable conditions than north people. Until comparatively recently, cattle breeding preserved some of its features. For example, use of yurts- a tent with lattice work, frame covered with felt and skins. The costume of the nomads is distinctive too, consisting basically of a sheepskin coat wrapped around left to right and a cloth robe of similar cut.

The economies of these peoples are based on various combinations of fishing, hunting, fur bearing animals and large game and reindeer breeding.

What maybe called the “Northern Triad” which is found throughout.

A fourth activity to this Triad was hunting marine animals, a pursuit confined to the Artic littoral. Hunting fur bearing animal and large game animals is the main activity of Evenks, Khanti- Mansi, Selkups and Orochi. Among the peoples inhabiting Tundra, the Nenesti, the nomadic Chukchi and Koryaks and Northern Evenks- reindeer breeding predominates. Hunting marine mammals is primarily pursued by Chukchi and Koryaks living along the coast.
Map 41. Native Peoples of the Russian Federation

Source:
North, Andrew (1994),
Map 42. Native People In Siberia

Table 14. List of Indigenous People by Regions in Siberia

<table>
<thead>
<tr>
<th>Region</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Siberia</strong></td>
<td></td>
</tr>
<tr>
<td>Chulyms</td>
<td>Krasnoyarsk Krai, Krasnoyarsk Krai, Khabarovsk Krai, Amur Oblast, Sakhalin Oblast, Buryat Republic, Irkutsk Oblast, Chita Oblast, Tomsk Oblast, Tyumen Oblast</td>
</tr>
<tr>
<td>Evenks</td>
<td>Sakha Republic, Khabarovsk Krai, Magadan Oblast, Chukotka Autonomous Okrug, Koryak Autonomous Okrug, Kamchatka Oblast</td>
</tr>
<tr>
<td>Evens</td>
<td>Krasnoyarsk Krai, Khants and Mansi: Khanty-Mansi Autonomous Okrug, Tyumen Oblast, Sverdlovsk Oblast, Komi Republic</td>
</tr>
<tr>
<td>Kets</td>
<td>Yamalo-Nenets Autonomous Okrug, Tyumen Oblast, Tomsk Oblast, Krasnoyarsk Krai</td>
</tr>
<tr>
<td>Selkups</td>
<td>Kemerovo Oblast</td>
</tr>
<tr>
<td>Teleuts</td>
<td>Khabarovsk Krai, Primorsky Krai, Sakhalin Oblast</td>
</tr>
<tr>
<td><strong>Far-East</strong></td>
<td></td>
</tr>
<tr>
<td>Nanais</td>
<td>Khabarovsk Krai, Primorsky Krai, Sakhalin Oblast</td>
</tr>
<tr>
<td>Negidals</td>
<td>Khabarovsk Krai</td>
</tr>
<tr>
<td>Nivkhs</td>
<td>Khabarovsk Krai, Sakhalin Oblast</td>
</tr>
<tr>
<td>Orochs</td>
<td>Khabarovsk Krai</td>
</tr>
<tr>
<td>Oroks</td>
<td>Sakhalin Oblast</td>
</tr>
<tr>
<td>Tazs</td>
<td>Primorsky Krai</td>
</tr>
<tr>
<td>Udege</td>
<td>Primorsky Krai, Khabarovsk Krai</td>
</tr>
<tr>
<td>Ulchs</td>
<td>Khabarovsk Krai</td>
</tr>
<tr>
<td><strong>Southern Siberia</strong></td>
<td></td>
</tr>
<tr>
<td>Kumandins</td>
<td>Altai Krai, Altai Republic, Kemerovo Oblast</td>
</tr>
<tr>
<td>Chelkans</td>
<td>Altai Republic</td>
</tr>
<tr>
<td>Shorians</td>
<td>Kemerovo Oblast, Republic of Khakassia, Altai Republic</td>
</tr>
<tr>
<td>Soyots</td>
<td>Buryat Republic</td>
</tr>
<tr>
<td>Telengits</td>
<td>Altai Republic</td>
</tr>
<tr>
<td>Tofalarls</td>
<td>Irkutsk Oblast</td>
</tr>
<tr>
<td>Tubalarls</td>
<td>Altai Republic</td>
</tr>
<tr>
<td>Tuvans-Todzhins</td>
<td>Tuva Republic</td>
</tr>
</tbody>
</table>

189
Demography of Siberia through the Years

The tsars and the soviet state used Siberia as a penal colony and a resource mine. Russian Prime Minister Pyotr Stolypin (1906–11) started an agrarian-reform programme during which the region's rural population was established. From the mid-1920s until the end of the 1930s, the region felt the impact of industrialisation, forced collectivisation and ultimately the Second World War. It was at this time that there were mass deportations of people and the relocation of huge industrial enterprises from the front to west Siberia. Different ethnic groups, especially Russian Germans, were forcibly deported during the first few years of the war (Soboleva, 2007). Under Joseph Stalin, the government launched the labor camp system in 1929 for the clear purpose of exploiting the natural resources of the nation's most remote regions. By 1934, half a million Soviet citizens were in the GULAG42. Stalin's era in the late 1930s brought the total camp population to more than 2 million. This also proved to be an inexhaustible pool of slave labor which became fundamental tools in the industrialization of Siberia. GULAG inmates—some 18 million–20 million of them over slightly more than two decades—facilitated the exploitation of timber and mineral resources in remote areas. They also laid railroads and roads, erected dams, dug canals, developed oil fields, and built factories and farms, all under monstrously inhuman conditions. During those peak years in the late 1940s and early 1950s, the GULAG accounted for an estimated 15–18 percent of all Russian industrial output and industrial employment (Hill and Gaddy, 2003).

Soviet politicians responsible with engineering and mobilizing society in the 1960s–80s stressed the ideology of "conquering new lands"- now to be interpreted as campaigns to overcome nature and the wilderness through industrialization—to increase the strength of the Soviet state. The route taken was to create planned cities. Cities were developed in Siberia in tandem with industries to provide a fixed reserve of labor for factories, mines, and oil and gas fields. By the 1970s the Soviet Union had urbanized its coldest regions to an extent far beyond that of any other country in the world (Hill and Gaddy, 2003).

42 An acronym based on the name of the department within the Soviet police ministry that ran the camp system.
1970–85 was the last time in the twentieth century that there was a significant rise in the number of residents in Western Siberia. It was during this period that the average annual population growth rate was greater than 15 (new residents or migrants) per 1,000 (members of the population). This increase can be explained by the influx of Russians from other regions to work on a new oil-processing complex in Western Siberia. Shift of priorities in Siberian development strategy from an earlier effort to endow Siberia with an integrated economy and settlement to one where the influx of population was encouraged only to the extent that the workers were needed to operate resource industries and power intensive activities. (Shabad and Mote, 1977).

Soviet economic slowdown of the late 1970s would put an end to such ambitions. By the 1980s the massive investments in Siberia and the Far East were offering extremely low returns. Siberia came to be seen as the problem of all Russian troubles especially in the late 1980s under Mikhail Gorbachev. Many constructions were abandoned, mega projects left mid way. Policies regarding people took massive twists and turns Soviet Union in 1991 and the beginning of Russia's macroeconomic reforms in the 1990s. In the Soviet period, once cities reached a size of 250,000–300,000 inhabitants, they continued to grow almost without exception.

Siberian region went through 3 broad stages of colonization: Trade, Agrarian and Industrial. Vodichev and Ablazhey notice two trends of colonization- Spontaneous and regulated. In reality, these trends and stages are interlinked and the clear division of them is impossible. However one can observe the inter-linkages in different chronologies.

The starting stages of colonization can be classified as end of 16th century the first half of 18th centuries. The key drivers were the incorporation of Siberia in to the Russian state. Siberia came to be legitimised as the inner colony of Russia. The most significant aspect was the 'penalised colonisation'. From the early 17th century Siberia was used as a penal colony and a place of exile for political prisoners.

According to the first census taken in Siberia in 1622, showed that population numbered seventy thousand, of whom 7400 were exiles (Shinkarev, 1973). Other studies show that the total number of its unwilling inhabitants exceeded one million persons. It is thought the banished would engage in agriculture, but majority were hostile to any kind of
constructive labour and engaged in criminal activities. Those sent for hard labour, were widely used in Siberia for industrial production but it was little effective (Shilovskii, 2007). In the 1730, the first large industrial project—the metallurgical production found by Demidov family—gave birth to the city of Barnaul. Later, the enterprise organized social institutions like library, club, and theatre. Siberian agriculture was stimulated in the late 16th and 17th century by the needs of the Russian military and administrative personnel stationed there. Peasants in Russia were starved for land, but instead of helping them to go over Siberia the tsarist authorities enforced rigid control over emigration. This was done in the interest of the landlords in Central Russia who needed the cheap labour force but Siberia had to be developed somehow, so the regime sent out convicts for the purpose, studding the country with jails and penal institutions (Yanovsky, 1972).

The second period to consider was the one that took place between second half of 18th century to the mid-19th century. The spontaneous agrarian colonization continued. The main source of increase in Russian population along with the natural growth, in Siberia in the 18th to 19th centuries was the coerced movement and settlement within the territory. The migration of peasants to Siberia sharply increased with the serfdom and then after the completion of Trans-Siberian Railway. During this period, industrial colonization, linked with the discovery of gold and silver) Ablazhey and Vodichev, observed heightened inflows and outflows of migrants around centers engaged in industrial activity mostly connected with gold and silver and in the south belt of Siberia, in and around steppe forest zones along rivers. Migrations to the Far East also rapidly gathered momentum beginning of 1860's.

With the development of capitalism, a working class was formed that by 1861 totaled 90,000. Of these only 33,500 were hired labour. The rest worked under compulsion and included convicts, deported attached to industrial enterprises, mines, recruits and others. Upon completion of Trans-Siberian railways in 1905, people from 60 guberniyas of European Russia streamed into Siberia in search of a living (Shinkarev, 1973). With the law on 12 June 1900, the criminal exile to Siberia ceased. Cultivation of fertile chernozems in the steppe and forest-steppe belts of Siberia assumed a particularly vast scale in the latter half of the 19th century in the wake of the increased migration of peasants to these parts. The strategy of the settlement policy of the tsarist government in
the 19th century shifted from being prohibitory to an encouraging one. Due to agrarian overpopulation to European Russia brought forth a sharp rise in number of settlers. The rural areas of Central Russia were overcrowded, while the East was still lightly populated despite having fertile lands.

The number of arrivals in the region during 1885-1905 was 1.5 million people and during 1906-1910 was 2.5 million. In 1908, the settlement wave reached 6.4 million persons—this was unprecedented scale of organized migration. Through 1897 to 1916, population grew from 5.8 million to 11 million (Shilovskii, 2007). P. A. Stolypin, the interior minister under Nicholas II, made a special effort to reduce rural overpopulation in European Russia by encouraging Siberian colonization. On May 10, 1906, by the decree of the Tsar, agriculturalists were granted the right to transfer, without any restrictions, to the Asian territories of Russia, and to obtain cheap or free land. A large advertising campaign was conducted: six million copies of brochures and banners entitled what the resettlement gives to peasants, and how the peasants in Siberia live were printed and distributed in rural areas. Special propaganda trains were sent throughout the countryside, and transport trains were provided for the migrants. The State gave loans to the settlers for farm construction. Not all the settlers decided to stay; 17.8% migrated back. All in all, more than three million people officially resettled in Siberia, and 750,000 came as footmessengers. From 1897 to 1914 Siberian population increased 73%, and the area of land under cultivation doubled (Voronov, 2003).

As industry of Siberia grew, the length of their working hours grew with it, ranging from 14-16 hours. The workers' pay was in cash and 'in kind', the latter taking form of consumer goods and foodstuffs received from the shop owned by the employer.

Although the industrial proletariat of Siberia matured at a somewhat slower pace than European Russia, their fight against their employers and the bourgeoisie developed according to the same laws of class struggle as their counterparts in European Russia (Shinkarev, 1973)

The idea of 'free lands' was a compelling factor for the settler movement.

In his memoirs, G.M Karnaukhov reproduces in this regard a revealing dialogue between a political convict Kazimirov and the elderly D.K Kukharev, which took place in 1912 in the settlement of Bratskaya Irkutskaya Guberniya. To the question "What makes you like
Siberia, the god-forsaken taiga country?" the old settler replies “Only what is there good in Mother Russia? All around there are gendarmes with batons, humiliation and mockery, forced labour and no freedom. A human being is nothing there, is worse than an animal- all fleece him and condemn him. There is no freedom there, my dear! And here in Mother Siberia, there is freedom for people here. Look around, expanses and lands, rivers and forests. Authorities are oppressively weak against the Russians. No one hits you in the teeth; no one pricks you in the eye. Whether it is a bread maker or whether a fisher, whether you hunt, or whether you just walk there where your eyes take you.” (Evseenko et al, 1993)

Graph 11. Population in Different Divisions of Russian Empire in 1909

Total Population of Russian Empire: 160095200

The settlement revolution causes a number of socio-economic changes. There were sporadic frontier type settlements. Russian peasantry saw the unification of land-users of categories of rural population (old inhabitants, new arrivals and aborigines), escalation of tension between the three broad groups, intensive development of market relations in agriculture specialization.

**Diagram 4. Ethnic Composition of Tsarist Russia (1909)**

- Others (including Jews), 17%
- Turco tatars, 3%
- Finns, 9%
- Poles, 5%
- Russian Slavs, 66%


In the first half of the 20th century the demographic landscape changed as Siberian peasants became industrial workers. After the War, there were discussions on how Siberia could be a region, providing hope for the world: “The world is short of food, and the still unbroken lands of Siberia are awaiting development. What better task for Russia than, helped by the combined organizing powers of the United States and Western
Europe, to make a great expedition against those lands awaiting the plough? Behind the opposing combatant lines today are improvised road-towns, canal towns and camps, great cranes, great guns, all sprung – where were no towns before – in the twinkling of an eye.” Stalinist “mass operations” were representative actions directed against categories rather than individuals. They appeared the first time during the Civil War of 1918-21. The rapid destruction of the peasant family in the late 1920s, as well as mass rural-urban migration, resulted in a break with the traditional family and its demographic behavior and in an accelerated demographic transition. Within Siberia there was increase in migration from the countryside to the urban areas.

According to Ablazhey and Vodichev, the main migration actors were refugees from European Russia during the Civil war, few peasants from central and prisoners sentenced to exile and hard labour from North to North East of Siberia. The World War II compelled Siberia to become the new base of the military industry. It mobilized 20% of the Siberian population (3000000 in number). Rapid urbanized characterized the period of 1926-1939. 30% of the total population in Siberia was now living in urban areas. “Siberia is the land of tomorrow!” was the slogan of the new generation of pervoprokhodtsi who came to Siberia in the 1930’s. New industrial centres started mushrooming up all over the land in Kuznetsk, where formerly coal was hauled up by hand from primitive pits. Soviet geologists discovered coal deposits estimated at 900,000 million tons. Electric power stations, highly mechanized mines, concentrating mills, went up in rapid succession. In three years’ time the Kuznetsk metallurgical combine was completed (Yanovsky 1972).

From mid-1937 to nearly the end of 1938, the Soviet secret police carried out mass terror against ordinary citizens. This “kulak operation,” as it was called, accounted for about half of all executions during the “Great Purges” of 1937-38. By the time it ended in November 1938, 767,397 persons had been sentenced by summary troikas; 386,798 of them to death and the reminder to terms in GULAG camps (Getty, 2002)

By the 1950s Siberia was the hub of oil, gas and mineral extraction for Soviet economy. Industrialization colonization was the dominant trend especially in the Centrets of Territorial production centres (Bratsk- Ust- Ilimsk region, North Tumen, BAM zone etc),
cushioned by the ‘Virgin Lands’ Campaign especially in the South of West Siberia and the development of SB RAS and Science cities related to military related complexes. However the fact remained that although bulk of natural resources were concentrated in Siberia and industries experienced huge demand for labour resource. The labour shortage was exacerbated by the accelerated construction of housing. The construction industry was in no condition to handle the volume of work needed (Rumer, 1984, page 82). There remained a huge lag between the developments of social infrastructure. The population growth rate during 1965 to 1975 is 1.3 times greater than the rate of growth of capital investment in social infrastructure (Pushkev, 1975). As a result only 30 to 50 per cent of those persons who moved into the regions settled permanently and most of those who left did so within 2 years (Pushkev, 1975). Internal migrations were seen from the Siberian rural areas to developing industrial centres. In 1959, 50% of the population of Siberia was in the cities and by 1989, this increased to 70 per cent. There were injections of highly qualified professionals to science cities. Population of North Tumen went up by 1,000,000 for 1970s alone. However between 1970s and 1980s about 6,000,000 migrants leaked back to western regions.

Migration trends in Siberia

Russian czars envisioned Siberia as a hunting ground and mining facility. Later, it became a penal colony. After WW-I and Civil War, volunteers were enticed by offering incentives to what was touted as the ‘New America’- the land of opportunities. Later in the times of Stalin, the penal colonies intensified. Prison laborers were instrumental in industrializing Soviet Union. The price was not only sweat but blood. For example, Kolyna Gold mines in the 1930-140s claimed about a thousand lies for every ton of gold produced (Hill and Gaddy, 2003).

After the prison camps were closed down and the prisoners were freed to migrate, the problems of labour supply became apparent. Engineers and planners ensured that population is clustered around mines and factories. In a bid to follow the policy of ‘regional specialisation’, the planners considered people as objects. Even increase in

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43 Ideological propaganda campaign communicating and glamorizing conquering Siberia
wages did not justify the high costs of living in the harsh land of Siberia as a result workers moved to warmer climes – northern Caucasus, East Ukraine and south western Russia. In vain, Soviet developers even tried to entice the ‘unproductive’ labor pool of Siberian housewives (Hill and Gaddy, 2003)

The influx of people into Siberia during the 1960's was exceeded by the population outflow. Soviet economists and demographers have given close attention to this disturbing phenomena, a report prepared by Zhaionchkova, a demographer and sociologist Perivedentsev showed that in the period 1956 to 1958, every hundred new arrivals from the cities of Ukraine and Moldavia in the cities of Siberia were balanced by 145 departures from Siberian urban areas.

“Every hundred immigrants in to the cities of Siberia from the rural areas of Ukraine and Moldavia were balanced by 125 departures. The position was even more serious in industrial areas of Krasnoyarsk territory- for every 100 new arrivals at the Molybdenum combine in Sorusk were 201 departures. The same was true of Yakutia: for every 100 people arriving from Ukraine arriving from Caucasus, 220 people departed from these areas. The immense scale of migration is also reflected by the ease of movement in modern conditions means that each person usually changes his place of domicile 4 or 5 times in the course of his lifetime, the average of which is 70 years” Perivedentsev in September 3, 1975 wrote in Lituratumaya Gazeta. (Perivedentsev and Zhaionchkova, 1964).

The age of overwhelming majority of those moving from one place or another is between 15 and 30, which meant that migration as a social phenomena related to young people. The soviet sociologist emphasized the importance of concentration of population in towns and cities and also the fact that most intensive population shifts between neighboring areas and within the bounds of major economic regions. The number of those leaving the Urals, almost perfectly balanced the natural population growth of this region, while in west Siberia the number of those departing equaled half- the natural growth. In West Siberia the population was growing only in the Tyumen Oilfields. Moreover all the people came there from all over the country, majority arrived from West Siberia itself and from the Urals, where climatic and natural conditions were almost identical. The tendency of labor force to fluidity continues to be very expensive;
measures taken in 1980s to correct the situations only partly ameliorated it. Manevich writes that losses brought about fluidity of labor force in Siberia amounted to 2000 million rubles during the 1960s. An article published in Pravda, published in 1961 noted that cost to the state of moving and reestablishing each person in Siberia, is difficult to estimate but amounted to 20,000 to 40,000 rubles. The construction of industrial installations, shops etc was discussed in a collection of scholarly article which appeared in 1964 under the title of “Problems of the North” (Sansone, 1980).

Kumo, (2005) observes after the collapse of the Soviet Union in 1991, the Russian economy seriously stagnated. However, this stagnation presents different aspects from region to region, and this phenomenon is frequently cited as a research objective, TACIS (1996a, 1996b) classified each region from the following points of view:

1. living conditions (income)
2. population dynamics (natural increases or migration rates)
3. labor market conditions (unemployment rates)
4. financial indicators (financial situations of regional governments)
5. structural changes (marketization or land reforms)
6. regional policy
7. Reforms on banking systems.

Their analysis was based on descriptive statistics, and their classification was very subjective. After Technical Aid to the Commonwealth of Independent States program - TACIS (1996a, 1996b)44- Russian regions were studied by many, especially by researchers in European states. Based on some quantitative analyses, Sutherland and Hanson (1996) clarified that the factors that characterized regional labor market conditions in 1992-1993 in Russia were

(1) Regional exports
(2) Existence of military industries
(3) Real income.

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44 Foreign and technical assistance programme implemented by the European Commission to help members of the Commonwealth of Independent States (as well as Mongolia), in their transition to democratic market-oriented economies. TACIS is now subsumed in the EuropeAid programme.
In an earlier paper (Kumo, 1997), interregional migration was examined, and the following factors were identified as the main ones determining interregional population migration patterns in Russia:

1. Quality of life (residence or transportation conditions)
2. Labor-market conditions
3. Climate conditions.

In addition, in yet another paper (Kumo, 2001, 2003), it was demonstrated that regional population/market size may stimulate in-migration in some regions. However, when conducting econometric analyses, Russia still presents numerous difficulties. Income variables were found to be negatively related to in-migration, which is not typical of other developing countries. These phenomena could be attributed to the coexistence of high wages in Siberia or in the Far East regions, which were used as an enticement because of the severe climate and large out-migration occurring in these areas. The effects of economic factors themselves, however, may not be stable (Kumo, 1997).

Hanson (2000) examined the effects on regional real income of saving rates, inflows of foreign currency, and income transferred by the central government. Although some significant effects were obtained, the results indicated that abnormal values must have critically distorted the analysis. Changing the explained variable from real income to net migration rates did not improve the results. Some researchers investigated individual regions in detail, not on the basis of quantitative analyses. The methods adopted by Ohtsu (2000), which focus on the examination of labor-market conditions in the Far East, or those by Gimpelson and Monusova (2000), which focus only on public employment and income reallocation policies, appear to be effective. Such microscopic analyses, however, must be based on individual surveys. These are typical methods in area studies; however, this study examines the possibility of using easily obtainable data from macroeconomics to explain interregional migration.

A pioneering study undertaken by Andrienko et al. (2002) uses in- and out-migration matrices by region (oblast') and applies simultaneous gravity models. Although some of the results are ambiguous, analyzing by income strata demonstrates that income variables and regional economic conditions significantly affect migration decisions. The results
make it possible to easily grasp the effects of economic factors on migration patterns in Russia. (Barchunova and Beletskaia, 2005)

It is at a glance strange that the percentage share of urban population and per capita housing space obtained insignificant coefficients. This phenomenon can be interpreted by the followings:

1. Regions with the highest percentage share of urban population are observed in the Far North
2. Regions (there may be no farmers and no areas are classified as farm ones in such regions) and
3. Per capita housing areas in such scarcely populated areas are large in comparison to the national
4. Average. It may be a supporting evidence of this interpretation that these variables obtained positive coefficients during the 1980s.
5. The percentage share of firms in debt showed ambiguous results.

When investigating regions individually, one can see that people flowed out from Primorskiy Kray with high percentage share of deficit firms, but on the other hand a large amount of population inflows is observed in south-western regions of Russia, where manufacturing industries are in severe conditions but good living environment can be enjoyed. These complicated phenomena might have affected on this result.

Surfaced road density, which is a condition of regional infrastructure, showed positive and significant coefficients throughout the 1990s, which indicates that maintenance of social infrastructure in regions positively affects on population migration. If interpreting this result connected with above one, one can think that people do not flow into regions in Far North, where the percentage share of urban population is high but social infrastructure is poorly equipped. Population size in each region obtained insignificant coefficients during the 1980s and affected positively in the 1990s and after, on migration flows. The political incentives given to the peripheral areas during the Soviet era and their effects on population flows in the transformational period show a contrast.

As repeated, large-scale out-migration from the Far North is well recognized and is pointed out by many previous studies (Heleniak, 1999; Mikheeva, 2001). In papers from 1997 and 2003 (Kumo, 1997, 2003), this phenomenon was shown to be a counteraction
against Soviet-era development policies that were inefficient; the same was found by Heleniak (1999) or Mikheeva (2001). Mikheeva (2001), however, asserts the necessity for supporting individual regional economies. From an economic point of view, it is questionable that Mikheeva’s view would be acceptable. The scale of out-migration from the Far North is quite large and has been regarded as a problematic phenomenon in previous studies (Heleniak, 1999; Mikheeva, 2001). The emergence of out-migration from these northern areas is, however, an adjustment process caused by inefficient Soviet development strategies. It should be regarded as an economically rational phenomenon. This is explained as follows. The logic is the same as that in the two-sector analysis presented by Todaro (1969).

This economic inefficiency required a change in investment policy in the 1970s (Dienes, 1972). The large population outflows from the Far North may denote the correction of the distortion that had accumulated during the Soviet era. From these points of view, the evident out-migration from the Far North after the collapse of the Soviet Union was inevitable. Such a phenomenon can be regarded as natural or as a necessary evil when considering the necessity of increases in economic efficiency in transformational Russia.

As widely recognized, migration patterns in Russia drastically changed after the collapse of the Soviet Union. The most striking phenomenon is the large-scale out-migration from regions located in the Arctic Circle. It should be regarded, however, as an outgrowth of the distortion accumulated during the Soviet era and as an inevitable event. The Far North did not have any foundation for supporting a large population, and the out-migration seemed to be quite natural.

Aleksey Mints (1974) first demythologized both the geography of the first five-year-plan and descriptions of how uniform investment boosted new and backward regions and created cities “from scratch.” The reality was more prosaic, with the opening of eastern raw material resources being combined with the development of manufacturing industries in western regions of the Soviet Union. The shift eastward, Mints observed, occurred (primarily) within the European USSR. The centers of heavy industry did move toward the Volga and Urals, but that process remained completed at the start of World War II (Treyvish, 2005).
A way of gauging the extent of the shift is to trace the movement of population and other centroids across the USSR over time. The Soviet population centroid\(^\text{45}\) crossed the Volga during the 1920s, then the border of Kazakhstan in the 1960s, and in the 1980s, dragged eastward by the Central Asian population, passed over the crest of the Urals. Russia’s urban population centroid lagged farther behind initially, but during the 1930s shot ahead, moving some 900 km eastward, where for 40 years it was located at Ufa (the present capital of Bashkortostan); however, neither it nor Russia’s rural centroid could “ford” the Belaya River. Now, in the post-Soviet era, all the centroids are moving back toward the west and away from Russia’s territorial center (the Evenki Okrug, some 2,500 km to the east), as the population flows out of northern and eastern regions. The centroid of the population living in Russian cities of one million or more population (the so-called “millionaire cities”) moved roughly 450 km eastward before turning back at the western border of the Chuvash republic.

The larger cities with higher population densities now tend to be located closer to the historical European nucleus of the heartland where a more dense settlement network has evolved. The eastward movement of population and industry over the Soviet period is reflected as well in the positioning of major cities in the so-called basic “framework” of urban settlement, which has been analyzed by a number of scholars like Baransky, Lappo, Polyan, Kudryavtsev. The average distance between any of the 272 large or 45 very large Soviet cities to their nearest similarly sized neighbor was around half that anticipated by a theoretical uniform distribution. The same ratio held for the 10 (very largest) major urban centers in the USSR, although when taking into account only settled territory it increased to about three-fourths of the theoretical level (Treyvish, 2003).

The patterns of internal migration in post-Soviet Russia must be examined in the context of economic restructuring, and more specifically the restructuring of the labor market. They also must be examined at several different geographic scales. The predominant internal migration flow has been out of Siberia, the Far East, and the European north.

\(^{45}\) To calculate population centroid, one assigns a uniform weight to each person and zero weight to the land surface. At this centroid, the weights of all the people are balanced over the point. This measure can be somewhat practical. When you calculate this center of population, you have found an efficient location for a capital. The distance for people to travel to this central location is minimized. One must generally choose a small territory and assume the world is flat. A 3-D centroid of population across the whole globe would be near the Earth’s core.
toward central Russia. For most of the Soviet period, the predominant internal migration pattern was outward from this central core in European Russia to the periphery in Siberia and the north. Eight of Russia's eleven larger economic regions reversed their direction of net migration between the 1980s and 1990s, with periphery regions of the North, East Siberia, West Siberia, and the Far East going from net in-migration regions in the 1980s, to net out-migration regions in the 1990s. Four central regions, the Volga-Vyatka, Central Chernozem, Volga, and Urals regions switched from being donor to recipient regions. It is not just those leaving the periphery regions within the country that are concentrating in areas of central Russia, but also those returning to Russia from the non-Russian states. Even though they are responding to a different set of push factors, they are obviously being drawn to regions by the same set of pull factors as migrants from elsewhere in Russia. In fact, return migration to Russia from the non-Russian states is concentrated in a small number of regions, mostly along the southern border of Russia in close proximity to the states they departed from.

Combining patterns of net migration with trends in natural increase or decrease (the difference between births and deaths), the regions of Russia can be divided into six groups. Whether the population of a region is growing or declining, and whether that is due to changes in net migration or natural increase/decrease, are important because of the differential age structure of each. Because of the slowdown in fertility during the transition period, Russia as a whole and many of its regions are "aging" quite rapidly. 14 regions that are experiencing high levels of out-migration are losing people in the younger, working ages, leaving them with an increasingly immobile elderly population. Those regions gaining large numbers of people through migration are adding them to their young adult populations, which can be a boon to their economies if the local economy is growing fast enough to provide jobs.

Overall during the 1990s, the population of 40 regions increased, and that in 49 regions declined. By 1999, only 10 of 89 regions were still growing. Only 10 regions had both more people arrive than leave, and more births than deaths during the last decade. All but one of those regions was ethnic homelands; they included Chuvashia, Tatarstan, Bashkortostan, and others in the North Caucasus and West Siberia. In 1999, only three of these regions continued to combine net in-migration with positive natural increase.
Twenty-four regions had more deaths than births during the 1990s but continued to grow because in-migration exceeded the population decline from natural decrease. They included a large array of regions, including Leningrad oblast, most of the Volga region, and the three regions in North Caucasus, which had the highest rates of in-migration in Russia-Stavropol, Krasnodar, and Rostov. Only six regions grew through the 1990s as a result of natural increase exceeding net out-migration. These were all ethnic homelands either in Siberia or the North Caucasus. (Heliniak, 2001)

Peculiarities of Migration phenomenon in Siberia:

Between 1926 & 1939 (the period of rapid urbanization of Siberia) a total of three million people moved beyond the Urals, from the European part of the soviet union, while between 1939 & 1959, the population beyond the Urals increased by 35.6% (as compared to an average population growth for the Soviet Union of 9%). This high level of growth is explained by a number of factors. Firstly, the population of Siberia did not experience the terrible wartime losses, suffered by the population by the European part of the Soviet Union. Secondly, many of those who were evacuated in 1941-1943 from the Ukraine, Byelorussia & the North West areas of the Russian Federation did not return to their former homes, but settled in Siberia & there were several other factors. During the period between 1959 & 1964, the number of those moving out the European part of USSR, exceeded those moving from west to east. The statistics show that as of January 1, 1964, only 23 million people lived in Siberia: that is, 10.2% of the country’s total population. Figures cited by Y. Manevich (Voprosy ekonomiki, number 6, 1965) illustrate the efforts made by the soviet government out move a part of the population from the west to the east & so that significant masses of people are constantly moving in and out of Siberia. Between 1956 & 1959 more than 1.4 million people moved to Siberia, the research conducted in 1961-62 showed that the overall growth in the Siberian population was below the natural increment: in short the number of people leaving Siberia between 1956 & 1960 exceeded 1.4 million.
As an aftermath of the disintegration, Siberia lost 4.8 per cent of its population and Russian Far East lost 1 per cent in 1989. A short period of decrease of urban population was registered in the beginning of 1990s due to the crisis. There was a substantial ethnic emigration to the Germany and Israel plus professional emigration of highly qualified scientists and technologists to USA (brain drain, Emigration of the intellectual élite and highly qualified personnel)

Another peculiarity was the migration inflows of ethnic Russians from the CIS countries. Since the middle of 1990s, labour force from CIS and China migrated into Siberia. By 2002, the population clocked 20,630,000 in Siberia, out of which 73% lived in cities. In 4 cities – Novosibirsk, Ekaterinburg, Cheliabinsk, Omsk – there were 1,000,000 citizens.

- Rural to urban locations
- Migration from the relatively over populated northern parts of western Siberia
- Ecological migration
- Forced migration mainly from the central Asian states
- International migration of labour

Judging from preliminary data from the 2002 census, migration flows between regions do not favor the eastern part of the country or the north. People are leaving the places where the major reserves of mineral resources are located to go where, as they say, “it is easier to make a living.” (Grebnev, 2004)

Table 15. Movement of Population by districts

<table>
<thead>
<tr>
<th>Federal Okrugs</th>
<th>Permanent Population</th>
<th>Moved in</th>
<th>Moved Away</th>
<th>Migration Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Central</td>
<td>37,991</td>
<td>2,357</td>
<td>1,570</td>
<td>787</td>
</tr>
<tr>
<td>Northwestern</td>
<td>13,986</td>
<td>1,104</td>
<td>1,248</td>
<td>-144</td>
</tr>
<tr>
<td>Southern</td>
<td>22,914</td>
<td>1,562</td>
<td>1,379</td>
<td>183</td>
</tr>
<tr>
<td>Volga</td>
<td>31,158</td>
<td>2,036</td>
<td>1,775</td>
<td>261</td>
</tr>
<tr>
<td>Ural</td>
<td>12,381</td>
<td>1,232</td>
<td>1,313</td>
<td>-81</td>
</tr>
<tr>
<td>Siberian</td>
<td>20,064</td>
<td>1,170</td>
<td>1,441</td>
<td>-271</td>
</tr>
<tr>
<td>Far Eastern</td>
<td>6,687</td>
<td>738</td>
<td>1,473</td>
<td>-735</td>
</tr>
</tbody>
</table>

Source: Grebnev, 2004
A particularly troubling demographic situation is taking shape in the Far Eastern Federal Okrug. In other federal okrugs, regional governments can be counted on to handle the situation either on their own or in cooperation with their neighbors. In the Far Eastern Okrug there is no such hope. The extremely low level of funding of general education may very well be one of the main factors causing the negative migration balance in this strategically important federal okrug.

In industrial cities wages are often higher, but those with diversified economies and administrative functions may enjoy higher per capita levels of retail trade and services provision. Non-industrial centers are more attractive to migrants, and consequently their populations continue to grow while those of industrial centers decline. Southern part of the Siberian district provides a vast inhabitable land reserve with a notable shortage of inhabitants. In order to increase, to the Russian average, population density in inhabited but under populated regions, and to bring severely lagging regions to even under populated levels, Russia needs some 21 million additional people. In European Russia alone (west of the Urals district) the population deficit is calculated at some five million people. Each year these figures must be adjusted further upward, as the population declines in the majority of Russia’s regions. Migration (internal and international) no longer assists in equalizing the spatial distribution of the population, since flows are toward already more populated, well settled zones.

The result is as Vardomskiy (2001) has observed, “the periphery, deprived of the resources for its economic development, today appears to be Russia’s central problem.” The problem for planners presents itself that in the absence of the demographic resources is it an option to create new urban centers and what kind of use will be made of exiting

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46 Under populated regions are defined as those with a population density of less than 35 people per km in total and less than 10 per km2 in rural areas. Scarcely populated areas have densities at half this level or less, whereas areas with at least one person per km2 are considered “inhabited.” The underpopulated threshold is based on a “standard” rayon unit (2,000 km2 and 50,000 inhabitants, including one medium-sized or several small towns and 20,000 rural inhabitants). The scarcely populated threshold has been revealed empirically as the minimum for successful commodity farming (Loffe and Nefedova, 2000, p. 300; Nefedova, 2003).
centres? Or is it easier to provide new support to old structures and most importantly, where to start and how to proceed?

The traditional way of developing new regions has been a method called Combined Tour of Duty and Expedition which has been firmly established in Tyumen. Many of the major development projects in Siberia such as the west Siberian oil and gas fields or the BAM are located in the remote and sparsely populated regions where it is difficult and costly to attract the workers and their families on a permanent basis.

Workers are brought under the tour-of-duty method to certain base cities that have been built up with all the amenities. They are then transported as far as 100-200 kilometers to temporary settlement at the work sites for a tour of 10 days to 15 days, after which they return to base cities or their families for a week or two. In the combined tour-of-duty and expedition, workers are flown from thousands of kilometers. Away without their families to work for several weeks at the settlements.

According to the calculations of the economists the construction of single trunk pipeline from western Siberia to the central part of the U.S.S.R. by the combined tour of duty and expedition method was likely to save the state 500 million rubles. This would also do away with the fear of futureless cities in the north.

The Sociologists, however, are opposed to this method of labour employment and they point out the harmful social consequences of the orientation towards temporary residence in the region. They favor the goal of all-round protection for the working people's health rather than the criteria of economic effectiveness to determine the scale, on which the combined tour-of-duty and expedition method should be used.

State of Education in Russia and Siberia

The most important intangible resource is knowledge, a step ahead of ‘information’. Information when processed and disseminated by competent manpower results in knowledge.

The concept of a Knowledge Economy as popularised by Drucker (1969) was the title of Chapter 12 in his book, The Age of Discontinuity. The transition requires that the rules and practices that determined success in the industrial economy need rewriting in an
interconnected, globalised economy where knowledge resources such as know-how, expertise, and intellectual property are more critical than other economic resources such as land and natural resources. An economy and society based on knowledge is more responsive especially in a globalised scenario. It can be argued that the knowledge economy differs from the traditional economy in the following key respects:

The new economics is not of scarcity, but rather of abundance. Unlike most resources that deplete when used, information and knowledge can be shared, and actually grow through application.

The effect of location is either diminished, in some economic activities by using appropriate technology and methods, virtual marketplaces and organizations that offer benefits of speed, agility, round the clock operation and global reach can be created or, on the contrary, reinforced in some other economic fields, especially by the creation of business clusters around centres of knowledge, such as universities and research centers. On other hand, restrictions and taxes are difficult to enforce on solely a national basis.

Knowledge and information "leak" to where demand is highest and the barriers are lowest. Knowledge enhanced products or services can command price premiums over comparable products with low embedded knowledge or knowledge intensity.

Knowledge when locked into systems or processes has higher inherent value than when it is retained in the human minds.

Human capital is a key component of value in a knowledge-based society. Social structures, cultural context and other factors influencing social relations are therefore of fundamental importance to knowledge economies.

Means of Communication is fundamental to knowledge flows. These characteristics require new ideas and approaches from policy makers, while planning future development of Siberian region.

Jan Hospers (2003) explores the function of cities in the knowledge economy. The knowledge economy asks for “creative cities,” i.e. competitive urban areas that combine concentration, diversity, instability and a positive reputation. He has reached the conclusion that knowledge, creativity and innovation cannot be planned from scratch by local governments. However, creative cities par excellence such as Austin (USA), the Øresund (Sweden) and Barcelona (Spain) demonstrate that local policymakers in fact can
play a part in preparing cities for the requirements of the knowledge economy. He concludes that local governments can increase the chance that urban creativity emerges by providing the appropriate underlying framework conditions.¹

Russia is witnessing an ongoing active dialogue in the last few years on building up an innovative economy. An economy based on Knowledge. At a time when developed countries’ 70-85% GNP is contributed towards new knowledge, Russia held the percentage at 1.1 per cent in 2000 which corresponded to the same percentage as that of the period 1946-1950 and the expenditure on sciences was almost like that of the 1960s. (Lenchuk and Uzbekova, 2007)

In a Question and Answer session that followed Putin’s speech at the APEC Business Summit 2003, the Russian President expressed the need for Russian economy to diversify. “We will work towards diversifying the Russian economy. We are going to focus more on the modern sectors of the economy, the new economy based on information technology. But we will also continue to do everything within our power to make effective use of our natural advantages, one of which is without doubt the large energy resources that Russia possesses.”

According to the Eurasian report, published in January 2008, the structure of Russia’s economy is changing as the share of energy constantly declines and share of innovative industry constantly rising. The share of hi-tech and innovative industry constituted almost 9 per cent though it was less than planned targets. Its share is expected to rise to 15 per cent by 2010. Furthermore, it notes that Russia is building massive state corporations in ship building, aviation, space, nuclear energy, and nano-technology with huge state investments.

Balancing the Siberian Economy

Current demographic and migration trends show that large numbers of Siberians are leaving the region permanently due to its harsh conditions. Siberian economy should make better use of the intellectual potential of its residents, which is one of the Strategy’s goals. With growth of information and communication technologies the world over, Siberia can toss up a different side of its coin by properly harnessing its talent.
President Putin at a press conference for the Russian and Foreign Media held in January 2006 "I am sure that given the high level of education in Siberia, and also the purity there, the moral purity, Siberia's human resources will be of great importance for the country."

Drawing on Siberia's Strengths:

Reputed institutions in pure sciences, engineering and technologies remain to be organized in Siberia. It has been home to the Science complexes of Academy of Sciences of the USSR, Academy of Medical Sciences of USSR, Lenin All Union Academy of Agricultural Sciences, present day Russian Academy of Sciences (RAS), Russian Academy of Medical Sciences (RA MS) and Russian Academy of Agricultural Sciences (RAAS). Universities at Irkutsk and Tomsk are one of the oldest and most respected universities.

Mikhail A. Laverentiev was instrumental in the creation new scientific centre in the east of the USSR. An exposition dedicated to Laverentiev which I witnessed at Academogorodok describes Laverentiev as a "world-famous scientist, untiring investigator and scientific manager." He laid the foundation of the Siberian Branch of USSR Academy of Sciences and it was his efforts that Academy Town near Novosibirsk became the first born of the Siberian Branch, he also pioneered organisation of Novosibirsk Scientific Centre and the further development of the Siberian Branch: the election of place for construction of Academy town, first years of the construction, served as the first President of the Siberian Branch, vice-president of the USSR Academy of Sciences and the Director of the Institute of Hydrodynamics, M.A. Laverentiev had spread great care to these problems Organizing of the Novosibirsk University, Physical Mathematician School (first in USSR) for talented Siberian and the Far East children. Young Technicals Club was the results of indefatigable activity by Laverentiev. Harsh climatic conditions are the primary cause of the low population density. Therefore, automation and the application of technology on the widest possible scale-that is, more active participation by science in the immense task of opening up the Asian part of the soviet union-represents the only means of exploiting the natural resources of this region"
that was how Lavrentyev, speaking in 1967, explained the thinking which lay behind the establishment of the Siberian division of the USSR Academy of Sciences. By then, Akademgorodok “academicity” set up in the face of widespread skepticism was already rising amid the larches and cedars of the Tiaga, 25 Kilometers from Novosibirsk (Sansone, 1980).

Siberia has prominent and modern universities throughout its spread: Novosibirsk State University, Vladivostok State University of Economics and Service, and Khabarovsk State University of Technology (Voskerenski, 2008).

Siberia’s economy is primarily based on extraction and utilization of raw materials. It is here that a knowledge economy can also benefit the greatest. In 2000, President Vladimir Putin met with regional heads of the Siberian Federal District. The meeting focused on the social-economic development of Siberia. He emphasized the need to create a favourable environment for attracting highly knowledgeable specialists to Siberia.

“We simply mustn't waste this chance,” Putin declared in Akademgorodok following his 2005 trip to India. Siberia’s other resources are tough to tap, but cashing in on the 200,000 science and technology graduates that Russia churns out each year, Kremlin can plan ahead about developing the region. President Putin at a Meeting on Social and Economic Development in the Siberian Federal District on April 26, 2006 in Tomsk concluded “Governor [of Kemerovo Region] Tuleyev said today, even in the regions in Siberia and the Far East that have based their development over these last decades primarily on raw materials, our colleagues are already beginning to introduce new methods for developing these resources and developing their regions as a whole. This is because modern raw materials production and refining methods are directly linked to advanced technology. Without question we must make use of the possibilities this technology offers for our country as a whole and for the regions of Siberia and the Far East.”
The greatest problem however that Russia faces is what Lounev (2008) terms as “Idea Drain”. He elaborates: Tens of thousands of scientists are now working for foreign companies and huge numbers of scientists have fled the country. Russia’s real contribution to the world market of science based products, know how, and technology is several times more than the registered statistics (In the world market of science based products only 0.3 per cent of the market belongs to Russian know-how).

Lounev (2008) compares Russia’s ability to build a new society based on scientific research compared to other Asian giants. He feels that the socio-economic situation of these countries stand in the way, which is aggravated by presence of huge unqualified population. “There is no sense for applying new resource-preserving technology because of low-cost manual labour and the necessity to provide jobs to the huge population”. He adds that the Asian giants lag behind Russia in the sphere of fundamental research. However currently, Russia suffers from a weak state and influential bureaucracy as a result of which science based production functions in an extremely distorted legal space, hardly facilitating development of scientific activities. He specifically points to the lack of protection of intellectual property. Sale of intellectual property presupposes its prior formatting as a property and Russia lags behind other countries in this field. “The state does not fulfill its functions in the sphere of unification of science and business, as it happens in not only in the developing nations but also developing countries whose experiences are very interesting.” He cites the example that in developing counties for each prospective scientific idea, there are on an average 10 managers who push the product in the market while the number is several times less in Russia. Critical is also the training of such managers.

Outdated methods of developing scientific potential are impossible. It is difficult to imagine the physical transfer of scholars and IT specialists to the region. However a comprehensive strategy to attract and develop talent in the new centers (for example techno park on the basis of Novosibirisk Scientific centre’ is being constructed in Siberia). Distance education modes like e-learning potentially have wide application in Russia. The sheer size of the country and the remoteness of many communities from
major centers of learning will probably soon become a much more serious obstacle than in the past to many who want to pursue higher education.

President Putin and Prime Minister Medeveyev favour structuring the educational systems in Siberia. Their priorities is to concentrate on a few and carve out universities of excellence, Russia wants to emulate the European education system to concentrate on quality not quantity (Voskresenski, 2008).

The federal government of Russia allocated almost 5.5 billion roubles for two universities in 2007 and 4.7 billion roubles will be allocated in 2008. President Putin, in his opening remarks at a meeting with teachers and students at the Siberian and Southern Federal Universities on November 13, 2007 justified the allocation: "Our aim is to raise the quality of education services, raise the quality of education and create a new and innovative environment. Our aim is to put in place the required conditions for integrating science, education and the economy in order to create synergy out of these different areas of activity. Our aim is to produce a quality education product that will help us to tackle our main development objective, that of giving our economy an innovative character, and, of course, we also seek to bring major educational centres closer to the parts of the country that have such great potential and importance for our nation's future. Our goal is to ensure that the specialists trained within the walls of these new universities will meet the demands of the regional and national economy and make sure that these universities will be able to respond flexibly to changes on the labour market and supply needed specialists at the right moment.

Looking at the region we are in today, the Siberian region, Krasnoyarsk, we see that there are very large and ambitious projects underway, projects in the mining and minerals industry and in high technology. These ambitious projects cannot be properly implemented without people who take the right decisions to reach the set objectives. This is our main goal. We need to ensure that our economy has a supply of qualified local professionals. This is a goal that we can achieve and I have no doubt that not only will
these universities become leading centres of learning in the Russian Federation but will also take a worthy place in the international education system.”

In the speech President of the Russian Federation, Putin at the Expanded Meeting of the State Council on ‘Russia’s Development Strategy through to 2020’ held on February 8, 2008, mentioned the importance of education in the Russian context. “Developing the national education system is a key part of global competition and one of the most important values in life. Russia has everything: a wealth of traditions and the immense potential needed to make our education system, from schools to universities, one of the best in the world.

Karpova (1994) observes education in the context of the Soviet and Russian period. The first half of the 20th century was marked by the contested legacies of Tsarist education, the experimentation by Soviet educators in the 1920s, and the establishment of strict political control over Soviet education in the 1930s, 1940s, and 1950s. The goal of the Soviet system was to develop human resources for the construction of the communist nation (Endo, 2003). Education was provided in accordance with Marxism and Leninism under centralized education administration and in close relation with the communist party. Given their training in one of the most conservative of Soviet institutions, educators were generally protective of the existing school system and pedagogical theories, and thus were relatively slow to detach themselves from "Soviet" models of thinking. Only in the last stages of the Gorbachev period did critics begin to look not just at "distortions," but at the fundamental structures of the Soviet educational system. In an 1988 plenary meeting of the Committee of the Soviet Communist Party slogans including “democratization”, “humanisation”, “diversification”, “development of individual character” and “creation of life long education system” were presented as basic components of the perestroika policy on education and set the direction for educational reform. Educational reform during Perestroika (restructuring) at the end of Soviet era, bought improvements in level of general education and reforms like extension of compulsory schooling from 9 to 11 years, decentralization over school curricula, and democratization of school management (Endo, 2003).
Russia has reformed its education system from the one prevailing in the Soviet times. The new system has enlarged the responsibilities of local governments and schools in the domains of finance, curriculum, school establishment and school choice. Decentralization has been the major features of the reforms. During the Soviet times education was governed by various laws and decrees at many levels— with Respublik (republic) at the top end and then Oblast (state), Krai (county), Gorod (City), Raion (District) and Okrug (ward) at successively lower levels. Local government were expected to implement the education policies set at higher levels, and to adhere to standards determined by Soviet government with appropriate adaptation to local conditions. Since the local governments were closely connected with local communist organizations headed by the Soviet Communist Party, and thus faithfully obeyed the education policy made by the Soviet government and Central Committee of the Soviet Communist party, and could not provide local residents with education which met their local needs and local circumstances. The Soviet regime regulated the goals to be achieved in each grade, methods of teaching and even lesson plans.

The nature of decentralized system was set out in the 1992 Federal Law on Education. The law limited the function of federal government to guidance and coordination in order to maintain unity within the federal system. In the new system, federal curriculum standards for primary and secondary education were simplified and local governments and schools were given more scope to determine the contents of school subjects. Law “On Education,” and continuing the draft Code of the Russian Federation on Education.

“The objects of educational relations are the systematic, poly thematic knowledge, skills, and know-how that are acquired by the student in the process of teaching and socialization in an educational institution (organization). The level of this knowledge should meet the requirements of the state educational standard and is certified by a document indicating the relevant education. Preschool and continuing education maybe completed without issuing a document indicating relevant level of education. (Article 4, paragraph 2, emphasis added)”
In 2001, in accordance with the principle of cultural autonomy, the government guaranteed the right to study the languages of ethnic minorities. Post-transition to a new economic system has led to a substantial privatization of public schools through paid educational services and financial support from parents. Differentiation in the status of schools has become evident especially in the urban areas. Academic circles in Russia are discussing the possibility of complete returning to BA plus MA system (we have in the past additional 1 year degree called "specialist") in accordance with the Bologna process. The numbers of private higher education institutes and students increased every year during 1990s. The DAAD (German Academic Exchange Service) observes in a paper titled “The Russian Federation Higher Education Development Priorities”: “Over the last ten years, the system of higher education in Russia has undergone considerable changes in the goals, structure, autonomy, financing and content. Increasingly efforts are made to align goals of the education with an orientation towards the needs of the market, society, and individuals. Structure of education has undergone a change with decentralization (as contrasted to Soviet centralized planning). Autonomy of higher educational institutions with the introduction of private higher education four- and two-year programs have been started parallel to the traditional five-year program elimination of a bias towards engineering specialties. Another improvement is that educational institutions are seeking financial diversification instead of a relying solely on state financing. Furthermore, attempts have been made to diversify programs and courses. Following the provisions of the 1992 Law on Education and responding to the rising demand the need to generate revenue, the state educational institutions acquired more autonomy, opened new programs and started enrolling commercial students. New non-governmental universities and institutions have been set up. By 2002 their number reached the number of 384. There has been a steady tendency for educational services market development. At present, the current Russian Higher education community consists of over 1000 Higher Educational Institutes, 655 of which are state institutions.

47 The purpose of the Bologna process (or Bologna accords) is to create the European higher education area by making academic degree standards and quality assurance standards more comparable and compatible throughout Europe.
In 1990 there were only about 700 institutions. During the last 10 years, both state and non-state Higher Educational Institutes have created more than 2000 branches. Of these, 64% are registered as state institutions, and 36% as non-state Higher Educational Institutes. As for the distribution of students on these two types of institutions, of the total of 6 million students, about 5.2 million or 87% are registered at state Higher Education Institutes. Thus, 36% of non-state institutions enroll about 13% of students. This means that many of the private institutions are fairly small and mainly have local importance in their respective region. Private institutions were mainly opened for the professions that were demanded by the labour market: lawyers, economists and accountants. A large number of the faculty members at private universities are full-time employees at public universities.

However, the society faced major problems from the severe financial situation during the transition period. These problems included delay of teachers' salary and the lack of textbooks and other teaching materials. As the major part of the educational expenses was subsidized by local governments, the problems were more severe in regions such as East Siberia and the Russian Far East. These problems acted as major barriers to reform (Endo, 2003).

The program for modernizing Russian education up to 2010 emphasized primary and secondary vocational education to meet the need for skills that were evident at the time when this program was being developed, at the beginning of recovery after the 1998 default. Even now, some respected university presidents, citing the experience of developed countries, repeat like an incantation that the ratio 0.5:1:4:7 must be followed for the categories of scientists/developer, engineer/operator, technician and worker.

If this formula is strictly followed, then at least half of middle and high school graduates will have to go to vocational technical school. Another third will have to go to vocational training schools, and the remaining one sixth to institutions of higher education. In 2010, this will be more than 200,000 people compared to 1.2 million at the beginning of the 2000 (not counting private institutions of higher education), of which more than 600,000 people enter classroom studies as opposed to correspondence school (Grebnev, 2004).

The DAAD (German Academic Exchange Service) observes in a paper titled "The Russian Federation Higher Education Development Priorities": Geographically and
traditionally Higher Education Institutes are concentrated in European Russia: Central Federal District has 347, North-Western Federal District has 136, Southern Federal District has 146 and Volga Federal District has 42. Whereas the remote Federal Districts (Siberian, Urals, and Far East) count 14-29 Higher Education Institutes each.

In the speech President of the Russian Federation, Putin at the Expanded Meeting of the State Council on Russia's Development Strategy through to 2020 held on February 8, 2008 "We are in third place in the world for the number of scientists and we are one of the world leaders for state spending on science, but we are still a long way from the lead in terms of results. This is a direct consequence of insufficient interaction between scientific and educational organisations, the state and the business community, and insufficient private investment in science."

According to the Institute of Complex Strategic Studies, Russia's cumulative innovation index is 0.59 of that of the EU, which is taken to be unity. The method of calculation and the parameters of this index are based on data collected by experts of the World Economic Forum and published in its annual reports. They show that Russia is above the average European level measured by two indicators, which are the share of new graduates working in science and technology and government expenditure on R&D as a percentage of GDP. Russia is gradually catching up with Europe measured by the ratio of innovation spending to total industrial spending and by the development level of information and communication technologies. However, it is far behind others by patent applications per million people, innovation spending in services, and the share of people with access to the Internet and effectiveness of government policy in research and innovation. The structure and priorities of financing are obsolete, and reduction of government allocations to research has not led to their rationalization. There are ways of using the available budget money more effectively to solve current socioeconomic problems and create reserves for the future.

The current structure of priorities in research spending by the Russian government is similar to that in developed countries after World War II: spending on technical sciences is much higher than on life sciences (particularly medical research). Expert assessments and polls of enterprises show that research priorities need to be changed, but government seems incapable of reacting to these findings. The biggest share of total federal budget
allocations for research purposes goes to economic research (36.6% in 2002). The share
given to military research increased from 22.6% in 1998 to 29.7% in 2002. But Russia is
still closer in this respect to such European countries as Britain, which channels 37% of
its research budget to defense, and France (23%) than to the USA (54%). However,
overall spending in Russia on civilian R&D is only 0.9% of GDP, which is much less
than in other developed countries, such as the USA (2.4%), Japan (2.9%), and the
average in Europe (1.5%). Most of Russia’s state research priorities, government
programs, and lists of crucial technologies are a result of lobbying power of main science
and technology organizations rather than of real economic needs and real financing
capacities. The result has been stagnation in state run research agencies and maintenance
of obstacles to development of private sector research, which is the main engine of
national innovation in all developed countries.

Creation of a new type of innovation system is only just beginning in Russia. New
innovation structures, capable of commercially attractive projects, are gradually
developing (small business, industry research bodies and academic institutes) and are
starting to receive financial support from efficient companies with large-scale investment
programs. The two main poles of innovative activity in Russia’s economy are the defense
industry and fuel and power. Most science intensive companies are in the defense sector,
but their R&D potential is under used due to reduction of state orders, which has made it
impossible to fund large scale projects. Fuel and power are not high-tech industries, but
they are among a few flourishing segments of the Russian economy, and they are
building a completely new innovation model, mainly by the efforts of private fuel and
power companies, which badly need to improve their levels of technology.

A. Fursenko, acting minister of industry, science, and technologies, in an interview in
Russian with Ekspert on 16th February, 2004 “…our limited resources mean that we must
select not 10-15, but just three or four state priorities. So it is not just a question of
identifying and eliminating weak or unpromising research directions, but selecting the
strongest of the strong. We have to look for intersection points, where good prospects for
a technological breakthrough combine with markets that will dominate the world in 10 or
15 years time. And we must make best use of our competitive advantages, both those
related to our large territory and rich mineral deposits, and the immense science and
technology base created in earlier years of our history – the results of huge investments in space exploration and nuclear technologies, study of materials...Take the example of space research. This is a sphere where we still have leading positions. Combine that advantage with the natural advantage of Russia’s location, and there is huge potential for synergy effect, which can generate money, e.g. by providing an intercontinental air freight corridor and using space technologies to control the traffic. The global space logistics markets offers lots of ways for us to make money: by launching tracking satellites, by installing equipment on those satellites, by supplying transponders for each cargo, by developing software for freight transportation. The same applies for atomic energy. I believe that we have a role to play in international development of hydrogen power engineering.”

Addressing the Knowledge Worker Shortage:

Presently, there are no concrete proposals for addressing labour-force shortages. The resource potential of Siberia can be a major stimulus for its development and has the capability to integrate the Russian economy. Political and economic changes will serve to differentiate numerous separate and distinct regions within Siberia. Between 1992 and 1997 the education levels of immigrants from the former Soviet republics is found to be higher than those of Siberians as a whole. Their educational levels are reflected in their professional profiles. A large percentage of their population is civil servants, well-qualified specialists in the areas of education, public health, culture and science. Difficulties involved in finding work lead many migrants to take jobs that do not match their educational or professional qualifications. The educational and professional potential of those migrating to Siberia is not being tapped efficiently. This is one of the factors hindering a smooth or quick adaptation process. It is also delaying development of Siberia’s human-resource potential and hence future economic growth. Qualified migrants from over populated Asian countries could be the answer to labour shortage in Siberia, especially if the policies are well regulated. Further more, a suitable enterprise friendly environment can ensure the creation of conditions for attracting foreign investments and advanced technologies to Russia via the Asian regions. Migration policies developed in conjunction with stake holder institutions and
academicians should keep in view the long term implications. One of the aims of the migration policy should be encouraging competition on the labour market. Diverse labour with diverse skill-sets will spruce up the flickering flame of Siberia. Fresh talent, management techniques and technology will flow in, and in time, local human resources of Siberia will become productive and globally competitive. The state should ensure that the expatriate workers hold rights as well as duties, in the light of which responsibilities of the local and national governments should be clearly defined. Protection of intellectual property rights has to be ensured.

**Education and Indigenous Communities in Siberia**

Indigenous settlements were usually located in settings of diverse and high biodiversity value, taking full advantage of what the nature could offer, and communicating with environment in ecologically sustainable manner. However, during the 20th century indigenous communities endured serious pressures on their traditional lifestyle and environment, related to the developmental interventions to the Northern territories and social reforms in the Soviet Russia, followed by the period of transition in the 90-ies. Once the former Soviet social security system collapsed, indigenous people appeared to be among the least protected, most vulnerable social groups. Low efficiency and profitability of the traditional economy and unemployment followed by decrease of the local incomes have a negative impact upon living conditions of indigenous peoples. Overwhelming majority of aborigines live in extreme poverty and very often their sources for living are limited to private gardening, hunting, fishing, wild plants harvesting and pension. Real financial income of indigenous peoples of the North who mainly live in the rural areas, is not only 2-3 times less than average level in Russia, but also by 25-30% lower than average level in the subsequent regions. At present economic situation, most important objective for indigenous peoples of the North is not merely preservation of their traditional economy but an adaptation of the latter to the modern market system.

Studies conducted by the Russian Committee for the Development of the Northern Regions ascertained that the reduction in the standard of living in the North is sharper
than in Russia as a whole, rate of unemployment in the North is above than in Russia as a whole and the outflow of highly qualified and adapted to the North conditions personnel results in lowering of the level of education and professional training in the North than in Russia as a whole.

Over the years, access to infrastructure funding and the transition to Russian language as the 'native language' have put the future of many in jeopardy. With few exceptions the indigenous peoples of Siberia lacked written languages (a number of religious books had been printed in two or three of local languages by missionaries). Efforts to fill this gap began soon after the inception of soviet power. The enormous task was accomplished following a campaign to wipe out bespismennost (absence of a written language). The creation of written languages was an indispensable condition for the establishment of schools, newspapers and a written literature and ultimately for disseminating the ideas of socialism. Sixteen indigenous peoples amongst them Evenks, the Nentsi and the Nanais acquired written languages. During the first years of soviet government "red chumy" (red tents) played an important role in the political and cultural education of indigenous Siberian population. Each "tent" consisted of a team of specialists—a doctor, a zoo technician, a teacher, a cultural organizer and so on—who worked among the nomads (Sansone, 1980)

The first alphabet for the northern peoples was created at the beginning of the 1930s following fundamental research in phonetics and a long period of preparation by a group of linguists that included Academician Vinogradov, Dr. Zinzius and the professors Procofiev and Bubagov. In 1930-31, a standardized alphabet was proposed, based like alphabet already used for a number of languages spoken by the Central Asian people, on Latin script. A year later, primers and textbooks for the Nenetsi, Selkups, Mansi, Nenais, Evenks, Evans and several other peoples were published. Discussions were held with different nationalities before primary school textbooks were issued and the Institute of Northern Peoples in Leningrad was actively involved in preparing them. Latin characters were replaced by Cyrillic alphabets in 1937 after practical experience had shown that children found difficulty in remembering one alphabet in their own language and another for Russian (Sansone, 1980).
In the Soviet period, which lasted till the 1930s, small nations of people were recognized and their self-consciousness occurred in tandem with collectivization and the heavy repressions known as “class struggle”. This phase was characterized by forced settlement. Traditional economic systems were dissolved by a liquidation of small villages and households. Collectivization was accompanied by a centralization of the economy which began alienating people from their work and environment, separated them from nature, and made them dependent on centrally apportioned supplies. Economy being an inseparable part of culture, this was an initial step in the ruination of national cultures. At the same time it should be appreciated what was done for the development of literacy among small peoples. Many languages received their own newly devised writing systems. Towards the end of the 1930s the situation changed radically. The Stalinist regime abandoned the least pretences of adherence to the principles of freedom and equality, and embarked on a course of blatant russification. National writing systems were either replaced by the Cyrillic alphabet or cast into disuse. Local intellectuals were dispersed and killed. For many the final blow was dealt by World War II. In the post-war period, these people suffered from the lack of vernacular schooling and letters. Their habitats were flooded with (mostly Russian) migrants.

The migrant influx was resisted only by those peoples protected by forbidding (mostly Caucasian) mountains and a traditionally militant mentality. Since the October Revolution took place in 1917, the main aim of the Soviet government in its policy toward the small-numbered peoples of the North was to transform their lives: archaic and backward economies of nomads, hunters and fishermen were to be replaced by socialist organisation of work. According to the Soviet laws of economic development, ethnic boundaries would vanish if there were an equal access to the means of production. The slow rate of these changes was assigned to the culture, which, as a stable phenomenon, was blamed for the failure of modernisation (Schindler, 1991, p. 70).

After a rather short period of korenizatsiia (This may literally be translated as ‘rooting’ policy. In 1924, the Committee of the North was created to coordinate state-induced activities among the small-numbered peoples of the North. Its policy promoted the development of indigenous cultures, languages, administration, etc. As a result of the Committee’s work, several indigenous languages and cultures were carefully studied;
first dictionaries and handbooks were published. It was the beginning of an education system that paid attention to local conditions, e.g. teaching native languages. Until the end of the Committee in 1935 there were created: 455 tribal councils (sovety), 9 national districts (okruga) and an additional 20 national regions (raiony). This policy was ethnic in form and Soviet in content (Vakhtin, 1998, pp. 82–6). Forced-collectivisation, industrialisation and centralisation were implemented. These policies were supposed to facilitate the equality of access to the means of production, elimination of ethnic differences, and creation of a homogenous group of ‘Soviet people’.

Officially, the small-numbered peoples of the North were to become fully recognised members of Soviet society. At the same time, they were deprived of self-determination and they were thought to be unable to create self-government. National okruga were an illusion of self-determination, as indigenous peoples were becoming a minority in their own territories. Cultural expressions of individual peoples were largely limited to wearing ‘national’ costumes and performing ‘national’ songs and dances. It must be remembered that becoming a member of Soviet society meant forced Russification, applied mainly through the system of education. After the October Revolution, indigenous peoples of Siberia were expected to benefit from the Soviet system of education. For years nobody paid attention to the fact that indigenous children learn in a different way and that indigenous culture and pedagogy may have their own value. Very often students whose language and culture differed from those of the dominant group and its education system had difficulties with particular subjects. The promotion of equal opportunities in education may require different education systems for various groups of students; otherwise, they might feel alienated, powerless, unsuccessful and socially excluded.

With the changes that the indigenous groups are facing, there should be concrete steps to support sustainable livelihoods simultaneously contributing to community development and improvements in social services. It is imperative to preserve and develop traditional land use practices and lifestyle strengthening the legal framework concerning traditional land use by indigenous communities (land rights issues). Besides in these isolated and
With the aim of explaining the education system in Siberia, one needs to present the main characteristics of traditional indigenous education. First, education among indigenous societies was mainly informal – they learned as they grew up. The only formal elements of education were initiations, rituals and other organised forms of ‘instruction’, e.g., when boys were becoming hunters or during rituals conducted after the killing of an animal. Nichol and Robinson (2000) stress that aboriginal learning was largely oral, and that storytelling was an important part of it. There was no secular education – every aspect of indigenous peoples’ life was regarded through the prism of religious beliefs. Native education was linked to the traditional economy; for example, children learned the skills of hunting, fishing and reindeer herding. Significantly, ‘knowledge of the kinship system was central to learning’ (Derlicki, 2005).

According to a recent research (Derlicki, 2005) among the Yukaghir, in northeastern Sakha (Yakutia) the role of the residential school (internat) in indigenous children’s upbringing Other analysts (Jochelson, 1926) hold that the teaching methods and content at the residential schools have created ‘a “lost” generation which has a problem with finding its place in life’. Derlicki’s special focus is on the introduction of ‘ethno-pedagogy’ into the curriculum, with the effect that the school – the very institution which once disrupted the indigenous community’s identity, language and traditional knowledge in the first place – is now engaged in the ‘invention of tradition’. The so-called traditional knowledge taught at school is artificial inasmuch as it is not taught in an informal, contextual manner and has little practical relevance. Derlicki draws an opposition between traditional knowledge and knowledge taught at school, yet his concern is rather to problematise the uneasy adaptation of the former into the latter – a process which results in the creation of pseudo-traditional knowledge. Liarskaya’s analysis of the role of the residential school in Nenets life and ethnic identity provides a different perspective on the influence of Soviet pedagogy on indigenous communities (Habeck, 2005). From her point of view, the one-sided argument that the residential schools have led to the destruction of indigenous ‘traditional culture’ is insufficient; moreover, she argues, this
argument is based on the idea that indigenous culture is passive, vulnerable and unable to respond. Liarskaya questions this notion and sets out to examine how Nenets parents and youth have integrated the residential school into their social networks, their social security strategies and their everyday lives – a process that she calls the inscription of the residential school into ethnic cultures. The first generation of Nenets enrolled in the residential school experienced this mode of pedagogy as a shock because the residential school was an ‘alien, externally imposed reality’. Subsequent generations of pupils suffered less because they obtained some guidance from their older siblings and relatives, who had already experienced this educational system. Nenets parents in the tundra agree to have their children educated in the residential school on the condition that the school is embedded in the family’s social network, which is constituted by their sedentary relatives in the ‘settlement’. They accept the residential school as a place where their children can learn ‘to step from one world to another’ – from everyday life in the camp to everyday life in the village or town.

Both Derlicki’s and Liarskaya’s papers point to the centrality of education in the study of youth in Siberia – not merely for the reason that education has a central place in young people’s daily activities but also in view of Soviet and post-Soviet pedagogy’s role in the ‘formation’ of ethnic identities. Both contributions illustrate Alexia Bloch’s (2003) insight that individuals evaluate their residential-school experiences in ambivalent ways, covering the whole range from resistance to acceptance and lasting incorporation of the officially promoted ideals into one’s one identity. This ambivalence makes it questionable to distinguish between ‘those in power vs. those victimized by power’. When Bloch interviewed elderly Evenki women who had been educated in the residential school of Tura, some of them were not lamenting but ‘instead affirming the way the state inscribed them with a collective sense of belonging’.

Against the backdrop of a general worsening of educational and cultural spheres, even by Russian standards the Northern regions are in a particularly disadvantaged position. In regions inhabited by the indigenous population at the beginning of the 1996/1997 school year there were 794 schools with 38,714 students-representatives of indigenous peoples. 50% of these students learned native languages. Also there were 7 nomadic schools, where education in pre-school and first grade was conducted in native languages. At the
beginning of the 1996/1997 school year there were 39 boarding schools. 11,995 school-
children studied there. 6117 students studied in 171 small-complete schools organized in
places of the parents' professional activity. In addition, there were 18 special high schools
and colleges where 6,751 students got professional education. In the last years some new
types of educational institutions were created and developed: gymnasiums, lyceums,
orphanages of household type and so on. They closely interact with scientific institutions
of Moscow, St.-Petersburg, Novosibirsk, Khabarovsk, Magadan, and Yakutsk. For
different reasons, admission of indigenous peoples to the institutions of higher education
decreased considerably. For the period from 1991 to 1995 there was a plan to admit 1240
students, but only 966 were admitted.
At the same time admission to the secondary special pedagogical educational institutions
increased considerably. For example, The Irkutsk State Linguistic University served as
"as a conduit between Russia and these native peoples by teaching languages" during the
communist era. Currently, higher education in Siberia has sought to revive the regional
culture. For example, Kemerovo State University has specialized in Shor language to
increase usage and document the language's history in Siberia (Karpova, 1994).

Education in Siberia: Peculiarities of Irkutsk and Khabarovsk

Irkutsk has been an industrial and cultural hub of east Siberia. Lumber, Oil and Chemical
industries predominate. Irkutsk Oblast has an area of 767,900 square kilometers and in
1999/2000 had a population of 2,742,000. Throughout the 1990s the population
gradually decreased. The proportion of Russians in Irkutsk Oblast slightly increased with
the proportion of Buryats, the indigenous ethnic minority of that area decreased even
though the total population of Buryat in Russian Federation as a whole increased.
In 1999/2000 Irkutsk had 1,074 kindergartens, 1418 elementary and secondary
institutions, 66 professional and technical schools, 55 secondary specialized colleges and
14 higher educational institutes. There were only 10 private schools in the whole region
of Irkutsk. At the higher education level, Irkutsk Oblast had only 3 private institutions in
1999/2000. These institutions enrolled 2.6 per cent of the total number of students in
higher education, which is considerably below the national average of 7 per cent.
The ratio of students in private higher education institutes per 100,000 population is as low as 95. Number of out-of-school education facilities per population was half the national average, yet very active (Endo, 2003).

In the rural areas, nationality languages and other aspects of ethnic education were emphasized in schools serving ethnic minorities. Buryat language was taught in 98 schools, the number of schools which had increased since the Soviet Era. While regeneration of ethnic identity of Buryats was promoted, Russian pupils were also attracted by Buryat language and culture (Endo, 2003).

Khabarovski Krai has an area of 788,600 square kilometers and in 1999/2000 had a population of 1,507,000. As in Irkutsk, the population gradually had decreased during the 1990s. The terrain is hilly, with little cultivated area. Traditional industries include, forestry, fishing and gold mining. During the soviet era, the Krai had a military aircraft factory. More recently automobile repair, oil, chemical and ship building industries have cropped up (Endo, 2003).

The proportion of Russian population slightly decreased during the 1990s, while that of Ukrainian people increased. Sakhalar (Yakuts) who are an Asian indigenous, also increased but less significantly.

In 1999/2000, Khabarovski Krai had 461 kindergartens, 513 elementary and secondary general schools, 49 professional technical schools, 28 secondary specialized colleges and 17 higher education institutes. In Khabarovski Krai, the pupils at all stages of education stages were encouraged to identify themselves as citizens of Far East and as members of Pacific Rim region. In the curricula of primary and second education, literature in Far East and Far East economy were compulsory. Teaching materials for these subjects had been developed locally. Artistic Education was also emphasized. Every school in Khabarovsk studied the cultures of various ethnic groups. Vocational technical schools and secondary specialized schools recovered their popularity during the 1990s as they restructured their courses to meet the needs of the market economy.

Among the 17 higher education institutes, seven were private. The number of private educational institutes was growing in Khabarovski Krai unlike in Irkutsk. Khabarovski Krai had more higher education students with 3809 students per 100,000 population
compared to 2717 in Irkutsk. The number of students in private high education institutes was around 3,400 and the ratio was 226 students per 100,000 population which was close to national ratio of 236. However it should be noted that compared to Moscow, where even public schools have at least been privatized through introduction of fees and other revenue sharing schemes, in both these regions of Siberia, private schools have not been popular.

This can be explained by different developmental patterns of both the regions. In Irkutsk it was relatively easier to adapt to the economic transition with traditional forms of industry, facilities concerning education and culture were maintained. In Khabarovsk, it was difficult to adapt to market economy with existing form of industry but because of location, it was much easier to attract flow of people, goods, money and information especially from foreign countries. This appears to be a factor in the increase of private educational institutes (Endo, 2003).

The Socio-Demographic Challenges In Siberia

Why would any one want to live on a harsh land and a former exile?

Sansone, pondered over the question at the peak of Siberia’s success as a Soviet settlement. He mentions that those who choose to live in Siberia wish to utilize their ‘instinct of struggle and the unique opportunities characteristic of a frontier region for self-development.’ His experiences were led by a romantic desire to be close to the nature. He goes on to say that Siberia’s technical advancement which gave settlers ‘the joy of making things with own hands and see the result of one’s work’, psychic benefit that they could not gain while working in say, Moscow. The settlers were led by higher wages, better housing and living conditions in this part of Russia. It has been indeed a challenge to inhabit a rich land and retain human resource in Siberia.

Shinkarev in his book ‘The Land beyond the Mountains’ recalls his meeting with Decembrist N. Basargin to quote him: “Siberia which covers such a vast area has so much of interest that it can look forward to a brilliant future, if only the people and the government have wisdom to use sensibly the resources with which nature has so richly endowed it with”. Shinkarev prognosticated about what Siberia will be like in the year
2000 in 1973. His prognosis mainly revolved around the likely climatic changes that Siberia could be through. He goes on to ponder about the economic and geographic changes and the implications of exploitation of Siberia’s resources. He forecasted that the manpower problem will be solved by ‘more rational use of the available labour reserves and by training a wide variety of experts in Siberia’s own colleges and universities and at local industrial enterprises.’

For development of the region proper and amenable living conditions have to be developed. The foundation of demographic policy over the next few years must emphasise increased production, more employment, higher earnings, more housing construction, and greater real public access to housing. Special programs are also needed to develop healthcare, improved working conditions, combat domestic injuries and accidents, and otherwise curb the mortality rate. In addition to these measures it may also be useful to try to encourage self care and a healthy way of life (Kashepov, 2004).

In addition to providing the means to develop resources, Urbanization is improves the living standards of people in the region. Concentrated cities serve as centers of resource exploitation and the settlement network. Special attention has to be paid to comprehensive economic development of Siberia, to the provision of transport links with them. Currently the problems the region faces are enumerated below:

**Under-Development**

About one in ten Russians live and work in almost impossibly cold Siberian cities, places where average January temperatures range from -15 to -45 degrees Celsius (+5 to -49 degrees Fahrenheit). The economy of much of Russia’s heartland remains mainly industrial. In 2001, the contribution of industry and construction to GRP in Siberia amounted to 54 percent, in the European North and Far East to 49–50 percent and in the Central region (Heliniak, 2001). Other industries and enterprises are under-developed in siberian region. President Putin in his Speech at the Meeting of the Council of the Inter-Regional Association Siberian Agreement in February 2001 explained the problem: "Siberia has hundreds of remote communities where there is a single enterprise that
provides jobs for the local people and bears the burden of providing the entire range of social services to a community.

The region is too far away from the western and eastern markets. Basic commodities cost more and an energy resource producing region faces energy crisis. Primorye, where coal this winter cost three times the country average. Putin in his speech recognized the potential that Siberia could offer in not only solving its own problems but that of Russia “the Russian economy needs to make a real leap forward in increasing its use of nuclear and hydro-energy resources and also coal for producing electricity. In this respect, Siberia offers extensive possibilities. But insufficiently developed electricity transmission lines managed by different agencies and their low throughput capacity constitute an obstacle to transmitting electricity from resource-rich Siberia to regions facing energy shortages. We need to link these disparate electricity systems together and in this respect we need to seriously consider the possibility of building constant current transmission lines to carry peak power from Siberia to the Urals and even further into European Russia.”

Worrisome demographic indicators:

Over the last 15 years the Russian Far East has lost more than one million people, and its population now is only 6.7 million that, according to the presidential representative in the Far Eastern District, General Pulikovskii, finally materialized as the most critical threat to the sustainability of the region. The expected lifetime, state of health and death rate are crucial components of reproduction and formation of human potential. It is shown that since 1993 Siberia has suffered a fall of birth rate and entered a zone of negative natural increase, 30-40% below-replacement reproduction. A clear trend to decline of population size is traced by the authors over all regions of the Siberian Federal District. This demographic situation will lead to a quicker ageing of population and to low proportion of children in it. As a result, the average age in Siberia will rise 2.5 years in a decade.

The state of its work force is such that, according to the Ministry for Economic Development, by 2004, 1.7m job vacancies were estimated to go unfilled, a figure that is set to rise in subsequent years. Its demographic potential will be unable to meet the labor requirements of the growing economy, and the additional demand will have to be met
only by attracted foreign labor (Soboleva and Chudayeva, 2004)

In his speech at a Security Council Meeting on National Security in the Siberian Federal District in 2003, President Putin mentioned the depopulation crisis: “In the last 10 years, the population of the district has been shrinking at the rate of 100,000 a year. The trend is a serious threat to the region’s future. The death rate is very high, and the causes are social: drug addiction, tuberculosis, and AIDS. Drug addiction is 73% higher than the Russian average.”

The biggest challenge will be dealing with the many residents of Siberia who are too old or too unskilled to find jobs elsewhere. Their assets in the region are worthless and cannot be sold to finance their relocation. For these people, the Russian central and regional governments will have to continue fuel, food, and other subsidies in the coming decades to make life bearable (Hill and Gaddy 2003).

Poorly regulated Borders

Over the past few years there has also been an influx of people migrating of their own will from China, Korea and Vietnam to Siberia and Russia’s Far East, whether legally or illegally, or on a permanent or temporary basis. Legal immigrants are subject to migration controls, but numbers are increasing every year especially from the bordering China. They are of three main types: workers from China; students; and traders. Research conducted in the various regions of the Far East and Eastern Siberia, as well as in Khabarovsk and Primorskii krai and the Amur and Irkutsk oblasts, indicates that most Chinese immigrants are independent businessmen. (Gelbras, 2006)

In his speech at the Meeting of the Council of the Inter-Regional Association Siberian Agreement, February 2001, President Putin mentioned the other geo-political problems of a porous border in the region. “It has to do with cattle rustling and other problems which stem from the fact that the border is unregulated and unprotected (in this context the border with Mongolia.) Clearly, something has to be done about it because it damages our reputation and relations with a friendly state.”

Further in his speech, in the context of the migration Policy, Putin advocated government intervention to establish a labour market: “Migration policy faces different problems in
southern Russia because too many people want to call this region home. We must establish a labour market, support small and medium-sized businesses and new forms of housing construction in Siberia and the Far East. We must also provide incentives for experts, businessmen and skilled workers who want to settle down there, and people should rotate in and out of certain Siberian regions."

*Poor Quality Of life:*

President Putin in Speech at the Meeting of the Council of the Inter-Regional Association Siberian Agreement, February 2001, explained the irony "The Siberian region, in spite of its natural riches, has one lamentable distinction: people here are poorer than in the country on average. This is a fact that cannot be ignored. We must take into account the lag in terms of living standards and the quality of life. Statistics show that roughly more than 4 million people live in extreme poverty. Their incomes are half or less than half of the living wage. Among them are those who work in the timber industry. Their wages are two or three times lower than in extractive industries.

In his speech at a Security Council Meeting on National Security in the Siberian Federal District in 2003, Putin outlined the socio-economic problems of the impoverished region of Russia: "Over the past years, the incomes in Siberian regions have unfortunately been 20% lower than in Russia as a whole. The wage arrears are massive, and unemployment is higher than in Russia on average. The housing and utilities are in a sorry state. Sixty percent of the system is decrepit. All of this affects people's lives, creates social tensions, and leads to an outflow of qualified personnel and not only from enterprises, but also from government bodies."

He went on to cite policy changes as one of the reasons for the region's backwardness: "Siberian resources can and must be used in the interests of the entire country, but, most importantly, they must contribute to higher regional standards of living. Quite recently, it was considered quite profitable and prestigious to work in Siberia. Unfortunately, many former advantages have turned into drawbacks in the last few years. We must admit that the long-term policy for the development of Siberia is proceeding by fits and starts."
Neglected State of the Minorities in Siberia:

The percentage of indigenous people in the North is relatively small. In number (210 thousand) they form only 2% of the whole population of the North. Before joining the market economy, the inhabitants of the Russian North lagged behind inhabitants of other areas of Russia in variety of vitally important factors. There are 31 indigenous ethnic groups living in the territories of Siberia and the Altai (Karafet and Hammer, 2008). Although most populations differ in their origin, language and culture- They are characterized by common types of economic activities like hunting, fishing, reindeer-breeding and herding. Their traditional occupations are linked to their nomadic or semi nomadic way of life and low population densities.

Several of these aboriginal Siberian groups have very small population sizes and are expected to go extinct in the near future because of high mortality and assimilation. The indices of disease of indigenous population in active tuberculosis, viral hepatitis, intestinal infections and diseases of the upper respiratory tract as well as alcoholism exceed that of non-indigenous peoples and Russia as a whole. Poor health of indigenous people of the North leads to an increased death-rate of this population. The life expectancy of men is about 50 years, of women about 60 years. In Russia as a whole the numbers are 64 years for men and 74 years for women. What has remained constant over the decades is that bringing education to the remote regions of Siberia would always be a challenge. The challenge is to bridge the divide between minorities and the mainstream.

Historically, the Russian advance into Siberia was pursued in two directions: northwards, along the arctic coast from river-mouth to river-mouth, and southwards, over dry land, and along the rivers that cut across Siberia. When the Russians appeared in the 16th and 17th century, the indigenous population presented a picture full of contrast. In the north economic backwardness was combined with the social structure of a primitive society tinged with traces of matriarchy. Class differences were moreover to be tribal nobility by trade and by wars among the tribes. This was especially true of the people of south Siberia, where cattle breeding and agriculture created opportunities for the accumulation of properties and the emergence of the first forms of exploitation.
Following ancient practices, the tsarist authorities immediately established contact with the local nobility, making them its intermediaries in controlling population and in levying taxes, which were paid in furs. Russian merchants came to Siberia to buy furs and sell supplies and equipment to the hunting population. All these transactions were conducted on the basis of credit under conditions that were such that within a few decades the local people were completely enslaved. The system also served the interest of the local elite, whose privileges were consolidated in 1822 in a Charter for the Control of Non-Russian Peoples, which arbitrarily divided the people of Siberia into three categories—settled, nomadic, wandering. Those belonging to the first category, were equated with the Russian peasants, but special local self-government bodies were setup for the other two in which power was effectively held by the local wealthy and the tribal nobility. For virtually all practical purposes, the charter remained the force until the October revolution and profound social & economic inequality became established amongst almost all the people of Siberia. This made the task of soviet governmental bodies more difficult when the struggle began to liberate the working people from age old forms of exploitation and influence of the local elite had to be neutralized. The construction of the railways and motor roads, the opening of the northern sea routes and the birth of polar aviation marked important steps for it.

In 1924, a special state committee to aid the people of the northern borderland (the committee of the north) was setup. Self-government was ensured by tribal soviets established in accordance with the Temporary Regulations for the control of the local peoples and the tribes of the Northern Fringes of Russian Federation, which were adopted in 1926. These soviets constituted the first centers of soviet powers and continued to exist until 1931, when they were replaced by ordinary governmental bodies (nomadic and rural Soviets).

The first attempts to establish a system of collective farms date from 1927, subsequently a large number of collective farms were formed on the basis of mixed co-operation. But in 1930 the committee of the north laid down the principle that the most wide spread type of collective agricultural enterprise in the north at that time should be a very simple form of production cartel pursuing the dominant activity in a given area—that is, reindeer
breeding or fishing. Hunting was excluded and mixed collective farms were formed only in the most advanced areas (Sansone, 1980).

The organization of natural areas and districts was begun in 1929 and by 1935 nine areas, ninety-three districts and eight hundred and thirty nomadic and rural soviets had come into being.

Every ethnic group, even the very smallest, now possessed its own national administrative structure.

Moreover, local languages began to be used in the soviets.

The eighteen social and cultural centers setup up the committee of the north in the most remote areas played a major role in strengthening soviet political bodies and providing cultural and economic assistance. Each center comprised of a co-operative store or ordinary shop, a hospital with a maternity ward, a school, a kindergarten, a veterinary clinic, a social club and so on.

Living in remote arctic villages, the Dolgan and Nganasan have been surviving since the collapse of the Soviet Union through subsistence production and minimal participation in the larger Russian market and the global market.

Traditional foraging activities and extensive food sharing are common for indigenous groups like the Dolgan and Nganasan people in the Taimyr Region of Siberia. The dolgan language is similar to Sakha (Yakut), the northernmost branch of the Turkish language family. The Dolgan population is close to 6,000 people and is a result of complex migrations, intermarriages, and official reclassification that indicates people with Sakha, Evenk, and Russian “tundra peasant: ancestries. Dolgan families traditionally practiced reindeer pastoralism, mostly in combination with big-game hunting, fishing, trapping and mercantile trading at the beginning of the twentieth century.

Nganasan is one of the six languages in the Samoyedic branch of the Uralic language family. The Nganasan traditionally hunted wild reindeer, and fished and trapper with dog teams and small domestic reindeer herds but, unlike the Dolgan, rejected Russian

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48 The primary form of collective farming in the north of Siberia was that of simple association. Those entering the association as members retained private ownership over the means of production. The association as the simplest and the most accessible form of production union introduced local people to the basic skills of farming on a collective basis and provided them with considerable advantages in improving their material position.
Orthodox missionaries. Currently, the majority of the approximately 1,000 Nganasan live alongside the Dolgan in the three permanent settlements. Despite recent economic transformations geared toward free market capitalism in the post-socialist era, since 1991, a native communal resource-management regime has developed.

Recent economic transformations geared toward free-market capitalism, privatization, disbanding of state enterprises (sovokhozy), and influxes of consumer goods and services, from abroad and within the former Soviet Union have only increased the importance of subsistence among these indigenous people (Ziker, 2002)

The most pressing problem of the indigenous people has been healthcare.

The insufficiency of a severe climate as sole protector is proved by the sad fate of the Nganasans. The Nganasans are few in number - 834 (2002 Census)

The Nganasans share their territory with the Dolgans. Nganasans are the northernmost of the Samoyedic peoples living on the Taymyr peninsula in the Arctic Ocean. Their territory is part of Krasnoyarsk Krai. Their ‘capital’ is the settlement of Ust-Avam. They speak a Samoyed language (Nganasan language).

Their southern and southeastern neighbors are the Yakuts; in the southwest they border upon the Enets.

It was the destruction of local economies that had the most destructive effect on Soviet minority peoples.

Throughout most of their history they have been nomadic hunters, fishers, and herders of reindeer. They have successfully resisted attempts at conversion to foreign religions until the Soviets.

The biggest change in their history occurred in the 1940s, when the Soviet authorities decided to end the shamanist beliefs of the Nganasans.

Shamans were imprisoned and their holy artifacts confiscated.

Since the 1960s, the nomadic life of the Nganasans has been ended and they have been settled in villages, where they live alongside Russians and Dolgans.

These sudden changes caused depression for many Nganasans and alcoholism is a big problem among them.

Throughout most of their history they have been nomadic hunters, fishers, and herders of
reindeer. They have successfully resisted attempts at conversion to foreign religions until the Soviets.

Direct state investments and subsidies into economy of reindeer husbandry and traditional craftsmanship have decreased by dozens of times. Number of active economic enterprises in the traditional economy; which have increased initially in 1992–1994, dropped by 90%. Society for Threatened Peoples (GfbV) estimate that in Siberia, there are around 40 different indigenous peoples – in total 200,000 inhabitants and out of those only about 10% of them live according to their traditional nomadic way of life, compared to 70% 30 years ago. Many of them are reindeer breeders. Others live from hunting or gathering mushrooms, berries, roots or herbs. Friendly laws and regulation will go a long way in protecting Siberia’s original wealth of people. However, present regulations on the protection of indigenous peoples are expressed in the subjunctive and have not been implemented so far because they do not include any implementation regulations.

Friendly laws and regulation will go a long way in protecting Siberia’s original wealth of people.

The law on “territories for traditional land use”, which is extremely important for the indigenous peoples, is a good example of this: after these types of territories had been formed in some regions, the law was suddenly put on the back burner and the areas were dissolved. Another example is the 400 page law on the amendment of federal legislation of the Russian Federation, which repeals several articles of the protection of indigenous rights. The following articles were repealed from The Indigenous Peoples of the Russian Federation (Guarantees of Rights) Act: article 4 on socioeconomic and cultural development, articles 6 and 7 on protection of original habitat, traditional way of life, economy and handcraft of indigenous minorities, as well as article 13 on the right of co-determination of indigenous peoples in the legislative bodies. The law was signed by President Putin on 22 August 2004 (Bangert and Reinke, 2005).

Another important minority in Siberia are the youth, its future.

Keeping in mind the centrality of youth in various societal processes the authors of the ‘Conceptual Basis of Youth Policy in Novosibirskaya oblast’ argue as follows: “The goal of youth policy is to create conditions for the self-determination of young people in life, history and culture . . . . Self-determination means assuming responsibility and [therefore]
the conditions for self-determination have to be created . . . . However, the areas where the zones of responsibility of young people lie, are determined . . . by the politician. It is his prerogative to keep the ideology of the country as the framework for youth policy and define strategic goals for youth policy. During World War II young people were called to be aviators and tankers, and after the war, to be vanquishers of virgin lands and cosmonauts. This was during the Soviet Campaign of Virgin and Idle Lands reclamation in Kazakhstan, Siberia, the Urals and Volga regions in the 1950s and 1960s. We now have to define the strategic priorities of development and to correlate them with the youth policy (Makiev et al, 2003)

Russia youth are faced with political apathy after the disintegration and economic reconstruction. In Soviet Russia, young people could direct their enthusiasm and energy to the development of the nation. In official Soviet discourse, youth (molodezh) appeared as a unified whole. Individual interests were to yield to collective ones and individual aspirations could only exist on the margins of large-scale social projects (Habeck, 2005). Youth of Russia were construed as the collective agents of social transformation (Pilkington, 1994). The Communist Party in Russia had entrusted youth with important tasks such as transforming the countryside and creating the (infrastructural) preconditions for a bright future. Many of the komsomol’skie stroiki (large-scale construction sites with Young Communist League members as labourers) were located in Siberia, for example the Baikal-Amur Railway.

But today, contrasts of youth’s attitudes are stark. Changes in economic systems are being reflected in their apathy towards issues of their nation. A recent year-long pilot study of nearly 150 young professionals in 5 Russian cities finds them increasingly pessimistic about their own future prospects. In fact, many are now pondering exactly when they should start packing their bags and leaving Russia in search of the elusive better life (McAdams, 2005).

Max Kiselyev, who heads the research, reasons the apathy amongst the Russian yuppies49: “That uncertainty stems from a whole host of events that struck young people at their very core, from the Beslan school hostage tragedy to the passage of a law allowing President Putin to pick regional governors, rather than holding direct elections

49 Colloquial English usage of young professional
as before. All their hopes of optimism for the future vanished after the Kremlin-sponsored attack against Russian oil major Yukos and the subsequent jailing of its former Chief Executive Officer, Mikhail Khodorkovsky.”

Siberia itself has, and has had, the reputation of being a ‘youthful’ country, a region of possibilities as seemingly endless as its expanses, a sleeping land that needs to be awakened, and a resource base that requires appropriation (osvoenie). Young people could direct their enthusiasm and energy to the development of Siberia. In official Soviet discourse, youth (molodez”) appeared as a unified whole. Individual interests were to yield to collective ones and individual aspirations could only exist on the margins of large-scale social projects (Habeck 2005).

Wallace and Kovatcheva (1998) have reviewed conceptions of what it means to be young within the new Europe, in historical and societal context, and one of the major themes is social exclusion as part of social change. Processes of ‘individualisation’ could be seen currently to characterize the lives of youth in Russia. From a western European perspective, in order to manage risk and uncertainty successfully, rural youth must negotiate a diversity of social systems, services and agencies – in place of traditional institutions, including the family – which compel the self-organisation of individual ‘biographies’ in order to account for their situations. Those who are unable to access or utilize these key resources are socially excluded and must account for their ‘failures’ themselves. In this, a key point made by Furlong and Cartmel (1997) is the potentially disabling effects of notions of ‘individualism’ and ‘self-agency’, when in practice, young people’s life chances and choices often remain tied to locality and family background, irrespective of the greater range of pathways seemingly available to youth in the new Europe. Young people’s lives and situations have changed, also in respect of education. Examining conceptions of youth as a global phenomenon, question the extent to which young people – in what they term ‘peripheral’ areas – are disembedded from the local, seen as separate from family, generation or ethnicity, and instead, immersed in individualism and dominant global consumption patterns and lifestyles.

Collaborative research has also critically examined Russian perspectives on ‘westernisation’ and the relationship between global ‘mass’ culture and youth locally. In their recent analysis on youth in Siberia note that there is stark segmentation by locality.
In small communities, the household 'copes' along with the young person in shared goals and understandings and in aspiring to get 'an education' as a means to secure employment and a 'comfortable' life beyond subsistence. Most households locally share the same situations. Almost all imagine continuing their education and leaving their home communities, dependent on family resources and networks. Horizons are limited to towns in the region, or perhaps the city, seen as a place of possibilities but also risks. Beyond the rural household, the collectivity of peers represents another key resource in negotiating and maintaining self-worth. Neither individualism nor the reach of 'global' culture is evident. Young people are embedded in the 'local', but despite their situations and poor prospects, these do not affect their sense of themselves. If anything, profiles of mental well-being and, certainly, self-worth are better in rural communities compared to the city.

Ventsel argues in his paper on Sakha ethnic music that, for a significant number of rural youth music is a potential way of getting out of the remote village and into town, a key to upward social mobility (Habeck, 2005). Although 'making music' has many playful elements and artistic creativity is greatly appreciated, it is hard work for those who want to make a living at it.

This is evident in Ventsel’s description of the economic mechanisms of music production and performance. Artists who have managed to move from an ulus (district) to the capital city, Yakutsk, act as representatives of their home district in the cultural life of the republic; but by the same token, they also become entangled in an intricate network of shady economic and political obligations.

Similarly, Krist writes on a topic that has long been neglected as insufficiently ‘serious’ for anthropological enquiry (Habeck 2005). His description of Buriat sportive competitions and the dynamic changes in how they are performed points to a symbolic arena where such powerful actors as the government, the Lamaist clergy and big companies encounter each other in the negotiation of ritual actions and political meanings conveyed by such an event to the wider public. Sport competitions are central, not peripheral, to the realm of officially promoted Buriat culture. Youth from the rural regions try to maintain their personal contacts with kin, peers and friends upon arrival in the republic’s capital through sportive (and other social) events, and they act as cultural
ambassadors of their rural home areas by participating in concerts and competitions. Music, sports, games and other forms of play appear to be important activities for the continuation and utilisation of rural social networks in the urban sphere.

Siberia has always had room for minorities during its history. The vast lands have been inviting to the marginalized and the oppressed- Whether they have been the exiled, the hope-seeking peasants or the indigenous people of the land. It has the potential to offer bright future to its own and Russia’s and even international youth. Thanks to its extensive higher educational infrastructure. The youth are instrumental in preserving the cultural heritage of Siberia’s various nationalities.

Currently, the minorities are struggling to make ends meet in the harsh land. Critical development problems of indigenous peoples include the crisis of the traditional economies, unemployment, degradation of health and decline in the quality of life, crisis of the traditional life style and deterioration of the ethnic cultural, social and economic tradition.

Siberia’s demography had been a catastrophe with high mortality and various influxes mainly in-migrations and out-migrations from surrounding regions at different stages having far-reaching implications. This has led to specific human problems like depopulation, healthcare crisis, shrinking indigenous populace and labour shortage in Siberia.

For the development of Siberia’s resources, provision of a quality of life which sustains a vibrant human society is a prerequisite.