

Economic Growth in Russia: Gas Only?

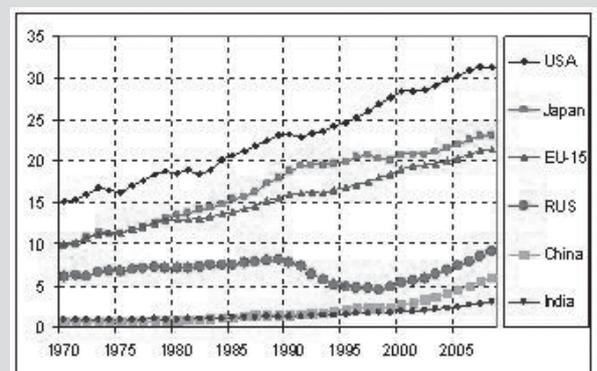
The Russian economy has been booming over the past decade and flexed its muscles in the international political and economic arena. But how strong is the Russian economy really? Is it mainly based on the revenues of gas and oil exports? Or is it the result of major changes in the structure and productivity in the economy since the breakdown of the communist system? To what extent will these changes be mainly transitory, reflecting the shift from a planned economy towards a free market environment, or permanent? In this article we compare the pattern of economic growth in Russia in the past decades with that of other economic regions in the world economy and argue that some features of sustainable growth have appeared in the last decade. The current crisis will be a major test of the resilience of the Russian economy.

Russia's Rise and Fall

Russia's drive to modernisation started in the mid-19th century, initiated by a severe defeat in the Crimean war (1853-1856) with England, France, and the Ottoman Empire. Through large-scale investment by the state a process of industrialisation was started with the aim to catch up with the more advanced countries in Northwestern Europe. Economic growth was based on the exploitation of cheap labour and excessive investment directed by large state-led banks. This process intensified after the Revolution of 1917. By the ear-

ly 1930s, a strong command economy emerged in which the government directed a wide set of tools for economic policy enforcement. High output growth rates were achieved through intensive use of labour and capital inputs. Collectivisation in agriculture, combined with high population growth led to a large inflow from villages to cities. And high investment rates were forced by limiting consumption. In the 1950s and 60s, the apparent success of the soviet economy became a subject for discussions in professional economic literature and even in textbooks in Economics. Many developing countries, eagerly looking for a new economic model after decolonisation, attempted to imitate the soviet experience. China and India are two prominent examples of imitators of the soviet-style planned economy and also embarked on a state-led push for industrialisation. In 1970, Russian GDP per capita had caught up considerably and stood at 40% of the US and 60% of Europe (see Figure 1).

Figure 1: GDP per capita (in constant 1990 US\$, PPP converted)



Source: The Conference Board, Total Economy Database, January 2009, <http://www.conference-board.org/economics>

However, by the end of the 1960s, the limitations of the planned economic system became increasingly visible. The surplus of labour from the agricultural sector had been depleted. Organisation of agricultural production in large-scale communes (so-called kolkhofs and sovkhofs) had failed as agricultural output plummeted. In addition, population growth rates slowed down. Possibilities of the government to support a high level of investments became limited, due to increased standards of living and a necessity to support social stability. The efficiency with which the inputs were being used in the Russian command economy lagged severely behind. Due to a rigid price system and lack of competition, incentives for innovation and entrepreneurship were minimal. Some Western technologies spread into the Soviet Union (for example, GAZ (Gor'kovskii Avtomobil'nyi Zavod), one of the largest car factories in Nizhnii Novgorod was placed into operation in 1932 with the assistance of the Ford Motor Company). However, this was restricted and spill-over was far from efficient. Above all, the increasingly advanced

economy became too complex to be commanded through a rigid system of prices and supply directives (Kornai, 1992). The slow-down of economic growth in the Soviet Union in the end of the 1960s triggered moderate economic reforms. However, the reforms were terminated after the Oil Price Shocks of the 1970s. High prices on oil and gas along with the system of transportation provided possibility for the government to direct additional resources to consumption and investments. This breathing space was exhausted by another sharp decline in oil prices in 1985, starting a new round of reforms known as perestroika. However, these were too slow and inefficient and possibilities for the government to control the economy were lost. On December 25, 1991, the red flag over the Soviet President residence in Kremlin was lowered and the USSR broke apart. Its biggest republic continued under the name of the Russian Federation. At that time the income gap with Europe had grown again to 55%. Initially, prospects for growth in former socialist countries, including Russia, appeared to be bright. In contrast to many de-

veloping countries, they had already a sizeable and experienced industrial sector and a comparatively high level of educational attainment of the population. Introduction of a free market economy and privatisation of state enterprises were expected to unleash market forces improving efficiency and boosting innovation. By opening up to international trade and foreign investment (FDI) advanced technologies could be acquired. However, this expectation was not borne out (Blanchard, 1997) and the decline in output was much more severe. In Russia, it took 14 years to reach the same income level as in 1991. By that time the gap with Europe has increased to 65%. In contrast, the transition of the Chinese economy away from a planning system in the 1980s was much more gradual and growth has been stable and high ever since (see Figure 1). Until now there is no clear-cut explanation of the unexpected slow-down, but must include the inefficiency of the former state sector in competition with foreign competitors, changes in the structure of labour force, rapid obsolescence of the capital stock and collapsed institutions (Campos and Cori-

celli, 2002).

In Russia, the crisis bottomed out in 1998. Unbalanced macroeconomic policy and a global financial crisis led to a default on foreign debt by the government. A sharp devaluation of the national currency along with an increase of oil prices launched a recovery period, with a decade of high and stable growth rates. Was this period of boom mainly due to reconstruction after the transitional crisis and mainly fed by oil and gas revenues, or was it based on new sources of economic growth?

Structural Change in Russia

One possible indicator for fundamental restructuring of the Russian economy would be a shift in the structure of production. For example, in China the share of manufacturing had dramatically increased since the mid-1980s. Table 1 provides the

shares of sectors in aggregate value added in 1995 and 2005 in Russia. Due to the historical emphasis on industrialisation, the share of manufacturing was already high in 1995 (20%). It declined to 16% as low-tech sectors were out competed by cheap imports. Another major structural change is the increasing share of mining. With rising exports of oil and gas and increasing global prices, the share doubled to 10% of GDP. The finance, business services and real estate sector also rapidly increased its share to 12% of GDP.

As shown in Figure 2, the structure of employment in Russia has been converging to that of the European Union. Employment in goods production declined, while it increased in the services sector. Market services have increased their importance in the EU and in Europe in the

past decades, and were especially dynamic in the US (Van Ark, O'Mahony & Timmer, 2008).

However, Russian employment growth is mainly in non-marketservices, including public administration, health and education. It is unclear whether this increase is merely an expansion of an inefficient public sector, or has led to a higher and better provision of public goods.

Productivity Growth

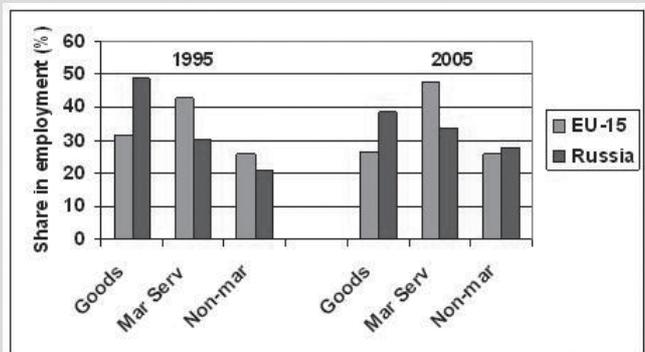
Another indicator for fundamental changes in the economy is labour productivity measures as the output per worker. Increases in productivity are a fundamental driver of increases in income and welfare. Sectoral measures of productivity are broad indicators of technological change. Figure 3 shows indices of labour productivity (gross output per worker) for a number of sectors in the Russian economy, in-

Table 1: Share of sectors in aggregate value added in Russia, 1995 and 2005

	2005	2006
Agriculture, hunting, forestry and fishing	6.4	4.9
Mining and quarrying	4.9	9.6
Total manufacturing	19.5	15.9
Electricity, gas and water supply	3.4	3.1
Construction	7.6	5.2
Wholesale and retail trade	18.7	18.6
Hotels and restaurants	1.6	0.9
Transport and storage and communication	11.9	9.3
Finance, insurance, real estate and business services	5.6	11.6
Public administration, education, health and personal services	20.5	21.0

Source: RU KLEMS database, Rosstat

Figure 2: Sectoral shares in employment, Russia and European Union



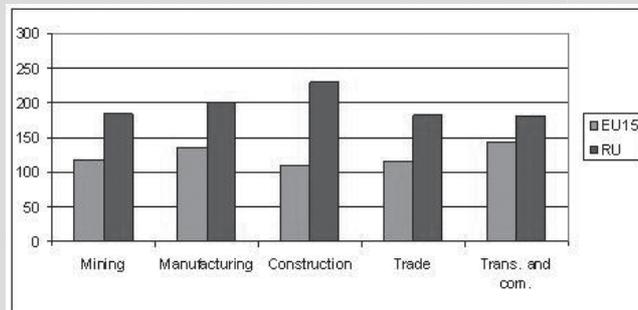
Sources: EU KLEMS Database, March 2008, see Timmer, M., et al (2008).

dexed to 1995. Compared to the EU, in Russia labour productivity growth has been higher in all sectors, and relatively fastest in construction and slowest in transport and communication. These increases are a combination of increases in the physical capital and improvements in efficiency with which the labour and capital is being used. In Table 2 we give the contribution of each sector to producti-

vity growth in the overall economy. Sectoral contributions are measured as sectoral growth times the share in current value added (averaged across the period). Together with trade, the manufacturing sector is a major driver of Russian productivity growth. High contributions of trade might be related to fundamental changes in the Russian retailing industries. For example, modern hypermarket net-

works like Auchan increasingly replaced small and inefficient shops. Growth in manufacturing mainly was in export-oriented (basic metals and chemistry) and internal-oriented sectors (motor vehicles and trailers). In terms of total factor productivity trends, technological change chemistry and investment goods industries was much higher than in the monopolised gas, oil and electricity production industries

Figure 3: Index of labour productivity growth by sector, Russia and EU15, 1995-2006 (1995 = 100)



Sources: see Figure 2

Table 2: Contributions of sectors to aggregate labour productivity growth, 1995-2006 in Russia

Sector	Labour Productivity Growth	Contribution to Total Growth
Agriculture	10.6	0.8
Mining	6.0	0.6
Manufacturing	7.0	1.7
Utilities	-0.8	0.0
Construction	8.3	0.8
Trade	6.0	1.7
Transport and Communication	5.9	0.9
All industries	6,5	6,5

Sources: see Table 1

(Bessonov, 2004).

The contribution of mining to overall productivity growth was only modest. Increases in the importance of mining are partly due to an increase in the output volumes (barrels of oil and cubic metres of gas) and partly in increases in prices. It is only the former which is of importance from a technological perspective on growth. But the generation of high wind-fall revenues can indirectly contribute to economic growth in other sectors. For example, by increasing demand for housing and luxury manufactured goods by consumers and boosting public investment in infrastructure and military systems.

Future

The question whether the Russia economy since 1998 is the results of fundamental changes in the underlying economic structure, or merely fuelled by booming oil and gas revenues is not easily answered but increasingly important in the view of the current global economic turmoil. The crisis seems to hit Russia more than most other countries in the world. The monthly index of production shows a collapse in 2008 and currently is back at the level of 2003 and expected to fall further in the near future (Figure 4).

Due to increased exposure to global financial and goods markets the speed of decline is even stronger than the decline in the 1990s which was mainly domestically generated. Production of

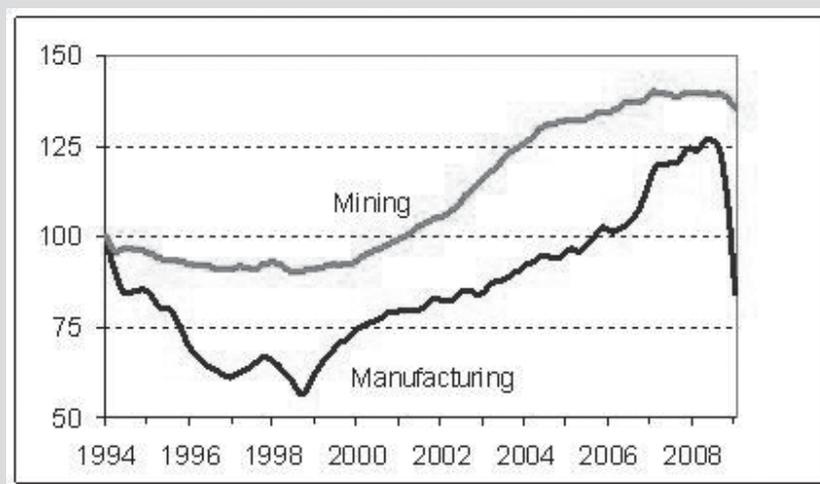
mining is still high, but due to global price declines its revenues will dry up quickly.

The upcoming year will be a severe test of the resilience of the Russian economy. If the progress made in the past ten years was built upon strong foundations, the Russian economy will whether the global storm and continue its catch-up with Europe and other regions in the world. If progress was mainly built upon gas, another deep recession in Russia as in the 1990s is very likely.

Ilya Voskoboynikov and Marcel P. Timmer

Groningen Growth and Development Centre, University of Groningen.

Figure 4: Monthly Index of Industrial Production (Jan 1994 = 100)



Source: Institute of Economics of RAS, and
Institute for Informational Development of State University
- High School of Economics

References

Ark, B. van, O'Mahony, M. & M.P. Timmer (2008), The Productivity Gap between Europe and the U.S.: Trends and Causes, *Journal of Economic Perspectives* (22/1), pp. 25-44.

Bessonov, V. (2004), TFP Trends in the Russian Economy in Transition, *Economic Journal of HSE* – in Russian – (8/4), pp. 542-587.

Bessonov, V.A. & I.B. Voskoboynikov (2008), Fixed Capital and Investment Trends in the Russian Economy in Transition, *Problems of Economic Transition* (51/4), pp. 6-49.

Blanchard, O. (1997), *The Economics of Post communism Transition*. Oxford: Clarendon Press.

Campos, N.F. & F. Coricelli (2002), Growth in Transition: What We Know, What We Don't and What We Should, *Journal of Economic Literature*, (40/Sept), pp. 783-836.

Kornai, J. (1992), *The Socialist System*. Oxford University Press.

Timmer, M., et al, (2008), The EU KLEMS Growth and Pro-

ductivity Accounts: An Overview, University of Groningen & University of Birmingham; downloadable at www.euklems.net,