

Inequality Patterns and Quality Erosion in Tertiary Education: Is There a Way out?

(Case of Russia)

The paper explores developments in the sphere of tertiary education in Russia during the period of socio-economic transformation. It is demonstrated that under market reforms deceptively positive tendency to educational expansion conceals rising inequality in access to education, quality erosion and increasing human capital mismatch thus reducing competitive advantage of Russia lying with national human resources. Alternative approaches to educational reform more favourable for sustainable development are discussed.

1. Introduction

In the world of today the skills and motivation of people play the chief role in strengthening the position of any country in the global economy. The quality of human and social capital of a nation is crucial for a country's economic performance. And the key sphere responsible for accumulation and quality of those intangible assets is the sphere of education.

Russia to this day has a well-developed educational system and the level of education and skills of its population ranks high in international comparisons. According to UNDP data, only 24 countries of the world surpass Russia by education index. As far as this index is concerned Russia is on a par with countries belonging to the high human development group. But the recent trends observed in the sphere of education are controversial demonstrating its rapid expansion on the one hand, and segmentation of educational system with deterioration of quality in mass education on the other.

In this paper the controversial developments of educational system in Russia during the period of reforms are explored. In the section 2 the merits and shortcomings of the Soviet system of education (forming the starting point of the reforms) are evaluated. In the section 3 the adopted concept of educational reform and its first outcomes leading to quality erosion are discussed. Section 4 highlights educational preferences, strategies and options opened for different categories of families. Section 5 explores the labour market angle of educational quality erosion and human capital mismatch. Lastly in section 6 alternative approaches to reform including income contingent tuition scheme are discussed.

Retrospective

The achievements of Russia in the sphere of education date back into the Soviet period. In the former Soviet Union first fighting illiteracy and later providing vast educational opportunities was a first rate priority. During 20 prewar years (1921-1940) about 60 million illiterate citizens were taught to read and write. The Census of 1959 demonstrated that there were practically no illiterate in the country. Expanding access to education contributed to communicative competence of vast population groups vital for sustainable development, strengthened equality of opportunity irrespective of financial circumstances, and was favourable for establishing cohesion in society and creation of social capital.

Up to the 1970s public expenditure on education as a percent of GDP was growing steadily reaching its maximum of 7% in 1971. At that time it was twice as much as the corresponding share in the GDP of the USA. As a result in a relatively short period of time Russia succeeded in substantially upgrading the educational and professional qualifications of its population. According to the Census of 1989 the share of adult population with university education amounted to 13% while the share of adults with insufficient educational attainment (less than 8 years) was about 37%. For comparison the corresponding figures for East European countries at the start of market reforms were 5.3% versus 54.6% for Poland, 5.8% versus 66.9% for Hungary, 5.7% versus 75.7% for Bulgaria and 3.5% versus 57.3% for Czechoslovakia.

The system also contained mechanisms to link professional education with future employment. It is worth noting that the mere fact of sustaining full employment and providing a regular job for everybody in most cases fairly well matching his or her professional qualifications prevented the process of skill and work culture degradation and acted against social exclusion¹.

At the same time the structure and contents of education were naturally tuned to the demands of heavily militarized centrally planned economy. It explained the ‘technocratic bias’ of professional education: a large share of students was concentrated in science and technology while training in humanities and social sciences was provided on a relatively modest scale. Also in a non-market economy practicing centralized allocation of resources there was little need for professionals in sales, marketing, etc. In the second half of XX century all sorts of engineers accounted for about 1/3 of total employment. At early 1970s the share of engineering students amounted to almost 50% of the university enrollment while in the USA it constituted only 7%.

Table 1

Satiation of economy with engineers in the USSR and the USA

Number of engineers (thousands)	1950	1960	1970
USSR	400	1135	2486
USA	310	590	905
Graduation of engineers (thousands)			
USSR	37.4	120.4	257.4
USA	61	43	50

Source: Народное образование, наука и культура в СССР. М.: Статистика, 1971. С. 216, 239.

In the era of industrial mass-production the specifics of Soviet-type economy brought visible economic advantages. The system was good at mobilizing resources (including the resources of human capital) and sustaining discipline. Skilled labour was underpaid which meant little or no monetary returns to human capital investment (Gregory and Kohlhase, 1988). Nevertheless acquiring tertiary education gave important intangible rewards like status, interesting not routine work, flexible working hours, and better working conditions. Taking into account that money mattered a lot less in a soviet-type economy than in a market economy, going in for higher education was in many cases a rational enough choice.

As a result a rather artificial situation was created and maintained for a long period of time. High prestige of professional occupations made young people to opt for higher education, the quality standards sustained in the educational system ensured very decent educational outcomes and the

¹ The fact was noted in sovietological research of the time. See for example Ellman, 1979: 493.

'iron curtain' made an outflow of skilled manpower from the national economy virtually impossible.

The radical transformation of the 1990s put an end to this artificial situation. The new challenge of meeting the competition in the global post-industrial economy where along with knowledge and skills such qualities as creativity, initiative, willingness to take responsibility and risk become the key factors of success called for reforms in the system of education.

Unfortunately pressing issues of modernizing the conceptual framework and technologies in the sphere of education did not get much attention when educational reform was set in motion. The focus of reform was on developing new economic mechanisms of supplying education that was wrongly perceived as a market good.

The Concept of Educational Reform and First Outcomes

Reforms in the system of education started along with the overall economic reforms and were based on the same logic of market economy restoration. The architects of reform argued that reliance on market forces in this sphere will eventually lead to better performance and produce gains in efficiency and quality. The obvious theoretical basis underlying this strategy was of course the human capital theory. Students were regarded as investors and colleges and universities as commercial bodies providing marketable educational services.

So the key idea picked up from the human capital theory has been that education is a valuable asset worth investing into. Meanwhile the specifics of human capital accumulation and the fact that education is a mixed good (market and social at one time) were largely ignored. But both these aspects are worth considering.

First, the process of human capital accumulation is interactive. It entails not only financial investment but also 'investment' of effort, time and will (Schultz, 1976: 82-83). It follows that with human capital accumulation outcome is much less predictable than with ordinary types of investment. Two graduates from one and the same university may in fact and usually do end up with a very different amount of accumulated human capital depending on their individual aptitudes, motivation and effort (Breslav et al., 2003: 50; Le et al., 2005: 5). So even from a strictly economic point of view it is rational to ensure that access to tertiary education (so long as it is not universally accessible) were conditioned upon aptitudes and academic results of applicants and not upon their financial circumstances.

Second, investment in education is a long-term enterprise associated with considerable risks. Even within the bounds of mainstream paradigm it has been cogently demonstrated that risks are higher and relative gains lower for children from poor families than for children from affluent families (Cuevas, 2001). Key types of risks stem from fluctuations in the labour market demand and (which is very important in the case of Russia) inability to spot in advance flaws in the quality of education supplied by various institutions. As Kuzminov (2002) puts it, education has a postponed verification effect. It's hard if not impossible for the consumer of 'educational services' to evaluate quality of what he is about to buy at the moment of decision-making.

Third, education is a social good and its costs and benefits cannot be comprehensively analyzed in the framework of individualistic market relations. On the one hand, the decisions to go in for more education, motivations for academic success can only partially be explained in terms of incentives like increase in pay or promotion and penalties like pay cuts or unemployment. Motivations and commitments (and hence outcomes of the educational process) have a strong

social and cultural dimension, are influenced with values and norms shared in a social group or in the society as a whole (Streeck, 1989; Coleman, 1988; Brown and Lauder, 2000).

On the other hand, the sphere of education is largely responsible not only for human capital formation but also for the quality of national social capital. It is to a large extent in this sphere values and norms prevailing in the society are transmitted and get embedded in the younger generations to be carried along through the future life. Furthermore in this sphere both weak and strong social ties are formed and communicative competence is developed. The crucial role of getting access to information and ability to digest and disseminate it for sustainable growth based on innovation makes equitable access to education a vital factor of national competitiveness (Szreter, 2000: 65-68).

Therefore both economic and social considerations provide cogent arguments for strong state involvement in supporting and shaping the system of education in order to ensure quality standards, contribute to equitable access² and minimize the inconsistency between the skills of graduates and the labour market demand.

Nevertheless according to the logic of reforms in Russia the role of the state in shaping and supporting educational system was bound to diminish gradually. As the present minister of education and science Andrey Fursenko puts it, *“strategically we need to create such an educational system where universities are financially self-sufficient and not dependent on resources allocated to them from the state budget”*(Spori strategov..., 2004) .

The practical implementation of reform started with reduction of state educational budget. During the 1990-s the GDP share of educational expenditure fell to 3.1%. Taking into account the crisis GDP decline the overall reduction in educational expenditure was very substantial: in real terms it reduced to about a half of the pre-reform amount. A modest growth in educational expenditure was observed only in the mid 2000-s when it was verbally declared as one of four national priority projects but the country still lags behind in per student educational expenditure, especially as regards tertiary education (Table 2).

² By equitable I mean conditioned upon aptitudes and academic results. Since aptitudes and abilities are unequally distributed among people and more able individuals and those having acquired more cultural capital from their families in preschool years tend to benefit more from education, educational expansion may in fact increase inequality in society. But this is a sort of inequality beneficial for growth and giving space for upward social mobility.

Table 2

Expenditure on education per student in 2005 in some countries

Region	Annual expenditure on secondary education		Cumulative expenditure on primary and secondary education		Annual expenditure on tertiary education	
	\$(PPP)	% of OECD average	\$(PPP)	% of OECD average	\$(PPP)	% of OECD average
USA	10390	133.1	117538	134.0	24370	211.7
New Zealand	6278	80.4	72102	82.2	10262	89.1
United Kingdom	7167	91.8	84750	96.6	13506	117.3
Germany	7636	97.8	88100	100.4	12446	108.1
France	8927	114.4	89280	101.8	10995	95.5
Korea	6645	85.1	68424	78.0	7606	66.1
OECD	7804	100	87720	100	11512	100.0
Brasil	1186	15.2	13834	15.8	9994	86.8
Russia	1754	22.5	19296	22.0	3421	29.7

Calculated upon: Education at a Glance. OECD, 2008, pp. 218, 221.

The reduction in state expenditure has been poorly compensated by growing alternative sources of investment. In contrast to the developed countries of the West where corporations play a prominent role in financing educational programs the majority of Russian firms invest little in education and training. The share of business in overall educational expenditure amounts to less than 0.1% of GDP. Private household investment appears to be of more importance since it accounts for another 1.9% of GDP. The trouble is that a substantial share of household expenditure constitutes so called grey or black investment that is investment not exactly in education itself but in getting access to it (Table 3).

Table 3

Structure of household expenditure in university education in 2004, % of total expenditure

Type of expenditure	Definition	Access to university	Budget* education	Commercial** education
White	Officially registered tuition fees, accommodation, transport, textbooks, etc	49,3	83,0	96,4
Grey	Fees paid unofficially for private coaching (mainly preparation for entrance exams <i>and for getting support at exams</i>)	28,3	3,9	0,7
Black	Corruption payments for getting university admittance, passing exams, etc	21,0	13,1	2,9

*costs of education are covered from the state budget

** costs of education are covered by tuition fees paid by students

Source: Data of Educational Monitoring conducted by State University – Higher School of Economics for the Federal Agency for Education

During the period of socio-economic transformation not only the state financial involvement in the sphere of education was cut down but its control over the activities of the higher education institutions loosened. As a result, after the shock decline in the demand for tertiary education in the early 1990s, the steady cut down of government educational spending was accompanied by rapid growth of the number of all sorts of universities and of enrolment rates (tables 4 and 5).

Table 4

Number of Educational Establishments

	Primary vocational education (ISCED 4)	Secondary vocational education (ISCED 5B)	University and postgraduate (ISCED 5A/6)
1990	4328	2603	514
1993	4273	2607	524
1995	4166	2634	762
2000	3893	2703	965
2001	3872	2684	1008
2002	3843	2816	1039
2003	3798	2809	1044
2004	3686	2805	1071
2005	3392	2905	1068
2006	3207	2847	1090

Data of the Federal Agency for Education

Table 5

University education enrolment

1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2824.5	2790.7	2964.9	3248.3	3597.9	4073.0	4741.4	5426.9	5947.5	6455.7	6884.2	7064.6	7309.8

Data of the Federal Agency for Education

During the last 15 years the number of public institutions providing university education increased from 514 in 1990 to 660 in 2006. At the same time the number of non-public (private) universities went up from zero to 430. The enrolment in tertiary education increased 2.5 times. The number of tertiary students (including postgraduates) per 10000 people in 2006 amounted to 702 which is higher than in any of the OECD countries. As regards university and postgraduate (ISCED 5A/6) enrollment, only Finland ranks higher by this indicator.

So the declining resources allocated to the sphere of education are being spread among a growing number of institutions and students. It is no wonder that the budget expenditure per student is insufficient and lacks far behind the level necessary to ensure decent quality standards. It is common knowledge that good education is expensive. With the meagre resources in their possession many colleges and universities, especially the newborn and lacking academic tradition, are unable to carry out their educative mission. They feel short of both – tangible assets (well-equipped university building, library, computers and internet access, etc.) and human resources (skilled and motivated body of teachers).

According to expert opinion to ensure the inflow of skilled personnel the wages in education are to be at least 1.5 of the economy average with a higher school teacher earning 1.2 of economy average wage and a university professor earning twice as much (Martsinkevich, 2005: 37). The

estimate of the ‘ideal wage’ which will permit a university rector to hire ‘a teacher of his dream’ given by several rectors of Russian Universities was 50,000 rubles (\$2,000 per month) for Moscow and 35,000 rubles (\$1,400 per month) for other Russian cities. At the same time the actual average wage for Moscow university teachers in 2004 was 7,500 rubles (adult subsistence minimum being 4,265 rubles), in other regions – 5,000 rubles³. The consequences are well predictable:

- outflow of most efficient and competitive cadres from the profession and lack of inflow of young teachers (only about 40% of graduates from pedagogical faculties intended to follow their occupation as compared to 91% of economists and 86% of lawyers; only 16% of university teachers are below 30 while 21.3% are above 60 and 44.3% - above 50);
- widespread moonlighting and second-job-holding (over 70% of regular university teachers have a second job, usually teaching in another university or as a private tutor or both);
- strong incentives for engaging in shadow schemes and corrupt practices (according to two different surveys only 7% of students stated that they never confronted with corruption, less than 1/3 of respondents characterized corruptive behavior as unacceptable for them).

Table 6

Dynamics of relative wage in education (B %)

Wage in education as a percent to									
1985	1990	1992	1995	1998	2000	2002	2004	2006	2008
average wage in economy									
78	67	61	65	63	56	67	62	65	61
average wage in manufacturing and mining									
71	65	62	66	55	45	57	54	68*	66*

* as a percent to average wage in manufacturing

Source: Rosstat data

According to the expert opinion of the Working group for joining the Bologna process of more than a thousand universities and academies currently operating in Russia only about a hundred meet the requirements of European quality standards. This is one of the main reasons of strong opposition to Bologna conventions manifested by the majority of Russian university rectors (Verbitskaya, 2006). The same reason stays for the fact that Russia fails to join the international tests for university students⁴. Thus we do not have internationally approved system of tertiary education quality assessment. Still according to the *Education monitoring* more than a half of employers state that the graduates of early 2000s have a worse educational and skills background as compared with the graduates of early 1990s.

Some feeble attempts to impose quality control to the sphere of tertiary education were met with strong opposition from those arguing for free market approach. They have two main arguments

³ Data of Educational Monitoring conducted by State University – Higher School of Economics for the Federal Agency for Education

⁴ According to the latest results of international comparative tests conducted among secondary school students of 40 countries, Russia ranked nearly at the bottom of the list being 33rd in reading comprehension and 30th in math. Meanwhile in the middle of the 1990s Russia still had a respectable ranking in the upper-third of the list and at the beginning of the decade when the reforms were to start, was at the top of it.

against state interference. First, the closure of universities and faculties which fail to pass quality tests will mean cutting off educational opportunities for many young people who are 'not geniuses but still have some aspirations'. Second, with the reduction of number of universities the competition between the rest of them will be less tense and this will lead to another whirl of quality deterioration. "*Who will benefit from lack of competition in the market of educational services? And does it really fall in line with the demand for education in Russian society? It's the consumer, the one who applies for educational services who should evaluate the quality of education and of diploma he gets*"(Sidorenko, 2004).

But do consumers (students and their families) possess necessary skills for quality control? The results of sociological surveys clearly demonstrate that most of them possess little information on existing educational opportunities, advantages and disadvantages of different establishments and even less knowledge and skills to evaluate quality of education offered (Omelchenko et al. 2003; Roschina and Drugov, 2003; Shiskin et al., 2005). The impact of the new market oriented system on access to education and educational opportunities is also controversial.

People's choice: family preferences and inequality of chances

The prestige of education in the Russian society is traditionally high and the share of people opting for higher levels of education (save for a short period in the early 1990s) has been steadily growing during the Soviet period and afterwards⁵. At the same time a sharp increase in tertiary enrolment has been accompanied by a growing share of secondary school dropouts. According to Population Census data, between 1989 and 2002 the share of young people (15-24 years) possessing not more than primary education increased from 5.6% to 7.5%. Another 9.2% of the age group 20-24 possess only 8 years of education which manifests an almost twofold increase as compared to 1989. The growing share of functionally illiterate low competitive and low productive marginal groups of population is the most open and vivid manifestation of rising inequality of educational opportunities in the contemporary Russian society. But to a large extent inequality patterns in education are of hidden character and stem from the growing segmentation of educational system.

At the first glance during the last decade university education has become almost universally accessible. The overwhelming majority of families (from 60% to 85% according to different surveys) intend to give children nothing less than university education. And in most cases, once the child succeeded in completing full secondary education (high school, i.e. ISCED 3), they manage to realize this intention. According to a survey conducted by IISP (Institute for Independent Social Policy) in 4 Russian regions in 2001, about 80% of high school leavers intended to go for university education right after finishing school and only 5% never planned to go to a university at all. The de facto share of school leavers admitted to universities the same year amounted to 70%, and of those who participated in entrance exams – 90% (Roschina and Drugov, 2003).

At the same time the share of students getting free university education financed from the state budget (budget students) was steadily going down to 87% in 1995/1996 and to 40.9% in 2006/2007. The share of annual student admittance supported by budget financing experienced even a sharper decline (Table 7). A growing majority is obliged to pay for their education. Indeed the rapid rise in enrolment was wholly due to 'commercial' students (that is paying full tuition fees for their education). Among different groups of population a belief is growing that education on commercial basis is the only possible way for an ordinary citizen to get admitted to a university.

⁵ A theoretical model explaining high propensity for human capital investment in economies of transition is presented in Spagat, 2006.

Table 7

Admittance to University Education (ISCED 5A level)

Year	Distribution of admitted students between sectors of university education		
	Public and municipal		Non-public
	Budget	Commercial	
1995	78.6	13.7	7.7
1998	59.6	31.5	8.9
1999	53.3	36.1	10.6
2000	45.4	42.8	11.8
2001	40.2	46.2	13.6
2002	40.4	46.0	13.6
2003	37.9	48.0	14.1
2004	37.9	45.6	16.6
2005	37.4	46.3	16.3
2006	35.3	47.7	16.9

Source: Data of the Federal Agency for Education

As is demonstrated by sociological surveys about a half of families with children are ready to pay tuition fees and the share is growing. In other words the propensity to invest in human capital is high. The problem is that the majority of Russian families do not have sufficient resources (neither financial nor social capital) to make a decent human capital investment in high quality education of their children. According to Rosstat data, the share of population living below official poverty level is about 14%. But the respective share for families with children is almost twice as high – about a quarter of families having at least one child fall below poverty line and the presence of a second child increases the risk to 35%.

According to a survey of Moscow families with children conducted by our research team in October 2008 though only about a quarter of respondents (24.8%) stated definitely they could not afford paying tuition fees for their children (with another 24.1% stating ‘hard to say’) the corresponding share for poor families was 55.5% (with 16.8% stating ‘hard to say’ and only 0.8% stating definitely they would undertake such investment if there were no other way out). The share of families that could not afford paying tuition increases steadily with the number of children in the family (Table 8). Thus the gap in educational opportunities between off-springs of big and small families is getting wider. The children of lone mothers are also at disadvantage.

Table 8

Capacity of Families to Pay Tuition, by Family Category

Share of families	Family category					
	1 child	2 children	3-4 children	5+ children	Lone mothers	All families
Can afford tuition	7.7	13.2	5.0	6.0	4.0	6.9
Can afford if cut other expenses	38.5	23.3	19.3	15.2	11.9	19.0
Can afford if go moonlighting	20.0	24.8	26.1	13.6	27.7	23.9
Cannot afford	6.2	10.9	29.2	47.0	24.8	24.5
Hard to say	27.7	27.9	20.5	18.2	31.7	25.6

Source: Moscow Family Survey

The amount of resources families can spare for investing in education is also vary different. According to the Moscow family survey the 'grey' fees paid unofficially for targeted private coaching (preparation for entrance university exams) ranged from 1000 rubles per month to 40,000 rubles per month. Another survey reveals an enormous variation in the sum of money the respondent families were ready to invest in university education of their children: from \$100 per year to \$7,000 per year (Roschina and Drugov, 2003). The sad reality is that 'the market for educational services' offers nearly as wide a range of opportunities to obtain a university diploma. In this situation a large number of families make a forced choice for cheap low quality education schemes in many cases obtaining the title (university diploma) poorly backed up with real knowledge and skills. The paradox is that in contemporary Russian context this may still be a rational enough choice.

Structure of Tertiary Education and Labour Market Demand

In the latest years the demand for university education has been heavily stimulated by heightened formal requirements of employers. A sort of a triggered off mechanism (accelerator) has been put in motion. School leavers opt for university education and the majority goes in for it one way or another. With abundance of fresh made university graduates of all sorts the employers raise their formal educational requirements. According to surveys 90% of employers demand a university diploma when hiring any kind of managerial and professional staff and 50% demand it when hiring clerks and skilled workers. At the same time in many cases they are satisfied with any university diploma irrespective of specialty looking for 'cultured, disciplined and quick-witted' employee who still needs to be trained and acquire necessary professional skills at the work place. As one of the employers put it 'if he's failed to get any diploma at all something must be wrong with him'.

In this situation it is no wonder that the competitiveness of employees depend strongly on their formal educational attainment. The National Labour Force Survey data demonstrates that people with tertiary and especially university education are characterized with higher rates of economic activity and employment and the lower is risk of unemployment. According to the findings of Nesterova and Sabirianova people with higher educational attainment are more likely to be hired by firms with higher average wages. At the same time education impacts their wage in the firm after being hired to a very small extent (Nesterova and Sabirianova, 1999: 23,24). Thus, university education is beginning to act not as a human capital accumulation device but as a 'filter' or a formal pass to decent work.

At the same time discrepancies between occupational profile of the new labour market entrants and de facto demand of the employers are gradually increasing, making the problem of human capital mismatch one of the key barriers to sustainable economic growth. The share of employed on jobs not matching the specialty acquired in the university increased from 36% for graduates of 1993-1996 to 42% for those of 1997-2000 and to 56% for those of 2001-2004 (Shishkin, 2005: 13).

As is demonstrated by two rounds of People's Security Survey conducted by our team in 3 Russian regions only about a half of respondents are inclined to apply and develop the professional skills they have acquired (or are assumed to have acquired) in the process of formal learning and the share have been declining all through the period of economic upturn. It is worth noting that for young people with recently acquired diplomas the trend is more vivid (Table 9).

Table 9

Intention to Pursue the Profession Acquired through Formal Tertiary Education in Future Career

Category of respondents	How important is for You to pursue the profession acquired ?			
	Very important	Important	Not very important	Not important at all
2002				
All respondents	23.2	34.7	32.5	9.6
Below 29 years	20.3	32.5	36.4	10.8
2007				
All respondents	19.1	32.4	33.6	15.0
Below 29 years	14.3	29.7	34.8	21.1

Source: *People's Security Survey*

Beginning from 1999 after the severe economic recession was over several types of manpower deficit are emerging in the Russian labour market:

- 1) professionals in IT and technical occupations;
- 2) high quality managerial staff (of 'European quality standards');
- 3) skilled manual workers;
- 4) low skilled service and auxiliary workers;

To a different but substantial extent it is the educational system that is responsible for all of these deficits.

The shortage in technical occupations is logical outcome of reliance on market forces in the sphere of education. In the last years the proportions between different branches of university education have been influenced mainly by demand of families (parents) possessing little information on the trends of labour market development. As a result during the last decade (1995-2006) the share of economic and managerial freshmen grew from 18.2% of overall university admittance to 34.1% and their absolute number increased fivefold. For the most popular technical occupations – IT, the respective share grew from 1.5% to 2.1% and the absolute number increased 3.4 times. For the rest of technical occupations the growth was much less if any. According to expert assessments we have over-saturation of market with economists and lawyers and a shortage of innovative occupations with best demand prospects. The overspread desire to be economist, manager or lawyer stems from lack of information available to school leavers and their families (Bolotov, 2003).

The second deficit is directly linked to low quality standards in the expanding sectors of tertiary education. Graduates with managerial degree are excessively provided by newly created universities and academies but the skills they possess do not satisfy employers.

The deficit of skilled workers stems largely from gradual destruction of primary vocational and (to a lesser extent) lower level tertiary education (see Tables 4 and 10). The factors undermining the system of vocational education are both of economic and of cultural origin. The destruction of 'working class culture' led to growing unwillingness of young people (usually supported by parents) to go in for manual occupations. Lowering entrance competition standards made

academic requirements for admittance to universities relatively easy to meet. And reliance on consumers demand in shaping the proportions of educational system (disregarding demand of economy) led to gradual squeezing out of the vocational level disregarding the growing labour market demand for skilled workers and mid-level technical specialists.

Table 10

Dynamics of number graduates from different levels of professional education (index, 1990=100)

Education level	year					
	1995	1998	2000	2002	2004	2006
primary (ISCED 4)	66.1	61.7	60.0	58.6	55.7	53.4
secondary (ISCED 5B)	74.5	86.2	91.1	105.0	110.1	109.9
University (ISCED 5A)	100.4	124.9	158.4	209.5	268.4	312.5

Calculated upon Rosstat data

It is worth noting that with the break of the present economic crisis the artificially booming labour market for ‘quasi-professionals’ shrank harshly with a rising share of fresh-made university degree holders becoming unemployed. At the same time the employers are reluctant to part with skilled workers and technical specialists with experience trying to retain them until the next upturn at all costs.

Reform reconsidered

The failure of the evolving model of educational system to contribute to equitable access to human capital irrespective of family background and financial standing, ensure quality standards, and meet the demands of economy makes it necessary to reconsider the concept of reform. However the upper-level discussions are carried on not in terms of seeking efficient ways to develop skills, intellectual and creative faculties and communicative competence of population vital for sustainable innovative development, but in terms of promptly providing educational services satisfying solvent demand of individual consumers. The problems of quality control, reconciling the severe human capital mismatch, modernization of infrastructure and technologies in education to say nothing of the vital challenge of contributing to equity of opportunity for children from different families recede into the background.

To my mind whence education is claimed a strategic priority, the state is to play a strong hand in supporting and shaping the system. The main directions of the state activities should be as follows:

- 1) monitoring the quality control (elaborating unified system of quality standards and closing down universities (or university departments) that fail to meet them);
- 2) elaboration of a comprehensive system of easily accessible information on educational opportunities and labour market trends;
- 3) adjusting the structure of professional education to the needs of economy;
- 4) strengthening equality of opportunity in access to education irrespective of the family background.

Of course in a dynamic world of today it is hardly possible to obtain an accurate long-term forecast of the employers’ demand for various types of skills. And the fact itself imposes new challenges on the educational system. It has to contribute to students’ ability and desire for life-long learning, competence in dealing with abundant but incomplete and rapidly changing

information, propensity to leave behind obsolete knowledge and skills, and so on. And still any system of professional education is bound at least to try taking into account the prospective labour market demand for graduates – otherwise accumulated human capital will be eroded through misuse. To reduce human capital mismatch active participation of the state in financing and managing educational system is required.

In addition to the state expenditure alternative sources of financing education should be considered. Nevertheless the state may withdraw from financial obligations only to the extent families and socially responsible firms are willing and able to compensate the decline. The scheme of drawing non-public investment into education should allow the state to maintain necessary control over the educational system in order to satisfy to the maximum extent equity requirements on the one hand and the demands of economy on the other. It follows that any scheme chosen has to ensure that mere affluence (ability to pay tuition) should not act as criterion of access to university education.

In the Russian case characterized by very high income differentiation and a large share of relatively poor families commercialization of education begets a bundle of negative effects. Firstly, the burden of tuition fees compels families to reduce the basic needs expenditure (food, leisure, medical care) to unsatisfactory level. Secondly, in the absence of adequate quality standards it leads to growing segmentation of the quality of education received depending mainly upon financial (and social) capital of families thus contributing to growing inequality in society and formation of rigid inequality patterns. Thirdly, the aptitudes and personal characteristics are to a large extent ignored in admission procedures lowering the outcomes of human capital accumulation efforts. And lastly the unfairness of the system leads to gradual erosion of societal values and destroys the motivation of students to study and of professors to do their best in teaching.

Different schemes of supplying loans to finance university education are being elaborated and put in practice since 2001. But usually they are of little success. The problem is that they are organized in the same way as traditional consumer credit schemes and therefore are eligible only for the relatively affluent part of the population. Such schemes contribute little to equity purposes. Between 2001 and 2006 only 4500 student loans were granted while the demand is a lot greater. According to surveys right before outbreak of crisis about 1/3 of ‘commercial’ students would like to participate in an educational credit scheme but were not eligible. When the crisis broke out an increasing number of students all of a sudden found themselves incapable of paying out even modest tuition fees but no emergency safety net was available.

To my mind it is a deferred tuition scheme that is worth considering for Russia⁶. In the Russian context such scheme has very strong arguments both pro and contra.

It may be organized as follows. 1. The admittance to universities is gained on the basis of unified entrance competition irrespective of any financial considerations. 2. The state financing is allocated among universities and areas of training according to perceived needs of national economy (priorities). 3. The gap between total costs of education and the costs covered by the state (state contribution is now on average less than 50% but should be increased) is to be covered by students or possibly by future employers. 4. The schemes of reimbursement of the costs placed upon the student should vary depending only on family income. The most affluent (e.g. upper deciles income group) have to perform the payment right away. The rest are entitled to interest-free or low interest loans to be paid after graduation. The fact of entrance exams being successfully passed should act as a guarantee when supplying these loans. 5. The loan is repaid

⁶ For a detailed discussion of advantages and barriers for income contingent scheme implementation in transition economies see Vodopivec, 2004.

gradually as a fixed share of the former student salary on condition he/she gets it (the salary). So the period of repayment (and the possible loss to the state budget) depends upon the success of the graduate in the world of work.

At the same time serious obstacles for successful implementation of such a scheme in Russia do exist. A critical issue for the viability of income contingent loan schemes is strong administrative capacity of the state (Vodopievec, 2004). This condition is not met by Russia where one of the most acute problems is wide spreading informal relations throughout the national economy and weak enforcement of legal norms. The share of unreported informal earnings and other incomes is very high. Actual wages may be several times higher than those fixed in the formal contract. Prevalence of informal norms and practices makes it difficult for the state to collect the amount of taxes due. According to the data of Tax Inspection, only 17% of economic units regularly pay all the taxes due, 50% do it in irregular way and 33% do not pay taxes at all (Bekryashev and Belozyorov, 2000). A survey conducted by Public Opinion Fund reveals that about a third of respondents consider tax evasion in the Russian context compatible with ethical norms.

Thus a task of setting in force the deferred tuition scheme is a difficult one. Still to my mind conceptually this is a promising approach which allows on the one hand meeting economic demand for high quality and good matching of national human capital and contributing to equality of opportunity in getting access to education irrespective of family background and financial circumstances.

References

Bekryashev, Andrei K. and I. P. Belozyorov (2000) *The Shadow Economy and Economic Crime*. Moscow: Open Society Institute. <http://newasp.omskreg.ru/bekryash/ch8p1.htm>

Bolotov, V. (2003) Malogo EGE ne budet. Малого ЕГЭ. *Izvestia*. August 28.

Breslav, L.B., B. C. Lisovik and I.E. Lomova (2003) Kadrovii potentsial I puti ego povisheniya. *Chelovek I Trud*, # 4.

Brown, Ph. and H. Lauder (2000) Human Capital, Social Capital and Collective Intelligence. *Social capital. Critical Perspectives*. Eds. S. Baron, J. Field, T. Schuller. Oxford: Oxford University Press: 226-242.

Coleman, J.S. (1988) Social capital in the creation of human capital. *American Journal of Sociology*, vol. 94: 95-120.

Cuevas, A (2001) Short- and Long-Term Poverty and Social Policy in a 'Snakes and Ladders' Model of Growth. IMF Working Paper WP/01/172.

OECD (2008) *Education at a Glance*. Paris: OECD.

Ellman, M. (1979) Full Employment – Lessons from State Socialism. *De Economist*, vol. 127(4).

Gregory, P. R. and J. E. Kohlhase (1988) The Earnings of Soviet Workers: Evidence from the Soviet Interview Project. *Review of Economics and Statistics*, vol. 70 (February): 23-35.

Kuzminov, Y (2002) *Obrazovanie i Reforma. Otechestvennie zapiski*, # 2.

- Le, T. V., J. Gibson, and L. Oxley (2005) Measures of human capital: A review of the literature. New Zealand Treasury Working Paper 05/10.
- Martsinkevitch, V (2005) Investitsii v cheloveka: ekonomicheskaya nayka i rossiiskaya praktika. *MEiMO*, # 9: 29-39.
- Nesterova, D. and K. Sabirianova (1999) Investment in Human Capital under Economic Transformation in Russia. EERC Working Paper 99/04E.
- Omelchenko, E. L., N.V. Goncharova and E.L. Lukianova (2003) *Problemi doctupnosti visshogo obrazovaniya*. Ed. by S.V. Shishkin. Moscow, IISP: 11-38.
- Roschina Y.M. and M.A. Drugov (2003) Sotsialnie determinanti neravenstava doctupa. *Problemi doctupnosti visshogo obrazovaniya*. Ed. by S.V. Shishkin. Moscow, IISP: 39-90.
- Schultz, T.W. (1970) Investment in Human Capital: the Role of Education and of Research. N.Y.
- Shishkin, S.V. (2005) Funktsionalnaya i socialnaya differentsiazia rossiiskoi sistemi visshogo obrazovaniya. *Socialnaya differentsiazia visshogo obrazovaniya*. Ed. by S.V. Shishkin. Moscow, IISP: 7-18.
- Sidorenko, A. (2004) V vuzi edet revizor. *Nezavisimaya Gazeta*. October 22.
- Spagat M. (2006) Human capital and the future of transition economies. *Journal of Comparative Economics*, vol. 34: 44–56.
- Spori strategov ot obrazovaniya (2004). *Nezavisimaya Gazeta*. November 5.
- Szreter, S. Social Capital, the Economy, and Education in Historical Perspective. *Social capital. Critical Perspectives*. Eds. S. Baron, J. Field, T. Schuller. Oxford: Oxford University Press: 56-77.
- Streeck, W. (1989) Skills and the Limits of Neo-Liberalism: the Enterprise of the Future as a Place of Learning. *Work, Employment and Society*, vol. 3/1: 89-104.
- Verbitskaya, L. (2006) Interview of the Day. Moscow news # 22. July 16.
- Vodopivec, M. (2004) A Simulation of an Income Contingent Tuition Scheme in a Transition Economy. IZA Discussion Paper No. 1247.