

Financing Education in Transitional Societies: lessons from Russia and China

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ABSTRACT Recent years have brought emerging theoretical propositions about the nature of educational change in societies undergoing transition from socialism to market economies. Focusing particularly on the financing of education, this article examines patterns in Russia and China in the light of this literature. It shows that although transitions in the two countries have displayed major differences, they have also displayed significant similarities. These similarities have been evident despite the fact that changes in Russia and China have been made independently of each other. This has largely been because of the impact of market forces, though it has also reflected broader forces of globalisation.

Social transitions may be of many different types. Some transitions result from political changes, both abrupt and gradual, while others arise from demographic, economic and other factors. Studies of transition have become so numerous and significant that they have become a domain of study in their own right under the label 'transitology'.

The present article is primarily concerned with transition from centrally-planned communist systems to market economies. A major literature has developed in this domain, one part of which focuses on states in which communism has been officially abandoned. This group includes the states of the former Soviet Union and its satellites in Eastern Europe. Another part of the literature focuses on countries which remain communist at the official level of government but which have moved to market economies. This group includes the Lao People's Democratic Republic, the People's Republic of China and the Socialist Republic of Vietnam.

This article is concerned with the two largest—and in many ways most significant—countries in this pair of groups. Russia officially abandoned communism in 1991, and moved abruptly to a market economy which matured by stages during the decade which followed. China officially retained the communist ideology, but also moved to a market economy. Thus these countries provide an instructive arena for comparative studies, for they display significant similarities amidst the obvious differences.

The main focus of the article is on the financing of education. To provide a framework, the article commences with some major dimensions in the literature on education in countries which have moved from centrally-planned communist systems to market economies. The article then presents some background facts on Russia and China, before turning to their education systems. One major theme of the discussion concerns the changing role of the state, whether under capitalism or under socialism. This requires analysis of the various tiers

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of government financing and control of education, and thus some commentary on centralisation and decentralisation. It also requires commentary on the changing roles of enterprises, households and individuals in the non-government sector.

Reform and Change of Education Systems in Transitional States

In the field of education, instructive steps to develop theoretical understanding of transitions have been taken by Cowen (e.g. 1996; 2000a). Some parts of his work (e.g. Cowen 1999, p. 84; 2000b, p. 339) seem to confuse transitions with transitologies (i.e. the *study* of transitions); and not all scholars would agree with Cowen that transitions/transitologies should only be defined as such if they occur 'in a short time span; operationally say 10 years' (Cowen 1999, p. 84). Nevertheless, Cowen has called attention to a domain deserving more detailed study, and has provided helpful pointers on the sorts of questions that scholars might ask.

Cowen's chief concern in his writings on the topic, like that of the present authors', is with 'major social turbulences' (Cowen, 1999, p. 84). His simplest question concerns their rules of operation, 'that is, what are the rules of their chaos, what are the patternings of educational variation that we may expect?' He suggests that:

we do not know—and more importantly there is little in our previous canon of work, except that on socialist revolutions, which permits us to create approaches of any subtlety. We can of course describe: we can describe aims, school structures, curriculum, finance and administration patterns, vocational technical provision and so on. In other words, we can use taxonomies of the sort useful to the International Bureau of Education (IBE) ... But we lack the conceptual apparatus—even of categories of educational description—to compare the South African and the Hungarian transitology in the same academic paper, except at the mundane level of the IBE taxonomy (1999, pp. 84–85).

The present article takes two countries which seem to resemble each other more closely than do South Africa and Hungary; and it is perhaps only a modest step towards improved conceptual understanding. However, it does endeavour to advance in the conceptual direction that Cowen appeared to have in mind.

To undertake this task, the article builds on two components of the existing literature which have remained largely separate from each other and with little cross-fertilisation. During the 1990s, a substantial literature emerged on transition from communism to market economies in the states of the former Soviet Union and in the Eastern European states which had been dominated by the Soviet Union (e.g. Phillips & Kaser, 1992; Birzea, 1994; Eroshin, 1996; Coulby, 2000). A parallel literature grew on China and the other countries which at the official level remained socialist but which had moved to market economies (e.g. Sloper & Le, 1995; Borevskaya, 1997; Brooks & Myo Thant, 1998; Mitaray, 2000). As this article will show, useful lessons can be learned from juxtaposition of the two bodies of work and from analysis of similarities and contrasts.

Up to the late 1980s, several features characterised the education systems of the Soviet Union and its satellites, and also of the communist countries in Asia. Among these features was stress—not only at the level of rhetoric but also to a large extent in practice—on equity between different regions, between rural and urban areas, and between different families. Enrolment rates were high compared with other countries at similar levels of development (Micklewright, 1999, p. 1; Gannicott, 1998, p. 119), approaching universality at primary and junior secondary levels, and also being considerable at the kindergarten level. The transitions

of the 1990s threatened these high enrolment rates. Governments were compelled to accelerate the pace of creating not simply large, but also efficient, education systems which were differentiated according to the educational demands of the market economies. They were less able to supply the quantities of education that had previously been supplied, and in some countries children were forced to drop out of school because the direct and/or opportunity costs were too high (Bray, 1996, p. 46; Laporte & Ringold, 1997, p. 8; UNICEF, 1998, p. 22; Cherednitchenko, 2000, pp. 5–21). In 1994, the drop-out rate from Russian schools was 17 times greater than it had been in 1988.

Among the results of these changes was a considerable increase in geographic and social disparities (McLeish & Phillips, 1998; Sobkin & Pisarsky, 1998; Micklewright, 1999). With reference to Russia, Nikandrov (2000, p. 217) observed that, 'in contrast to earlier times, there is now no talk about equality of opportunity; differentiation is not only admitted but encouraged'. Similar observations could be made both of the other countries which had officially abandoned communism and also of the countries which officially retained communist systems but which had moved to market economies (Berryman, 2000; Lee, 2001).

Another general characteristic of the education systems prior to the transition was a high degree of centralisation. Curricula, personnel, criteria for enrolling pupils, and many other dimensions of school systems were controlled by the central authorities, and little autonomy existed at the school or district levels. Universities were also carefully regulated by national authorities. In the planned economies, enrolments in individual courses were supposed to be tied to national plans, and tight control was maintained over the number of universities, size of institutions, admission criteria, curricula and staffing. Education systems were almost entirely operated by the state, and education was provided free of charge.

The transitions of the 1990s greatly changed this picture. In most countries, central governments devolved authority to lower levels in the hierarchy. This was partly a response to calls for flexibility which had been absent in the old system, but was also a mechanism for 'passing the buck'. The majority of transitional states suffered from rampant inflation, and changes in the economic base meant that governments had fewer resources to meet the needs of education systems. When the central authorities found themselves acutely short of resources, they decided to hand responsibility for school systems to other tiers and new actors.

Financial conditions also caused other changes. Shortages of resources at the school level led to severe deterioration of quality within the public sector, and in many countries private schools emerged to maintain the quality for those who could afford it. Schools in the public sector also sought ways to supplement the resources received from the government. Some schools raised money from parents in the form of fees and levies, and some embarked on revenue-earning schemes by running factories, renting out premises, and embarking on other mechanisms which led in effect to privatisation within the public sector (Laporte & Ringold, 1997; Wang, 2000).

While some of the changes in such states were distinctive to states in transition from communism, other changes matched those in longstanding capitalist societies. Many observers (e.g. Ramirez, 1997; Spring, 1998) have highlighted the forces of globalisation, which gained momentum towards the end of the 20th century and which affected education as well as other sectors. These forces were not necessarily unidirectional, and analyses should not be oversimplified (see e.g. Sweeting, 1996; Green, 1997; Burbules & Torres, 2000). Nevertheless, privatisation, for example, was part of a global trend. Privatisation encompasses not only the establishment of for-profit institutions which operate in parallel to existing public institutions, but also the introduction or increase of fees and other forms of cost-recovery in public

institutions. Fees in public institutions have become especially prominent at the tertiary level in all parts of the world (Ziderman & Albrecht, 1995; Task Force on Higher Education and Society, 2000), and the move in this direction in the transitional states may thus be considered part of a global shift. Similar comments may apply to decentralisation of control in education, which has been evident in longstanding capitalist countries as well as in transitional states (see e.g. Fiske, 1996; Hanson, 1998).

With reference to transitions of all sorts, Cowen (1999, p. 83) has again extended the conceptual vocabulary of the field by referring to immunologies and permeologies. He asks what is filtered in, and what is filtered out. The globe, he observes, has had various strong immune systems in which neighbouring states have vigorously rejected each others' ideologies. Examples include Taiwan and the People's Republic of China, Greece and Turkey, and the European countries on each side of the 'Iron Curtain'. Taking the example of Hungary, Cowen observes that both the immune system and the permeability of conceptual frameworks have changed:

Hungary has manifestly changed its international 'filters'. Curriculum theory now owes as much to the thinking of Dewey as Krupskaya. Language as a cultural marker has altered, in the preferences of both the State and 'consumers' from Russian to English and German These are new permeologies and are to be understood not merely through the domestic educational politics of Hungary but by its absorption into a late modern world which has mobile capital, increasingly mobile labour, weaker principles of political immunology in Central and Eastern Europe, and new educational expressions of purity and pollution (1999, p. 85).

The present article will show that immune systems and the permeability of ideas, in the sense used by Cowen, have also changed significantly in Russia and China. Moreover, the changes have been largely in the same direction, even though both countries have been operating independently of each other.

Contextual Features: Russia and China

Russia

During the 20th century, Russia moved through two major political transitions. The first resulted from the 1917 Revolution, when Russia became the world's first communist state. Russia's influence then spread dramatically throughout the region and beyond. Russia was the largest member of what in 1922 became the Union of Soviet Socialist Republics (USSR). However, in 1991 the USSR collapsed, and Russia moved through its second major political transition.

The second transition was the result of economic and political stagnation, which informed the policies initiated by Mikhail Gorbachev and his close advisers following Gorbachev's appointment in 1985 as Secretary General of the Soviet Communist Party. Gorbachev's policy of *glasnost* (openness) increased the freedom of the society. It also allowed the development of Russian nationalism which, although previously evident, had not been permitted in an overt form. The process of *perestroika* (restructuring) launched in 1987 accelerated change. Communism was officially abandoned with the collapse of the Soviet Union, and Russia found itself a separate country which was independent of the other 14 members of the former USSR.

Modern Russia has a population of 146 million, and a land area of 17 million square kilometres. The bulk of the population is concentrated in the western side of the country. During the period 1992 to 2000, Russia's population decreased by 2.8 million, representing

over 2% of the total. This decrease resulted from emigration and falling birth rates, which in turn reflected the economic crisis which beset the country.

The 1993 constitution made Russia a federation with 89 'subjects'. These subjects comprised 21 republics, 52 *oblasts*, six *krais* and ten autonomous *okrugs*. However, nine *okrugs* were subsidiary units of larger *oblasts* or *krais*, meaning that there were only 80 non-overlapping regions within the Russian Federation. At the sub-regional level were 1,869 *raions* and 650 major cities which had their own administrations.

Following the dissolution of the USSR, the Communist Party was dismantled as a monopolistic political structure. Prices were liberalised, precipitating high inflation, and mass privatisation was embarked upon. By 1997, about 70% of gross national product (GNP) was produced in the private sector. Much production was severely disrupted by the restructuring, and between 1990 and 1996 real GNP per capita fell by an annual average of 9%. Per capita GNP was approximately US\$2,300 in 1998 (World Bank, 1999). This average figure concealed wide disparities between regions, groups and individuals.

The new political framework brought new partnerships in the international sphere. For example, for over four decades the USSR had refused to join the World Bank on the grounds that it promoted capitalist modes of operation and was dominated by the United States and other countries which were enemies in the Cold War. However, Russia joined the World Bank in 1992 and embarked on a substantial project portfolio. Russia also developed links with the Organisation for Economic Cooperation and Development (OECD) and other international bodies which had previously been spurned. These links brought external influences in policies for education as well as for other sectors (see e.g. World Bank, 1995; OECD, 1998). They are an example of the changing immune systems and the new permeabilities which Cowen (1999, p. 85) had in mind.

China

With over 1.2 billion people, the People's Republic of China (PRC) has a much larger population than Russia. It also has a smaller land area (9.6 million square kilometres), and thus considerably greater population density. As in Russia, the distribution of China's population is unbalanced: in particular, China's eastern regions have greater population densities than its western regions. Also as in Russia, the rate of population growth greatly decreased towards the end of the 20th century. However, this was not so much because of China's transition to a market economy as because of the policy introduced in 1979 which stipulated that, with certain exceptions, each married couple was only permitted to have a single child. Yet despite this policy and the resultant fall in the rate of growth, China's total population grew by approximately 96 million between 1990 and 1998.

China became a People's Republic in 1949, following the success of the communist revolution led by Mao Zedong. During the decade which followed, China and the USSR were close allies. The USSR provided much technical and other assistance, and the Chinese leadership looked to the USSR for models of many kinds, including educational ones (Cleverley, 1991, pp. 127–135; Hayhoe, 1999, p. 77). However, in 1960 a diplomatic break with the USSR led to the abrupt withdrawal of Soviet aid and a separation of paths.

The decade from 1966 was the period of China's Cultural Revolution, during which intellectuals were persecuted and both economic and social activities were severely disrupted. Soon after the death of Mao Zedong in 1976, Deng Xiaoping became the leading figure, with a more pragmatic approach to politics and economics. China remained largely closed to the outside world, but the 1980s brought gradual opening. One significant step in 1980—at a much earlier stage of transition compared with Russia—was China's rejoining of the World

Bank, reclaiming the seat which for the previous three decades had been occupied by Taiwan. Other international organisations, such as the United Nations Children's Fund (UNICEF) and the United Nations Development Programme (UNDP) also played increasingly prominent roles.

The tenth anniversary of Mao's death in 1986 was marked by an official reassessment of his life. While his accomplishments were praised, it was acknowledged that he had made mistakes. Thus at the same time that Gorbachev in the USSR was launching his policies of *glasnost* and *perestroika*, shifts were also occurring in China. The Chinese reforms did not lead to changes in national borders, and the communist ideology was maintained. However, in 1987 the Thirteenth National Congress of the Communist Party of China brought a shift with the suggestion that there must be 'a very long primary stage in the building of socialism in a country that is backward economically and culturally' (Zhao, 1987, p. 70), which legitimated a softening of earlier Marxist stances. The 1990s brought further shifts towards a market economy, and further international openness. The USSR had abandoned the system of centrally-planned job assignment for university graduates in 1990, and China abandoned it by stages between 1983 and 1997. In China, the official formula for change was encapsulated in the phrase 'socialist market economy', which had been introduced by Deng Xiaoping in 1992 and which emphasised the importance of economic reform while also stressing the need for political stability within the existing framework.

In contrast to the Russian Federation, China is officially constituted as a unitary state—with 22 provinces, five autonomous regions, four municipalities, and two Special Administrative Regions (SARs). The two SARs are the former colonies of Hong Kong and Macau which were reunited with China in 1997 and 1999, respectively. Their modes of government, living standards and systems of education are markedly different from those of the mainland, and the formula 'one country, two systems' permits retention of capitalism in the two SARs despite the official maintenance of socialism in the mainland. Because the two SARs are so different from the mainland, they have been excluded from the focus of the present article.

Per capita GNP in mainland China was approximately US\$750 in 1998 (World Bank, 1999), which was one-third of the Russian figure even during that period of Russian economic crisis. In contrast to Russia, however, the 1990s brought continuous growth in China's economy and an improving standard of living for the bulk of the population. Between 1991 and 1998, per capita GNP grew at an annual average of 8.8%. This contrasted with Russia's annual decline of per capita GNP of 6.7% over the same period (World Bank, 1999).

Like Russia, China also faced growing regional disparities during the 1990s. Economic growth was substantially greater in the eastern regions compared with the western regions, and gaps grew between urban and rural areas. The proportion of the population living in rural areas was much greater in China than in Russia, being approximately 67% in the former and only 23% in the latter (World Bank, 1999).

Public Expenditures on Education

Two widely-used indicators of the extent to which governments give priority to education are public expenditure as a percentage of GNP, and public expenditure on education as a percentage of total public expenditure. On the first measure, allocations in both Russia and China were lower than the average for comparable countries. Table I shows figures for the two countries and by global region between 1985 and 1997. The figures for China were considerably below any of the regional averages; and the figures for Russia were lower than

TABLE I. Public expenditures on education as a percentage of GNP, 1985–97

| Country/region | 1985 | 1990 | 1995 | 1997 |
|-------------------------------|------|------|------|------|
| Russia | 3.2 | 3.5 | 3.5 | 4.2 |
| China | 2.5 | 2.3 | 2.3 | 2.3 |
| <i>More developed regions</i> | 4.9 | 5.0 | 5.0 | 5.1 |
| North America | 5.0 | 5.4 | 5.3 | 5.4 |
| Asia/Oceania | 4.3 | 4.0 | 4.0 | 4.0 |
| Europe | 5.2 | 5.1 | 5.3 | 5.3 |
| <i>Less developed regions</i> | 3.9 | 3.8 | 3.8 | 3.9 |
| Sub-Saharan Africa | 4.5 | 4.6 | 5.1 | 5.1 |
| Arab States | 5.8 | 4.9 | 5.0 | 5.4 |
| Latin America and Caribbean | 4.0 | 4.0 | 4.5 | 4.6 |
| Eastern Asia and Oceania | 3.1 | 3.0 | 2.9 | 2.9 |
| Southern Asia | 3.4 | 3.7 | 3.2 | 3.3 |

Sources: Berryman (2000, p. 123); UNESCO (2000a, p. 118); UNESCO (2000b).

any regional figure except Eastern Asia/Oceania (which was itself pulled down by the low China figure).

Viewing trends over time, in Russia the reported proportion of GNP consumed by education in 1995 was the same as that for 1990, and was actually higher than that reported for 1985. This shows that declines in education spending did not begin with the 1991 transition. Indeed, the declines can be traced back over the previous four decades (Nikandrov, 2000, p. 217). In the 1950s, education consumed about 10% of gross domestic product (GDP) [1], but the 1960s brought gradual decline so that the 1970 figure was only 7%. Yet this was still high compared with subsequent figures. Public expenditures on education consumed 3.9% of GNP in 1975, and declined to a low point of 3.1% in 1984 (UNESCO, 2000b). The proportion grew again during the 1990s, but at the highest point, in 1993, it was only 4.1%.

Table II turns to the proportion allocated to education within the total government budgets. The statistics refer to consolidated budgets, i.e. the sum of national, regional and sub-regional budgets. The situations in the two countries were markedly different before the reforms, but proportions in Russia decreased while proportions in China increased. During the 1990s, the Chinese figures were not significantly out of line with international averages (Table III) but the Russian figures were somewhat below those averages.

In both Russia and China, the central governments recognise that their education expenditure is undesirably low, and have set specific targets to raise it. Russia's 1992 Law on Education declared that education expenditure should be no less than 10% of the state revenues. The 1996 revision of the Law (Russian Federation, 1996) added that the allocation for tertiary education could not be lower than 3% of the federal budget. In 1999, the Russian Duma (parliament) approved a National Doctrine on Education which included the goal of public expenditure on education reaching 6% of GNP within three years. These declarations paralleled a 1993 decision in China that public expenditure on education should reach 4% of GNP by 2000.

However, in both countries these targets proved to be unattainable. In China, an official document (China, 2000, p. 96) pointed out that the 1995 figure for public expenditure on education as a proportion of GNP was actually lower than that for the previous year—2.4% compared with 2.6%. The document applauded the 1993 declaration by the Communist Party

TABLE II. Public expenditures on education as a percentage of total public expenditures, Russia and China, 1980–98

| Year | Russia | China |
|------|--------|-------|
| 1980 | 16.7 | 7.7 |
| 1985 | — | 9.7 |
| 1990 | 14.8 | 13.6 |
| 1992 | 11.0 | 15.0 |
| 1993 | 12.7 | 13.8 |
| 1994 | 11.7 | 16.9 |
| 1995 | 12.4 | 13.4 |
| 1996 | 12.8 | 15.3 |
| 1997 | 14.4 | 14.7 |
| 1998 | 12.9 | 14.5 |

Sources: Canning *et al.* (1999, p. 50); Lugachyov *et al.* (1997, p. 163); World Bank (1997, p. 122); Russian Federation, State Statistics Committee (1999, pp. 492–493); Tacis Project, (2000, Vol 2, p. 25); Ministry of Education, Beijing (unpublished).

TABLE III. Public expenditures on education as a percentage of total public expenditures, by world region, 1995

| Region | Education expenditures as % of total public expenditures |
|---------------|--|
| Africa | 17.6 |
| North America | 17.2 |
| South America | 13.9 |
| Asia | 15.1 |
| Europe | 13.4 |
| Oceania | 16.1 |

Source: UNESCO (1998, pp. 156–159).

of China (CPC) Central Committee, but observed that the proposed steps could not attain the goal of 4% of GNP by 2000. Given that the Russian target was even more ambitious, and competition for scarce resources just as pressing, observers in Russia had few grounds for greater optimism.

Non-government Expenditures on Education

In both countries, a significant part of the gap arising from inadequate government expenditures during the 1990s was bridged by non-government sources. The rise of non-government expenditures was perhaps the most dramatic change from the situation in the 1980s and earlier. Particularly obvious was the development of profit-making private schools; but also of great significance was an increased element of cost-sharing in the public system.

In both countries, private institutions emerged, particularly in cities, to serve élites who

TABLE IV. Numbers of private institutions, China and Russia, by Level, 1996

| | Russia | | China | |
|--------------|--------|-------|--------|------|
| | No. | % | No. | % |
| Kindergarten | 4,958 | 7.2 | 20,780 | 9.1 |
| Primary | 119 | } 0.7 | 3,831 | 0.5 |
| Secondary | 421 | | | |
| Higher | 244 | 42.6 | 1,230 | 53.8 |

Sources: Canning *et al.* (1999, p. 54); Russian Federation, State Statistics Committee (1999), www.stats.gov.cn/ yearbook.; Mok (2000, p. 117).

could afford to withdraw their children from resource-deprived public institutions (Vaillant, 1994; Lin, 1999; Sutherland, 1999; Zhang & Li, 2000). Many private schools offered alternative curricula and media of instruction, and some were particularly attractive because they had international connections. In Russia's St. Petersburg, for example, many international schools had links with such countries as Australia, Canada, Finland, Germany, the United Kingdom and the United States (Lisovskaya, 1999, p. 212). The private schools were also in the vanguard of curriculum reforms emphasising the methods of Maria Montessori, Rudolf Steiner, Gestalt pedagogy, Marshall Rosenberg's theory of empathic listening, and others.

However, although the mere existence of private schools was very significant, they did not form a large proportion throughout the education sector. During the mid-1990s the kindergarten sector was vigorous and the higher education sector even more so (Table IV). However, at the primary and secondary levels in neither country did the number of private institutions exceed 1%. Moreover, although statistics for higher education are striking, the majority of private institutions were very small. Thus the proportion of enrolments in the private tertiary sector was much lower than the proportion of institutions. Nevertheless, the decade brought continued growth. In China the number of private higher institutions in 1999 is reported to have exceeded 2,000, though only 37 of these institutions were accredited by the Ministry of Education (Zhang, 2001, p. 157).

One problem with classification of institutions as either public or private is that it implies a sharp distinction. In practice, the boundaries are commonly blurred. Although provision was not adhered to uniformly, the 1992 Russian law on education indicated (article 41) that private schools which obtained a state assessment certificate had the right to receive public funding at least equivalent to that given to state schools. This provision was repeated in the 1996 revised law, though the revised version excluded tertiary institutions from the arrangement.

In China, the blurring had a different cause. Up to the mid-1990s the government was rather unwilling to recognise profit-making private schools because their existence seemed incompatible with the official socialist ideology. Such institutions were therefore commonly labelled people-run (*minban*) schools. This label had a respectable place in socialist history, having been applied to schools operated by the Communists during the 1940s (Robinson, 1988, p. 182). After the creation of the People's Republic in 1949, people-run schools continued to exist, and were seen as a mechanism to supplement government funding and expand the provision of schooling (Cheng *et al.*, 2000, p. 157; Law, 2000, p. 365). These people-run schools were of course very different from the élite private schools which

developed in the 1990s. As that decade progressed, society came to accept more readily the existence of the profit-making institutions, and the blurring of distinctions between such institutions and community schools was less necessary. At the same time, the Chinese authorities became less willing to subsidise private institutions. The 1995 law on education indicated (China, 1999b, article 53) that the government could only participate in funding non-state schools in the case of economic constraints.

On the other side of the picture was blurring of the public/private boundary in the public schools. This arose because many public schools were unable to make ends meet with the funds received from their governments. They therefore embarked on various forms of revenue-earning, including operation of their own enterprises and demand for contributions from parents. In both countries, schools commonly rented out buildings, operated school farms, and made items for sale (Tsang, 1994; Vaillant, 1994; Ng, 2000). Also, particularly in urban areas, teachers embarked on supplementary private tutoring either independently or in collaboration with colleagues.

The scale of contributions from parents and communities was smaller in Russia than in China. One reason was that Russia had a longer history of communism, and thus had a more deeply entrenched perception that education was the sole responsibility of the state. A second reason was linked to bureaucratic processes, for when schools did raise their own resources the government made corresponding reductions in official allocations. A third reason was that even after the triumph of communism in China, the authorities were more willing than their Russian counterparts to accept contributions from non-government sources provided they were made within an appropriate framework and spirit. A fourth reason was that community contributions are often easier to mobilise in rural than in urban areas, and Russia had a much smaller proportion of its population in rural areas; and a fifth reason was that China's one-child policy made parents more conscious of their single children and more willing to contribute to the welfare of those children.

Nevertheless, by the 1990s the scale of contributions from parents and their families was significant in both countries. In Russia, official figures indicated that in 1992 education expenditures consumed 2% of all household expenditures (Canning *et al.*, 1999, p. 55). The proportion was reported to have fallen to 0.7% in 1997; but in view of the facts that many contributions were in goods and labour rather than cash, and that even the cash contributions were commonly unrecorded, the statistics for both 1992 and 1997 may have been underestimates. Surveys in China found levels which were higher, and in some cases much higher. For example, Tsang (1994) reported that in 1989 households in Beijing devoted 2.7% of their incomes to education; while Zhang (1996) reported a figure of 5%. More strikingly, West (1995, p. 20) found that in 1992/93, households in one of the poorest parts of Guangdong Province devoted 29% of total incomes to education, while households in middle-income and rich areas devoted 19% and 14%, respectively. Some of the private schools which emerged in China were low-cost institutions for the poor rather than high-cost institutions for the rich: they served households who were excluded from public education by the 'hidden' charges in the public schools (Lin, 1999, p. 13). For the latter, the proportion of tuition and miscellaneous charges in total educational expenditures increased sharply from 4.4% in 1991 to 10.7% in 1995 and 12.5% in 1998 (China, 2000, p. 20).

China has also pursued a more vigorous policy in cost-sharing at the tertiary level than Russia. In the early 1990s, increasing numbers of Chinese universities admitted self-sponsored or organisation-sponsored students for high fees. The pattern was supposed to spread to charging fees for the majority of students by 2000, the chief exceptions being students in institutions catering for national minorities, and specialists in subjects which were deemed priorities for national development such as teacher training, agriculture, forestry and sports.

By 1997, the average fee for state-sponsored students in many institutions was between 25 and 30% of recurrent costs (Zhang, 1998, p. 246), and for the self-sponsored students it was much higher. To reduce the burden on students, in 1993 the Chinese government introduced interest low loans for students from poor families. Initially, these loans were rather small, meeting 3–5% of the recurrent cost of education. Also, the repayment term was short, with some institutions demanding repayment before graduation (Zhang, 2001). However, in 1999 a special fund was created with industrial enterprises, firms and private entrepreneurs as investors and with administration undertaken by the Industry and Commerce Bank of China. The size of loans was increased, and the maximum repayment term was extended to four years after graduation.

More socialist patterns were evident in Russia. Public tertiary institutions were initially authorised to charge fees to students who were not part of their centrally-allocated quotas. Such students were not supposed to form more than 25% of the centrally-allocated number, but in 2000 this ceiling was raised to 49%. Some prestigious institutions gained substantial incomes in this way. For example, in 1993 Moscow State University charged US\$2,500 per year for preparatory work and US\$6,000 per year for PhD enrolment (World Bank, 1995, p. 22). However, according to Lugachyov *et al.* (1997, p. 171), in the country as a whole the fees from extra-budgetary students during this period only met 2 or 3% of the institutions' total expenditures. Unlike the Chinese authorities, the Russian government remained devoted to the idea of tuition-free education for the centrally-allocated students in state institutions. Moreover, for most of the decade the government maintained provision of stipends for 90% of students from a special public fund (Russian Federation, 1995, p. 219). The Education Law indicated that the state would fund free tertiary education for not less than 170 students per 10,000 people. A proposal for student loans was excluded from the revised Education Law in 1996 (Russian Federation, 1996), but change came in 2000 when the government did agree to introduce loans on an experimental basis. The loans had a 21% annual rate of interest, and had to be repaid within ten years of receipt.

Decentralisation of Financial Responsibilities

The Shift in Emphasis

Both Russia and China have moved from highly centralised systems to substantial degrees of decentralisation. The change was especially marked in Russia, where reforms in the early 1990s moved with great speed. With specific reference to education, Heyneman (1997) has explained that:

Freeing education from central control was interpreted as a requirement to prevent such control from being reinstated: break it quickly and thoroughly so it cannot be put back together (p. 334).

Reforms were less dramatic in China, partly because the state remained unitary rather than federal. Nevertheless, even in China the nature and extent of decentralisation was of great significance. For the first time in Chinese history, the lowest levels of governance—counties, townships and villages—became fully responsible for funding primary and junior secondary schools. The authorities in some areas responded with enthusiasm, but others were passive.

While the general shift in Russia paralleled that in China, the trend was not consistently in a single direction. The 1994 Russian Federal Programme of Educational Development proposed a steep growth in the federal role and a decrease in the regional one (Dneprov, 1998, p. 99). Only in the second half of the 1990s was this pattern reversed. Nevertheless, as a result of financial decentralisation, the general trend in China (after the mid-1980s) and

Russia (after the late 1980s) was decreased weight of central government expenditures in total education budgets. By the second half of the 1990s this ratio was similar in both countries. In 1998, only 13.3% of total public expenditures on education in Russia were through the central budget (Kliachko & Rozhdstvenskaya, 1999, p. 176), whereas in China the proportion was 13.1% (China 1998, p. 4).

In Russia, however, throughout the 1990s regional and local decision-making on educational allocations was rather *ad hoc*. The growth of subventions to the regional budgets presupposed the increase of the local governments' responsibilities, but municipal bodies were initially unable to fulfil their new functions of financing schools because they needed special proxy from the state and had no administrative rights for the new tasks. Confusion was increased by the fact that many Russian republics promulgated their own laws on education, some of them containing articles which contradicted the federal law. Similar problems were experienced in China.

Also common to both China and Russia was another adjustment: by the end of the 1990s the extreme swing to local allocations—including 75–80% of teachers' salaries, and the maintenance of buildings—proved unworkable. As a result, both governments declared that they would strengthen the role of the centre. Educational allocations in the central budgets had decreased to 3.5% in Russia and about 6% in China (China, 1999a), but in 1998 the Central Committee of the Communist Party of China declared that in the following five years central budgetary allocations to education should increase by one percentage point each year. In Russia, the authorities commenced in 2000 by increasing taxation revenues for the central budget.

A further question concerned the financial autonomy of institutions. In Russia, educational institutions received more academic autonomy than in China, but financial autonomy developed more slowly. Russia's 1992 Law on Education gave schools status as legal entities, but by the end of the 1990s fewer than 10% of Russian public and municipal general secondary schools had managed to open bank accounts. The chief reason was that funds were distributed to the municipal rather than institutional level, and institutions could not directly participate in decisions on the distribution of budgets.

Impact on Disparities

While decentralisation had many positive outcomes, it also had problematic consequences. Among these was a growth of disparities. The financial system was an instrument through which these disparities were exacerbated.

In the previously centralised systems of both Russia and China, considerable efforts were made to reduce disparities. This was especially the case at the school level, though less strongly at the university level (Lugachyov *et al.*, 1997, p. 151; Hayhoe, 1999, p. 267). The measures to reduce disparities were not always viewed positively. Nikandrov (2000, p. 216) reported that in Soviet times there was a joke that under capitalism wealth was unevenly distributed, whereas under socialism, poverty was evenly distributed. Nikandrov added that:

Perhaps it was not exactly that way, but it is true that there really were no striking differences in life standards among people during the Soviet regime. True, the party and Soviet elite had greater opportunities and there certainly existed rich people in the shadow economy. But nobody could really flaunt his or her wealth for fear of persecution for economic crimes (2000, p. 216).

Similar comments could have been made about China up to the mid-1980s. However, in both countries that situation had radically changed by the 1990s. In China, it began with the

TABLE V. Regional disparities in budget allocations per primary student, China, 1988–95 (Yuan)

| | Cities of central jurisdiction | Coastal and eastern regions | Middle- income regions | Low- income regions |
|-------------|--------------------------------------|-----------------------------------|------------------------------|---------------------------|
| <i>1988</i> | | | | |
| Highest | 249 | 106 | 167 | 109 |
| Lowest | 177 | 59 | 45 | 41 |
| Disparity | 72 | 47 | 122 | 68 |
| <i>1990</i> | | | | |
| Highest | 332 | 145 | 217 | 129 |
| Lowest | 221 | 77 | 61 | 56 |
| Disparity | 111 | 68 | 155 | 74 |
| <i>1995</i> | | | | |
| Average | | 559 | 331 | 338 |

Sources: Wu (1995, p. 23); China (2000, p. 104).

government slogan that, 'it's alright for some to get rich first' (Cleverley, 1991, p. 286). This set the agenda for stronger emphasis on the market, which in turn exacerbated disparities between social groups.

As already indicated, local budgets were determined not only by the economic situations of each region, but also by local governments' approaches to education. On average, education received about 20% of regional budgets in Russia; but the range was from 10 to 40% (Eroshin, 1996, p. 59). Per student expenses in Chukotskyi Autonomous District in 1994 were 11 times higher than those in the prosperous Penza District, and 18.5 times higher than Tumen District, which was the lowest in the country. This was a function of priorities as well as of economic standards. Samara District spent twice as much on students as Saratov District, even though they had comparable economic resources.

Disparities in China were perhaps less extreme, but were still marked. In 1997, the range of proportions of the government budget allocated to education was from 16% in Liaoning Province to 25% in Jiangsu Province (China, 1998, p. 6). Table V presents statistics on monetary allocations. The gap between cities of central jurisdiction and low-income regions was substantial in all years; but the gaps between highest and lowest rose within all categories between 1988 and 1995.

Taxation is one widely-used instrument for the alleviation of disparities. In China, taxation allowed governments above the county level to organise regular funds for earmarked educational subventions. In many cases, these subventions were combined with explicitly-designed projects for aid to areas in need. During the 1980s and 1990s, the focus of earmarked funds slowly shifted from the eastern areas to the central and western areas, with the western areas having the most emphasis by the late 1990s. However, the subventions from the central budget to expand compulsory education in poor and difficult areas were very low, and in 1996 their ratio did not exceed 0.04% of budgetary allocations for education by all levels of government (*People's Education*, 1999, No. 5, p. 4). The largest national project in this domain, which aimed to expand compulsory education in poor and difficult districts between 1995 and 2000, was designed to provide 10 billion yuan during this period through earmarked subsidies from the centre and revenues from local governments. This scale may be compared with 200 million yuan per year in the first half of the 1990s (Jiang, 1995, p. 17). In the three years from 1998 the central government together with local governments of nine western provinces committed 5.5 billion yuan to this project (in ratio 1:1.5) to build 15,000

schools in 469 poorest counties (*People's Daily*, 8 May 1998, p. 1). Another target of earmarked subventions was tertiary education in the western provinces which were heavily affected by the introduction of fees in 1994. The central authorities also considered tax exemptions for the poorest western provinces, so that they could invest an additional 1–2% in education.

In Russia, earmarked regional subventions for education were first deployed on an experimental basis in 25 districts during 1995/96. Before that year, central budget transfers and subventions to the regions were not earmarked and the sub-national governments distributed them according to their own preferences. As a result the federal government failed to provide economic guarantees needed for the functioning of the education system. The new measure improved the system of targeting. Subventions were used primarily to pay teachers' salaries, but some funds were used for educational innovations and other earmarked projects.

At the level of higher education, the World Bank (1997, p. 17) has observed that in China 'the decentralization of finance and planning has widened the gap between poor and more prosperous provinces'. In 1994, the Bank reported, there were 43 college students per 10,000 people in the country as a whole. For Beijing the figure was 136, while the geographically remote and economically backward Guizhou Province had only nine. The Russian statistics showed similar disparities, albeit at a lower level. In 1993, there were 171 higher education students per 10,000 people in the country as a whole. For Moscow the figure was 505, St. Petersburg 432, and Tomsk *oblast* 357. At the other end of the scale, Sakhalin *oblast*, Murmansk *oblast*, Komi republic and Vladimir *oblast* had fewer than 100 (Lugachyov *et al.*, 1997, p. 151). During the rest of the decade, market forces caused disparities in both countries to widen through the opening of private institutions and fee-charging in public institutions.

Redesigning the Structure of State Educational Allocations: the introduction of multi-channels

The core mechanism for financial reform during the transition period in both countries was called multi-channel funding. The main non-governmental channels were community donations, institutional fund-raising initiatives, private investments, and fees. Revenues from international donors and lenders were also important.

Concerning the last of these categories, Table VI shows projects managed by the World Bank. At first sight, the list in China seems particularly notable, with the education sector receiving nine projects worth US\$946.2 million between 1986, the year in which the first World Bank project (in any sector) commenced, and 2000. However, the list in Russia is perhaps even more notable given the facts that the country's population is only about 12% of China's, and that Russia's first World Bank project commenced in 1992 [2]. In Russia, three education projects worth US\$171.4 million were launched between 1992 and 2000; and both countries had additional projects with education components under the headings of training and social protection. Both countries also had many other projects with the Asian Development Bank (in China), the European Bank for Reconstruction and Development (in Russia), the United Nations Development Programme, UNESCO, UNICEF, etc.

Domestically, revenues for education were also raised through earmarked taxes (Qian, 1998). After 1994, authorities in all Chinese cities and towns levied educational surcharges, which were calculated as approximately 3% of value added in goods and services, on the output and consumption. In rural areas, these surcharges were calculated at approximately 1.5% of per capita revenues during the previous year, and were levied by local governments. The sum of educational surcharges collected in 1997 was four times greater than that in

TABLE VI. World Bank projects in Russia and China

| | Year approved | Value (US\$ million) |
|---|------------------|-------------------------|
| Russia: education projects | | |
| Management & financial training | 1994 | 40.0 |
| Education innovation | 1997 | 71.0 |
| Education restructuring support | 2000 | 60.4 |
| | | Total: 171.4 |
| All sectors 1992–2000: 52 projects worth US\$12,063.6 million | | |
| China: education projects | | |
| Key studies development | 1991 | 131.2 |
| Education development in poor provinces | 1992 | 130.0 |
| Effective teaching services | 1993 | 100.0 |
| Basic education in poor and minority areas | 1994 | 100.0 |
| Technology development | 1995 | 200.0 |
| Basic education | 1996 | 100.0 |
| Vocational education reform | 1996 | 30.0 |
| Basic education | 1997 | 85.0 |
| Higher education reform | 1999 | 70.0 |
| | | Total: 946.2 |
| All sectors 1986–2000: 151 projects worth US\$25,907.4 million | | |

Source: www4.worldbank.org/sprojects (2000).

1990, and its proportion in public educational expenditures increased from 8 to 10%. Additional educational surcharges were introduced by provincial and autonomous district governments for local needs. Such surcharges in 1997 constituted one-third of all educational surcharges. Education authorities felt that considerable potential existed to increase this amount, since in 1997 surcharges formed less than 1% of rural per capita incomes (China, 1998, p. 7). The authorities aimed to replace the miscellaneous surcharges with a unified official tax.

The Russian situation was much less noteworthy. In the country as a whole, difficulties in the collection of taxes caused the share of state revenues in GDP to fall from 44.2% in 1992 to 29% in 1998 (Gustafson, 1999, p. 193). Like their counterparts in China, the Russian authorities had the idea of imposing a 1% education tax on salaried personnel. The tax was supposed to be collected by local governments, but in the mid-1990s fewer than 40% of the subjects in the Russian Federation actually levied the tax. Local governors were not keen to collect taxes (including educational ones) because the less they collected, the more they could demand from the centre. So while some Russian regions collected 90–95% of the anticipated sum of all types of taxes, others collected only 20%. Partly because of such inefficiencies, the 1999 Russian Tax Code abolished educational taxes.

State enterprises were another source of public funds for education in both countries. During the Soviet period, many schools were under the patronage of industrial enterprises. To some extent, this continued even during the economic crisis of the 1990s, though assistance was often provided as a payment in kind rather than cash, e.g. through repair of school buildings or supply of furniture or food. In 1997, about 5% of state education expenditure was provided by state enterprises (Kliachko & Rozhdestvenskaya, 1999). Table

TABLE VII. Structural changes of fiscal educational expenditures, China (%)

| | 1991 | 1995 | 1998 |
|--|------|------|------|
| State budgetary allocations | 74.9 | 73.8 | 77.0 |
| Taxes and fees collected by government at various levels for education | 12.2 | 13.4 | 13.7 |
| Educational expenditures provided by enterprises | 6.9 | 10.1 | 6.3 |
| Revenues from school-run enterprises and services | 3.1 | 5.4 | 2.9 |

Source: China (2000, p. 21).

VII shows that a similar proportion of income from enterprises, both state and private, was evident in China.

As noted above, many schools in both countries also secured revenues from their own enterprises. In China, such enterprises had been encouraged for some decades on the ground that manual labour had educational merit. During the late 1980s and the 1990s, enterprises were operated chiefly for revenue-earning reasons. Table VII indicates that in the 1990s school-run enterprises provided a significant proportion of total revenue, though the figures may need to be interpreted with caution since school-level accounting and reporting mechanisms were not always thorough and transparent. Parallel initiatives were undertaken in Russia during the 1990s, though these appeared to be on a much smaller scale.

Philosophical Underpinnings of the Reforms

In Russia, the wave of educational reform moved much more rapidly than the democratic transformation of the whole society. The 1992 Law on Education and the 1993 Federal Programme of Educational Development laid down the core principles of democratisation, humanisation, diversification, decentralisation, information technologies, and support for ethnic diversity. These new concepts were announced in the form of declarations with very little strategic or economic support. The 1992 Law on Education did include a section called 'Economy of Education', but it presented just a shallow outline of a new model. Its main focus was the substitution of the administrative-distributive methods of interaction between education and society by ones which could reflect the short-term and long-term educational demands of society.

Chinese goals were more pragmatic. Education was expected 'to serve the socialist economy as the centre' and, more specifically, to lay the foundation for the 'four modernisations' of industry, agriculture, science and technology, and defence. Leading educational documents of the 1990s were based on the core principles of modernisation theory. They confirmed the strategic role that education was expected to play in social progress, and advocated faster development of education compared with industrial output.

Thus, while the goals of the Russian educational reform during the transition period were delineated predominantly in terms of political democratisation, the Chinese ones were laid out within the framework of economic transformation. Both countries demonstrated awareness that the achievement of the educational reforms was impossible without expansion of the economic rights and the financial autonomy of educational institutions. Both governments indicated understanding that this new arrangement would require a shift from the state education system to a state-community one. In addition to reforming educational gover-

nance, the new arrangements presupposed a transition to multi-channel financing. In turn, this required interaction between five levels: the state, local governments, local self-government bodies, families, and individuals. Industrial bodies and banks also had to play a role. Among these partners, in both countries the state was expected to retain macro-control functions.

In defining their new commitments, the governments of the two countries started from different propositions. During the 1980s, China was still aiming to eliminate illiteracy and universalise primary education. The 1986 Law on Compulsory Education set out a target of universal nine-year basic education. Officially, basic education was free of charge, but students were expected to pay fees for education beyond the compulsory level. Concerning tertiary education, the 1993 Guidelines for the Reform and Development in Education declared the government's determination to change the system of financing so that its 'norms and methods should vary depending on the level of the institution's subordination and its specialisation' (*People's Daily*, 27 February 1993, p. 2).

In Russia, 11 years of secondary education were made universal and compulsory during the 1980s. However, because of qualitative and financial problems the government decided in 1992 to reduce the duration of compulsory education to nine years. At the same time, the government articulated a commitment to free primary, secondary and primary-vocational education in state and municipal schools within the framework of the state educational standards.

Juxtaposing both countries' commitments to education, it is important to recall that the Chinese government had made several attempts to reduce its financial commitment for education, especially at the basic level, during the 1957 Great Leap Forward and the 1966–76 Cultural Revolution decade. During those periods, the central government had placed much of the burden of financing on local communities on the grounds that 'the people's education should be run by the people'. This approach did not have a parallel in Russia, where the state had consistently demanded the right and responsibility to act as the only agent in the sphere of education. Having accumulated both positive and negative experiences in that field, after the late 1970s the state in China claimed for itself the main financial responsibility at all levels of education. The central government maintained its budget for universities and secondary specialised institutes which trained personnel for the core projects of state construction, defence, culture, education, and fundamental scientific research. Unlike Russia, China stated the necessity to concentrate the scanty resources on the core directions of paramount priority from the beginning of the transition period. The government also funded elite key schools more generously than other schools, and in 1993 the central authorities launched the '211 project' which gave extra resources to 100 elite universities.

In Russia, by contrast, the authorities maintained the policy of 'spreading the butter equally thin', even under conditions of the increasing financial constraints. Initially, the only exception was the government's promise, stated in the 1996 edition of the Law on Education (p. 7) 'to give impetus to providing elite education for the students with outstanding talents' by a system of special grants. Only at the end of the decade did the government start to design a programme of priority budget support for the leading Russian universities.

Conclusion

This article began by noting that Russia and China have major differences but some fundamental similarities. Russia has a much smaller total population than China, and during the 1990s the size of the population was falling. One factor underlying Russia's population

decline was economic crisis, which caused per capita GNP to fall. In China, by contrast, per capita GNP showed impressive gains throughout the 1990s, though average income levels in China remained at considerably lower levels than in Russia. At the level of official ideology, Russia abandoned communism in favour of democratisation in 1991, whereas China officially retained the socialist ideology while moving to a market economy.

These differences caused some paradoxical trends in educational reforms. The socialist China introduced fee-paying tertiary education but did not fund the non-government sector; while Russia basically retained fee-free state university education but supported private schools from the state budget. At the same time, the article has shown some major similarities in patterns for educational financing. Most dramatic has been the extent to which non-state actors have played a role in the education systems. In both countries, prior to the transition the state asserted both the right and the responsibility to control and finance education. In China, some non-government resources had been harnessed at the base of the system through people-run schools; but even these were carefully controlled and were part of what was basically a highly centralised system. During the 1990s, this picture changed significantly in both countries, though the governments of both countries aimed to preserve the role of the state as the main investor in education.

During the course of the transition, paths were bumpy. The Chinese authorities were initially ambivalent about the emergence of private schools. They were also anxious to preserve fee-free education at primary and junior secondary levels, though had to accept that because government funds were inadequate to meet all demands, schools had to find supplementary resources through levies of different kinds and through their own revenue-generating activities. Similar ambivalence was evident in Russia. In the early 1990s, private schools were promised subventions equivalent to those received by public schools, though this measure was not implemented uniformly or on a sustained basis. The state was ambivalent about charges in tertiary education, and maintained stipends for over 90% of students. However, in 2000 the authorities in Russia, like their counterparts in China a few years earlier, decided to introduce student loans on an experimental basis. In both countries, the transition exacerbated social and regional disparities.

Returning to Cowen's theoretical frameworks, the article has shown how these two countries have changed their immune systems, ideological permeabilities and filters. Many of the changes of the 1990s were of a capitalist kind which would have been anathema one or two decades earlier. The World Bank played a major role in both countries, bringing with it perspectives on cost-effectiveness, efficiency and fee-charging which had long been standard practice in many other parts of the world but which had not been part of the general vocabulary of the socialist bloc. Many private schools also forged links with Western countries. Changing permeabilities were increased by international mobility of labour, for many citizens of both Russia and China sought employment abroad, particularly in Western capitalist countries, in order to secure higher incomes and improved standards of living. Those that did go abroad of course maintained links with their families, and in many cases returned home from time to time bringing perspectives from the host societies.

Particularly interesting in this analysis is that Russia and China largely moved in the same direction independently of each other. To a considerable extent, this reflected the broader forces of globalisation. Both countries became more closely linked to the forces of international capitalism, and this fact helps to explain why China moved to a market economy despite maintenance of the official ideology of socialism. As noted by Huang (2000, p. 6) with reference to China, globalisation 'is forcing a highly centralised Communist structure to interact with more open-market oriented external institutions and processes'. Russia officially abandoned socialism, and thus was even less resistant to the forces of

international capitalism. In the domain of education, these forces included a diminished role for the state in the financing of schools, and greater decentralisation of control.

From these comparisons one can see some 'patterning of educational variation' which were among Cowen's (1999, p. 84) foci of concern. As for the 'conceptual apparatus' which Cowen suggested should be developed, one key element must be the role of the state. Especially in Russia, but also in China, at the beginning of the transition process the central authorities took a much less directive role than had previously been the case. A decade later, however, the central authorities had begun to reassert themselves. Decentralisation had been embarked upon for reasons of convenience as well as ideology, and after a few years extreme decentralisation was creating severe problems of equity. These acute problems appeared to be particularly problematic because both Russia and China were large countries; but further comparative analysis would probably expose similar tendencies in smaller countries that have undergone comparable processes of transition.

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NOTES

- [1] This figure is a proportion of GDP rather than GNP. However, it is unlikely that the proportion as a percentage of GNP would have been greatly different.
- [2] Note, however, that these projects are listed at current prices. The projects launched in China during the early 1990s might deserve more weighting than the projects launched in either country during the later 1990s or in 2000.

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