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**Between Russia and China –
Central Asia's transition experience**

Andreas ZEITLER

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**OSTEUROPA-INSTITUT
MÜNCHEN**

Scheinerstr. 11
D-81679 München
Telefon: 089/99 83 96-0
Telefax: 089/98 10 110
E-Mail: oei@oei-muenchen.de
Internet: www.oei-muenchen.de

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Between Russia and China – Central Asia's transition experience

Andreas Zeitler¹

Abstract

The differences in chosen transition paths as well as the resulting outcomes between Russia and China are well-documented. Similarly, the Central Asian republics have followed different transition paths despite similar initial conditions. Kazakhstan, the Kyrgyz Republic and Tajikistan opted for big bang reforms Russian-style while Uzbekistan chose a more gradual way in the Chinese style and Turkmenistan remained principally unreformed. However, the transition outcomes rather resemble the Russian experience. The positive picture of the Uzbek transition highly depended on its relatively modest decline in economic output and social indicators during transition. But with regard to the preservation of the pre-transition output level, Kazakhstan outpaced Uzbekistan in more recent years. With regard to other “stylized facts of transition”, the developments in the Central Asian republics even more clearly and consistently follow the Russian, not the Chinese, experience. Nevertheless, the slightly different transition experiences, especially between Kazakhstan and Uzbekistan, may be attributable to different institutional developments which are crucial for a smooth transition to a market economy. Uzbekistan avoided the high level of disorganization and disorder evolving in Kazakhstan and the Russian Federation after the demise of political dictatorship and the centrally planned economic system. In this respect, Uzbekistan comes closer to China which may be attributable to a firmer state and far lower rent-seeking opportunities in and around the resource-extracting industries. However, the less profound reform efforts prevented the reallocation of resources which is necessary to guard a successful transition to a market-based economy.

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¹ Department of Economics, Osteuropa Institut München, Germany (www.oei-muenchen.de),
Email: zeitler@oei-muenchen.de

Introduction

Almost nothing could be more different than the transition experiences of Russia and China. While Russia saw a political turnaround and its economic output plummeting during most of the 1990ies, China became the new East Asian tiger accompanied by political stagnation. Thus, it seems as if the Chinese dual-track reform approach which allowed the creation of a private sector parallel to its ideologically untouchable public sector worked far better than the Russian way of big-bang reforms recommended by the Washington Consensus. But is it really just the difference in the chosen path of reforms that caused this divergent economic development of these two transition giants? Even if the different performance may to a great extent be attributable to the chosen reform paths, it may also be that some other factors influenced the available reform choices for the governments of the two states.

While the literature has mainly focused on explaining the different experiences of these two countries, somehow understandable due to their size and importance, the Central Asian republics (CARs) were almost neglected in this respect. Being located in between these two giants and evolving from the dissolution of the Soviet Union (SU), their transition paths may not only be influenced by their big neighbours but also provide some insight into the whole debate. In this respect, the five CARs differ in their reform paths to a market economy. While Kazakhstan and the Kyrgyz Republic adopted the big bang reform path Russian-style in accordance with the Washington Consensus, Uzbekistan chose a more gradual reform path often compared to the Chinese way (Klugman, 1998, Pomfret, 2001 and 2003). After stagnant reform years during its civil war, Tajikistan evolved as a fast reformer. On the other hand, Turkmenistan's reform path may best be seen as stagnant. The aim of this paper is, therefore, to introduce the five CARs into the Russia-China debate. As such, the paper presents and compares the initial conditions of the CARs at the beginning of transition as well as their chosen reform paths. In order to provide some insight into the outcomes of the first decade of transition in Central Asia (CA), the paper traces the seven stylised facts of transition as specified by Campos and Coricelli (2002) and relates these to the experiences in Russia and China. The findings furthermore constitute the basis for an assessment of the different transition experiences among the CARs and how they relate to their big neighbours.

With regard to the economic policy advice towards the transition from centrally planned to market economies the agenda guiding the second generation reforms has fairly widened in comparison to the early strategies of the Washington Consensus. According to the Washington Consensus, reforms to stabilise, liberalise and privatise the transition economies had to be carried out quickly and would be sufficient to increase efficiency and productivity as the economies move up to their production possibility frontier. Reforms in the institutional environment were neglected as these were thought to follow suit. A decade of transition later, the Washington Consensus on transitional reform is highly criticised (Stiglitz, 1999 and 2002). The initial reforms of stabilisation, liberalisation and privatisation did not automatically trigger the implementation of market economic institutions. Without taking into account the political and social restric-

tions as well as the institutional conditions of a country, without the active role of government in institutional change some transition economies seem to have failed in implementing effective reforms. This was especially experienced by the CIS (Commonwealth of Independent States) countries whose reforms were not grounded in suitable institutions and most likely failed to deliver successful outcomes (Frensch, Nowak, 2003). Without principally doubting the necessity of the recommendations of the Washington Consensus, a new strand of theories evolved which focuses on the building of institutions supporting a market oriented economic system. This ingredient had been neglected or postponed in the initial strategies but now features highly in the second generation reforms.²

The different transition experiences of Russia and China played an important role in this change of policy advice. While representatives of the Washington Consensus argue that different initial conditions, in particular the higher degree of industrialisation of the Russian economy, were responsible for the bad economic performance of Russia (Sachs, Woo, 1994), other economists identify a different institutional environment and its different development as the main cause. A reasoning put forward by Quian and Xu (1993) is that the decentralised organisational structure of the Chinese economy was helpful for the success of the gradual reform path. This argument is taken up by Blanchard and Shleifer (2000) who connect the successfulness of a gradualist reform to the degree of political centralisation. Other theoretical considerations demonstrate that a partial reform strategy as was undertaken by China may be successful if the political control is sufficiently large (Murphy, Shleifer, Vishny, 1992) and that political control might support the successful implementation of reforms even without far-reaching privatisation if the right incentives are set by the state (Roland, 2000, Blanchard and Kremer, 1997). On the other hand, Quaisser (1996) argues that the reforms undertaken in East Asian transition economies cannot really compensate for the privatisation advancements in Central and Eastern Europe (CEE).

The empirical research explaining the growth performance of the transition countries focuses on the comparison of the transition experiences in CEE versus the worse outcomes in the countries of the CIS or FSU. In this respect, the debate is centred on the relative importance of initial conditions and reforms while the chosen reform path may again be affected by the initial conditions. Studies which identify a dominant role of policies find e.g. that reforms have an initial negative but over time positive impact on growth (e.g. Berg et al., 1999, Havrylyshyn et al, 1999). As such, a fast reform path has promoted growth or at least the recovery of output after its initial decline. Other studies identify initial conditions to be more important (e.g. Heybey and Murrell, 1999, Popov, 2000).

The paper is structured in the following way. Chapter 2 presents some theoretical considerations concerning output dynamics in transition. With regard to the empirical debate, Chapter 3 provides some insight into the initial conditions which seem to be rather similar across the CARs and Chapter 4 analyses their chosen reform paths and compares them to the Chinese and the Russian reform paths. Chapter 5 provides an

² For the agenda of the second generation reforms, see e.g. Rodrik (2000) and Stiglitz (1999).

overview of the transition experience in these five CARs as well as China and Russia during the 1990ies and early 2000s. We thereby refer to the “seven stylised facts” of transition as specified by Campos and Corricelli (2002) and investigate their existence and magnitude for the these countries. Connecting the insights from the former chapters, Chapter 6 analyses the transition experience of the CARs in comparison to Russia and China while chapter 7 finally concludes.

Theory of Growth in Transition

Many theories have been put forward in order to explain the output dynamics in transition. Some of them refer to a comparison among the transition countries of CEE and the FSU (which we will also refer to as “European” transition countries) while others refer to a comparison between Russia and China in specific, or the “European” and the “Asian” transition economies in general. In this respect, the CARs are actually seen as “European” transition economies due to their historic past as part of the SU which, of course, does not coincide with their geographical location. Nevertheless, the study is going to analyse if the economic reforms and developments of the CARs justify this broad categorisation by comparing them to the experiences in Russia and China, the two most populous transition countries and the stereotypes of this discussion.

The strands of theories describing the European transition experience and explaining the initial output collapse comprise the Keynesian recession (see e.g. Blanchard et al., 1991, Berg and Sachs, 1992), trade implosion (see e.g. Calvo and Corricelli, 1993), the credit crunch approach (see e.g. Calvo and Corricelli, 1992 and 1993) and disorganisation, referring to the disruption of the economic relations of the planned economy, which took an extreme form in the FSU (see e.g. Murphy et al., 1992, Blanchard and Kremer, 1997). As the problem of disorganisation arises with the degree of complexity in production, output is expected to fall more in the highly industrialised countries of the FSU than in more agrarian countries such as China (Roland, 2000). This view was advanced by the representatives of the Washington Consensus who argued that different initial conditions, in particular the higher degree of industrialisation of the Russian economy, were responsible for the bad economic performance of Russia in comparison to China (Sachs and Woo, 1994).

The medium-term perspective of output development during transition rests on the structural change and the reallocation of resources between sectors and firms. Campos and Coricelli (2002) specify three different strands, Schumpeterian creative destruction, capital accumulation, and institutions. According to the latter, transition thus becomes a lengthy and costly process which highly depends on institutions that facilitate the accumulation and mobility of the factors of production.

It is widely acknowledged that institutions play a major role in promoting economic development (e.g. North, 1990 and 1997, Rodrik, 2000, Romer, 2000, Acemoglu et al., 2001) as they reduce uncertainty and lower the cost of transactions and production.³ The economic literature emphasises the role of economic institutions which are social arrangements which regulate economic behaviour and are based on anonymity and shared expectations (Hare, 2001). In this respect, the due implementation and enforcement of private property rights as well as corporate control structures and commercial and bankruptcy laws are essential for the proper functioning of a market economy. The theoretical considerations identify several channels through which determinants of social capital affect economic development (see Romer, 2000).⁴ For the countries in transition, the reform of political institutions which guide economic policy making and resolve social conflicts seem to be equally important. In this respect, governance which is defined as traditions and institutions that determine the execution of authority (Kaufmann et al., 1999) matters as it affects a country's ability to pursue effective policy reforms and deter social conflicts. These have widely occurred in the transition countries, even in the form of wars, and are far from being repressed.

An interesting theory about institutions with reference to the institutional development during transition is given by “the new comparative economics” put forward by Djankov et al. (2003). In their view, the fundamental problem of institutional design lies in the conflict between disorder and dictatorship, two conflicting goals, both of which impose social costs due to expropriating behaviour of private agents (disorder) and the state (dictatorship). Different institutional settings ranging from totally private orderings to authoritarian regimes like socialism may be distinguished by their inherently different combinations of disorder and dictatorship. The different possible combinations of disorder

³ This is especially the case for the countries in transition which undergo a large-scale institutional change (Dewatripont and Roland, 1997) from the highly inefficient institutional arrangements of central planning to the decentralised mechanisms of a market economy. While it is unquestionable that institutions matter economically, the debate has concentrated on how much state intervention is necessary for their evolution. While advocates of the shock-therapy process of transition leave the institutional setting up to the decentralised forces of the market and thus internalise the evolution of institutions, the gradualist advocates recommend active state intervention, i.e. an external factor, in triggering the institutional development which is necessary to govern a market economy (Marangos, 2002).

⁴ All three considerations are important for transition economies. The first focuses on incentives and identifies scenarios in which a political elite or a dictator prevents the (or further) necessary reforms to construct an institutional environment conducive for economic development due to its/his own personal benefits. This seems to be especially crucial for the countries of the FSU where the old elite seems to have captured the state and more or less successfully prevents further economic and political liberalisation as the gains from preferable accession are huge. The second encompasses cultural factors, e.g. ethnic, religious and cultural homogeneity, that increase social cohesion and trust and thus lower transaction costs in economic relations and may help to substitute missing legal institutions or their enforcement, e.g. with the development of efficient financial markets. This is highly relevant for the newly independent states of CA which are rather ethnically and religiously heterogeneous (see chapter 3). The third determinant of social capital concerns individuals' beliefs about the right institutions and policies. This seems to be an important factor for the new accession countries to the European Union whose institutional choice was restricted in order to be in line with the blueprint set by the EU. Though this collides with the view that institutions have to be adapted to the different reality of each country (Rodrik, 2000), the belief that these are the right institutions seems to be rather successful in terms of economic transition outcomes.

der and dictatorship form the institutional possibility frontier, the location of which is dependent on what the authors refer to as civic capital (similar but broader than social capital) which may be invested in and pays off in the medium run. According to different endowments with civic capital, this feasible set of institutional possibilities may differ among countries. Without changes in its civic capital, a country may move along its institutional possibility frontier thereby trading-off the social losses accruing from disorder and dictatorship which includes the possibility of an efficient combination minimising these costs. Thus, depending on a country's civic capital and the original institutional setting, a country may benefit from trading off some dictatorship for some disorder in terms of reduced social costs which was the case of the transition countries after the overly regulated socialist regimes broke down. With regard to the institutions in transition, Djankov et al. (2003) assume that the countries of CEE reduced dictatorship less than Russia did and, additionally to their benefit, along a more attractive institutional possibility frontier. On the other hand, countries like Belarus and Uzbekistan pretty much remained at their location with inefficiently large costs of dictatorship.⁵

This theoretical framework may also be extended to specify a difference between the Russian and the Chinese transition experience. Russia traded off a high degree of its socialist dictatorship against an even more pronounced increase in disorder which probably went far beyond its effective combination.⁶ On the other hand, China abandoned dictatorship to a much lesser degree while it seems to have prevented a huge increase in disorder, at least in comparison to the Russian experience. The more, China reduced the extent of dictatorship via economic liberalisation while it kept its political institutions highly unchanged. This seems to have helped it to keep the political control and the degree of political centralisation sufficiently large to improve the success of its partial reform strategy.⁷

These theoretical considerations pretty much stress the importance of institutions in the output dynamics in transition. For instance, trade implosion and disorganisation as explanations for the initial output drop may also have been prevented to a large degree

⁵ The more, the authors note that the transplantation of an institutional setting (the adoption of a blueprint of institutions from another country characterised by a fixed proportion of disorder and dictatorship) may not be in the interest of the receiving country. As an example they describe the adoption of common or civil law systems of richer European states on their much poorer colonies. As the colonies had less civic capital, especially the adoption of civil law led to a high over-regulation of the economies which is due to the enormous risk of public abuse of businesses. On contrary to the view about individuals' beliefs about the right institutions, the pure adoption of an institutional setting may not always be the best choice for a country. This is not only important for the EU accession countries, but should also be taken account of in specifying policy advices for the institutional setting in transition countries. Rodrik (2000) also notes the importance of the search and evolution process in finding the right institutions which have to be adapted to the different reality (for Djankov et al. (2003) civic capital) of a country.

⁶ Djankov et al. just indicate this outcome for Russia in 1995 graphically (2003, Figure 4, p.12) without further notice in the text with regard to the difference in institutional change between Eastern Europe and Russia mentioned above.

⁷ As was already noted in the introduction, Murphy et al. (1992) modelled the connection from political control to the successfulness of the partial reform strategy in China while Blanchard and Shleifer (2000) revealed the same outcome for the degree of political centralisation.

in the CIS countries if institutions governing the decentralised market system had been in place. Nevertheless, in order to reveal some insight about the CARs and their transition experiences in this theoretical framework, the following three chapters provide information about the initial conditions, the chosen reform path and some stylised facts of transition.

Initial Conditions

The initial conditions of the five Central Asian republics (CARs) are quite similar though there are profound differences as well.⁸ As for the similarities, all the countries evolved from the dissolution of the Soviet Union (SU) in 1991 which had two important consequences. First, their national territory resulted from a Soviet national policy conducted in the 1920ies according to questionable ethnical, territorial and linguistic criteria and had never existed before (see Anderson, Pomfret, 2005). As such, these countries had deeper problems in generating their own national identity than other CIS countries. As another consequence, their populations are highly diversified, both ethnically (or even tribally) and religiously, though the degree of the resulting fragmentation of the populations also varies greatly among them.⁹ Second, the dissolution of the SU created barriers and thus parts of a former entity. This exacerbated cultural and economic ties and, as another consequence, transport routes were cut. The more, all CARs became

⁸ Initial judgements about the favourability of the initial conditions did not always materialise in terms of more favourable economic development. At the beginning of transition, Kazakhstan appeared to have the most favourable initial conditions as per capita incomes and other development indicators were higher and it was abundant with natural resources. But it also faced obstacles. It was the only CA country in which the titular nationality did not constitute the population's majority and oil reserves could only be exported via Russia. The Kyrgyz Republic and Tajikistan faced the highest disadvantages while Turkmenistan had experienced rapid growth in the final Soviet decades with the increase in cotton and natural gas production. Uzbekistan was thought to have neutral initial conditions as cotton was not under-priced in the Soviet Union, but it was thought to gain from its containment of the ancient CA settlements and Tashkent's position as the regional capital of Soviet Central Asia. Nevertheless and contrary to expectation, Uzbekistan's neutral initial conditions turned out to be very favourably as world cotton prices soared up to 1995 and it inherited the most effective administration in the region. (Pomfret, 2003)

⁹ The fractionalisation indices of Alesina et al. (2003) take values between 0 and 1 while a lower value refers to a more homogeneous population. The indices are separately available for Ethnic, Language and Religion and will be presented in that order in brackets behind the countries. According to these data, Turkmenistan (0.3918, 0.3984, 0.2327) and Uzbekistan (0.4125, 0.4120, 0.2133) have the most homogeneous societies among the CARs. Tajikistan (0.5107, 0.5473, 0.3386) comes in next, while Kazakhstan (0.6171, 0.6621, 0.5898) and the Kyrgyz Republic (0.6752, 0.5949, 0.4470) have the most heterogeneous populations. In contrast and for the purpose of comparison, both China (0.1538, 0.1327, 0.6643) and the Russian Federation (0.2452, 0.2485, 0.4398) have less fractionalised societies with regard to both ethnicity and language. In contrast, with regard to religion, the Muslim dominated countries Turkmenistan and Uzbekistan are the least fractionalised.

landlocked which aggravated their access to international markets and thus impeding their integration into the world economy.

Other similarities in their initial conditions concern the inheritance of their socialist past. The five countries inherited a biased economic structure which is highly focused on primary production (agriculture and mining industry) and proceeding industries though, as we will turn to later, there are some decisive differences as well. Positively, they inherited high levels of human development (education, life expectancy) in comparison to other countries at similar stages of economic development (see Chapter 4 and Human Development Report, various years).

The differences among the CARs stem from geography, the population and its age structure, their economic structure and development classifications. Geographical differences are to be found in the location and size of the countries with further implications for the population, cultural ties and natural resource endowment. Kazakhstan is a huge country with low population density and close links to the Russian Federation due to its location, size and population structure. Tajikistan and the Kyrgyz Republic are small mountainous countries bordering the Chinese Muslim dominated and underdeveloped hinterland (in comparison to its coastal region). Uzbekistan has the largest population, concentrated in the eastern part, therefore the highest population density and the ancient and well-known settlements of the region with good prospects for tourism. With regard to its size and population density, Turkmenistan seems to be Kazakhstan's southwestern counterpart. These two countries also stand out for their vast endowments with mineral fuel resources. With regard to the age structure of their population, Uzbekistan, Tajikistan and Turkmenistan have younger and more vibrant populations and, consequently, higher dependency ratios than the other two CARs.

The differences in geographic location, population size and age structure as well as natural resource endowment help in some part to explain the differences in the economic structure and the different stages of development. Resource-rich Kazakhstan and Turkmenistan are the most industrialised as of 2002 (see Chapter 4.5) and the most developed countries. The Human Development Report 2004 ranks Kazakhstan 78th (Human Development Index (HDI)¹⁰ of 0.766) and Turkmenistan 86th (0.752) out of 177 countries. This index reflects the stage of development better than their higher per capita GDP values alone. Uzbekistan comes in 107th (0.709), Kyrgyzstan 110th (0.701) and Tajikistan 116th (0.671).¹¹ Nevertheless, the striking differences are due to much higher per capita GDP values and slightly higher education levels while, on the other hand, life expectancy is even lower in Kazakhstan and Turkmenistan (see Chapter 5.7). Nevertheless, all the countries are classified as medium human development countries by the

¹⁰ The Human Development Index (HDI) consists of three components, the Life Expectancy Index, the Education Index and the GDP Index, with equal weights in its composition.

¹¹ For reasons of comparison, the Russian Federation comes in 57th with an HDI value of 0.795 and China on rank 94 with an HDI of 0.745, both in the group of medium human development countries as well. The HDI value for the country group Central & Eastern Europe & CIS amounts to 0.796 which shows that the CARs belong to the less developed transition countries, together with the Caucasian Republics as well as Moldova and Mongolia.

report. On the other hand, a classification of the countries by income which is e.g. conducted by the World Bank, shows that Kazakhstan and Turkmenistan are lower middle income countries¹² while the Kyrgyz Republic, Tajikistan and Uzbekistan are classified as low income countries. With regard to the economic structure of the latter three countries, this also translates into a higher share of agriculture in national value added (except for Tajikistan in comparison to Turkmenistan in 2002– see Chapter 5.5) and lower levels of urbanisation (see Chapter 5.5).

Though there are differences in the initial conditions among the five CARs, the similarities seem to prevail. This becomes even more evident if one thinks about the initial conditions considered in the economic literature which are mostly aimed at describing favourable conditions for the countries of CEE, namely less physical distance to the developed markets of Western Europe, less initial market distortions and time under central planing and more developed market mechanisms. These seem to be extremely unfavourable for the countries in CA though not exclusively to the same extent. While it seems senseless to see even more disadvantages for Uzbekistan as it is a double-landlocked country, differences in the economic structure and stage of development as well as natural resource endowments may of course be relevant for the economic development of these countries.

The initial conditions of the CARs resemble the Russian ones with regard to their common past, i.e. concerning their inherited biased economies and social development. With regard to their stage of development, economic structure and the complexity of production however, the CARs except for Kazakhstan resemble China as they occupied an extreme position among the FSU countries. But concerning the discussion about the relative importance of initial conditions and policies in explaining the growth experience in transition, the different reform paths seem to be more relevant for explaining the different outcomes among the CARs.

Reform strategies in Central Asia

As already noted, the reform paths of the five Central Asian republics were quite different.¹³ The fast reformers are the Kyrgyz Republic and Kazakhstan. They followed Russia in the big-bang implementation of the Washington Consensus strategies of stabilisation, liberalisation and privatisation and pursued restrictive monetary and fiscal policies. This can also be seen in Table 1 which records the evolution of an unweighted average of eight reform indices of the European Bank for Reconstruction and Development

¹² China and the Russian Federation are also counted as lower middle income countries.

¹³ See also Anderson, Pomfret, 2001.

(EBRD), often referred to as the EBRD Transition Index.¹⁴ While the Russian Federation still led the list in 1992 and 1993, the Kyrgyz Republic became the most profound reformer for the remaining years (except for 1997). Kazakhstan still lagged behind Uzbekistan until 1995 but continued its reform efforts, albeit with some small setbacks as well, and surpassed its neighbour country. In another way, Kazakhstan's reform experience also displays many similarities to Russia as privatisation created powerful private interests that furthermore distorted the reform process (Kalyuzhnova, 1998, Olcott, 2002). Both countries are abundant in mineral resources and the privatisation processes resulted in "insiders and politically well-connected people gaining control over the valuable assets" (Pomfret, 2003, p. 18). This further limited the extent of economic reform and created the sort of crony capitalism which now prevails. The Kyrgyz Republic's reform efforts have been on hold since 1998. Nevertheless, the Kyrgyz Republic and Kazakhstan are the fastest and profoundest reformers among the CARs. This furthermore relates to every sphere of reform measured by the separate EBRD indices (see footnote 10) though the two countries' willingness to reform appears to be higher in the liberalisation of prices, foreign exchange and trade as well as privatisation than with regard to competition policy and all sorts of enterprise reforms. But shortcomings in the latter reforms are common among the CARs and other CIS countries in comparison to CEE.

Tajikistan may now also be counted as a profound reformer. Though it initially lagged behind due to its civil war, fairly liberal policies have been introduced since 1997. The profoundness of the reforms, however, is just displayed in its liberalisation and privatisation policies while the gap to the other reform efforts appears to be wider than for the other countries. But nevertheless, with regard to the Washington Consensus strategies, Tajikistan constitutes a big-bang reformer with a certain time lag.

Uzbekistan exemplifies the gradualist reformer in CA. As can be seen in the table, the reform progress was slower and less profound than in Kazakhstan, the Kyrgyz Republic, the Russian Federation and Tajikistan (since 2000). The initially positive reform trend even reversed after 1996 mostly due to the reversal of liberalisation policies, i.e. the restrictions on foreign exchange convertibility and the ongoing state orders for cotton and wheat. The furthest progress has been achieved in privatisation while enterprise and financial sector reforms and competition policy were initially implemented, albeit to a low degree, but stagnated or were even reversed since 1997. On the other hand, though Uzbekistan is less reformist than the three CARs mentioned so far, its implementation

¹⁴ Source: Transition Reports, various years. The eight EBRD Indices measure the extent of the implementation of: price liberalisation, foreign exchange and trade liberalisation, small-scale privatisation, large-scale privatisation, enterprise reform, competition policy, banking sector reform and reform of non-bank financial institutions. As data are just available since 1995, the infrastructure reform index was left aside. All the indices and thus our average as well vary between 1.0 and 4.3 with a lesser value denoting a smaller progress in the implementation of the reforms. It shall also be noted that the EBRD Transition Index is not only the most applied transition indicator, but also captures a very similar picture of the reform progress in transition countries as similar indicators. Its value for 1997 and the Liberalization Index by De Melo et al. (1996 and 1997) are highly correlated and a lot of their variations among the countries is also reflected by the Institutional Quality Index developed by Weder (2001) (see International Monetary Fund (2000), p. 136f.).

of the reforms is more effective (Pomfret, 2003). In comparison to China, the aggregate transition indicator recorded by the IMF (2000) reveals the same value of 2.1 for China and Uzbekistan. But while Uzbekistan has achieved more progress in privatisation and roughly the same in financial market reforms, it lags behind China in liberalisation, enterprise restructuring and competition policy.¹⁵

Table 1: EBRD Transition Index 1991-2002

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Kazakhstan	1.00	1.25	1.50	1.75	2.34	2.75	2.88	2.91	2.79	2.86	2.91	2.91	2.95	2.95	2.95
Kyrgyzstan	1.00	1.50	1.75	2.50	2.88	3.00	3.00	2.95	2.99	2.99	2.99	2.99	2.99	3.08	3.08
Tajikistan	1.00	1.25	1.30	1.30	1.79	1.84	1.88	2.14	2.18	2.29	2.30	2.39	2.48	2.43	2.46
Turkmenistan	1.00	1.00	1.00	1.09	1.30	1.30	1.55	1.51	1.51	1.43	1.34	1.34	1.34	1.34	1.34
Uzbekistan	1.00	1.13	1.38	1.88	2.38	2.39	2.30	2.23	2.14	2.10	2.19	2.19	2.15	2.15	2.19
Russia	1.00	1.88	2.21	2.43	2.71	2.96	3.08	2.61	2.54	2.66	2.75	2.94	2.99	2.96	2.96
China											2.1				

Source: Own calculations, based on EBRD Transition Reports, various years, value for China in 1999 IMF (2000) p. 134

Transition Index is the unweighted average of Price Liberalisation Index, Foreign Exchange and Trade Liberalisation Index, Small-Scale Privatization Index, Large-Scale Privatization Index, Enterprise Reform Index, Competition Policy Index, Banking Sector Reform Index, Reform of Non-Banking Financial Institutions Index

Turkmenistan constitutes the stagnant reformer in CA. Its economy is basically unreformed. This is captured by the EBRD transition index in Table 1 recording the lowest reform efforts for the country among the CARs with a peak value in the year 1997. The reversal of the most recent years is due to setbacks in large-scale privatisation and enterprise reform. While there was some progress in price liberalisation and small-scale privatisation, its highly personalised and autocratic political regime has hampered any progress in trade and foreign exchange liberalisation, competition policy and financial sector reforms.

Overall, the reform paths of the CARs have been very different. According to the EBRD Transition Index, its separate indices and overall perception, the Kyrgyz Republic and Kazakhstan are the leaders in economic reform in CA following more or less Russia’s big-bang strategy. But the closest link between Russia and Kazakhstan appears to be the evolution of crony capitalism via their privatisation processes. On the other hand, Uzbekistan is clearly the more gradualist reformer and lags behind in its legisla-

¹⁵ The comparison of the reform progresses of Uzbekistan and China is taken from the International Monetary Fund (2000, p. 134), while the data for China are estimates of the IMF staff and unfortunately not available over the whole time period. The gap in liberalisation between China and Uzbekistan is also captured by the often cited Liberalization Index of De Melo et al. (1996). Its cumulative value for 1997 over the period 1989-1997 was just 2.83 for Uzbekistan, but 4.95 for China (International Monetary Fund, 2000, p. 135). The cumulative index is the sum of the annual values which range between 0 (conditions without reform as in centrally planned economy) and 1 (structural characteristics comparable to the average in advanced economies). But while the Uzbek progress in liberalisation reforms has been much slower at the beginning of the 1990ies, Uzbekistan’s liberalisation efforts improved substantially in more recent years (Uzbekistan scores 0.57 in 1997 in comparison to 0.66 for China and 0.86 for Kazakhstan, the highest scoring among the countries in observation).

tive reform record. Pomfret specifies that Uzbekistan is just following a different reform model, i.e. “a version of the Asian developmental state model” (2003, p. 22). In his explanation for the Uzbek growth puzzle, he states that “it has much to do with underestimating reform progress and, especially, failure to recognise the key importance of infrastructure and the institutional setting in which markets function” (2003, p. 23). As such, the widely used indicators reflect the reform progress on the way to copy the institutional framework of advanced Western economies. As these may not be the blueprints for the CA transition economies, their reform progress may be underestimated in comparison to other transition countries, especially those of CEE (Pomfret, 2003). As such, differing role models among the CARs may as well explain some of the further reform progress of the big-bang reformers in comparison to Uzbekistan’s gradual strategy while Turkmenistan remains substantially unreformed. The reform strategies and the initial conditions had an impact on the economic outcomes of the transition period.

The seven stylised facts of the Transition in Central Asia

Campos and Coricelli (2002) reported on seven stylized facts of transition in a regionally comparative perspective for the countries of Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) along some subgroups. As such, they note that these facts apply to these countries including the CARs while the experience in other Asian transition countries, notably China and Vietnam, has been very different. This study examines the seven stylised facts separately for the five CARs and compares them to the Russian Federation and China. This provides a detailed analysis of the transition experience in CA following the development of economic growth, of the classical factors of growth and the social development. It furthermore investigates in howfar the transition experience of the CARs resembles and if it really was comparable to that of Russia and not the different outcomes in China.

The output decline

The first stylised fact of the transition from a centrally planned to a market economy constitutes the massive output decline experienced in the countries of CEE and the CIS. Aggregate output initially shrank in all of these countries and the decline lasted longer than initially expected. The countries of CA are no exemption. Table 2 provides yearly growth rates for the years 1990 to 2002 as well as the yearly growth rate for the period 1990-2002 as a whole, based on per capita GDP measured in PPP (purchasing power

parity) values.¹⁶ Evidently, growth rates for the CARs had a negative sign in the early years of transition except for the Kyrgyz Republic in the starting year 1990. Double-digit negative growth rates occurred in all of them, lasting only one year in Uzbekistan (1992), two years in Kazakhstan (1991, 1994), three years in the Kyrgyz Republic (1992, 1993, 1994) and Turkmenistan (1993, 1994, 1997) and even five consecutive years in Tajikistan (1992-1996). Growth only just turned positive in the second half of the 1990ies, in 1996 in Kazakhstan (interrupted in 1998) and the Kyrgyz Republic (again negative in 2002), in 1997 in Tajikistan and Uzbekistan and finally in 1998 in Turkmenistan. Comparing this pattern of the development of aggregate output with the experiences of Russia and China, one can clearly see that the Central Asian transition path resembles the Russian experience which is again pretty similar to the experiences in the rest of the CIS. On the other hand, the Chinese output development, as already noted, clearly stands out. This picture is confirmed by Figure 1 which captures the output decline of the countries under investigation. While China’s output growth performs tremendously as its slope leaves the chart scale in 1994 and China reaches 269% of its 1990 output level in 2002, all the other countries follow a U-shaped output development. None of them regains its 1990 level up to 2002 and the Russian Federation just fits in smoothly among the CARs.

Table 2: Annual Growth Rates of GDP per capita in 1995 PPP \$, 1990-2002, and annual average Growth Rate

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	1990-2002
Kazakhstan	-5.2	-11.6	-5.7	-9.0	-11.6	-6.9	1.4	2.8	-0.5	4.3	11.5	14.6	9.8	-0.42
Kyrgyz Republic	3.7	-9.3	-14.9	-15.4	-20.0	-6.5	5.5	8.3	0.6	2.2	4.4	4.5	-1.5	-3.94
Tajikistan	-2.9	-9.8	-30.4	-17.4	-22.8	-13.8	-18.0	0.2	3.4	3.1	7.7	9.6	8.5	-7.59
Turkmenistan	-1.7	-7.4	-8.0	-12.6	-19.5	-9.5	-8.8	-13.1	5.0	14.9	15.6	18.6	13.1	-1.79
Uzbekistan	-0.5	-2.6	-13.3	-4.5	-7.0	-2.7	-0.2	3.2	2.6	2.8	2.8	2.9	2.9	-1.22
Russia	-3.4	-5.3	-14.6	-8.6	-12.5	-4.0	-3.1	1.2	-4.6	5.8	9.6	5.6	4.8	-2.28
China	2.3	7.7	12.8	12.2	11.3	9.3	8.5	7.7	6.8	6.1	7.2	6.5	7.3	8.61

Source: Own calculations, based on WDI (World Development Indicators) 2004

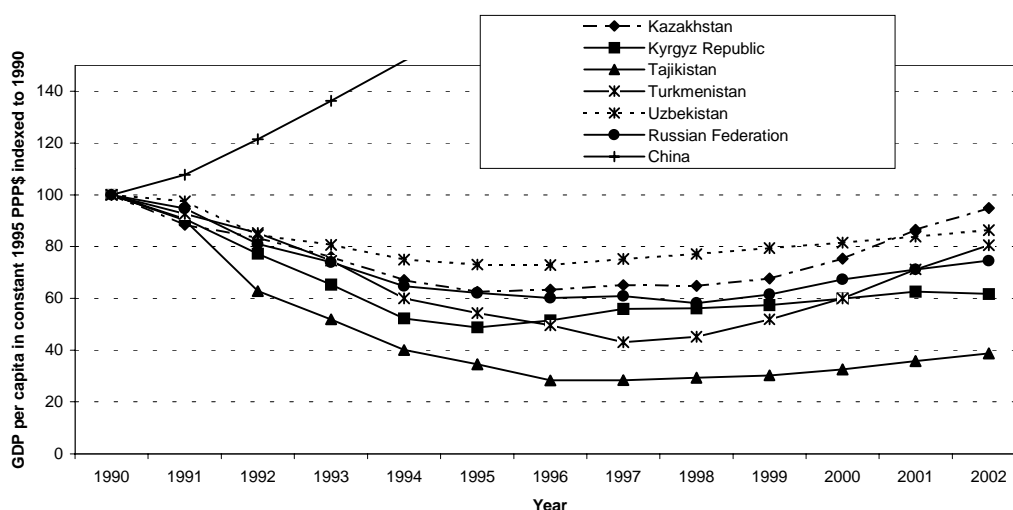
In comparison to other studies which relied on less recent data,¹⁷ Kazakhstan reached a higher level of its 1990 per capita output level in the year 2002 than Uzbekistan. Kazakhstan’s growth rate has exceeded Uzbekistan’s since 1999, i.e. after the Russian financial crisis which took its heaviest toll on Kazakhstan and the Kyrgyz Republic among the CARs. In accordance to other studies of CA’s two biggest countries, Uzbekistan’s output decline was a lot flatter than Kazakhstan’s. But the newest growth records

¹⁶ The data are drawn from the WDI 2004. However, we used own calculations dividing aggregate GDP values by the population figures, not the provided per capita values, as the latter recorded a very unlikely value for Turkmenistan in 1992. However, despite this difference the data differ only slightly.

¹⁷ Most studies identify Uzbekistan as the most successful Soviet successor state in terms of output performance (see Pomfret, 2000, or Spechler, 2000).

clearly have reversed the order among the two countries according to their ability to better preserve their initial output level. Indexed to the year 1990, Kazakhstan's per capita output level was 86.4% its 1990 value in 2001 and exceeded Uzbekistan's 83.9%. The gap even widened in the year 2002 when Kazakhstan reached 94.9% of its 1990 per capita output level while Uzbekistan's grew only slightly to 86.3% (see Figure 1). The growth performance of these two countries thereby was the best among the CARs followed by Turkmenistan, the Kyrgyz Republic and, finally, Tajikistan. With regard to the recent recovery, Kazakhstan and Turkmenistan achieve the best results due to their abundant endowments with mineral resources.

Figure 1: **Real GDP per capita in 1995 PPP\$ Index for Central Asia, China and Russia**



The contraction of capital formation

Investment in the socialist economies was mainly public and centrally planned, thus in comparison to advanced market economies relatively high and inefficient. With a reduction in the mandatory public capital formation, the expectation was that investment levels would be reduced but efficiency enhanced in transition. On the financing side, saving was also expected to fall as the intertemporal consumption decision moves on to the people who seem to put a stronger time preference on the present as a socialist central planner. On the other hand, as the inherited allocation of capital was distorted, additional capital was needed in order to partially replace and upgrade the old capital stock. Thus, foreign capital was thought to be needed in order to bring about the necessary adjustments of the capital stock.

In order to trace the investment dynamics, Table 3 presents data on gross fixed capital formation in relation to GDP levels as reported in the WDI 2004. Two countries stand out in a positive sense – China whose investment ratio increased sharply in the early 1990ies and remained quite stable and high later on – and Turkmenistan with somewhat high investment ratios which are only available since 1997 and drop sharply in the early 2000s. The data for the other transition countries confirm the expected decrease in capital formation. While this occurred rather smoothly and with some signs of recovery for the latest years in Kazakhstan and the Russian Federation, the sharpest decrease is reported for Uzbekistan between 1991 and 1992 whose investment ratio recovered until 1996 only to drop again afterwards. Investment in the Kyrgyz Republic followed a similar path as in Uzbekistan albeit starting from a lower level and showing much less volatility. Investment in Tajikistan just follows some up-and-down path.

Table 3: **Gross Fixed Capital Formation as percentage of GDP, 1990-2002 and unweighted average**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	1990-2002*
Kazakhstan			31.5	20.0	28.7	23.3	16.1	15.6	15.8	17.8	18.1	26.9	27.3	21.9
Kyrgyzstan	24.2	15.4	19.9	11.7	9.0	18.3	25.2	21.7	15.4	18.0	20.0	18.0	18.5	18.1
Tajikistan	24.9	19.1	33.6	39.1	36.5	28.7	22.3	19.4	15.5	18.9	23.9	18.0	22.7	24.8
Turkmenistan	40.1	45.9						38.7	45.5	46.3	39.6	36.9	31.3	40.5
Uzbekistan	32.2	26.8	12.9	14.6	18.3	27.2	29.2	22.8	16.9	17.8	14.0	19.4	20.2	20.9
Russian	30.1	36.3	34.6	27.0	25.5	25.4	23.7	22.0	15.0	14.8	18.7	22.0	21.0	24.3
China	34.7	34.8	36.2	43.3	41.2	40.8	39.6	38.2	37.7	37.4	36.3	38.5	40.4	38.4

Source: WDI (World Development Indicators) 2004

* unweighted average 1990-2002, according to data availability (see reported values)

With regard to foreign capital inflows, we trace the importance of foreign direct investment (FDI). As this is a long-term, not speculative form of investment, FDI reveals information about the relative quality of the investment climate of a country. In the case of the CARs however, FDI mainly went into resource-extracting industries and is consequently not mainly driven by aspects of international competition but by the availability of and the demand for the resources.

Table 4 reveals that China absorbs a huge amount of FDI in absolute terms which is a well-documented fact. But in relation to its massive population, increased GDP and investment levels, which provides a better picture about the importance of FDI for a country, the figures indicate that Kazakhstan with its resource-extracting industries attracts relatively more FDI than China. For both countries, the amount of FDI increased substantially over the 1990ies and again, especially in Kazakhstan, in the early 2000s. But importance of FDI grew much more profoundly in Kazakhstan where its percentage of GDP increased almost steadily from 0.4% in 1992 to 10.5% in 2002 while FDI as % of GDP after a surge in the early 1990ies peaked in China in 1993 with 6.4% and fell to 3.9% in 2002. For the other CARs and the Russian Federation, FDI is less important than in China and Kazakhstan. As in the case of Kazakhstan, FDI in these countries is

highly driven by the availability of resources. On the other hand, its amount and importance differ a lot over time. For the Kyrgyz Republic, FDI increased substantially until 1998, but fell even faster afterwards. For Turkmenistan, FDI as percent of GDP stands out in 1995 (9,4%) with much smaller values in other years (between 1,3% (2002) and 4,5% (1996)). This phenomenon of a single peak is even sharper in Uzbekistan (7,5% in 2001) where despite this peak FDI is negligibly small as it is in Tajikistan and, except for the absolute amount, in the Russian Federation. This peak-phenomenon indicates that FDI in CA is highly driven by a few investment projects in certain years rather than a steadily attractive investment climate.¹⁸

Table 4: **Foreign Direct Investment**

	Cumulative FDI Inflows, 1992-2002 (billion US\$)	Cumulative FDI Inflows per capita, 1992-2002 (\$)	Average of annual FDI Inflows as % of GDP, 1992-2002	Average of annual FDI Inflows as % of Gross Capital Formation, 1992-2002
Kazakhstan	14.89	948.54	6.36	31.07
Kyrgyz Republic	0.44	91.95	2.41	14.39
Tajikistan	0.16	27.28	1.25	5.81
Turkmenistan	1.16	265.97	3.63	6.58
Uzbekistan	1.33	56.62	1.37	7.26
Russian Federation	24.46	166.48	0.73	3.87
China	407.18	331.81	4.54	11.54

Source: Own calculations, based on WDI (World Development Indicators) 2004

As such, we found evidence that capital formation shrank in transition from a centrally planned and compulsory to a voluntary savings system as individuals adjusted their intertemporal consumption decisions. For the exceptions to this trend, China and Turkmenistan, it is not unreasonable to doubt that the political changes brought about this aspect of transition and thus prevented capital accumulation from falling and varying as in the other countries. FDI inflows into CA varied a lot across space and time as they were mainly driven by the availability of natural resources and their extraction possibilities. One may, therefore, doubt if they helped in closing the gap between reduced domestic capital formation and what would have been needed in order to restructure the economies though this conclusion is hard to draw as data about the depreciation of the inherited capital stock are missing. Everything indicates that capital input shrank during transition thus lowering the productivity of another factor of production, labour.

¹⁸ A more detailed discussion of the growth impacts of FDI in transition is given by Campos and Kinoshita, 2002.

Labour movement or changes in the labour market

Labour movement as a “stylised fact” does not primarily refer to a geographic movement. On contrary, this sort of labour mobility remained extremely low in the transition countries due to distortions in the housing market (see Boeri and Flinn, 1999), though some CARs experienced cross-border migration of ethnic minorities. Labour movement in this context refers to changes in the labour market, i.e. a decreased labour force participation rate, increased unemployment and sectoral employment changes. The more, as labour accumulation is a fundamental determinant of growth, both quantitatively and qualitatively, it is important to examine what happened to labour in transition.

Under communism, labour force participation and human capital formation were extremely high in comparison to other countries and unemployment was almost non-existent. In fact, it was argued that the initial growth performance under central planning was mainly and positively driven by the accumulation of the factors of production, capital and labour. In the case of labour, the positive growth impact was mainly achieved by increases in the labour force participation rate, esp. of women. As in the case of capital accumulation, it was therefore assumed that the participation rates would fall in transition as people become free to decide on their labour supply. On the other hand, the transition to a market economy created plenty of scope for the reallocation of labour. In that reallocation process, unemployment arises as a lot of people have to find a new job and get the skills to be able to perform it while new jobs have to be created.

In order to check for this stylised fact of transition, we track the labour force participation rates for the CARs as well as China and the Russian Federation as shown in Table 5. Contrary to the hypothesis of a high movement of labour, the participation rates do not show the expected drop. Only in Turkmenistan, the participation rates fell between 1990 and 1999 with a sharp increase between 1990 and 2000. For the Russian Federation and Kazakhstan, the rates slightly increased at the beginning and continuously decreased later on, in Russia after 1992 and in Kazakhstan after 1994 with a small rebound in 1996 and 97. For the other countries, the picture is rather mixed. Overall, comparing the values for 2002 and 1990, participation rates were lower in all countries except Tajikistan and Uzbekistan. But the differences are not high enough to confirm the hypothesis of a strong labour movement in the CARs with regard to labour force participation rates.

Table 5: **Labour Force Participation Rates**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kazakhstan	75.19	75.91	76.48	76.55	75.96	75.12	75.26	75.27	74.99	74.66	74.33	73.38	72.99
Kyrgyz Republic	71.90	72.69	73.11	72.68	72.24	72.65	72.64	72.64	72.66	72.61	72.29	71.98	71.79
Tajikistan	67.40	68.58	69.06	69.01	69.44	69.63	70.05	70.41	70.98	70.63	70.29	70.17	70.08
Turkmenistan	73.14	72.35	71.60	70.83	69.98	68.99	68.54	67.96	67.25	66.48	73.27	73.15	72.99
Uzbekistan	71.48	71.73	72.12	72.47	72.58	72.59	72.89	73.15	73.22	73.15	72.77	72.47	72.14
Russia	77.68	77.90	77.98	77.95	77.90	77.84	77.68	77.49	77.32	77.05	76.68	76.63	76.63
China	88.73	88.86	88.86	88.80	88.71	88.59	88.72	88.82	88.86	88.90	88.71	88.18	87.63

Source: Own calculations, based on WDI (World Development Indicators) 2004
Labour Force Participation Rate is calculated as Labour Force as percent of Population aged 15-64

The description of the labour market so far rested on relative quantities specifying which part of the population is employed or seeking employment. We now turn to the demographic development as well as the change in the human capital stock. In the neo-classical growth literature, population growth reduces per capita growth as the capital stock per person diminishes. On the other hand, the expansion of the input factor labour, both quantitatively and qualitatively, enhances overall growth. Thus, both the population growth as well as a change in the demographic structure affect the economic development of a country.¹⁹

Rows four and five in Table 6 show the population and labour force growth rates for the time period 1990-2002. Population growth was highest in Turkmenistan followed by Uzbekistan, Tajikistan, the Kyrgyz Republic and China. In Kazakhstan and the Russian Federation, population growth over that period was negative due to reduced fertility, increasing mortality and emigration. Comparing the overall population growth with labour force growth, every country experienced faster labour force than population growth. This should have had a positive effect on per capita growth if the labour market entrants got employment. The dependency ratios decreased accordingly albeit from and to much higher levels in Tajikistan, Turkmenistan and Uzbekistan which have younger populations in comparison to the other countries and as such a higher youth dependency ratio. The fertility levels were reduced in all CARs albeit from different starting points. Tajikistan, Turkmenistan, Uzbekistan and the Kyrgyz Republic have had higher fertility levels than Kazakhstan and the two reference countries once again highlighting their higher ratios of young people in contrast to the elder population. Nevertheless, the fertility drop in all of CA and the Russian Federation during these ten years was severe, for Kazakhstan and the Russian Federation it dropped below the constant-reproduction level of around 2.3, in the latter case even dramatically so. With regard to the CARs, one might argue that the economic transition initiated or speeded up their demographic transition. But the speed seems to be too fast as the reduction in fertility was not mainly driven by the adaptation to reduced mortality and rising incomes²⁰ as should be the case, but by increased economic uncertainties and the change of the economic system per se. However, the data show that the CARs differ a lot with regard to their population dynamics and its implication on past and future growth. Kazakhstan stands out with lower population and labour force growth, lower fertility and a lower dependency ratio. Population dynamics in Tajikistan, Turkmenistan and Uzbekistan still much more resembles that of developing countries with higher values of these variables while the Kyrgyz Republic lies somewhere in between.

¹⁹ A positive growth impact of a changing population structure occurs when the economically active part of the population grows faster than the rest, a phenomenon referred to as demographic gift in the economic literature. This appearance first occurred in the developed world when fertility levels started to fall. The transition from high to low fertility created a baby boom generation that increased growth in a lot of countries when it entered the labour force while its reduced fertility meant relatively few dependent offspring.

²⁰ Rising incomes reduced the fertility in the demographic transition as people reacted with a quantity-quality trade-off investing more in the quality of their offspring while lowering the quantity (see Becker, 1992).

With regard to the quality of the labour force, we follow changes in secondary enrolment rates listed in the six last rows of Table 6. The human capital stock inherited from the socialist past was extraordinarily high in comparison to countries at a similar stage of development and also in comparison to China. This was especially the case for the CARs. Though their economic development was lower than in the other transition countries, the recorded school enrolment rates reveal values which even resemble those of developed economies. The more, educational enrolments by gender show no sign of a gender gap in education except for a relatively small one in Uzbekistan in the year 1990. This is a great achievement of their socialist past and actually offered scope to improve their growth prospects for transition.²¹ Nevertheless, educational attainment dropped significantly in Kazakhstan, the Kyrgyz Republic and Tajikistan while it only slightly fell in Uzbekistan and the Russian Federation and even improved in Turkmenistan and China albeit in the latter case from a much lower starting point. Interestingly, the figures show a widening gender gap for Tajikistan while. This gap even closed in Uzbekistan and the Kyrgyz Republic as the educational values deteriorated for both genders. However, the contraction in educational enrolment rates in three of the CARs is impressive although the levels remain relatively high in comparison to other countries at a similar stage of development and in comparison to China.

Table 6: Unemployment, Population and Human Capital Development

	Unemployment Rate		Population Growth Rate	Labour Force Growth Rate	Secondary School Enrolment Rate		Female Secondary School Enrolment Rate		Male Secondary School Enrolment Rate	
	1990*	2000			1990	2001**	1990	2001**	1990	2001**
Kazakhstan	0.0	12.2	-0.78	-0.38	98.05	88.75	99.40	87.82	96.74	89.65
Kyrgyz Republic	0.0	5.6	1.03	1.59	100.06	85.40	101.29	85.63	98.85	85.18
Tajikistan	0.3		1.40	2.48	102.09	82.02	102.16	73.94	102.02	89.91
Turkmenistan	2.0		2.25	2.96	107.47	112.00	108.47	111.70	106.48	112.30
Uzbekistan	0.0		1.75	2.57	99.41	98.61	94.93	97.13	103.80	100.06
Russia	0.0		-0.24	0.04	93.30	91.96	96.11	92.30	90.58	91.64
China	2.5	3.1	1.01	1.13	48.69	58.95	41.69	61.67	55.27	56.44

Sources: Unemployment Rate: EBRD Transition Report 1997, for China WDI (World Development Indicators) 2004

Population and Labour Force Growth Rates: Own calculations, based on WDI 2004; Scholl Enrolment Rates: WDI 2004

* value for the Kyrgyz republic 1991, for Tajikistan 1992

** value for Turkmenistan 1996, for China 1997

In summary, the CARs did not experience labour movement in the stylised manner specified by Campos and Coricelli (2002). Labour force participation rates did not drop according to the data. However, the developments of their populations and their popula-

²¹ Though the data reveal nothing about the quality of the accumulated human capital stock as well as the applicability of the acquired skills to the changed demands of a market economy as there are several problems (see Boeri (2000) and Campos and Dabusinskas (2001)).

tion structures differ greatly among the CARs. Whereas Kazakhstan and less so the Kyrgyz Republic followed Russia, the other countries had a totally different starting point with higher reproduction rates. This comes closer to population trends in China though a comparison is difficult due to China's one-child policy. On the other hand, the CARs except for Turkmenistan experienced a, in some cases even tremendous, deterioration in their human capital stock albeit starting at and even still retaining relatively high levels. This is due to their common socialist past and in sharp contrast to China.

Trade reorientation

Trade undisputedly exerts a positive impact on growth as it leads to a greater specialisation of an economy according to its comparative advantage. The communist past left the transition countries with highly specialised economies while the centrally planned production was internally traded within the Council for Mutual Economic Assistance (CMEA), the Soviet-era trade bloc. The break-up of the SU and collapse of the CMEA thus led to disruptions in economic ties among the former members and left the CARs being landlocked with severe consequences for the transition process in CA. The expectations were that trade volumes would fall and that the pattern of trade would change in favour of non-transition countries, esp. the industrialised world. It is thus important to investigate how the extent and the pattern of trade developed.

The trade performance of the CARs and the Russian Federation experienced an initial decline and recovery pattern which was recorded by Campos and Coricelli (2002) for the CIS countries as a whole. Russia's export volume²² dropped dramatically until 1992 and started to grow thereafter with a stagnation between 1996 and 1999 induced by the Russian financial crises. The unweighted average of the export indices for the CARs without Tajikistan also indicates an inverted-U shape development.²³ But in comparison to the Russian Federation, the initial recovery before the Russian financial crises is missing for the region as a whole as an increase in Kazakhstan and Uzbekistan faces a decrease for the Kyrgyz Republic and Turkmenistan. Between 1997 and 1999, the Russian financial crises exerted a greater negative impact on the export performance in CA than in the Russian Federation.²⁴ Nevertheless, export volumes finally started to increase afterwards in Kazakhstan and Turkmenistan since 1998 surpassing levels from the beginning of the 1990ies while they stagnated for the Kyrgyz Republic and Uzbeki-

²² Export in goods and services are measured in 1995\$, as given by the WDI (2004).

²³ The initial export volume decline is highly influenced by Kazakhstan and since 1993 also by Turkmenistan as exports even grew in the Kyrgyz Republic between 1992 and 1993 (and just fell afterwards) while data on the other countries are missing. However, as data become available for four CARs (save Tajikistan) after 1994, the continuation of the fall in average export volumes which is going to be described in the ongoing text accrues to a steep drop in Turkmenistan's export volume until 1998.

²⁴ This poses a sharp contrast to the import performance.

stan. The recent increase in exports is highly driven by the availability of mineral resources and seems to spur economic growth in Kazakhstan.

With regard to the pattern of trade, the importance of the Russian Federation as a trading partner of the CARs is almost continuously declining. This trend seems to be predominant for exports while imports from Russia are subject to higher fluctuations.²⁵ Trade reoriented to Western markets. This trade reorientation increases with the size and the natural resource abundance of the countries while the destination countries in Europe and Northern America vary a lot. On the other hand, trade among the CARs is more important for the smaller countries, the Kyrgyz Republic and Tajikistan, which are dependent on energy imports from their neighbours. The more, China became an important trading partner as well especially in the case of Kazakhstan and the Kyrgyz Republic.

As we just saw, trade in the CARs dropped dramatically during the early years of transition but recovered after the Russian financial crises, especially for the oil and gas rich countries Kazakhstan, Turkmenistan and Russia. This was in unison with Russia due to the same starting point after the dissolution of the SU and the COMECON trade arrangement. On the other hand, the development of trade turned out to be in sharp contrast to China whose trade volume continuously exploded hand in hand with its economic growth miracle. With regard to the direction of trade, other transition countries and especially the Russian Federation lost on importance. But due to the geographical location of CA and its remoteness to Western markets, the reorientation of trade from other transition to industrialised countries was far less significant than for the countries of CEE.

Structural change

The transition from a planned to a market-oriented economy triggers the reallocation of resources in order to adapt to market forces. Socialist central planning left the economies with highly distorted production structures which particularly favoured industry

²⁵ The following values are own calculations based on data from the Asian Development Bank (ADB) – Key Indicators 2004 available at www.adb.org/statistics. Russia's share of Kazakhstan exports fell from 44.6% in 1994 to 16.5% in 2003 while its share of imports remained high and decreased only from 39.4% in 1994 to 34.9% in 2003, but peaked in 1996 with 54.7% and fluctuated enormously afterwards. This confirms the strong economic relations between these two countries. For the Kyrgyz Republic, exports to Russia fell from 29.9% in 1992 to 16.5% in 2003 and imports fell from 41% to 17.4% over the same period. Tajikistan's exports to Russia peaked with 22.6% in 2000 but fell from 17.9% in 1993 to 10.4% in 2003 and remained in between that range for the rest of the years. Its imports remained rather stable between 11 and 16.5% except for 19% and 23% in 2001 and 2002 respectively. Turkmen trade with Russia resembles Tajikistan's, exports with a high of 41.1% in 2000 but otherwise falling from 4.7% in 1994 to just 0.9% in 2003 and imports between 7% and 15.5% with two higher values in 2001 and 2002. Uzbek trade with Russia was also very volatile. Exports fell rapidly from 38.9% in 1994 to 21.4% in 2003. Imports fell from 37.4% in 1995 to 21.7% in 2003 with a minimum of just 10.6% in 1999.

and repressed the service sector. It was, therefore, expected that transition would trigger sectoral shifts in the economic production. As such, the development of the sectoral pattern offers some insight into the reallocative pressures evolving in the transition towards an economic market structure. The more, the Chenery hypothesis (Chenery, 1960) specifies that structural change takes place with ongoing economic development. As real per capita incomes increase the share of agriculture declines shifting to the industrial and service sector.

Table 7 records the sectoral composition of the economies of CA as well as China and the Russian Federation for the years 1990 and 2002 with regard to the sectoral shares in value added. The share of agriculture fell in most of the countries, most notably in Kazakhstan and the Russian Federation where the shares in 2002 decreased to only a third of the initial values. The agricultural share kept relatively stable in Uzbekistan and slightly increased in the Kyrgyz Republic where it peaked with almost 50% in 1996 and decreased afterwards.

The development of the industrial and service sectors follows the expected path. The industrial sector favoured by the Soviet central planning lost ground in four of the CARs and in the Russian Federation. The industrial sector shares fell between 6 (Kazakhstan) and 14.5 (Russia) percentage points. On the other hand, the industrial sector significantly grew in importance in China and Turkmenistan to over 50% of value added, though in the case of Turkmenistan the figures varied considerably between 1990 and 2002. The share of the service sector only fell in Turkmenistan while it increased tremendously by around 25 percentage points in Tajikistan, Kazakhstan and the Russian Federation.

Table 7: **Structural Change**

	Urban Population (as % of total)		Agriculture, value added (% of GDP)		Industry, value added (% of GDP)		Services, value added (% of GDP)	
	1990	2002	1990*	2002**	1990*	2002**	1990*	2002**
Kazakhstan	57.0	55.9	26.71	8.62	44.59	38.60	28.70	52.80
Kyrgyz Republic	37.7	34.4	34.25	38.60	35.76	26.20	30.00	35.20
Tajikistan	31.7	27.6	33.31	24.30	37.61	24.00	29.08	51.70
Turkmenistan	45.0	45.2	32.24	28.80	29.61	50.70	38.16	20.50
Uzbekistan	40.1	36.7	32.77	34.60	32.96	21.60	34.27	43.80
Russia	73.3	72.9	16.61	5.75	48.35	33.80	35.04	60.50
China	27.4	37.6	27.05	15.40	41.61	51.10	31.34	33.50

Sources: WDI (World Development Indicators) 2004

* for Kazakhstan value for 1992

** for Turkmenistan value for 2001

With regard to the Chenery hypothesis, China seems to follow the predicted path of structural change quite smoothly with the decreasing agricultural share taken up primarily by the industrial and somewhat by the services sector albeit with an astonishingly

high and still increasing gap between the corresponding sectoral shares in value added and employment. On the other hand, the sectoral change in the other transition countries (except Turkmenistan) may be viewed as a fast adjustment from socialist biases in the sectoral composition to patterns more in line with countries at a comparable stage of development. As such, taking the average of lower middle income countries²⁶ as a rough reference point, over-industrialisation was reduced in Kazakhstan and resolved in the Russian Federation, but strengthened in China and Turkmenistan. The Kyrgyz Republic, Tajikistan and Uzbekistan even became under-industrialised in comparison to other low income countries.²⁷ With regard to agriculture, Kazakhstan was the only CAR which followed Russia in its deep structural change away from this sector. On the other hand, agricultural sector shares in the other countries much more resemble those of China with the difference that its importance did not decrease accordingly. But as a result, these four CARs rather comply with the necessary initial conditions to benefit from an economic reform strategy Chinese-style which started with market reforms in the agricultural sector.

As such, rapid structural change took place during the transition of the 1990ies in China, Russia and the CARs but with quite different directions and outcomes.

Institutional collapse

The transition from a centrally planned to a market based economy involves an according change in institutions. In comparison to other Asian transition countries like China, the CARs as well as other FSU and CEE countries quickly abandoned the communist monopoly of political power as well as the central planning of economic activity. The old institutions collapsed while the new institutions governing the transition to a market economy were still missing and had to be gradually acquired. The CARs made some initial progress in extending political and civil freedoms to their people though the success was very limited in comparison to the other FSU and especially the CEE transition countries and the reversal followed suit.²⁸ Table 8 reports the later development of de-

²⁶ The average share of industry in value added fell from 39.14% in 1990 to 33.91% in 2002 for the countries of the lower middle income group (WDI 2004).

²⁷ The average share of industry in value added slightly increased from 29.54% in 1990 to 30.43% in 2002 for the countries of the low income group (WDI 2004).

²⁸ Freedom House even records a slight improvement concerning civil liberties in Turkmenistan in the year 1992 after independence, just to be reversed the year thereafter. Kazakhstan and the Kyrgyz Republic were even classified as partly free which ended for Kazakhstan in the year 1994 and for Kyrgyzstan in 2000 (see Freedom House, Nations in Transit, various years).

mocratisation and the rule of law for the CARs and Russia as documented by Freedom House (2003 and 2004).²⁹

Table 8: **Democratization Score, 1997-2004, and Rule of Law Score, 1999-2004**

	Democratization Score (DEM)							Rule of Law Score (ROL)				
	1997	1998	1999	2001	2002	2003	2004	1999	2001	2002	2003	2004
Kazakhstan	5.30	5.35	5.38	5.56	5.88	6.13	6.19	5.75	6.00	6.13	6.25	6.38
Kyrgyz Republic	4.65	4.70	4.88	5.13	5.38	5.63	5.65	5.50	5.63	5.63	5.75	5.75
Tajikistan	6.20	5.95	5.69	5.44	5.50	5.50	5.56	5.88	5.88	5.88	5.88	6.00
Turkmenistan	6.94	6.94	6.94	6.94	6.94	6.94	7.00	6.38	6.63	6.63	6.63	6.63
Uzbekistan	6.35	6.45	6.44	6.50	6.56	6.56	6.56	6.25	6.25	6.25	6.25	6.25
Russia	3.80	4.10	4.25	4.63	4.81	4.88	5.25	5.25	5.38	5.38	5.13	5.25

Source: Freedom House, Nations in Transit, various years, data for 2004 based on own calculations

The Democratization Score reveals a deterioration of the political environment of these countries between 1997 and 2003 which is in sharp contrast to the political trends in CEE. This deterioration of the political environment has taken place in all the observed countries except Tajikistan which gradually improves its ranking from its initial fourth place to third place between 1999 and 2001 getting ahead of Kazakhstan and finally even overtaking the Kyrgyz Republic since 2003 to come in second place only behind Russia. A similar development can be observed with regard to the Rule of Law Score reported by Freedom House since 1999. As this index evaluates the development of the legal framework and corruption, it more directly reflects the evolution of a market-based economic environment. Also in this regard, the progress in CA since 1999 is regressive or at best stagnant as in Uzbekistan. Changes in ranking occur between 1999 and 2001 with Tajikistan overtaking Kazakhstan and, more interestingly, between 2003 and 2004 when Uzbekistan gets ahead of Kazakhstan as well leaving the latter in fifth place only ahead of Turkmenistan.³⁰ As such, in comparison to the other transition countries of CEE, institutions in CAR as well as other CIS countries deteriorated again since the latter years of the 1990ies. This deteriorating institutional framework further prevents the successful transition to well-functioning market economies.

²⁹ These data are not available for China. However, the development of institutions in CA is very similar to that of the Russian Federation as it was triggered by the dissolution of the SU and other similar initial conditions originating from the common socialist inheritance.

³⁰ Already in 2002 Kazakhstan slipped down to the lowest political characterisation as a consolidated autocracy or authoritarian regime among the transition countries ranked by Freedom House's Nation in Transit reports where it joined Uzbekistan, Belarus and Turkmenistan. Russia, Kyrgyztan and Tajikistan were ranked one category above as semi-consolidated authoritarian regimes.

Transition costs

Another stylised fact is that transition imposed high transition costs for the population in terms of reduced standard of livings and lost lifetime for the CARs as well as Russia. This could already be seen in Chapter 5.1 which provided data about the massive output collapse in per capita terms for the CARs and the Russian Federation. That implies that a lot of economic activity and choices were lost during transition and reduced the peoples' standard of living. But per capita GDP is at best a very vague indicator to trace the extent of the transition costs. This is because it only captures an average value but tells us nothing about the underlying distribution of economic activity and the resulting incomes. Furthermore, it merely captures a small dimension of what people value. In the following sections, the development of income distribution during transition is taken into account which provides a more profound understanding of the economic impact of transition on the people in the CARs. Afterwards we trace the development of a social indicator which is often drawn upon with regard to a judgement of the standard of living, i.e. life expectancy.

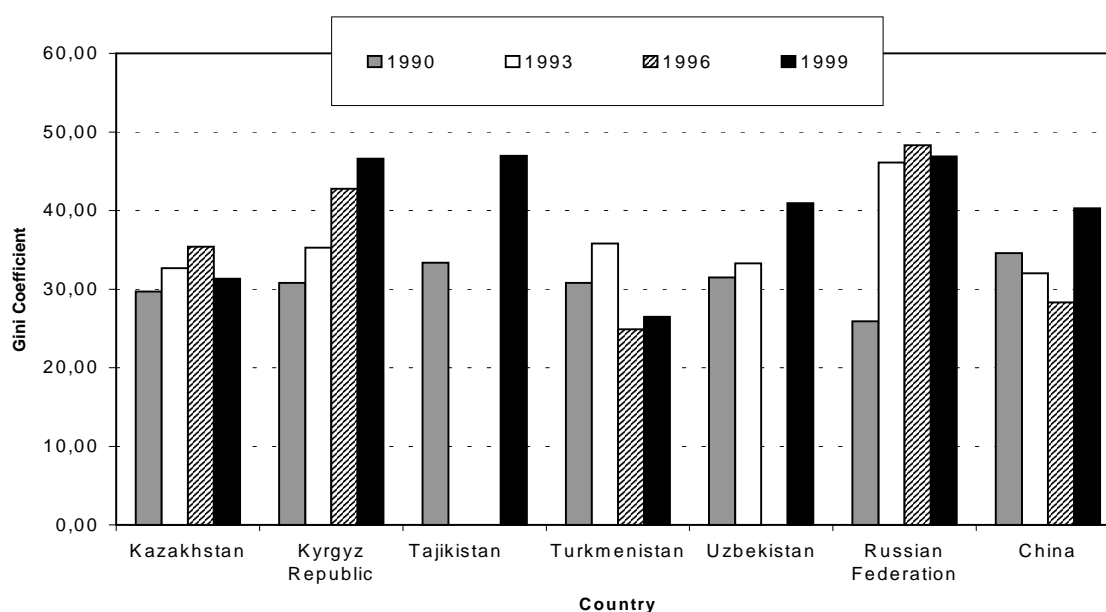
Inequalities became much more distinctive during transition. Besides high values in social development, a great achievement of the socialist legacy was the imposition of a high degree of economic equality. At the beginning of transition, these countries were, in accordance to the egalitarian ideas of socialism, among the most equal in the world in terms of recorded income inequalities. This especially holds for the countries of CEE while the SU was originally a little more unequal due to its size and more profound regional differences. As such, an increase in inequality could have been expected during the reallocation of resources and the adjustments to the changed requirements of a market economy.³¹ There is ample evidence that inequality increased during transition (see e.g. Milanovic, 1998 and 1999, and Flemming and Micklewright, 2000). However, inequality data vary a lot which makes it hard to specify the real extent of this increase in inequality.³² Nevertheless, Figure 2 records the increase in inequality during the

³¹ The transition countries started with highly distorted markets and thus highly distorted production patterns. The resulting structural and sectoral shifts include a high reallocation of resources which will take some time. The more, these resources (labour, physical and human capital) may be unsuitable or even almost worthless in a market economic system as these were neither accumulated nor remunerated according to market needs. This furthermore prolongs the reallocation process and creates rents for the factors of production which are more adapted to market needs or could faster become so. As such, a change in the remuneration of the factors of production according to market needs could be expected to increase inequalities in the short- and medium-run. On the other hand, the resulting inequalities would have improved the incentives in the economy and would have fastened the process of reallocation.

³² First of all, data are hard to compare across countries and over time as they may be based on different specifications about the underlying variable or income dimension (gross or net income, expenditure, consumption) and on different reference units (person, household, employed person). As such, one should be careful in comparing these data over time and across countries. We tried to reduce this problem by selecting according to similar original data sources as well as income specifications and reference units. However, as studies are mostly taken at one point in time for more than one country, it seems to be even more reliable to compare the data across the countries than across time. This should be kept in mind for the ongoing description about the increase in inequality.

1990ies. Starting from similar levels of income inequality in 1990, the highest increases have been recorded for the Kyrgyz Republic, Tajikistan and the Russian Federation.³³ On the other hand, Uzbekistan and China saw their income distribution deteriorate as well while Turkmenistan is recorded to have experienced a small improvement.

Figure 2: **Inequality in Central Asia, the Russian Federation and China**



Source: World Income Inequality Database V2.0a (WIID2a) June 2005; Data point Kazakhstan 1999: value for 2001, Source: World Development Indicators (WDI) 2004; Data point Turkmenistan 1996: value for 1997, Data point Uzbekistan 1999: value for 2001

Declining output in combination with rising inequalities led to what Milanovic finds to be the greatest recorded peace-time increase in poverty. As such, measures of well-being deteriorated tremendously during the transition, especially at its early stage. The more, there is a strong correlation between the initial output collapse and the corresponding rises in inequality among the transition countries of CEE and the FSU. The countries of the FSU not only experienced more profound decreases in GDP but also steeper increases in inequality than the countries of the CEE. This further exacerbated the situation for the losers of the transition process in the FSU countries including the CARs and incurred transition costs which were relatively more shouldered by the lower

³³ The data for Kazakhstan vary the most with regard to different sources and income specifications. In 1996, another Gini Index based on net income and from another source records a value of 56.38 instead of our value of 35.4 which is based on data about expenditure. Though our value seems to be better suited to be compared with the precedent values, the similarity of the Kazakh to the Russian and also Kyrgyz transition implies that inequality may have increased there much more than is shown in the figure.

range of the income distribution.³⁴ This seems to have happened to a lesser extent in both China and Uzbekistan.

Table 9: Transition Costs – Change in Life Expectancy

Life Expectancy	Overall			Female			Male		
	1990	2002	Relative Change (in %)	1990	2002	Relative Change (in %)	1990	2002	Relative Change (in %)
Kazakhstan	68.3	61.7	-9.7	73.1	67.0	-8.3	63.8	56.6	-11.3
Kyrgyz Republic	68.3	65.2	-4.5	72.6	69.0	-4.0	64.2	61.0	-5.0
Tajikistan	69.3	66.6	-3.9	71.9	69.6	-3.2	66.8	63.7	-4.6
Turkmenistan	66.2	64.6	-2.4	69.7	68.4	-1.9	62.9	61.0	-3.0
Uzbekistan	69.2	67.0	-3.2	72.4	70.3	-2.9	66.1	63.8	-3.5
Russia	68.9	65.8	-4.5	74.3	72.2	-2.8	63.8	59.8	-6.3
China	68.9	70.7	2.6	70.5	72.4	2.7	67.4	69.0	2.4

Sources: WDI (World Development Indicators) 2004 and own calculations

This impressive drop in the overall standard of living can also be seen in the sharp deterioration of various social indicators including life expectancy which is often cited as one of the main negative implications of transition. As can be seen in Table 9, life expectancy fell in all five CARs as well as the Russian Federation, the most by 6.6 years or almost 10% of the original level in Kazakhstan among the total population. Though the expected longevity decreased for both genders, the male population had to bear greater transition costs in terms of lost human lifetime. The male populations lost on average between 1.9 (Turkmenistan) and 7.2 (Kazakhstan) expected life years, the female populations between 1.3 and 6.1 years. On the other hand, the Chinese transition prevented this large-scale cost to human life, the overall life expectancy grew by 1.8 years, its female population gaining absolutely and relatively more.³⁵ As such, the transition costs in terms of forgone welfare and life were huge among the CARs as well as in Russia and in sharp contrast to China.

³⁴ A first impression of the transition costs was already given by the simple indicator average per capita income at the beginning of this text. If the massive increase in inequality is furthermore taken account of, some resulting measures of well-being reveal even more dramatic drops in the standard of living in the transition countries. The decline was more profound for the CIS than the CEE countries and led to massive changes in the ranking of the transition countries in an international comparison of these measures of well-being (see Klasen and Grün, 2001 and 2003).

³⁵ The link between transition and the drop in life expectancy seems straightforward as rising mortality rates are highly associated with rising unemployment, poverty, and alcohol consumption and, therefore, psychological stress due to turbulent times (see Brainerd et al., 1998).

Central Asia's transition experience

Overall, the transition experience of the CARs much more resembles Russia's transition path and outcomes than the ones of China. Of course, in many respects this is not surprising given the fact that all countries evolved from the dissolution of the SU and faced similar initial economic conditions and shocks. But so far, Uzbekistan's more gradual reform path did not pay off in terms of China's growth miracle which is neither surprising given that China needed a lot of time to reap the benefits from its reform efforts which had already started in 1978.

Nonetheless, though there are similarities in the transition experience of the CARs, there are striking differences as well. The initial transition costs in terms of forlorn output were much lower in Uzbekistan. This led Spechler et al. to describe "The Uzbek paradox: progress without neo-liberal reform" (2004). Speaking of "The Uzbek Growth Puzzle" Zettelmeyer (1999) identifies a "combination of low initial industrialization, its cotton production, and its self-sufficiency in energy" (1999, p. 274) as the main reasons. On the other hand, Klugman (1998) points out institutional continuity as the helping factor in the Uzbek growth performance up to 1996. However, as we found out in Section 5.1, this picture has changed as Kazakhstan, a representative of a fast reformer in CA perspective, has overtaken Uzbekistan in terms of returning to its pre-transition output value which is highly attributable to the oil and gas industry. As such, while Uzbekistan succeeded in avoiding a similarly huge downturn as experienced in the other CARs, its slow reform record takes revenge as the country became the tail-light with regard to economic growth in recent years. But comparing this with other dimensions of transition costs, the more shallow development of economic output certainly helped to prevent the dramatic decreases in social indicators experienced in the other CARs save Turkmenistan, at least if the data is to be trusted. But how can this different transition experience in the CARs be explained and related to its neighbours, the Russian Federation and China?

As already noted in Chapter 2, the theoretical considerations of the output decline in the European and CA transition countries as well as the explanations for the difference between the Russian Federation and China strongly point in the direction of institutions as the driving force. Institutions, both economic and political ones, could have eased the transition to a market economy if they had been quickly adapted to the changed requirements. However, so far the CARs and actually all the CIS countries have at best only half-heartedly changed their institutional settings in order to comply with the change in the political and economic system. On the other hand and according to the New Comparative Economics brought about by Djankov et al. (2003) and described in Chapter 2, China managed to reduce the costs from dictatorship while it kept a strong hand on its economy and thus limiting the scope for the upcoming costs from disorder. This stands in sharp contrast to the Russian Federation where the social losses due to private expropriation skyrocketed and created a form of crony capitalism while reducing the social costs due to public expropriation a little more. With regard to the CARs, Kazakhstan, the Kyrgyz Republic and Tajikistan seem to have followed the Russian way

while Turkmenistan's and Uzbekistan's transition path bears greater resemblance to that of China. However, as we have seen, the outcomes of transition have been rather similar among the CARs in that they resemble Russia's experience and stand in sharp contrast to the Chinese success story. Nevertheless, some differences among the CARs were evident as well. These can be related to the differing degrees of disorder accruing from the retreat of the state in the political and economic landscape. We highlight this hypothesis for the CARs in that we describe the relative importance of initial conditions and reform efforts for their economic development. The greatest emphasis will lie on Kazakhstan and Uzbekistan, the biggest countries in the region and the stereotypes of the Russia-China divide. Another reason are the specific circumstances for Tajikistan as a war-torn country and Turkmenistan as a principally non-reformed economy which impede any comparison.

With regard to the empirical literature emphasising the relative role of initial conditions and reform efforts, initial conditions do not seem to be different enough in order to explain too much of the varying economic development. This especially holds with regard to the variables used in this respect. All five CARs are landlocked and remote from western markets. The more, the duration of the Soviet legacy was quite similar and the inherited economic structure highly stressed the production of primary goods. But with regard to the CARs, other initial conditions seem to be more important for the economic development and may have had their impact of the chosen reform paths. These are the different stage of development and the natural resource endowments.

With regard to the stage of development, China's economic success is often related to its low stage of industrialisation at the beginning of the reform process as the initial reform efforts referred to the large agrarian sector. According to the theory described in Chapter 2, agrarian countries are expected to be less affected by the phenomenon of disorganisation. Among the CARs, Uzbekistan's primary goods production in the Soviet system was to a much lesser extent specialised in the extraction of natural resources but also heavily reliant on agrarian products, especially cotton. And cotton did not only turn out to be a better initial condition than actually thought, but also constituted some diversification in the Uzbek economy. While e.g. in Kazakhstan, many people abandoned agrarian production given the rich rent-seeking opportunities in and around the resource-extracting industries, this possibility was much smaller or even non-existent in Uzbekistan. As such, the inherited economic structure was much more preserved in Uzbekistan than it was in Kazakhstan (see Chapter 5.5). This confirms the view that disorganisation arose to a lesser degree in Uzbekistan than in Kazakhstan. This also relates to the medium-term aspect of the theory which is based on structural change and the reallocation of resources. Furthermore, it highlights the fact that disorder was much higher in Kazakhstan as rent-seeking behaviour poses wasteful social losses.

In this whole context of the reallocation of resources in order to adapt the production structure to market needs, the different reform paths seem to be much more important than the initial conditions. This follows the direct impact of the reforms on the different institutional settings among the CARs, both in political and economic aspects. However, initial conditions had an impact on the chosen transition path as well. As such, we found some indication among the stylised facts of transition that less profound reform efforts

in Uzbekistan and especially in Turkmenistan prevented the reallocation process, necessary to guard a successful transition to a market-based economy, more than in the other CARs.³⁶ This indicates that Turkmenistan and Uzbekistan created an institutional setting which more resisted the economic pressures accruing from the transition to a market economy. But while this resistance somehow paid out in Uzbekistan in terms of less forlorn output, Turkmenistan's transition recession comes in second only after Tajikistan (see Figure 1). This demonstrates that initial conditions were important as well and that small liberalisation efforts have eased the economic hardship of transition at its initial phase. As such, the small reform efforts in Uzbekistan did not give rise to the phenomenon of disorder up to the extent seen in the other CARs. In comparison to China however, Uzbekistan and Turkmenistan seem to have experienced a higher degree of disorder due to higher political instability and worse governance.

On the other hand, deeper reforms in Kazakhstan, the Kyrgyz Republic and later also Tajikistan have increased and prolonged the transitional recession and led to tremendous social costs like the reduction in life expectancy. In comparison to Turkmenistan and Uzbekistan, we found indications that structural change and the reallocation of resources has taken place to a larger degree (see Chapters 5.2, 5.3 and 5.5). The more, the transition phenomena of trade implosion and disorganization seem to have had a bigger impact on these economies as indicated by the development of the extent and reorientation of trade (see Chapter 5.4). In addition, however, the half-heartedness of the reforms, as in the case of the Russian Federation, even aggravated the economic toughness of transition in comparison to the countries of CEE as it left the economies in some institutional vacuum. Especially in Kazakhstan, the sheer abundance of natural resources and the possible wealth accruing from their extractions, created rent-seeking behaviour and accordingly a high degree of disorder while the institutions are missing or are ineffective in controlling this socially costly behaviour. This may also be the case in Turkmenistan which "suffers" from a comparable abundance of natural resources.

However, the recent development in the world markets for primary goods, especially the sharp increases in oil and natural gas prices, have helped the resource-rich economies in terms of economic growth, making Kazakhstan the best-performing CAR in terms of output recovery to its pre-transition level. This positive trend will only be sustainable if it is accompanied by an improving institutional setting. However, recent political events in CA and the deterioration in this institutional framework shown in Section 5.6 point the opposite way.

³⁶ And this showed to be again different between these two countries. In Turkmenistan, capital formations remained high and probably rather inefficient as indicated by its minor attractiveness for FDI inflows despite its huge mineral wealth (see Chapter 5.4). On the other hand, labour force participation in Turkmenistan initially decreased and increased later on which may give a hint for some reallocation, while it remained very stable in Uzbekistan what somehow contradicts the expectation in order to reach a more efficient application of this factor of production (see Chapter 5.3). And in comparison to the other CARs, enrolment rates only slightly declined in Uzbekistan and even increased in Turkmenistan and thus human

Conclusion

The CARs constitute an interesting playground for economic research in the field of transition, its reform strategies and outcomes. Though their Soviet inheritance has been rather similar, they have followed very different transition paths. Being situated between China and Russia, their reform paths provide some helpful insights into the different economic development of these countries as was shown in this paper.

However, their remoteness does not only hamper their access to western markets, but also highly excludes their specificities from the ongoing economic research. The stylised facts of transition e.g. seemed to better describe the economic development in the other transition countries, but did not fit as smoothly for the CARs. The differences between Russia’s and China’s transition have been studied extensively, but do not describe the differences between the CARs very suitably. The same holds for the explanations of the different outcomes of transition in CEE and the CIS as well as the empirical literature. Though the CARs are part of the CIS, their location, cultural and religious background as well as their economic situation and development differs a lot from the “European” countries of the CIS. As such, much more research is needed to address the specificities of the CARs and to integrate these into the research of transition as well as development economics. The more, due to their economically and socially hard transition experiences, the CARs climbed down the development ladder in a formerly unprecedented way. As such, they became even more different from their CEE counterparts than at the beginning of the 1990ies. And after all, even the CARs do not constitute a heterogeneous regional entity as they differ a lot in their economic situation and development as well as their political background. While Kazakhstan aspires to be a “Eurasian” country, at the other end of the spectrum Turkmenistan is a politically almost closed entity.

capital accumulation remained extremely high in comparison to countries at a similar stage of development (see Chapter 5.3).

References

- Acemoglu, Daron, Johnson, Simon, Robinson, James, 2001: "The Colonial Origins of Comparative Development: An Empirical Investigation", *American Economic Review* 91:5, pp. 1369-1401
- Alesina, Alberto, Devleeschauwer, Arnaud, Easterly, William, Kurlat, Sergio, Wacziarg, Romain, 2002: "Fractionalization", *Journal of Economic Growth*, 8, pp. 155-194
- Anderson, Kathryn, Pomfret, Richard, 2001, "Economic Development Strategies in Central Asia Since 1991", *Asian Studies Review* Vol. 25, No. 2 (June 2001), pp. 185 - 200
- Anderson, Kathryn, Pomfret, Richard, 2005, "Spatial Inequality and Development in Central Asia", in: Kanbur, Ravi, Venables, Anthony J., Wan, Guanghua, (eds.), „Spatial Disparities in Human Development: Perspectives from Asia“
- Asian Development Bank (ADB), "Key Indicators 2004"
- Becker, Gary S., 1992: "A Treatise on the Family", Harvard University Press
- Berg, Andrew, Borenstein, Eduardo, Sahay, Ratna, Zettelmeyer, Jeromin, 1999: "The Evolution of Output in Transition Economies: Explaining the differences", IMF Working Paper 99/73
- Berg, Andrew, Sachs, Jeffrey, 1992: "Structural Adjustment and International Trade in Eastern Europe: The Case of Poland", *Economic Policy: A European Forum* 14, pp. 117-173
- Blanchard, Olivier, Dornbusch, Rüdiger, Krugman, Paul, Layard, Richard, Summers, Lawrence, 1991: "Reform in Eastern Europe", MIT Press, Cambridge
- Blanchard, O., Kremer, M., 1997: "Disorganisation", *Quarterly Journal of Economics*, 112, pp. 1091-1126
- Blanchard, O., Shleifer, A., 2000: "Federalism With and Without Political Centralisation. China Versus Russia", NBER Working Paper No. 7616, March 2000
- Boeri, Tito, 2000: "Structural Change, Welfare Systems, and Labour Reallocation: Lessons from the Transition of Formerly Planned Economies", Oxford University Press
- Boeri, Tito, Flinn, Christopher, 1999: "Returns to Mobility in the Transition to a Market Economy", *Journal of Comparative Economics*, 27:1, pp. 4-32
- Brainerd, Elizabeth, Kawachi, Ichiro, Kennedy, Bruce P., 1998: "The Role of Social Capital in the Russian Mortality Crisis," *World Development* Vol. 26 No. 11, November 1998, pp. 2029 - 2043
- Calvo, Guillermo, Coricelli, Fabrizio, 1992: "Stabilizing a Previously Centrally Planned Economy: Poland 1990, *Economic Policy: A European Forum* 14, pp. 213-226
- Calvo, Guillermo, Coricelli, Fabrizio, 1993: "Output Collapse in Eastern Europe: The Role of Credit", *IMF Staff Paper* 40: 1, pp.32-52
- Campos, Nauro F., Coricelli, Fabrizio, 2002: "Growth in Transition: What We Know, What We Don't, and What We Should", *Journal of Economic Literature* Vol. XL, pp. 793-836

- Campos, Nauro F., Dabusinskas, Aurelijus, 2002: "So Many Rocket Scientists, So Few Marketing Clerks: Determinants of Occupational Change During the Estonian Transition", CEPR Discussion Papers 3531
- Campos, Nauro F., Kinoshita, Yuko, 2002: "Foreign Direct Investment as Technology Transferred: Some Panel Evidence from the Transition Economies", , " CEPR Discussion Paper 3417
- Chenery, Hollis, 1960: "Patterns of Industrial Growth", American Economic Review 50:4, pp. 624-654
- De Melo, Martha, Denizer, Cevdet, Gelb, Alan, 1996: "From Plan to Market: Patterns of Transition", World Bank Economic Review 10:3, pp. 397-424
- De Melo, Martha, Denizer, Cevdet, Gelb, Alan, Tenev, S., 1997: "Circumstance and Choice: The Role of Initial Conditions and Policies in Transition Economies", World Bank Policy Research paper 1866
- Dewatripont, Mathias, Roland, Gerard, 1997: "Transition as a Process of Large Scale Institutional Change", in: Kreps, David, Wallis, Ken, ed.: "Advances in Economic Theory", Cambridge University Press, vol. II, pp. 240-278
- Djankov, Simeon, Glaeser, Edward, La Porta, Rafael, Lopez-de-Silanes, Florencio, Shleifer, Andrei, 2003: "The New Comparative Economics", World Bank Policy Research Paper 3054, May 2003
- Flemming, J.S., Micklewright, John, 2000: "Income Distribution, Economic Systems and Transition", in: Atkinson, A.B., Bourguignon, F., (ed.), Handbook of Income Distribution, Volume 1", Elsevier Science B.V., Amsterdam, pp. 843-918
- Freedom House, various years: "Nations in Transit"
- Frensch, Richard, Nowak, Robert, 2003, "Progress in Systemic Reforms in the CIS", Economic Survey of Europe 2003, 1, Vereinte Nationen, Genf, April 2003, pp. 123-147
- Hare, Paul G., 2001: "Institutional Change and Economic Performance in the Transition Economies", Economic Survey of Europe No. 2/2001, UNECE, Geneva, Chapter 3, pp. 77 - 94
- Havrylyshyn, Oleh, Wolf, Thomas, Berengaut, Julian, Castello-Branco, Marta, Van Rooden, Ron, Mercer-Blackman, Valerie, 1999: "Growth Experience in Transition Countries: 1990-1998", IMF Occasional Paper 184
- Heybey, Berta, Murrell, Peter, 1999: "The Relationship between Economic Growth and the Speed of Liberalization during Transition", Journal of Policy Reform, Vol. 3, Issue 2, 1999
- Human Development Reports (HDR), various years, United Nations Development Programme (UNDP), Oxford University Press
- International Monetary Fund (IMF), 2000, "World Economic Outlook, Focus on Transition Countries", October 2000
- Kalyuzhnova, Y., 1998: "The Kazakstani Economy: Independence and Transition", Macmillan, Basingstoke/London
- Kaufmann, Daniel, Kraay, Aart, Zoido-Lobaton, Pablo: Governance Matters. World Bank Policy Research Working Paper Nr. 2196, October 1999
- Klasen, Stephan, Grün, Carola, 2001: "Growth, Inequality, and Well-Being in Transition Countries", Economics of Transition 9, pp. 359-394

- Klasen, Stephan, Grün, Carola, 2003: "Growth, Inequality, and Well-Being: Intertemporal and Global Comparisons", *CESifo Economic Studies* 49, pp. 617-659
- Klugman, Jeni, 1998: "Uzbekistan: Institutional Continuity helps Performance", *Moct-Most* 8: 63-82, 1998
- Marangos, John, 2002: "Alternative Methods of Institutional Development for Transition Economies", *Journal of Institutional and Theoretical Economics JITE* 158, pp. 483-513
- Milanovic, Branko, 1998: "Income, Inequality, and Poverty during Transition from Planned to Market Economy", The World Bank, Washington, D.C.
- Milanovic, Branko, 1999: "Explaining The Increase in Inequality during Transition", *Economics of Transition* Vol. 7 (2) 1999, pp. 299-341
- Murphy, Kevin, Shleifer, Andrej, Vishny, Robert: *The Transition to a Market Economy: Pitfalls of Partial Reform*, *Quarterly Journal of Economics*, Vol. 107, 1992, S. 889-906
- North, D.C., 1990: "Institutions, Institutional Change and Economic Performance", Cambridge University Press, Cambridge
- North, D.C., 1997: "WIDER Annual Lectures 1: The Contribution of the New Institutional Economics to an Understanding of the Transition Problem", United Nations University, Helsinki
- Olcott, M.B., 2002: "Kazakhstan: A Faint-hearted Democracy", Carnegie Endowment for International Peace, Washington, D.C.
- Pomfret, Richard, 2000: "The Uzbek Model of Economic Development 1991-1999", *Economics of Transition*, 8(3), pp. 733-748
- Pomfret, Richard, 2001: "Reform Paths in Central Asian Economies", in: Cornia, G.A., Popov, V.M., 2001: *Transition and Institutions*, Oxford University Press
- Pomfret, Richard, 2003: "Central Asia since 1991: The experience of the new independent states", *OECD Working Paper* No. 212, July 2003
- Qian, Y., Xu, Ch., 1993: "Why Chinas Economic Reforms differ: The M-form hierarchy and entry-expansian of the non-state sector", *Economics of Transition*, Vol. 1(2), 1993, pp.135-170
- Quaisser, Wolfgang, 1996, "A comparison of Economic Transformation in Eastern Europe and East Asia", *Economics*, Vol. 53, 1996, Institute for Scientific Co-operation, Tübingen
- Roland, G., 2000: "Transition and Economics: Politics, Markets, And Firms", MIT Press, Cambridge
- Romer, David, 2000: "Advanced Macroeconomics", 2nd Edition, McGraw-Hill, New York
- Sachs, J., Woo, W.: "Reform in China and Russia", *Economic Policy*, April 1994, pp. 101-145
- Spechler, Martin, 2000: "Hunting the Central Asian Tiger", *Comparative Economic Studies*, 42(3), pp. 101-120
- Spechler, Martin, Bektemirov, Kumatbay, Chepel, Sergei, Suvankulov, Farrukh, 2004: "The Uzbek paradox: progress without neo-liberal reform", in: Ofer, G., Pomfret, R.), (ed.), "The Economic Prospects of the CIS: Sources of Long-Term Growth", Edward Elgar Publishing

- Stiglitz, Joseph E., 1999: "Whither Reform? Ten Years of the Transition", Paper prepared for the Annual World Bank Conference on Development Economics, Washington, D.C., April 28-30, 1999
- Transition Reports, various years, European Bank for Reconstruction and Development (EBRD), London
- Weder, Beatrice, 2001: "Institutional Reform in Transition Economies: How Far Have They Come?", IMF Working Paper 01/114, August 2001
- World Development Indicators (WDI) 2004, The World Bank, Washington, D.C.
- Zettelmeyer, Jeromin, 1999, "The Uzbek Growth Puzzle", IMF Staff Papers Vol. 46, No. 3 (September/December 1999)