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**Uzbekistan:  
Welfare Impact of Slow Transition**

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# **UZBEKISTAN: WELFARE IMPACT OF SLOW TRANSITION**

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# CONTENTS

LIST OF TABLES	iv
ABSTRACT	v
UZBEKISTAN: WELFARE IMPACT OF SLOW TRANSITION	1
I INTRODUCTION	2
1. Development strategy and its recent changes	2
2. A brief historical account of the welfare situation	5
II CHANGES OF WELFARE INDICATORS	6
1. Economic indicators	6
2. Capability-based indicators	8
2.1 Health	8
2.2 Education	10
2.3 Nutrition	12
3. Demographic-based indicators	13
4. Environment-based indicators	14
5. Assessment of changes	17
III MACRO AND MICRO-ECONOMIC IMPACT ON WELFARE CHANGES	18
1. Monetary, fiscal, and price liberalization policies	19
2. Privatization and enterprise reform	20
3. Foreign trade and exchange rate policies	22
4. Conclusions	23
IV IMPACT OF SOCIAL POLICIES ON WELFARE CHANGES	24
1. Taxation	24
2. Public expenditure	26
3. Structural policies	28
V RESPONSES TO SHOCK OR GRADUAL CHANGES	29
VI CONCLUSIONS	31
REFERENCES	33
ANNEX: TURKMENISTAN: NON-REFORM IN A RESOURCE-RICH ECONOMY	36

## **LIST OF TABLES**

Table 1	Progress in institutional reform	39
Table 2	General government spending, 1992-95	40
Table 3	Output and inflation performance	41
Table 4	Socioeconomic indicators for the Central Asian republics	42

## ABSTRACT

Uzbekistan is typically seen as one of the slowest reformers among the countries in transition from central planning to a market-oriented economy. This paper evaluates the welfare impact of gradual transition in Uzbekistan, asking whether it has avoided the short-term disruption associated with more rapid transition while remaining on course for long-term economic success. By the usual output criteria Uzbekistan has performed well relative to other former Soviet republics. To some extent this reflects favourable initial conditions and absence of military conflicts, but the lack of radical change contributed to the limited output decline. Whether slow reform will thwart long-term economic success is more problematic, but Uzbekistan has undertaken some reforms and these are generally in the desirable direction - unlike its neighbour Turkmenistan which has tried to avoid reforms, at least up until 1996, and is in a far less promising situation. The most interesting aspect of Uzbekistan's transition strategy has been the explicit concern with the welfare impact on those members of society least able to deal with the shift to a market-oriented economy. The paper examines the labour market, social expenditure and institutional reform strategies adopted to protect disadvantaged individuals. Although some of these measures have been ineffective (e.g. unemployment assistance) and others contain long-term dangers (e.g. the generous pension arrangements), together the social protection measures have softened the impact of transition on disadvantaged groups.



## UZBEKISTAN: WELFARE IMPACT OF SLOW TRANSITION

The aim of this paper is to evaluate the economic and social impact of the transition from central planning to a market-oriented economy in Uzbekistan. The Uzbekistan government has pursued a policy of gradual reform, and, among transition economies, Uzbekistan is typically seen as one of the slowest reformers. The World Bank, in its ranking by cumulative liberalization, places Uzbekistan in the bottom of the four groups, together with Ukraine, Belarus, Turkmenistan and the war-torn economies of Tajikistan and Azerbaijan. Among Asian transition economies, Uzbekistan has liberalized its economy less than China and Vietnam, which have been reforming over a longer period, and less than Mongolia, the Kyrgyz Republic and Kazakhstan, which have undertaken faster reforms during the 1990s (World Bank, 1996, 14; de Melo et al., 1996). Other indices prepared by the European Bank for Reconstruction and Development and by the Economist Intelligence Unit present a similar picture (Table 1).

Uzbekistan provides the only reasonable test of whether gradual reform of a Soviet centrally planned economy could avoid the short-term social and economic disruption associated with Big Bang strategies, while remaining on course for long-term economic success. Other slow reformers have been affected by regional tensions or suffered from blatant economic mismanagement. This paper will analyze whether Uzbekistan has suffered less economic collapse than more rapidly liberalized transition economies and avoided serious decline in social indicators.

Apart from the conceptual problems associated with measuring well-being, the exercise is more difficult for Uzbekistan than for most established market economies or for many transition economies due to the paucity of economic and social statistics. The government retains a near monopoly over data collection and is selective about what data are released. International agencies typically publish less positive figures than those in official Uzbek publications, but their figures are based on government-provided data with little opportunity for independent cross-checks of the raw data.

The first section of the paper provides an overview of Uzbekistan's development strategy and of the welfare situation in Uzbekistan prior to the December 1991 dissolution of the USSR. Section II discusses the changes in welfare indicators since independence. The third and fourth sections analyze the connections between Uzbekistan's economic and social policies and the welfare changes. Section V discusses responses that have been made to policy changes or which might be expected, focussing on possible indirect or long-term

consequences not picked up in sections II-IV. The final section presents some conclusions.

## I INTRODUCTION

### 1. Development strategy and its recent changes

Uzbekistan's development strategy and economic reforms were primarily determined in Moscow until 1992. Uzbekistan was not one of the Soviet republics which experimented with local reforms during the Gorbachev era, and even after it became independent in late 1991 the country reacted to Russian initiatives (e.g. following the Russian Federation's January 1992 price reform) rather than adopting proactive reforms. The government pursued a gradual reform strategy, seeking to minimize the economic and social impact of the dramatic changes associated with the dissolution of the Soviet Union.<sup>1</sup>

The Uzbekistan government recognized that the pre-independence economic strategy was unsustainable. The cotton monoculture established during the Soviet era led to deterioration in the natural resource base, highlighted by the dramatic shrinking of the Aral Sea and salinization of large tracts of land.<sup>2</sup> Transfers from the central Soviet budget declined in 1991 and, although some subsidization from Russia continued within the ruble zone, the amounts were dwindling.<sup>3</sup> In Autumn 1993 the situation within the ruble zone became

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<sup>1</sup> Economic policies and performance during the first two post-independence years are analyzed in ESCAP (1994, 95-103) and, with more background material, in Pomfret (1995).

<sup>2</sup> Cotton accounts for 30% of GDP and over 40% of employment (IMF, 1996, 1). Uzbekistan suffered from a small terms of trade deterioration following the shift from administered to world prices on intra-USSR/CIS trade, estimated by Tarr (1994) at -3%. The negative effect was reversed by increases in oil production which reduced crude oil imports from 9 million tons in 1990 to 0.15 million tons in 1995 (IMF, 1996, 8). Uzbekistan's cotton dependence was a greater blessing in the short-term than the abundant energy resources of Turkmenistan or Kazakhstan, which experienced difficulties in shipping and in collecting payment. Connolly and Vatnick (1994, 200) report that in 1992-93 stronger commodity prices and Uzbekistan's ability to diversify export markets 'led to modest improvements in the external environment for trade'.

<sup>3</sup> Griffin (1996a, 19) quotes World Bank estimates of transfers having peaked at 19% of the Uzbek republic's GDP in the years before independence. All such measurements must be treated with caution because substantial intra-republic transactions in the USSR were hidden in the accounts of giant all-Union enterprises. Pomfret (1995, 72) uses the 14% resource gap in World Bank national accounts estimates as a measure of net transfers to Uzbekistan in 1990. Griffin (1996a, 20)

untenable and Uzbekistan issued a provisional national currency in November 1993, followed by a permanent currency in July 1994.

Creation of the national currency was followed by macroeconomic stabilization in late 1994. Uzbekistan has been one of the most successful former Soviet republics in controlling the budget deficit; Uzbekistan's deficit, equal to 18.8% of GDP, was above the average of those republics in 1992, but below the average in 1995 at 3.4% of GDP (Table 2).<sup>4</sup> Most former Soviet republics have suffered a drastic revenue decline due to the erosion of former tax bases, revenue-losing tax reform and inadequate institutional responses, which resulted in a reduced tax base and poor collection. Uzbekistan, together with other slow reformers, was sheltered from some of these changes and additionally benefited from continued ability to raise revenues from the cotton and minerals sectors.<sup>5</sup> Thus, despite the paucity of external financing and long-term unsustainability of the inflation tax, Uzbekistan was still maintaining government expenditures at over two fifths of GDP in 1994 and 1995. Uzbekistan has used this ongoing public control over resources to maintain social spending and (unlike other slow reformers such as Ukraine) has increased spending on education and health rather than channelling resources into subsidies for enterprises and consumers (the 'social protection' category in Table 2).

After the exit from the ruble zone, Uzbekistan adopted a more assertive political and economic nationalism in 1994-95. Attempts to shift agricultural output from cotton to grain were intensified, but the 1995 grain harvest was disappointing. In 1995-96 the government shifted to a more regional emphasis, promoting Central Asian union, although the Turkestan concept received a cool reception from Kazakstan, the Kyrgyz Republic and, especially, Turkmenistan.<sup>6</sup>

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argues that Uzbekistan gained \$700 million per annum from being able to retain earnings from its gold mines.

<sup>4</sup> The deficit in the consolidated budget (including net lending, extrabudgetary funds, foreign currency transactions, etc.) is higher than that in the official budget. The definitions of government revenues and expenditures in Table 2 are not consistent due to continuous shifting of items into off-budget accounts.

<sup>5</sup> By contrast, Turkmenistan, which benefitted from a highly favourable initial situation (a *surplus* in the consolidated government budget equal to 13.2% of GDP in 1992), suffered severe revenue losses due to non-payment for gas exports. As a counterpart, Ukraine recorded substantial foreign financing of its deficit due to the accumulation of credits, owed to Turkmenistan for gas exports.

<sup>6</sup> The USSR initially recognized the region's cultural unity by creating the Turkestan Soviet Socialist Republic, but between 1924 and 1936 the Turkestan SSR was subdivided into five Soviet republics, which formed the basis for the Central Asian

Other regional initiatives such as proposals for a CIS customs union or Uzbekistan's membership in the Economic Cooperation Organization (ECO) have had little impact (Pomfret, 1997a).

Uzbekistan has welcomed foreign investors and gradually liberalized its trade regime, although at a slower pace than Kazakstan or the Kyrgyz Republic. The liberal policy towards imports is, however, nullified by strict foreign exchange controls, which also reduce the incentive to export. The response of foreign investors was limited in 1993-94, but increased in 1995-96; direct foreign investment accounted for 1% of total investment in 1994 and 17% in 1995 (UNDP, 1996, 26), and the State Committee for Forecasting and Statistics (SCFS, 1996) reports 2397 joint ventures in existence by mid-1996. These inflows are dominated by a few large investors: Daewoo, BAT, Newmont Mining, Mercedes Benz and Lonrho.

The slow pace of reform and concerns over human rights issues contributed to difficult relations between Uzbekistan and the IMF, World Bank, European Union and USA in the post-independence period. The political relations eased in 1996, culminating in President Karimov's meetings with European Union leaders and with President Clinton in June 1996. The sources of potential discord have been papered over by the western powers due to their perception of Uzbekistan's stability and its role as a bulwark against Iran from the south, Islamic fundamentalism in Central Asia, and Russian expansion from the north. For its part, the Uzbekistan government appeared to be adopting a more purposeful economic reform strategy as relations with the western powers improved.<sup>7</sup>

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states which became independent in 1991. According to Rashid (1994, 32) the people were reluctant to accept the division into separate ethnic groups, but there is a distinction between the Uzbeks who have been sedentary for centuries and the Kazaks, Kyrgyz and Turkmen who were nomadic up until Soviet collectivization. Tajikistan differs from the four Turkic-speaking Central Asian republics in having a Persian language.

<sup>7</sup> President Karimov's support for the USA became pronounced in 1996, when he attacked Iranian leader Rafsanjani at the May 1996 ECO summit (on the eve of Karimov's visit to Washington) and when Uzbekistan was one of only three countries (with Israel and the USA) to vote against the November 1996 UN motion condemning US sanctions against Cuba. Whether announcements of more far-reaching economic reforms represented genuine proposals or are merely intended to placate western countries and potential investors remained unclear; the Economist Intelligence Unit, for example, took the view in its 1996 quarterly reports that the announcements were cosmetic.

In the second half of 1996, however, relations with the international financial institutions deteriorated once again. A poor harvest and disappointing export revenues from cotton led the government to start financing expenditures by money creation. This was not apparent at the time of the IMF Country Report (prepared in the summer), but had become clear by September/October when the unofficial exchange rate began to diverge sharply from the official rate<sup>8</sup> and when a surge in the reported money supply broke the terms of the IMF's conditional loan. At the same time the deteriorating balance of payments situation was dealt with by tightening exchange controls, which contravened an agreement with the IMF to liberalize the foreign exchange regime. The break with the IMF in 1996/7 was important because the government had made good relations with the IMF a central theme in its pitch for foreign investors.<sup>9</sup>

## 2. A brief historical account of the welfare situation

Uzbekistan was one of the poorer Soviet republics and at the time of independence was probably a lower middle income country on the World Bank scale. As with all Soviet republics, Uzbekistan's social indicators were higher than those of most developing countries with similar income levels. In particular there was widespread access to health and education, with almost universal literacy and high life expectancy. Unemployment was non-existent and an effective social security system provided a safety net against extreme poverty.<sup>10</sup>

The Soviet economy was, however, running into ever more severe problems from the 1970s onwards, which made it increasingly difficult to maintain living standards. The environmental problems associated with Soviet planning were especially acute in Uzbekistan, as the cotton monoculture placed exorbitant demands on water resources. Apart from the economic consequences, the over-reliance on irrigation led directly to health problems with high rates of

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<sup>8</sup> The official rate was devalued from 38/\$ at the end of July to 56/\$ by January 1997; over the same period the black market rate fell from 51 to 125. The spread widened from 34% to over 100% in less than six months.

<sup>9</sup> The World Bank also reacted to the emerging macroeconomic imbalance, postponing a substantial loan for enterprise reform. Kaser (1997, 41) ascribes the *volte face* by the IMF and World Bank to a 'panic reaction' in October 1996 by the head of the Central Bank, a former planner who responded to the current account deficit by imposing stringent exchange controls.

<sup>10</sup> Nevertheless, the percentage of 'non-employed' in the working population was above the USSR average, and the proportion of people below the official minimum consumption level was higher in Uzbekistan than in the Slav republics.

morbidity and gynecological ailments being reported especially in the Karakalpak region bordering the Aral Sea.<sup>11</sup>

Social tensions were becoming more open during the 1980s. When Mikhail Gorbachev initiated his anti-corruption drive, the Uzbekistan leadership was his first target; although the culprits were treated as local heroes for channeling Soviet funds into the republic by overinvoicing cotton shipments, they also benefitted privately, creating a wealthy elite. Crime was low during the Soviet era, but the methods of local law enforcers were crude with frequent reports of torture and harsh treatment (Rumer, 1989, 152). Ethnic tensions exploded in killings of minorities and in border conflicts with the Kyrgyz republic; despite the overtly ethnic nature of these conflicts, they were also driven by economic pressures, especially access to land in the densely populated Fergana Valley.<sup>12</sup>

## II CHANGES OF WELFARE INDICATORS

### 1. Economic indicators

Uzbekistan had the smallest decline in GDP over the period 1990-95 of any former Soviet republic. According to IMF estimates, Uzbekistan's 1995 GDP was 83% of its 1991 GDP (Table 3a).<sup>13</sup> Uzbekistan also had relative success in avoiding hyperinflation, never recording a four-digit annual increase in the consumer price index, although by 1995 the Kyrgyz Republic and Kazakhstan had made more progress in reducing inflation (Table 3c).

Official statistics are subject to large margins of error, or doubt. Production figures often appear to be inflated. Estimates of the disappointing 1995 grain harvest were continuously downsized during 1996, revealing the first official

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<sup>11</sup> The environmental effects of drying up of the Aral Sea are discussed in Pomfret (1995, 29-30). Apart from the direct impact on health, the shrinking of the inland sea has induced significant climatic change over large parts of Central Asia.

<sup>12</sup> The major clashes were between Uzbeks and Meskhetian Turks in 1989 and between Uzbeks and Kyrgyz in 1990. The 1990 conflict, centred on Osh, the second-largest city in Kyrgyz republic, almost led to war between the two Soviet republics.

<sup>13</sup> The UNDP (1996, 69) reports Uzbekistan's 1995 GDP as 82% of its 1990 GDP, compared to 45% for Kazakhstan and 50% for the Kyrgyz Republic. World Bank data show a similar pattern. In their study of 26 transition economies from Europe, the former USSR and Mongolia, de Melo et al. (1996, 405) compare the lowest GDP figure from the 1990s with GDP in 1989 and Uzbekistan has the highest ratio with a minimum GDP equal to 88% of that in 1989; ratios for other Central Asian republics are Turkmenistan 62%, Kyrgyz Republic 53%, Kazakhstan 49% and Tajikistan 30%.

reports to have been gross overestimates. Gold production is a state secret, officially reported only as being in the 70-80 tonnes per year range, although foreign geologists doubt whether an annual output of 60 tonnes has been achieved. Monthly inflation figures vary considerably and the methodology is unclear. A rough cross-check on inflation is provided by the exchange rate, which depreciated from 7 sum/US\$ when the sum was introduced in July 1994 to 35 in December 1995, when the black market rate was reported by the Economist Intelligence Unit to be 47 - and 56 in January 1997 when the black market rate reached 125.<sup>14</sup>

Countering official tendencies to overstate production, output in the privatized sector may be understated as statistical coverage is less complete in that sector and people may seek to hide their economic success from the state for tax reasons. Quality changes and index-number issues also make it probable that GDP measures overstate the decline in output in economies in transition from central planning to more market-oriented economies. The decline in welfare is even less than the decline in GDP, because the shift to a market economy permits gains from trade even without increased output.<sup>15</sup>

Many of these statistical problems apply to all transition economies, so that comparisons between Uzbekistan and its Central Asian neighbours are more firmly based than attempts to compare Uzbekistan's GDP or inflation rate with established market economies. There are, however, substantial differences in the availability and reliability of data among the Central Asian republics. The Kyrgyz Republic and Kazakhstan have been more open with data and their governments have been less pervasively intrusive in managing macroeconomic data than the government of Uzbekistan, while data from Tajikistan and Turkmenistan are less available and less reliable than data from Uzbekistan. Nevertheless, the general picture of Uzbekistan's relative success in limiting GDP decline and open inflation is apparent from Table 3.

All of the evidence from the Soviet era suggests a high degree of income equality, although a privileged class with special access to some services and to the perquisites of power clearly existed. Rural-urban and regional differences in income were also apparent, e.g. the Karakalpak autonomous republic lagged the rest of Uzbekistan. On average Slav households were more prosperous than households of Central Asian origin. Since independence, inequality of status

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<sup>14</sup> While this may not look like a great record of macroeconomic stability, it is far superior to that of Turkmenistan, whose national currency began life in November 1993 at 2 manat/US\$ and by December 1995 was 2100/\$ and falling (to around 4000/\$ by mid-1996).

<sup>15</sup> Pomfret (1995, 171-6) provides an introduction to these measurement issues.

has been transformed into greater inequality of income and wealth through the alienation of state assets and possibly increased opportunities for corruption. Rural-urban and regional inequalities remain, but ethnic differences may have diminished in importance due to Slavic emigration. The absence of any system for regular collection of data on household income and expenditure makes it impossible to make more precise statements about the degree of income inequality or the incidence of poverty. The Living Standards Measurement Survey (LSMS) project initiated in April 1995 by Goskomprognostat in conjunction with the World Bank will give baseline data (from a sample of 20,000 households) when (or if) it is eventually completed, but will not permit identification of distributional changes during the first half-decade since independence.

Poverty among old people is limited by a fairly generous pension system which has been maintained since independence. The universal entitlements for men over sixty and women over fifty-five involve a serious budgetary burden, which was exacerbated by an unsustainable indexation policy. In 1993 pension payments amounted to 11.4% of GDP (ILO, 1996, 155-7), but after a change in indexation rules expenditure almost halved in 1994.

## **2. Capability-based indicators**

### *2.1 Health*

Life expectancy has risen slightly during the 1990s and infant mortality rates have continued to decline sharply from previous high levels (Table 4). Apart from these rough indicators there is little information about trends in health, with only anecdotal evidence on morbidity. Health expenditure fell from 5.9% of GDP in 1991 to 4.7% in 1993, which was still high compared to other CIS countries (e.g. 3% in Russia and 2.4% in Kazakstan). Some changes in health delivery have occurred with the legalizing of private activities, but their extent is hard to assess.<sup>16</sup> Measures of inputs into healthcare are available but difficult to interpret.

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<sup>16</sup> Klugman and Schieber (1996) report Uzbekistan's public health expenditures to have been 4.0% of GDP in 1996; comparable figures are 2.0% for Kazakstan, 3.2% for the Kyrgyz Republic, 6.4% for Tajikistan and 1.2% for Turkmenistan. Private hospitals exist and doctors have left the state sector to open private practices, but the degree of privatization appears to be limited. A more common phenomenon appears to be that of state-sector facilities charging for supposedly free services. The mid-1993 survey reported by Lubin (1995) found that surgery in a good clinic cost an average of 50,000 rubles, which was over a tenth of the average annual salary in Uzbekistan.

Infant mortality fell from 32 per thousand live births in 1993 to 28 in 1994 and 21 in 1995. The UNDP (1996, 27 & 60) ascribes this to fewer births, longer spacing between births and a lower birth rate among women over thirty-five, which in turn are related to improved maternity services and a dramatic increase in the use of contraception (from 12% of women of child-bearing age in 1990 to 21% in 1991, 33% in 1993 and 38% in 1995).<sup>17</sup>

The Soviet system provided widely accessible healthcare, but was inefficient due to a bias towards intensive use of physical and human capital. Since independence there has been a shift from in-patient to out-patient activities, which has reduced costs and improved efficiency but the net impact on the quality of healthcare is difficult to assess. Between 1990 and 1994 the number of hospital beds fell by 40,000 (16%) and average length of stay in hospital was reduced by a third, while daycare facilities were expanded. The UNDP (1996, 59) reports that by the end of 1995 a quarter of all patients who would have been treated in hospitals in 1990 were being treated at day clinics or at home.

Hetland and Haycock (1996, 120) observe that admissions to medical school were cut by half after independence. The UNDP, however, puts this in the perspective of more efficient delivery of healthcare, observing that although admissions to higher education institutions dropped from 4800 in 1991 to 1500 in 1995, admissions to secondary medical educational establishments increased by 2000 (UNDP, 1996, 63). The critical change is towards training doctors for general practice and other healthcare providers at varying skill levels, rather than focussing on training specialists.

In all of this, there is no evidence of whether the change in inputs by substituting for physical and human capital has had a positive or a negative impact on national health.

Despite the official shift in emphasis from cure to prevention, routine child and adult immunization declined after independence. Poliomyelitis vaccine coverage fell from 89% in 1992 to 46% in 1993, when 117 cases were reported of which 94 were children under two. A similar pattern applied to diphtheria, with 37 deaths in 1994. The government responded to these developments with National Immunization Days in October and November 1994, when 98% of children under four were reached, with financial support from external aid donors (Hatland and Haycock, 1996, 124).

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<sup>17</sup> Becker, Hemley and Urzhumova (1996) argue that a similar, but less dramatic, decline in infant mortality rates in Kazakstan reflects changes in reporting practices (ie. failure to report births and deaths of infants in the first weeks of life) and by their recalculations Kazakstan's infant mortality might even have increased in the 1990s.

The shift from central planning to a market economy should improve health by increasing the price of some 'bads'. Undervaluation of water and clean air led to serious pollution in the Soviet era with negative consequences for health. The specific problems associated with the desiccation of the Aral Sea have already been alluded to. Preventable diseases such as diarrhoea and hepatitis are especially prevalent in rural areas with poor and declining water quality. Respiratory diseases and asthma are associated with increasing air pollution. Charges for commercial water use and taxes on industrial polluters and limits on emissions will have a direct impact on health. Higher prices for alcohol and tobacco have reduced consumption of these drugs; lower consumption and improved quality can be expected to have beneficial health effects.<sup>18</sup> On the other hand, if infrastructure spending declines over the transition, then this could adversely affect health; there have been repeated scares in the 1990s over cholera, a waterborne disease associated with poor sanitation.

## *2.2 Education*

The government has maintained a high priority for education since independence with over a quarter of the consolidated government budget being spent on education. The share of public expenditure on education dropped from 11% of GDP in 1991 to just below 9% in 1994, but this remains high by international standards. The distinctive feature of the structure of the education budget is the large share of funds allocated to student subsidies (30-50%, depending on the data source); students and parents make no contribution to the cost of education beyond food and basic school supplies. This feature has helped to ensure that a basic education is open to all, although it appears certain that more targeted assistance will be necessary to alleviate fiscal pressures. The literacy rate in Uzbekistan (over 97%) is very high for a country of its income level, reflecting the emphasis on education in the USSR with ten grades of compulsory schooling. The 1992 educational reform reduced the number of compulsory grades to nine, but also increased the entry age for primary school from six to seven so that the minimum school-leaving age is unchanged.

Primary education continues to be universal, but in the mid-1990s it apparently lasted three years for some pupils and four for others, and some entrants were better prepared than others (Tibi, 1996, 96-8). Raising the primary school entry age disadvantages children not attending kindergarten, especially as kindergartens began to teach basic literacy skills to six-year-olds. Kindergarten capacity in 1993 was 45% of 4-6 year-olds in urban areas and 21% in rural areas. The shortage was exacerbated in 1994 by the closure of 917 preschool

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<sup>18</sup> On the other hand, a cigarette project involving BAT is one of the largest foreign investments in Uzbekistan, and the arrival of multinational cigarette companies will lead to more sophisticated cigarette marketing.

centres, mostly due to the privatization of sponsoring enterprises which then withdrew funding; meanwhile, only 356 new state preschool centres were opened.

Middle schools cover five grades (11-15 year-olds since 1992) and the number of graduates appears to have remained steady around 96-7% of the age group. There are several types of post-primary institutions, and the trend since 1992 has been a shift away from standard comprehensive schools to vocational education and to lycees with more advanced teaching or other specialized schools.<sup>19</sup> This trend, together with the legalization of private schools in the 1992 educational reform, is likely to accentuate variations in the quality of secondary education.

Quality variations are made more likely by the generally recognized teacher shortage. Although 4300 new teachers graduated in 1992 and 4700 in 1993, this is believed to have not kept pace with the rate of dropouts from teaching. Market-oriented reforms opened up new opportunities for people with some skills (e.g. foreign language teachers), and state salaries provided poor incentive to remain in teaching.<sup>20</sup> Increased emphasis on the use of national languages has been associated with many math and technical teachers, who were predominantly Slavs, deciding to emigrate from Uzbekistan.<sup>21</sup>

Physical facilities in grade schools had shortcomings in the Soviet era, but the situation is deteriorating, with virtually no funds having been allocated for school repairs and maintenance between independence and the time of the ILO mission in April 1995 (Tibi, 1996, 100). Less than a third of schools have a central water supply system, and in rural areas schools have earth floors; some schools even lack facilities for boiling drinking water. Since independence most schools have discontinued provision of free school lunches due to insufficient funds. Textbook supplies have been disrupted by the need to pay in hard

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<sup>19</sup> Tibi (1996, 99) reports that admissions into standard comprehensive schools declined from 78% of basic education graduates in 1990 to 73% in 1993 while admissions into vocational schools increased from 14 to 17%.

<sup>20</sup> Tibi (1996, 111) estimates that the April 1995 monthly salary of 300-400 sums (about US\$10) was enough to cover living expenses for ten days. Teachers also receive subsidies from the state (ie. free housing and a 50% discount on electricity, gas, water and transport). A distinctive feature of Uzbekistan's school system is that more is spent on supporting pupils' living expenses than on teachers.

<sup>21</sup> There are seven languages of instruction in comprehensive schools, with 7716 schools (containing 81% of pupils) using Uzbek, 1000 using Russian (10% of pupils), and the remainder using Kazak, Tajik, Karakalpak, Turkmen and Kyrgyz (from a 1994 Ministry of Public Education report, quoted in Tibi, 1996, 105).

currency for books imported from elsewhere in the CIS; the textbook shortage has been exacerbated by the multiple languages of instruction, the government's reluctance for ideological reasons to continue using some Soviet texts, and the replacement of the cyrillic alphabet by the latin alphabet in 1996.

Uzbekistan has fifty-five higher education institutions, in which 272,000 students were enrolled in 1993. This represents a 20% drop from the 1990 enrollment of 341,000. It is unclear whether the declining numbers are mainly due to reduced supply of places or to lower demand reflecting poor employment expectations and emigration of qualified teenagers.<sup>22</sup>

### 2.3 Nutrition

The traditional Uzbek diet has been high in animal fat. During the Soviet era caloric intake levels in Uzbekistan were well below the USSR average, and varied considerably within the republic; in 1991 average meat consumption was 81 kg. in Tashkent and 20-23 kg. in the Fergana Valley, while milk consumption varied from 376 kg. in Tashkent to 144 kg. in Andizhan (Craumer, 1995, 31). The same source reports that the poorest households received 60% of their caloric intake from bread alone.

Nutritional deficiencies, specifically lack of micronutrients such as iron and vitamin A, are major causes of anemia, which is exceptionally prevalent in Uzbekistan with high incidence among women of childbearing age and among children under five.<sup>23</sup> Anemia contributes to low birthweight and excessive bleeding during delivery (increasing infant mortality) and aggravates acute respiratory diseases. Since independence, maternity wards have been encouraging breastfeeding, which ameliorates the problems for babies.

Food consumption since independence is difficult to document. Declining incomes have shifted food consumption patterns away from meat towards vegetables and breads. Increased dependence on bread among the poor has raised the potential for bread shortages or price increases to promote social unrest. In January 1995 food rationing was abolished, apparently in connection

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<sup>22</sup> It might also reflect increased cost. Although public-sector education is technically free, admission to institutions with good reputations can be expensive, and this applies especially at the university level. Lubin (1995, 8) reports a mid-1993 admission charge for prestigious institutions of higher learning of close to one million rubles (ie. double the average annual salary).

<sup>23</sup> Hetland and Haycock (1996, 123n) report rates over 80% among toddlers in Karakalpakstan. The *Economist* (15 October 1994, 31) quotes one doctor as saying that every pregnant woman he examined in a Nukus (Karakalpakstan) maternity unit was anemic.

with the first IMF loan to Uzbekistan, but the following month the government reinstated rationing in order to ensure availability of bread for all. Meat output increased by 9% between 1991 and 1994, i.e. about equal to population growth, but meat imports declined. Milk output rose more substantially (by 12% between 1991 and 1994), and there may be under-reporting associated with the growth of private ownership of livestock.<sup>24</sup> This picture of average food consumption, while more or less stagnant, is better than in most former Soviet republics.

There is concern about variations in nutritional changes between regions and age groups, with children in poor areas particularly vulnerable. The discontinuation of free school lunches is likely to have contributed to the number of children receiving inadequate nutrition. A summer 1995 household survey of three representative oblasts (Fergana, Karakalpakstan and Tashkent), however, showed some stunting among children but no evidence of severe or moderate wasting; stunting tends to indicate chronic malnutrition, while wasting would suggest acute malnutrition in recent years.<sup>25</sup>

### **3. Demographic-based indicators**

Population in Uzbekistan grew from 20.3 million in 1990 to 22.2 million in 1994, and the annual rate of population growth remained relatively constant over this five-year period. In 1990 and 1994, population grew at 2.2% per year; at this rate, population will double in about 32 years. However, between 1991 and 1994, there was fluctuation in growth, from a low of 1.9% in 1991 to a high of 2.4% in 1992. The drop in growth between 1990 and 1991 was partly due to the large emigration of Russians, Germans, and Tatars from Uzbekistan.

The rate of natural increase (Crude Birth Rate - Crude Death Rate) declined significantly after 1990. In 1990, natural increase fell from 27.6 per 1000 population to 22.7. The change in natural increase was largely due to changes in fertility; the CBR fell from 33.7 to 29.3.<sup>26</sup> Even if these significant reductions

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<sup>24</sup> The food situation may have deteriorated in 1996 due to a poor grain harvest. Official figures show declining output of other food products, but they may omit increases in privately marketed foodstuffs or in subsistence production.

<sup>25</sup> This is in contrast to the higher prevalence of severe and moderate wasting reported by a World Bank study of Kyrgyzstan in 1993 (Klugman, 1996, 4).

<sup>26</sup> Birth rates fell from the high levels of the 1980s, but not as dramatically as in European transition economies. Soviet policy was pro-natalist; the cost to parents of children was close to zero, and the children were guaranteed jobs once they left school. Since independence some of the services provided freely to parents were reduced, and

in fertility are permanent, population will continue to grow rapidly for many years. Because of high fertility in the past, the current population is young, and a large percentage of women will be of childbearing age well into the next century. At 1990 growth rates, the number of persons aged 20-24 is projected to increase from 2 million in 1994 to 3.5 million in 2014 (Craumer, 1995, 37).

Significant rural-urban differences in population growth are evident. In 1990, 8.3 million persons lived in urban areas of Uzbekistan while 12 million lived in rural areas; urban and rural population growth rates were comparable (2.2% - 2.3%). By 1994, population increased to 8.7 million in urban areas and to 13.5 million in rural areas with urban growth of only 1% and rural growth of 3%. This change in growth across regions was caused by emigration from urban to rural areas as well as smaller reported drops in fertility in rural areas where children are an important source of agricultural labor. Outmigration from urban areas was so large that Uzbekistan experienced a decline in the level of urbanization after 1990 (Craumer, 1995, 38). Continuing high fertility in rural areas also means a younger age structure there. Even with significant fertility declines, population will continue to grow for many years in rural areas in comparison to urban centres unless migration patterns reverse or mortality increases.

Associated with the relative increase in rural population was a deterioration in agricultural wages. Klugman (1996) reported agricultural wages 15% above the Uzbekistan average in 1991 but less than 70% of the average by 1995. The increase in unpaid agricultural production was not reflected in these figures.

#### **4. Environment-based indicators**

Unemployment was first officially acknowledged in the 1992 Employment Law, after which the number rose from 13,300 in 1993 to 21,800 in 1994 (UNDP, 1996, 96) to 36,200 in March 1995 (Harasty, 1996, 48) and 41,000 in mid-1996 (SCFS, 1996). It is widely believed that the high levels of underemployment in agriculture and in state enterprises typical of the Soviet era still remain, and that many displaced workers are recorded as having entered rural jobs or part-time work, rather than being included among the unemployed (Harasty, 1996, 48-9). The IMF (1996, 13) reports that 50-60,000 workers were on forced leave in 1995, i.e. they had jobs but received no wages during the year, and quotes estimates of disguised unemployment in agriculture around a million persons. The agricultural labour force has increased since independence while agricultural output fell; this is often interpreted as evidence of work-

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one consequence of the higher cost of children was increased use of contraceptives (mainly IUDs provided free by the government).

sharing, but it could also be an efficient response to relative prices.<sup>27</sup> State enterprises are not allowed to dismiss workers for three years after privatization.

By the end of 1994 over 96% of housing units had been turned over to occupants, apparently with little difficulty and at nominal cost to buyers. The IMF (1994, 59) reports that in 1993 the cost per dwelling ranged from 24% to 158% of the average monthly wage. Privatization of housing should have improved efficiency of resource allocation as people with inappropriate housing had the opportunity to swap housing units, raising welfare even if the housing stock does not increase, and also permitting increased labour mobility. Uzbekistan's long tradition of very low inter-regional migration does not, however, appear to have changed greatly in the mid-1990s.<sup>28</sup>

Privatization at nominal prices was inequitable as some people dwelt in superior housing, so the distribution of assets (which had all been paid for by the entire population) was uneven.<sup>29</sup> Restrictions on the sale of housing combined with uncontrolled rents forced foreigners to pay high rents for apartments in the few buildings sufficiently close to western standards; in late 1993 Tashkent apartments were renting for as much as US\$4000 per month (Pomfret, 1995, 70n) at a time when the highest public officials' monthly salaries were no more than \$25.

The Soviet Union placed a high priority on freeing Central Asian women from traditional restrictions, with the economic consequence of increasing labour participation rates. The USSR's pro-natalist policies also provided significant benefits for women. Maternity leave began after thirty weeks of pregnancy and continued for 126 days at full pay. Women were entitled to three years of unpaid leave without prejudice to their pension entitlements. All women caring

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<sup>27</sup> Substantial demechanization of cotton production has occurred during the 1990s. The production of cotton combines dropped to 651 in 1994, from a peak of 9400 in 1985. Soviet planners pushed mechanization during the early 1980s because a hectare of cotton harvested by hand requires 3400 hours of labour while mechanized harvesting requires only 500-600 person-hours, but, with market-determined prices for cotton (which reflect quality, which is higher for hand-picked cotton), fuel, labour and equipment, mechanization may not be economic (Craumer, 1995, 20-1).

<sup>28</sup> Initially resale of privatized housing, other than to the state, was restricted and the *propiska* (permission to live in a specified location) was retained until the end of 1994.

<sup>29</sup> Griffin (1996, 37) denies that the housing privatization was inequitable on the curious grounds that there are few homeless people in Uzbekistan. Griffin then makes the inequitable distribution point with respect to small and medium-sized enterprises, whose assets had been accumulated in the name of the entire population but which were privatized to employees who happened to have particular jobs.

for children under two received a monthly benefit equal to 20% of the minimum wage. Women with five or more children (accounting for 57% of families in the 1989 census) retire at 50 instead of the normal female retirement age of 55. Since independence these benefits have remained in place, but are difficult to monitor or enforce in the private sector (Kandiyoti, 1996, 136). In a market economy, the protective labour legislation and generous maternity benefits provide a disincentive for enterprises to hire women.

Labour force participation rates for women remain high (71% in 1993, when they accounted for 46% of the workforce), but women receive lower pay and there is evidence of increasing marginalization. Low pay reflects the concentration of women in low-wage activities such as health, education and other services and light industries such as textiles and food, but there also seem to be barriers to women reaching high levels in industry or government.<sup>30</sup> In 1993 64% of the registered unemployed were women. More importantly, the World Bank (1994, 20) reports evidence of an increased share of rural labour taking the form of household production, i.e. women returning to a traditional role of providing unremunerated labour but not officially registered as unemployed. Some displaced female workers have turned to the informal trading sector which is among the most entrepreneurial and dynamic parts of the post-independence economy, but by its nature the size of this sector is difficult to monitor.<sup>31</sup>

Organized crime was associated with Uzbekistan, perhaps first amongst all Soviet republics, even before independence. Rumer (1989, 144-59) provides harrowing stories of the powerful local mafia and their wealthy bosses during the Soviet era. The extent of organized crime is by its nature difficult to measure, but by all reports it increased after the collapse of central planning and dissolution of the USSR; in mid-1993 70% of respondents in a public opinion survey felt that organized crime had increased in recent years, while most of the remainder answered that they did not know whether it had grown or not (Lubin, 1995). Corruption among public officials is also a long-standing feature of

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<sup>30</sup> This is not due to lack of education. Kandiyoti (1996, 138) points out that, although over 50% of university degree holders in Uzbekistan are women, the proportion of women among senior managers is only 17.5%. Within the government there are no women ministers, although there are female deputy ministers. The percentage of members of parliament who are women fell from 35% in the 1980s to 6% in 1994, although this reflects the end of quotas rather than any change in a continuing low-level of acceptance of women's involvement in politics.

<sup>31</sup> Among Central Asian republics the small-scale commercial sector is smaller in Uzbekistan than in the more liberalized economies of the Kyrgyz Republic and Kazakhstan, but more dynamic than in Turkmenistan.

Uzbek society, which is widely believed to have increased during the 1990s and to be especially prevalent within law enforcement agencies; a survey of a hundred law enforcement officials confirmed the latter belief (Lubin, 1995, 8).

Uzbekistan has, however, not experienced the collapse of law and order which has occurred elsewhere in the former Soviet Union. Official statistics show a decline in the number of crimes from 93,626 in 1992 to 67,026 in 1995, a much lower crime rate than in Kazakhstan, Belarus, Ukraine or Russia (UNDP, 1996, 75-6). This corresponds to travellers' tales of relative safety; as long as one keeps on the right side of government officials and criminal organizations, then Uzbekistan is a relatively safe place.

There has been substantial emigration from Uzbekistan during the 1990s, which has been concentrated amongst non-Uzbeks and in professionals and technicians. Griffin (1996, 20-1) quotes estimates by Kaser and Mehrotra of net emigration of 1.8 million persons in 1990 and 1.0 million in 1991, i.e. 13% of the population in two years. Rashid (1994, 95) reports a million Russians having left Uzbekistan by 1993. The BBC (1996, 6) has reported a drop in the number of Russians from 1.6 million to 0.9 million and that few Germans or Tatars remain, supposedly due to the absence of political or legal guarantees with respect to social security. Official estimates are much smaller, 274,400 emigrants between 1990 and 1993, but even this represents a significant proportion of the Slavic population (Griffin, 1996, 21).

## **5. Assessment of changes**

Following the shock of the collapse of the Soviet Union in 1991, Uzbekistan maintained living standards better than other former Soviet republics. Average material welfare undoubtedly declined, but per capita GDP fell by less than in any other CIS or eastern European country. National income estimates for transition economies are notoriously unreliable, but the general picture of a limited decline in well-being is supported by other indicators.

The high rate of population growth declined during the 1990s. Unlike the changes in birth and death rates in some eastern European and CIS transition economies which are attributed to negative feelings towards the economic future, the changes in Uzbekistan have mainly been in response to a public campaign encouraging smaller families (i.e. 3-4 children instead of as many as possible) and due to lower infant mortality. Health indicators are difficult to interpret, but reduced public spending may have been offset by improved efficiency in healthcare delivery.

The open unemployment to be expected from the changing output mix during transition has been minimal in Uzbekistan. Underemployment is believed by some observers to have increased sharply, but it is difficult to measure both at present and in the previous economic system. The perception among residents is of increased crime, but official statistics say otherwise, and Uzbekistan has certainly avoided the open lawlessness that has accompanied transition in other newly independent states such as Kazakstan or the Russian Federation.

The welfare impact of independence and transition has not been evenly spread. Many non-Uzbeks ceased to feel at home in the republic and have emigrated. Long-standing rural-urban income differentials have widened. The elite has turned non-pecuniary benefits into wealth and income, while others have seen their previously guaranteed incomes decline substantially in real terms. Changes in the provision of education and health services are likely to exacerbate these distributional effects. Gender-based differences in economic opportunities also threaten to widen as the active policy of including women in the labour force and ensuring their equal access to education in the Soviet era is replaced by a more passive policy. Nevertheless, extreme poverty has been avoided and some form of safety net clearly continues to exist for the very poor.

### **III MACRO AND MICRO-ECONOMIC IMPACT ON WELFARE CHANGES**

This and the following section analyze the links between policies and performance. The distinction between economic and social policies is artificial because the human development perspective has emphasized that increasing human capabilities is central to well-being, but it is useful to begin with the macro and micro-economic policies which dominated the early debates on transition strategies. Those debates focussed on the desirability of shock therapy, involving rapid adoption of market-determined prices (including wages, interest rates and exchange rates) supported by anti-inflationary monetary policy (and tight fiscal policy), reforming state enterprises (through privatization or hardening the budget constraint of public enterprises) and opening up the economy to international trade. By the mid-1990s the transition debate had become more nuanced as it was recognized on all sides that in some of the policy areas just listed shock therapy was impossible or undesirable, while in other areas gradualism was impossible or undesirable.<sup>32</sup>

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<sup>32</sup> This was mirrored by the wide range of strategies actually adopted. Dabrowski (1996) identifies six sets of transition strategies adopted in eastern Europe and the former Soviet Union, and even this taxonomy is an oversimplification because countries moved in different ways in the various policy areas and because

## 1. Monetary, fiscal, and price liberalization policies

Uzbekistan has espoused a gradualist reform strategy and consistently resisted shock therapy. This is most apparent with respect to fiscal and monetary policy and price reform. Fiscal policy has been cautious, with the government seeking to limit the budgetary deficit rather than commit to a non-inflationary policy. Likewise, monetary policy has not been directed to the single goal of taming inflation. Indeed, monetary policy has been of limited significance, because the government has relied on price controls as its main anti-inflation weapon.

Price liberalization was introduced in January 1992. As a member of the ruble zone with porous intra-CIS borders, Uzbekistan had little alternative but to follow Russia's price reform, but Uzbekistan retained price controls on a number of basic commodities and services (and price increases on most regulated items were less than in Kazakhstan or the Kyrgyz Republic). During 1992 and 1993 the potential for commodity arbitrage between Uzbekistan and neighbouring states with freer (and hence higher) prices was a constant source of tension, which led to the borders being closed on several occasions.

Following the introduction of the national currency in July 1994 Uzbekistan has pursued cautious but cumulatively significant price liberalization. After 1994 only flour, sugar and vegetable oil remained subject to rationing, and all subsidies for consumer goods were eliminated. Following the abolition of profit margin regulations and shift to full-cost recovery pricing by state enterprises, the IMF (1996, 11) concluded that 'the process of price liberalization was essentially completed' by early 1995. Nevertheless, prices for many public services and some key commodities (e.g. bread and flour) were still far below world prices (although oil and gas prices were brought substantially closer to world levels in 1996), and the two most important prices in any market economy, the exchange rate and interest rates, continue to be artificial. State orders remain important in agriculture, with 60% of the cotton crop and 50% of the grain crop in 1995 (down from two thirds for both in 1994) being purchased at official procurement prices which were about 50% of world prices (IMF, 1996, 13).<sup>33</sup>

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implementation was often inconsistent over time. Dabrowski includes Uzbekistan in the 'no significant change' category, but in housing policy there was substantial change and consumer subsidies have been abolished.

<sup>33</sup> There are conflicting reports on the administration of the state order system, and especially after the 1996 harvest it is unclear what price farmers actually received; the large premium which had emerged between the official and unofficial exchange rates allowed some discretion in converting the 'world price' into local currency. The government intends to eliminate state orders for grain in 1997 and for cotton in 1998,

Since late 1994 Uzbekistan has announced several macroeconomic stabilization programs.<sup>34</sup> Actual policy has been cautious; monetary tightening has occurred, but the drop in inflation in 1995 was less dramatic than in Kazakhstan or the Kyrgyz Republic. Financial sector reform has been limited, with entrepreneurial banking discouraged and interest rates controlled. As a counterpart to Popov's (1996) characterization of Russia's transition strategy as 'inconsistent shock therapy', Uzbekistan's macroeconomic policy since 1994 could be characterized as inconsistent gradualism.

## **2. Privatization and enterprise reform**

The dangers of characterizing Uzbekistan as a slow reformer are most pronounced in the area of privatization and enterprise reform. There has not been any sweeping privatization of state enterprises from above. There have only been limited amounts of privatization from outside in the form of foreign investments, although this did accelerate in 1995 (see 1. in section I), and of privatization from below in the form of new enterprises; both foreign investors and potential new entrepreneurs have been discouraged by the red tape and corruption associated with a still heavily regulated economy. On the other hand, housing was almost completely privatized by 1994 and the incentive structure has been changed in agriculture and in industry.

The housing policy represents a substantial step towards a market economy, although the reform is less dramatic than it might appear. Even before independence Uzbekistan had widespread private ownership of housing, especially in rural areas. For apartment dwellers, the buildings and surroundings remain publicly owned and, not very efficiently, managed. Despite the caveats and restrictions, however, private property rights in housing have become stronger and a housing market is emerging.

Before independence agriculture was divided between state farms (whose workers received a fixed wage) and cooperative farms (which paid workers out of net revenue), with a tiny proportion of personal plots.<sup>35</sup> After independence the state farms were converted into collectives, primarily to relieve the state budget, and by 1994 the only remaining state farms were those engaged in experimental work. The land allocated by collective farms to personal plots

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but as pointed out elsewhere in this paper control over cotton prices is an important source of government revenue.

<sup>34</sup> Monetary policy and financial sector developments are described in IMF (1996, 27-35),

<sup>35</sup> A 1990 Soviet reform had allowed private leasing of land, but the state retained ultimate land ownership.

increased from 110,000 ha. in 1991 to 630,000 in 1994, and a limited privatization program created 10,408 private farms covering 89,650 ha. by 1994.<sup>36</sup> Potentially more important than the privatization measures is the spread of arrangements within cooperative farms whereby individual farmers contract to produce a certain quota at a specified price and then retain a larger share of revenue from above-quota production. This system, which resembles China's successful household responsibility system, appears to have been adopted in most cooperative farms by 1995.

Key agricultural prices remain controlled, especially for cotton and grains. The terms of trade moved against agriculture after independence, and the relative incentives within agriculture shifted against cotton and in favour of grain. The changes were aimed at reducing dependence on cotton and increasing food self-sufficiency, and at providing government revenue. Although agricultural output declined by less than total output in the first half of the 1990s, Khan (1996, 71) concludes that discriminatory cotton pricing alone transferred income out of agriculture equal to over a tenth of the value of GDP originating in agriculture (even after taking account of all direct and indirect subsidies to agriculture), so that rural incomes fell by more than urban incomes.<sup>37</sup>

Within the industrial sector, enterprises appear to have been captured by incumbent managers. As suggested in section II, a similar process has happened to some extent in service sectors, including education, health and other public services. This process has been inequitable and unpopular; the lukewarm reaction to economic reform in the mid-1993 public opinion survey reported by Lubin (1995) is ascribed by her to the association between reform and the enrichment of state enterprise managers and public officials. The economic consequences are more difficult to assess, because the change in incentive structure as managers turn from being salaried employees to controlling residual incomes could lead to greater efficiency. The widespread price distortions and absence of efficient financial markets, however, inhibit achievement of *allocative efficiency*.<sup>38</sup>

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<sup>36</sup> Figures are from Khan (1996, 75), who estimates that by 1994 private farms accounted for 2% of the sown area. Craumer (1995, 7) reports 477,500 ha. in personal plots (accounting for 9% of arable land) and 14,236 registered private farms covering 193,100 ha. (4.7% of arable land) by the end of 1994.

<sup>37</sup> Connolly and Vatnick (1994) model the transfer mechanisms applied to Uzbekistan's cotton sector. World Bank estimates imply that the cotton sector provided 13.4% of total government revenue in 1993 (Klugman, 1996, 19).

<sup>38</sup> Financial market reform has progressed slowly. Although Uzbekistan now has a two-tier banking system and a securities market, the financial sector is heavily repressed (eg. with high reserve requirements for banks) and does not behave in an

The conflicting economic implications of Uzbekistan's enterprise and price reforms are starker in agriculture. The institutional changes have improved the incentive structure, but distorted prices are likely to induce resource misallocation. Although there is a strong argument for reducing cotton dependence, the best way to do that would be to introduce prices for water and fertilizer which reflect their full social cost. Similarly, milking the cotton sector as a tax base may or may not be desirable, but a land tax would be superior to using price controls as an output tax. Finally, paying artificially high prices for grains is likely to encourage resource misallocation, especially given the availability of grain surpluses in Kazakhstan, whose northern land is more suited to grain production than anywhere in Uzbekistan.

### **3. Foreign trade and exchange rate policies**

Uzbekistan has a relatively open economy but restrictive trade/forex policies.<sup>39</sup> Cotton and gold have both proven to be desirable export commodities in the initial post-independence years, since they face less physical impediments than the oil and gas of Kazakhstan and Turkmenistan and cotton prices have been buoyant. The government has chosen to focus on its exportables as a tax base and to provide substantial protection to import-competing producers in industry and agriculture. These policies have underpinned the limited change in output mix and relatively small drop in GDP during the transition process.

In the mid-1990s trade policy became more liberal but less relevant as the foreign exchange market was tightly controlled. By 1996 all forex-earnings had to be turned in to the central bank which allocated forex to approved importers and other certified buyers. Discretionary control over access to forex to pay for imports permitted selective protection of import-competing domestic producers. Although the exchange rate is market-determined at auctions, access to the official market is controlled. Enforced surrender of export earnings simplified tax collection and the government maintained discretionary control over imports, but at substantial cost in terms of resource misallocation. One indication of the return to a shortage economy was the black market rate of over 100 sum/US\$, over twice the official rate, by late 1996.

The foreign trade outcome has been good insofar as large trade deficits have been avoided. In 1996, despite declining cotton revenue, Uzbekistan had a small

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entrepreneurial manner. Government caution in allowing access to the financial sector is aimed at avoiding the corrupt practices seen in Kazakhstan or the Kyrgyz Republic or pyramid scams such as occurred in Russia and Albania.

<sup>39</sup> Agafonoff and Sirojiddinov (1996 a and b) provide more detailed accounts of Uzbekistan's foreign trade and foreign exchange policies up to 1995.

trade surplus, mainly due to a substantial decline in grain imports (from about 3 million tons per year in the early 1990s to 1.6 million in 1996) and to achieving self-sufficiency in electricity, coal, oil and gas. New oil refineries in Bukhara and Ferghana will reduce imports of refined oil products. The moves towards self-sufficiency in grain and energy are probably desirable, because pre-1992 policies discriminated against using land for grain and against energy production, so that higher output of these items reallocates resources in the right direction. The danger, however, is that policymakers may continue, as in the Soviet era, to view self-sufficiency as good in itself, rather than appropriate in specific circumstances. This danger is reflected in the current foreign exchange policies which discourage specialization and trade.

#### **4. Conclusions**

The pattern of limited output decline and less dramatic hyperinflation experienced by Uzbekistan in the 1990s is closely connected to the choice of transition strategy, helped by a favourable resource endowment. Transition in Uzbekistan has been gradual in the sense that the government has retained controls over key prices and hence over resource allocation. This control has been exerted cautiously, so that Uzbekistan is arguably the least changed of all the former Soviet republics.<sup>40</sup>

The cost of retaining administrative control over resource allocation has been to restrict the emergence of new enterprises and the identification of new activities fitting the country's comparative advantage. To some extent allocative inefficiency may have been mitigated by privatization and enterprise reform measures which improved the functioning of the housing market and improved the incentive structure across the economy. Price incentives may have also induced more labour-intensive production techniques (e.g. in the cotton sector), which may be more efficient and will promote more employment (and be more equitable) than the capital-intensive techniques inherited from the Soviet era.

Nevertheless, the beneficial impact of an improved incentive structure is limited by distorted prices; in particular, the two most important prices in any market economy (exchange rates and interest rates) are artificial in Uzbekistan. Distorted exchange rates and interest rates penalize most the potential new

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<sup>40</sup> Other successor states usually included in the category of slow reformers have either been affected by gross mismanagement (eg. Ukraine and Turkmenistan) or war (eg. Tajikistan and the Caucasus republics), which have blown out public expenditures and led to hyperinflation. In Uzbekistan, gradual change with continued government control over the main export commodities and over the financial sector contributed to a relatively good tax collection record (see next section).

small-scale enterprises which have led growth (and had beneficial income distribution consequences) in the more dynamic transition economies. This augurs badly for the future, especially given the strong international evidence of correlations between neutral trade policies and growth and between lack of financial repression and growth.

Uzbekistan's transition strategy has so far had an adverse impact on the distribution of wealth. Thus, although the economy retains many features reminiscent of the Soviet era, transformation of the non-economic perquisites of the elite into real assets and monetary wealth has undermined the income equality which characterized the USSR.<sup>41</sup> Whether the ensuing income inequality is more or less severe than in alternative scenarios, such as a purer market economy is difficult to assess, but the fact that the nouveaux riches became rich as a result of privilege rather than effort has been resented.

#### **IV IMPACT OF SOCIAL POLICIES ON WELFARE CHANGES**

Table 2 shows that Uzbekistan maintained public expenditure's share of GDP and raised the share of social expenditures; given the relatively small decline in GDP, social expenditures must have dropped less in Uzbekistan than anywhere else in the former Soviet Union. Has this ameliorated the welfare situation?

##### **1. Taxation**

The budget deficit in Uzbekistan fell from 36% of GDP to less than 4% in 1995 with a slight surplus during the first quarter of 1996 (IMF, 1996, 20). The reduction in the deficit resulted from the introduction of new measures to maintain revenues, a change in government expenditures, and tight budget management. In 1995, tax revenue was 30% of GDP. The most important sources of revenue were corporate income taxes, individual income taxes, the value-added tax (VAT), and excise taxes on cotton and fuels. Corporate revenue increased its share in total revenue after transition while individual income tax revenue fell in importance. Corporate revenue increased from 11% of total

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<sup>41</sup> The process of transforming privilege into wealth began during the Gorbachev era. Kryshtanovskaya and White document this and also discuss the problem of elite renewal in Russia, observing that 'a wider range of mechanisms of elite renewal will come into play: particularly access to privileged educational institutions. Already within the Russian elite a number have emerged as particularly important' - especially the Economics Faculty of Moscow University (1996, 730). This is consistent with the high costs of entry to similar higher education institutions in Uzbekistan reported by Lubin (see section 2.2b).

revenue in 1989 to 30% in 1995 while taxes on individual income fell from 14% in 1989 to 9% in 1995. This contrasted with the average transition economy in which corporate taxes comprised 15% and individual income taxes comprised 12% of total revenues in 1995 (Klugman, 1996, 31).

Revenue from the VAT and excise taxes on domestically produced goods rose. In 1995, 19% of revenue came from the VAT and 28% from excise taxes. This represented an increase in excise tax revenue and a decrease in VAT revenue since 1992 (IMF, 1996, 20).

Recent changes in individual income tax policy have been minimal. However, the decline in real wage income, the increase in agricultural employment and unpaid work, and the increase in in-kind income and home production caused the decline in income tax revenue. The government relied on collection of revenue from the cash side of the economy -- the cotton, gold, oil, and gas industries in particular -- where state involvement facilitated tax collection (Klugman, 1996, 31).

The corporate tax itself changed from a tax collected on profits and wages to a tax on profits. Under both forms of the corporate tax, investment was encouraged through lower tax rates. In 1995, a 38% corporate tax rate was imposed on profits, but the rate was lowered if more than 50% of firm profits was used for investment. The corporate tax rate was also lowered if firms provided social or community services (IMF, 1996, 22). These policies encouraged investment in firms and long-term growth and rewarded firms which facilitated social and economic development.

VAT and excise tax policies changed in 1995. First, new excise taxes were imposed on crude oil and natural gas. As a result, the actual price paid for fuel approached the world price. This adjustment in the price encouraged consumers to ration their energy consumption. Second, the base of the VAT was extended to wholesale and retail prices, and the rate was lowered from 30% to 17% in 1996. Exports to non-CIS countries were encouraged by a VAT exemption (IMF, 1996, 31). These policies made consumer goods produced in Uzbekistan more competitive with imported goods and more affordable to consumers and were in line with the general export-promotion, import-substitution policy adopted after transition.

To fund the social insurance system (pensions, unemployment benefits, sick pay, and maternity benefits), a large payroll tax was imposed on wage income. The payroll tax in 1995 was 41% of the gross wage (Klugman, 1996, 31). The effect of a payroll tax was to lower the wage received by workers and to raise the total wage (including the tax) paid. Employment can be adversely affected

by payroll taxes with fewer workers desiring to take jobs at lower wages and firms reducing the number of employees demanded. The extent to which employment is affected depends on the responsiveness of workers to a wage cut and responsiveness of firms to a wage increase. If there is significant surplus labour in the economy, a payroll tax can exacerbate the unemployment or underemployment situation. The dependence of the government on the payroll tax fell from 8% of total revenue in 1989 to 2% in 1992; the share of revenue from payroll taxes in 1995 was uncertain (Klugman, 1996, 31). This decline in payroll tax revenue was likely due to significant declines in wage income and in paid employment. An increase in unpaid home production substituted untaxed income for taxed income, further reducing dependency on wage-based taxes for revenue.

## 2. Public expenditure

The transition caused an increase in income inequality although the extent of this increase is uncertain.<sup>42</sup> Poverty also increased but was not visibly widespread (Griffin, 1996, 151). Since 1989, social policy moved away from the provision of universal subsidies towards providing a cushion for the economically most vulnerable households -- the elderly, the disabled, children, and low-skilled labor (Klugman, 1996, 31). This policy shift likely reduced the spread of poverty in Uzbekistan.

Four major policy initiatives were implemented after 1989; the mahalla scheme, child payments, pension reform, and unemployment insurance. Beginning in 1994, Uzbekistan implemented the mahalla scheme to assist low income families in need. Government funds were distributed to neighbourhood committees or mahallas. The mahallas decided who received money from the fund and distributed the money to these families. The mahallas enjoy significant discretion within broad guidelines set by the government (Klugman, 1996, 33). Allowances were tied to the minimum wage; the average allowance in 1995 was equal to two minimum wages (IMF, 1996, 26). While the program was cheaper to run than a program of national distribution, it was subject to a great deal of local variation in standards of need and, therefore, which households received aid. One in five households and 30% of the bottom quintile of the income distribution received money from this fund in 1995 (Klugman, 1996, 27). The mahalla program cushioned, to a certain extent, the economic disruption experienced by low wage households. It tended to equalize income within the lowest quintiles by placing a floor on poverty, but it did not reduce the level of income inequality in general (Klugman, 1996, 27).

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<sup>42</sup> UNDP (1996, 77) reports an increase in the Gini coefficient from 0.285 at independence to 0.341 in 1996, but the basis for the calculation is not indicated.

In addition to material assistance to low income families, the government targeted needy children through two programs. The first program served families with children under the age of 16. Payments varied with the number of children in the family and were linked to the minimum wage. For example, families with one child received 20% of one minimum wage while families with five children received one full minimum wage per month. The second program targeted mothers with children under the age of two. Eligible women could receive about 1 1/2 minimum wages per month; however, few women participated. Both of these programs provided income to households so that the health and development of children would not be impaired because of low income.

Spending on pensions fell from 12% to less than 6% of GDP between 1993 and 1995. Under the pension system, men with 25 years of work experience are eligible to retire at age 60 while women with at least 20 years of experience can retire at age 55. Men and women who worked in 'dangerous' occupations may retire 10 years earlier than other workers and receive a full pension. The pension amount is generous. The maximum pension benefit is 75% of earnings and the minimum benefit is indexed. The recent decline in benefits occurred through large reductions in the replacement rate or the rate at which earned income is replaced by a pension. The decline in the replacement rate coupled with indexation of the minimum benefit implies a redistribution of pension benefits from higher income retirees to low income retirees. This again cushions one of the most vulnerable groups -- low wage elderly workers -- from severe poverty during periods of economic disruption. Retirees can supplement their pension income with additional market work to further prevent poverty; about 13% of retirees work and receive a pension (Griffin, 1996b, 156).

The low retirement age and generous pension benefits relative to wage income create incentives for low wage workers beyond their peak earnings capacity to retire even though they may still be productive workers. As life expectancy increases, pensions will be paid over longer periods of time, further straining government budgets. Because the pension system is supported by payroll taxes, wages of current workers pay for the pensions of current retirees. Imbalance in the number of workers or the income they are making and the number of retirees means that payroll taxes must rise in the future to cover pensions. While this imbalance is not of immediate concern because of the young age structure of the population and the significant rate of population growth, this will become a more serious problem in the next century as the demographic composition of the population changes.

Finally, unemployment benefits are paid by the Employment Fund and financed through a 2.5% payroll tax. Benefits to unemployed workers are low, however,

and, as a result, only 30,000 workers in 1995 applied for benefits (IMF, 1996, 26). If the program were effective, it provides workers with income support while they search for other employment. It can encourage workers to remain unemployed if employment prospects are poor and wages are low; it can also encourage unemployed workers to find better jobs by giving them income support while they conduct their search. However, if the unemployment insurance program continues to pay relatively low benefits and participation is minimal, the program will have no effect on the welfare of unemployed workers.

Overall, the social expenditure system in Uzbekistan was designed to reduce the hardship experienced during transition among low income households and to force higher income households to contribute to this redistribution of income. Programs which continue to receive funding focus on providing assistance to those families who are most vulnerable to significant downturns in the economy. Among the elderly, minimum benefits increased, but this increase was at the expense of higher income retirees who received lower benefits. For families with children, cash assistance for each child was provided so that the health and development of children would not be negatively impacted by slow growth. For low income families, general assistance was available and determined from a community standard. Finally, for the unemployed, an insurance program was developed to support workers in their search for other employment. All of these programs will minimize the hardship endured by the most vulnerable citizens and will likely minimize the social disruption often experienced when income inequality increases within a relatively short period of time.

### **3. Structural policies**

Two labour market policies can have significant effects on employment -- the minimum wage and the 'wage brake' system. The minimum wage is an important component of wage policy in Uzbekistan. In most transition economies, the minimum wage has eroded in real terms so that it has relatively insignificant effects on employment. However, in Uzbekistan the real minimum wage is set so that 75% of the consumer's market basket can be purchased, and the wage is partially indexed. In 1993 and 1994, the minimum wage was one-third of the average wage. The real minimum wage did fall significantly between 1995 and 1996 so that the 1996 minimum wage was one-sixth of the average. This decline was possibly due to '...the stabilisation effort and lagged indexation...' (Klugman, 1996, 36).

An effective minimum wage can increase the share of income going to low wage workers if the negative employment response is weak. If, however, the

employment effect of the wage is large relative to the increase in the wage, then the share of labour income accruing to low wage workers will fall. As the real value of the wage declined in Uzbekistan, the minimum wage became less effective because indexation was not sufficient to prevent the wage from falling, and employment was not significantly affected.

Benefits paid under the social safety net are linked to the minimum wage. With adequate indexation of the wage, real benefits do not fall over time. However, if the real value of the minimum wage does fall relative to the average real wage, then the real value of benefits paid through transfer programs falls as well. The lowest income households are negatively affected relative to other households, and the cushioning effect of transfers on poverty may be reduced.

To control wage inflation, the 'wage brake' system was implemented in July 1994. This system of wage controls in state and private companies in the production sector of the economy capped increases in the firm's wage bill to no more than 70% of the increase in production. In 1995, additional wage incentives were imposed in state enterprises; wage increases over a certain level were taxed at high rates (IMF, 1996, 14). These two policies prevented firms from fully adjusting wages and the production process itself to changes in the economy. If, for example, skilled labour needed by firms was in short supply, firms would be constrained in their ability to raise wages to the level needed to fill their labour needs. Skilled labour would choose to work for other less constrained firms or choose not to work. Constrained firms would be forced to substitute other, more costly inputs and technologies for scarce labour in their production process; costs would increase, output would fall, and the overall level of employment of labour would decline.

## **V RESPONSES TO SHOCK OR GRADUAL CHANGES**

The Uzbekistan government has been among the most successful of CIS countries in creating a national consciousness and reviving traditional institutions. This is most apparent in the mahalla system of decentralized social assistance. There has also been a revival of traditional kinship relations as social security measures, which has reduced individual poverty but may have had a negative impact on the role of women.

Uzbekistan spent over a century under Tsarist and Soviet rule, but particular political and social institutions proved resilient. The hierarchical political and administrative system was based on traditional as well as imposed norms. Since

independence, the authoritarian leadership has managed to retain power (as in most other Soviet successor states), but also to limit entrepreneurial corruption at lower levels of government (unlike other CIS countries, such as Kazakhstan). Policy implementation, while uneven across regions of Uzbekistan, appears to be better than in any other of the larger CIS countries.

Uzbekistan has been relatively successful in decentralizing the social security system. The mahallas are a means of reducing the administrative burden on the central government, and, although implementation is uneven, reports suggest that they have contributed significantly to poverty alleviation. If this is so, then the success is in large extent due to acceptance of their legitimacy both by the government which promotes and supports the mahallas and by the local residents who run them.

The continuing strength of the extended family in Uzbekistan, as elsewhere in Central Asia, has also provided an important safety net for many people adversely affected by the shocks of the 1990s. The extended family provides a low-cost system of employment information and network of contacts, as well as offering unpaid work and satisfaction of basic needs to family members who would otherwise be unemployed. The phenomenon of underemployment is especially pronounced in the rural and the informal service sectors. This response to rapid economic change is more positive than state-supplied unemployment benefits, which encourage welfare-dependency and discourage initiative. At the same time, it needs to be emphasized that the informal sector characterized by independent traders and producers in kiosks and small workshops is not flourishing as much in Uzbekistan as in most other transition economies. Excessive regulation is usually blamed for the lack of such activity, which is unfortunate because the informal service sector in many East Asian countries has been a source of economic dynamism, and not infrequently a springboard to success in the formal economy (ESCAP, 1996).

The negative aspects of these responses are as yet potential rather than actual. Hierarchical social and political structures may inhibit future economic development, if access to higher education and to other opportunities becomes limited to an elite. Decentralization of social services could accentuate regional and rural-urban disparities, if organizations in poorer communities have to rely on local sources of revenue without substantial equalization payments from the centre. The role of the extended family in offering economic protection could result in a reinstatement of traditional values for the allocation of work and resources within the family with particularly negative consequences for younger women.

## VI CONCLUSIONS

The Uzbekistan government's goal, reiterated in several speeches by President Karimov, is to create a socially-oriented market economy through 'stage-by-stage transition'. So far Uzbekistan has passed through two stages. In the initial stage, priorities were the establishment of the legal framework for a market economy, institutional reforms such as changing the sectoral specialization of government ministries and removing monopolies, and changing attitudes towards property through housing and small-scale privatization. Large expenditures for social protection were intended to maintain popular support for economic reform. The second stage, following the introduction of the national currency in July 1994, included macroeconomic stabilization and financial reform, as preconditions for a strategy of attracting foreign investment and undertaking more general systemic reform.

The common characterization of Uzbekistan as a slow reformer among transition economies is correct, but it is false to categorize it as a non-reformer. Even in the initial phase, privatization of housing was thorough and rapid, and small-scale privatization and (possibly substantial) agricultural reforms were implemented. The commitment to macroeconomic stability and to financial reform have strengthened since the early 1990s, but in both areas Uzbekistan lags the rapidly reforming transition economies.

The economic performance of Uzbekistan since independence has been good compared to most other transition economies. The cumulative decline in output has been smaller than in all other former Soviet or East European transition economies and hyperinflation less than in most of these comparable economies. To some extent, Uzbekistan had favourable initial conditions -- more so than appeared at the time -- with exports which could be sold at buoyant world prices during the first half of the 1990s, and the potential to displace key imports through resource allocation decisions which make economic sense. Economic performance has also been aided by the absence of military conflicts suffered by many CIS countries and by the enforcement of internal order by a strong government, but those are not sufficient conditions for relative economic success (as the Annex on Turkmenistan illustrates). More debatable is the relationship between gradual reform and relatively little economic decline; the lack of radical change clearly contributes to the absence of drastic output drops associated with major changes in the output mix, but the question is whether that is at the expense of faster medium and long term growth once the initial reallocation has occurred.

The most interesting aspect of Uzbekistan's transition strategy has been the explicit concern with the welfare impact on those members of society least able

to deal with the shift to a market-oriented economy.<sup>43</sup> By its nature, relying on economic incentives to redirect people's efforts and rewarding those who make the correct decisions, the market mechanism widens income differentials which had been suppressed under the Communist regime. Uzbekistan has sought to counteract these tendencies by its expenditure policies and by intervention in the labour market. Unlike some other slow reforming transition economies Uzbekistan has not concentrated on providing subsidies to enterprises and to consumers, but has relied more on direct payments to families. Some of these payments have been ineffective (e.g. unemployment assistance) and others contain long-term dangers (e.g. the generous pension arrangements), but together they have softened the burden of transition on vulnerable groups. The most innovative aspect of the social expenditures has been the revival of mahallas as a vehicle for decentralized administration of social security. Another positive aspect of the government's expenditure priorities has been the attempt to maintain the share of spending on health and education, which has fallen by less than in other CIS countries, and which is the best long-term assistance to the less well-off. The structural labour market policies have been less appropriate, since both minimum wages and the graduated wage taxes discourage employment, although the falling real value of the minimum wage in 1995 and 1996 diminishes its economic impact.

Overall Uzbekistan succeeded in ameliorating the impact of the shocks of the early 1990s better than other former Soviet republics. This may have been assisted by its gradual reform strategy, but more important was the explicit concern for economic welfare and specific social policies. The long-term economic future of the country, which is still only five years old, remains uncertain. Many of the prerequisites for a flourishing market economy are less firmly established than in eastern Europe or the more reformist CIS countries, but the gradual reform strategy has not yet put any major obstacles in the way of eventual success as a market economy.

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<sup>43</sup> In this respect Uzbekistan's strategy differs from that of China, which is often viewed as another example of gradualism, but where regional and income disparities have only recently become a subject of debate (and not yet of decision). Pomfret (1997b) analyzes the contrasting motives of Chinese policymakers and those in other transition economies.

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## ANNEX: TURKMENISTAN: NON-REFORM IN A RESOURCE-RICH ECONOMY

Turkmenistan is often linked with Uzbekistan as another example of gradual reform by the autocratic government of a natural-resource-rich Soviet successor state.<sup>44</sup> The contrasts are, however, more striking than the similarities. Turkmenistan has a far less diversified economy than Uzbekistan and output is heavily concentrated in natural gas and cotton (66% and 8% of GDP in 1994). Since independence the regime in Turkmenistan has been highly personalized and populist, buying support by sharing the natural resource rents rather than undertaking reforms. This strategy proved unsustainable and the first significant reforms were announced at the end of 1995. Implementation has been patchy and as yet difficult to assess.

Turkmenistan's natural gas reserves are among the world's largest and were viewed as a huge advantage at independence. Moving to world prices yielded a huge immediate improvement in the terms of trade, estimated at around 50% by Tarr (1994). President Niyazov sought to cement popular support by making water, gas and electricity free (up to generous limits), charging nominal rents on public housing, and subsidizing retail prices of sugar, rice, tea, butter and flour. The extensive social protection also included guaranteed employment, family allowances, pensions and other benefits. The overall impact of the many provisions is non-transparent, but the social protection helped to cushion vulnerable groups from the immediate negative consequences of the dissolution of the USSR and other economic shocks.

Reform of the economy towards a more market-oriented system was minimal during the first four years following the dissolution of the USSR. Some prices were freed, but many key prices remained controlled. The government sets an average wage, and payments above this level are subject to a punitive excess wage tax (set at 50% on all wages over 20,000 manat following the January 1996 wage reform). Interest rates and exchange rates are tightly regulated.

Privatization has progressed slowly and been constrained by the government's unwillingness to cede control. By 1996, 1652 out of 3980 small enterprises

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<sup>44</sup> This Annex draws heavily on Pomfret (1995) and on IMF Staff Country Report No.96/30 on Turkmenistan (April 1996); all data are from the IMF Report. Turkmenistan has fewer inhabitants than Uzbekistan (its population in mid-1994 was 4.4 million, compared to Uzbekistan's 22.4 million), but started with a higher real GDP in 1991 (3,540 PPP\$ versus 2,790 for Uzbekistan, according to the UNDP Human Development Report 1994). The international agencies stopped giving dollar-GDP estimates for Turkmenistan in the mid-1990s due to the poor data.

targeted for privatization had changed ownership structure and four medium-sized and one large state enterprise had been privatized by auction, but the government has retained a majority shareholding in many of these enterprises. Urban housing privatization has been suspended. The June 1995 agrarian reform replaced state farms and cooperatives by peasant associations, whose members must fulfil state orders but can retain additional output. Although this arrangement has superficial resemblance to China's household responsibility system and Uzbekistan's agrarian reform, in Turkmenistan all produce in key sectors (including cotton, grains and livestock) must be sold at official procurement prices rather than market-determined prices, so that the Turkmenistan situation is less favourable to producers.

The IMF staff team diplomatically described the situation in early 1996 as one of 'limited progress' in reform and where 'a heavily subsidized public enterprise sector continued to dominate the economy'. A monetary policy of accommodating to the needs of state enterprises, the social protection system and prestige construction projects fuelled high inflation levels. Output performance was negatively affected by the no-reform strategy, which gave no incentive for the development of non-traditional sectors.

Given the structure of the economy, the key to performance since independence has been natural gas exports. Output of natural gas fell from 88 billion cubic metres in 1990 to 84 b.m<sup>3</sup> in 1991, 60 b.m<sup>3</sup> in 1992, 65 b.m<sup>3</sup> in 1993 and 36 b.m<sup>3</sup> in 1994, with a further drop in 1995. Initially, export earnings increased with the shift to world prices, but then declined from \$1.86 billion in 1993 to \$1.43 billion in 1994. More important than the decline in earnings was the growth of arrears due to non-payment, especially by Ukraine and Georgia.<sup>45</sup> National expenditure during 1993-95 was maintained by foreign borrowing. The external debt increased from zero at independence and \$168 million in 1993 to \$469 million by the end of 1995; although this was only 21% of GDP (and despite the notional external assets), Turkmenistan ran into debt-servicing problems due to high interest rates and short-term nature of its debt, and was forced to reschedule (notably \$58 million owed to the European Union at the end of 1995).

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<sup>45</sup> The contract value of exports enters into the trade account of the balance of payments, while arrears show up in the capital account as an increase in assets abroad. Even though these assets may never be realized, Turkmenistan has little recourse because the direction of gas exports is determined by the pipelines. Plans to build alternative gas pipelines through Iran to Turkey or to the Indian Ocean have been delayed by financing difficulties.

Table 3 illustrates the output and inflation pattern. Output was initially maintained by gas export earnings and minimal reform, but plummeted in 1993 and 1994. Inflation was repressed in 1992 and early 1993 by extensive price controls, but accelerated in 1993 and was still very high in 1995 when most former Soviet republics had regained macroeconomic control, at least to the extent of ending hyperinflation.

Turkmenistan's policies since independence have differed fundamentally from Uzbekistan's. Rather than undertaking gradual reform, Turkmenistan's president has attempted to maintain popular support by giving away some of the natural resource rents, while consolidating absolute political power and avoiding any economic reform which reduces the government's control. Analysis of the welfare impact of government policy in Turkmenistan is exacerbated by statistics which are even more unsatisfactory than Uzbekistan's. By the usual economic aggregates, Turkmenistan's economic performance has been significantly worse than Uzbekistan's (Table 3). The poorer members of the population may have been sheltered by the social security system, but this worked only in the short-term and by the end of 1995 the strategy was unsustainable. In 1996 official policy started to look more similar to Uzbekistan's gradual reform strategy, but implementation was more reluctant and the consequences are as yet unclear.

TABLE 1 PROGRESS IN INSTITUTIONAL REFORM

Country	Aggregate EBRD index <sup>a)</sup>	EU index of institutional development	EU index of political development	World Bank classification <sup>b)</sup>	Private sector share in GDP (%) 1995	Change in private sector share of GDP (% points) 1969-95
Hungary	3.3	3.3	3.5	4	60	45
Poland	3.1	3.3	3.3	4	60	31
Czech Republic	3.3	3.3	3.5	4	70	59
Slovakia	3	2.7	2.5	4	60	50
Slovenia	2.9	3.4	3.5	4	45	37
Albania	2	2.1	2	3	60	55
Bulgaria	2.3	2.2	2.2	3	45	30
Romania	2.2	2.2	2	3	40	27
Bosnia-Herzegovina	n/a	1.4	1.4	0	n/a	
Croatia	2.5	2.3	1.9	0	45	30
Macedonia	2.1	2.1	2.2	0	40	30
FRY	n/a	1.8	1.4	0	35	22
Estonia	2.9	3	2.9	3	65	55
Latvia	2.4	2.6	2.5	3	60	50
Lithuania	2.5	2.5	2.5	3	55	45
Russia	2.3	2.3	2.1	2	55	50
Ukraine	1.9	1.8	1.9	1	35	30
Belarus	1.8	1.4	1.3	1	15	10
Moldova	2.3	2.1	2.1	2	30	25
Armenia	1.8	1.9	1.9	0	45	37
Azerbaijan	1.3	1.6	1.5	0	25	20
Georgia	1.7	1.8	1.8	0	30	12
Kazakstan	1.8	1.9	1.6	2	25	10
Kyrgyz Republic	2.5	1.8	1.7	2	40	35
Tajikistan	1.3	1.2	1.2	0	15	10
Turkmenistan	0.8	1.4	1.3	1	15	10
Uzbekistan	2	1.5	1.3	1	30	25
East-Central Europe	3.1	3.2	3.3		63	46
Balkans	2.2	2	1.9		44	32
Baltics	2.6	2.7	2.6		60	50
CIS	1.8	1.7	1.7		30	22
Eastern Europe (excl FSU)	2.7	2.5	2.4		36	28
Eastern Europe (incl FSU)	2.2	2.2	2.1		42	32

Notes: Regional averages are unweighted averages.

a) The EBRD scores have been adjusted to make the scales more comparable with the EIU scores. (EBRD classification is on a scale of 1-4.5.)

b) World Bank classification: 4 = leading reformers; 3 = advanced reformers; 2 = intermediate reformers; 1 = slow reformers; and 0 = countries affected by regional tensions.

Source: *Transition*, 7, July-August 1996, p. 9.

TABLE 2 GENERAL GOVERNMENT SPENDING, 1992-95

(a) Revenue and expenditure in Uzbekistan, and average for former Soviet republics (as a percentage of GDP)

	1992	1993	1994	1995
General govt. revenues				
Uzbekistan	32.3	41.5	36.0	35.0
FSU average	33.1	30.3	28.6	23.9
General govt. expenditure				
Uzbekistan	50.1	52.0	43.6	42.4
FSU average	45.8	44.1	37.9	29.5
General govt. deficit				
Uzbekistan	18.8	9.4	6.7	3.4
FSU average	13.1	12.2	7.2	4.6

(b) Allocation of general government spending (as percent of GDP)

	USSR (1989)	Kazakstan (1994)	Uzbekistan (1994)
Education & health	7.4	4.7	16.5
Social protection	7.4	5.7	7.4
Support for the economy	14.1	11.4	12.2
Capital & restructuring	7.2	0.2	3.9
Law enforcement	0.9	1.3	...
Defence	8.0	0.8	...
Administration	0.3	0.7	1.0
Interest	0.7	0.3	...
Other	3.5	4.2	7.0
Total	49.5	29.3	48.0

Source: Cheasty and Davis (1996).

TABLE 3 OUTPUT AND INFLATION PERFORMANCE

(a) Real GDP (index: 1991 = 100)

	1991	1992	1993	1994	1995
Uzbekistan	100	89	87	84	83
Estonia	100	78	72	72	74
Belarus	100	90	81	71	63
Turkmenistan	100	95	85	68	61
Russia	100	81	74	65	58
Latvia	100	65	54	56	56
Kyrgyz Rep.	100	81	68	55	55
Lithuania	100	62	51	51	53
Kazakhstan	100	86	76	57	52
Ukraine	100	83	71	55	48
Azerbaijan	100	78	60	52	47
Moldova	100	71	70	48	47
Armenia	100	47	40	43	46
Tajikistan	100	71	63	50	44
Georgia	100	55	41	37	35

Source: IMF staff estimates, reported in Horton (1996, 19 &amp; 22).

(b) GDP growth rate (percent)

Country	1971-80 ave.	1981-89 ave.	1990	1991	1992	1993	1994	1995
Kazakstan	4.4	2.0	-4.6	-6.8	-13.0	-	-	-9.0
Kyrgyz Rep.	4.4	4.0	6.9	-9.1	-15.8	15.6	25.0	-6.0
Tajikistan	4.9	3.3	-2.4	-8.7	-30.0	16.3	26.5	-
Turkmenistan	4.0	4.0	0.8	-5.0	-5.4	27.6	15.0	12.0
Uzbekistan	6.2	3.4	2.0	-0.5	-11.1	n/a	n/a	-5.0
						-2.4	-4.5	-2.0

Source: World Bank *World Development Report 1996*, 173-4.

(c) Average annual inflation rates (percent)

Country	1990	1991	1992	1993	1994	1995
Kazakstan	4.2	91.0	1,610.0	1,760.0	1,980.0	180.0
Kyrgyz Rep	3.0	85.0	854.6	1,208.7	280.0	45.0
Tajikistan	4.0	111.6	1,157.0	2,195.0	452.0	635.0
Turkmenistan	4.6	102.5	492.9	3,102.0	2,400.0	1,800.0
Uzbekistan	3.1	82.2	645.0	534.0	746.0	315.0

Source: World Bank *World Development Report 1996*, 173-4.

TABLE 4 SOCIOECONOMIC INDICATORS FOR THE CENTRAL ASIAN REPUBLICS

	Population	Population growth		Urban pop	Sec. enrol.	GNPPC
	(million)	(percent)		(% of total pop.)	(% of age group)	(US\$)
	mid-1994	1981-90	1991-94	1994	1993	1994
Kazakstan	16.8	1.2	0.1	59.3	90	1,160
Kyrgyz Rep	4.5	1.9	0.4	38.8	n/a	630
Tajikistan	5.8	2.9	2.0	32.2	n/a	380
Turkmenistan	4.4	2.5	4.6	44.9	n/a	n/a
Uzbekistan	22.4	2.5	2.2	41.2	94	60

## Life expectancy at birth (years)

Country	1971-80	1981-90	1991-93	1994
Kazakstan	66.6	68.2	69.0	68.3
Kyrgyz Rep	65.5	65.8	67.9	67.8
Tajikistan	64.8	69.0	68.1	66.6
Turkmenistan	61.9	64.9	65.8	66.3
Uzbekistan	67.3	68.1	69.3	69.8

## Infant mortality rate (per 1,000 live births)

Country	1971-80	1981-90	1991-93	1994
Kazakstan	32.7	29.2	27.3	27.4
Kyrgyz Rep	46.1	38.5	31.0	29.1
Tajikistan	58.1	47.5	44.5	40.6
Turkmenistan	53.6	52.5	45.5	46.4
Uzbekistan	47.0	42.7	35.0	28.2

Source: World Bank *World Development Report 1996*, 172-5.

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