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Constraints to Growth and Job Creation in Low-Income Commonwealth of Independent States Countries[1]

Paolo Verme[2]

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[2] Consultant, World Bank and Contract Professor, University of Torino and Bocconi University, Milan (paolo.verme@unito.it). I am grateful to Katya Zykova for research assistance and to the participants of a workshop held in Milan in May 2004 in the framework of the ECA Labor Market study including Tito Boeri, Pietro Garibaldi, Paloma Lopez-Garcia., Philip O'Keefe, Jan Rutkowski, Stefano Scarpetta, and Milan Vodovipec.

Abstract

Despite sustained output growth since 1997, low-income CIS countries (CIS-7) have not experienced growth in employment, a phenomenon observed elsewhere in transitional economies and labelled as 'jobless growth'. This paper addresses the causes of this phenomenon in the CIS-7. It is argued that the lack of job creation is explained by a combination of structural factors including capital-intensive growth, large potential for productivity gains among existing workers and compartmentalized economies best depicted by a dual labor market framework. Agriculture and industry have performed asymmetrically and grown apart during the recession and during the growth periods. Agriculture provides subsistence and refuge from urban poverty and unemployment but is unable to grow beyond subsistence because it is disconnected from industrial manufacturing and because the agricultural infrastructure is depleted and underinvested. Industry has progressively lost its manufacturing capacity, and focuses on capital intensive, highly productive sectors and provides good wages for the few highly skilled workers. With governments and the international community currently refraining from investing in agricultural and industrial policies focussed on reviving manufacturing, jobless growth is likely to persist.

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1. PREMISES

Initial conditions

In the Soviet Union, the labor market was subject to less control and planning on the part of the central management than other aspects of the Soviet economy. The Soviet authorities worried about sufficient workplaces to match the labor force but workers were rather free in deciding where to work. *"In the mid-1980s, around 85 percent of all hires took place at the factory gate, that is, without any form of organized state allocation. Workers are also free to quit and change jobs, and turnover rates show a high degree of mobility."* [3]

The full employment policy was pursued at the central level but regional imbalances were often significant and labor mismatch in the republics a serious problem. The misallocation of labor resources also coexisted with labor hoarding. Managers concerned with annual fluctuations in planned production targets had strong incentives to retain all available labor and contributed in this way to labor shortages in the market. Especially during the last decades of the Soviet Union, the extensive nature of production led to an increasing concern for finding the necessary labor force to propel growth, even encouraging old aged and economically inactive people to join the labor force. Some of the first reforms introduced by Gorbachev were specifically aimed at encouraging enterprises to release excess labor. The 1986 wage reform, the 1987 enterprise law and the revised 1988 labor code all contained incentives for enterprises to streamline the internal labor force while the 1986 reforms that allowed the creation of non-state cooperatives and private individual activities provided the basis for an initial reallocation of workers from state to non-state entities.

The Soviet Union had also an extensive system of labor exchange offices, including job placement centers and local job placement bureaus created in 1969 in expectations of large redundancies following the 1965 economic reform. In 1989, the system counted 812 job placement centers and 2000 bureaus and these were financed with fees charged on enterprises who would use the services provided. In reality, most enterprises preferred hiring workers at the factory gate which induced the authorities in 1988 to make it compulsory for enterprises to register vacancies with the bureaus. However, enterprises continued to see the bureaux as a second best recruitment option and direct recruitment remained the preferred hiring option.

A similar process occurred with re-training. Although retraining was one of the activities assigned to the bureaux, most of retraining took in fact place in the factory. In practice, the existing system of labor offices was poorly equipped and organized to deal with mass unemployment and the reallocation of resources that would have been necessary in the early years of the transition. Labor shortages in the market remained a feature of the Soviet Union until the very end with the number of vacancies advertised still increasing between 1989 and 1990.

At the same time, great disparities existed across the republics and not everywhere labor shortages were a feature of the system. In terms of employment and among all the republics, the most severe problems were found in Central Asia. An estimated 13 million people were formally not employed in 1989 in the Union and approximately half of this number was registered in Central Asia. In this case, there was a clear understanding that the plan had failed to provide sufficient jobs for the working age population and the Soviet authorities recognized the existence of widespread poverty in the region.

[3] Marnie (1992) *Employment ad the Reallocation of Labor in the USSR*, in Aslund, A *Market Socialism or the Restoration of Socialism?*, Cambridge University Press (quote on page 146).

The Soviet Union performance during the last two decades of its existence was in fact rather unequal not only in respect to the Central Asian republics but also relatively to the Trans-Caucasian republics and Moldova. The Southern republics of the Union including Armenia, Azerbaijan, Georgia, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan (CIS-7 henceforth) were underperforming already in the 1970s and 1980s relatively to other republics. The CIS-7 experienced lower growth than other CIS republics in the 1970s and this gap increased during the 1980s (table 1.1). In 1989, the average GNP per capita at PPP prices was estimated at 4,191 USD for the CIS-7 as compared to 6,711 USD for the other FSU republics (De Melo et Al. 1997).

Table 1.1 Initial Conditions: Output and Income

	NMP growth pc (1) 1971-1985	NMP growth pc (1) 1986-1989
Armenia	4.9	2
Azerbaijan	2.1	2.9
Georgia	4.6	-0.8
Moldova	5.2	-1.2
Kyrgystan	3.1	2.2
Tajikistan	2.2	0.3
Uzbekistan	1.4	0
Median CIS-7	3.1	0.3
Median FSU non CIS-7	3.4	2.6

Source: Adapted from Wolf (2003); (1) Net Material Product growth per capita

Industry was relatively underdeveloped and the populations remained largely rural. While non CIS-7 republics had a median urban population growth between 1975 and 1985 of +9% per year, the CIS-7 had a growth of -2%. In 1990, less than half of the populations of the CIS-7 lived in urban areas as compared to an average of 65% for the other FSU republics. The CIS-7 - with the exception of Azerbaijan - were also not particularly rich in natural resources and were generally net receivers of either implicit or explicit subsidies from Russia.

Relatively lower performances were evident for almost all socio-economic indicators. Despite the historically lower salaries and wages, the CIS-7 show lower growth in these measures in the 1980s as compared to other republics of the Union. These countries entered the transition period with lower industrial output per capita, lower wages and lower productivity as compared to other CIS republics (table 1.2). They were also endowed with a relatively underdeveloped infrastructure, low shares of fixed capital and fewer highly educated workers. The trade pattern showed significant less integration with the rest of the world and longer distances with potential foreign markets[4].

Trans-Caucasian countries performed relatively better than Central Asian countries but the overall picture is that the CIS-7 entered the transition period significantly under-equipped as compared to other republics of the Soviet Union.

[4] Wolf, H. (2003) "*The Initial Conditions*", paper presented at the Lucerne conference of the CIS-7 initiative, January 20-22, 2003

Table 1.2 Initial Conditions: Employment, Productivity and Wages

	Per 1000 population with complete and incomplete secondary and higher education	Employees with higher education per 10,000	Labor productivity Russia=100	Unit labor cost SU=100	Average monthly monetary payments to workers and employees (Rubles)	Average monthly pay of workers in state farms (Rubles)
	1986		**1988**	**1988**	**1987**	**1986**
Armenia	751	654	74.7	103.1	191	150
Azerbaijan	741	417	83	94.3	165	141
Georgia	756	455	74.7	109.3	177	140
Moldova	679	643	75.4	93	171	152
Kyrgystan	640	476	64.3	104.3	167	156
Tajikistan	650	386	82.6	109.9	166	141
Uzbekistan	698	343	62.5	107	170	160
Median CIS-7	698	455	74.7	104.3	170	150
Median FSU non CIS-7	688	598	93.3	91.1	199	198

Source: Adapted from Wolf (2003)

Institutional transition and transitional reforms

The desegregation of the Soviet Union in 1991 was a political move aimed at ousting Gorbachev rather than a programmed set of political and economic reforms aimed at improving the republics' performance. It was unexpected and as such the republics were unprepared for the economic consequences. The CIS-7 in this respect experienced a similar succession of events to the one experienced in other republics with the first rounds of prices liberalization in 1991 and 1992, the consequent exposure of previously overhanging inflation and a sharp rise in prices, the disorganization of production, the break-up of the payment and financial systems, the decline in trade and exchanges and the collapse in output.

With the notable exceptions of Kyrgystan and Uzbekistan, the CIS-7 have also experienced extreme *political instability and conflict*. Armenia and Azerbaijan fought over the Nagorno-Karabach area between 1992 and 1993 which resulted in human losses and also in a sudden arrest of cross-border trade. Tajikistan experienced a prolonged civil war between 1992 and 1997 which halted reforms and economic development. Moldova has been struggling throughout the 1990s with the breakaway region of Transnistria. Georgia has been subject to internal instability throughout the 1990s with the regions of Abkhazia and Tskhinvali and despite the recent changes in government the situation remains highly volatile. In addition to internal conflicts, regional instability determined by the Chechen, Afghani and Iraqi wars led to a sharp movement of refugees and Internally Displaced Persons (IDPs) across the CIS-7 contributing to political instability, affecting trade relations and complicating labor market functioning. While open armed conflict have now been sedated, none of these countries can claim to have permanently resolved the internal instability with the political systems remaining very fragile.

Output decline, conflicts and low investments have had a major impact on *institution building.* The desegregation of the Soviet Union entailed the desegregation of its institutions including political, legal and administrative institutions. Republic branches of the Soviet institutions could not function autonomously as virtually all instructions came from Moscow during the Soviet period. They had to be rebuilt. This meant reaching a political consensus, drafting the necessary legislation and establishing the organization and institutions to run the legislative, judiciary, and executive branches. In the midst of conflict and economic decline this proved very difficult and many of the critical reforms such as the introduction of essential legislation (constitution, civil, penal

and labor codes) and the reform of essential national administrations (police, custom, judiciary, health, education) gained momentum only in the late 1990s. Anarchy rather than rules and regulations dominated many markets including the labor market throughout the early 1990s.

Already less equipped than other republics at the outset of transition, the CIS-7 also suffered greater losses in terms of essential *infrastructure* such as railways, telephone, roads, electric power, heating, water, sewage, gas and other primary networks due to the economic recession, a reduction in public spending that continued throughout the growth period and conflict. Only between 3.7% (in Tajikistan) and 15.7% (in Armenia) of the CIS-7 population had a telephone line at home in 1999.[5] In addition, poor maintenance and management and theft have been major sources of disruption for various networks. One of the major export item in Georgia is scrap metal derived from obsolete scrapped equipment but also from theft of functioning equipment such as transformers along electric lines[6]. Attempts to privatize the provision of public services have clashed with national and political interest and also with a very low capacity of the population to pay for these services.

Conflict, internal and external instability, recession and depletion of former soviet institutions contributed to explain the slow pace of *reforms* in the early 1990s. Macroeconomic stabilization achieved between 1994 and 1996 in all countries was the real turning point in terms of economic reforms and has proved to be a success after a prolonged period of hyperinflation and devaluation of the newly introduced national currencies. By 1996, all countries brought inflation down to two digit levels and the 2003 figures showed all countries to be below 10% with the exceptions of Tajikistan and Uzbekistan. This allowed CIS countries to start focussing on other reforms. In this respect, the CIS-7 seem to have outperformed other CIS countries although the CIS overall performance remained significantly below other transitional economies. Moreover, progress has been uneven across the reform spectrum with price liberalization and small-scale privatization performing better than large scale privatization, financial sector reforms, institutional and infrastructure reforms.

Small-scale and land privatizations have generally been more successful as has been the case in other republics of the CIS. Small scale privatization focussed on retail trade and services or the sale of small assets such as vehicles. It was relatively easier and the incentives to participate to the schemes were greater for households. The problems with SMEs came in fact later and due to the difficult business environment they operated with red tape, corruption, poor infrastructure, scarce protection of property rights and difficult access to finance (see next sections).

Privatizing large industrial complexes was understandably more complex and all countries struggled to find proper solutions resulting in delayed restructuring. The Agency for Restructuring and Enterprise Assistance (ARIA) which was set up in Moldova is one of the few examples which is often cited as a successful experiment that managed to find *ad hoc* solutions for large industrial complexes but this is an exception in the large enterprises privatization processes observed in the CIS-7.

Perhaps the weaker aspect of structural reforms concerns the financial intermediation sector. All CIS countries moved quickly to allow private banking in 1992 and this initially generated a large

[5] Pomfret, R. (2003) *Structural Reforms in the CIS-7*, background paper to the Lucerne CIS-7 conference, January 2003, www.cis7.org

[6] This is one problem we often encountered working with farmers in Southern Russia. Electricity in villages was occasionally interrupted because of theft of transformers or other hardware to be sold to merchants of scrapped metal and shipped via the Volga river to the Caspian sea or via the Lenin canal and the Don river to the Black sea. The Trans-Caucasus was evidently at the cross-road of this type of commerce.

number of small commercial banks. However, many of these banks were created to serve particular interest groups for licit and illicit activities and could not and would not be interested in serving the public for savings and credit purposes. The fragility of the systems quickly emerged with the first bankruptcies and governments responded by strengthening banking regulations which resulted in a reduction in the number of banks and in an increase of the average size. In the late 1990s, the typical banking system in these countries included a few tens of banks with two-three banks owning over half of the consolidated capital in the system. To date, financial systems remain very weak and vulnerable, lending rates are high with large interest spreads between credit and lending rates and very low access for small businesses and farms. Sources of capital are also almost exclusively enterprises which are obliged to operate with banks by law while only a very small percentage of households holds bank deposits (Pomfret 2003).

The 1998 Russian financial crisis, while it had some positive externalities on exports, delayed reforms further. Comparing the pre and post crisis period, the EBRD transition indicators deteriorated in most countries[7] with the result that, at the outset of the new millennium, transitional reforms were still largely incomplete and markets were not supported by the necessary institutional infrastructure.

Growth and the labor market

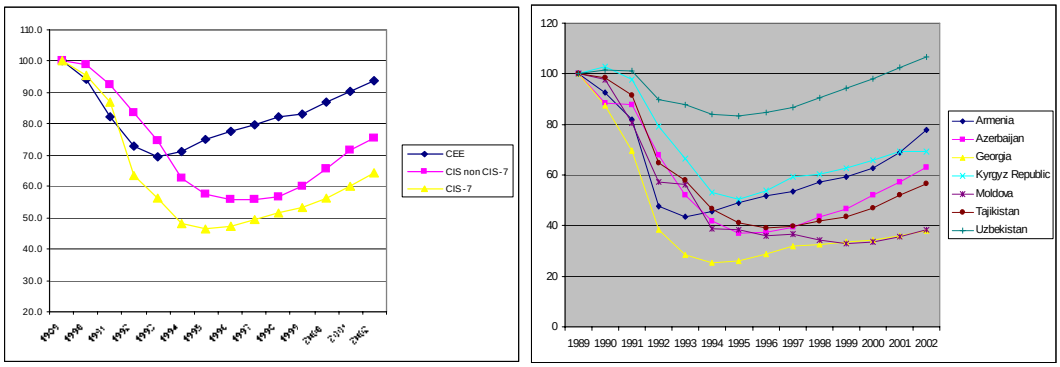
The scale of the general *output* decline has been faster and deeper in the CIS-7 than elsewhere in transitional economies (figure 1.1). By the end of the recession in 1995, the average GDP stood at 55% below the 1989 level with Armenian and Georgian output having fell by a staggering 70% between 1989 and 1993. As elsewhere in the CIS, the deep recession has been followed by a macroeconomic stabilisation period between 1994 and 1995 that halted the output decline and brought down inflation to manageable levels. Since 1996 and despite the 1998 crisis, the CIS-7 have been able to re-establish growth with an estimated cumulated and cross-country average for the period 1996-2001 of 27.1%. This is an encouraging achievement although the pre-transition level of output target remains some years away as - on average - the CIS-7 are still almost 36 percentage points below the 1989 output level. Among the CIS, the only outlier is Uzbekistan, a country that had a relatively minor recession during the early years of transition followed by moderate growth that allowed this country to bring the output level above its pre-transition level.[8]

Population trends also show remarkable changes during the recession years and later. Birth rates plummeted as elsewhere in the CIS and the rates of natural population growth decreased making the population on average older. Net external migration rates have been very significant with a net outflow of people in all countries and in every year between 1992 and 2002 with peaks of emigration in Kyrgyzstan and Tajikistan between 1992 and 1994 (a net emigration of between 1% and 2% of the population every year). The number of internally displaced persons and refugees has also been very large due to conflict inside these countries and conflicts in neighboring regions coupled with very poor economic conditions.

[7] Vandycke, N. (2003) *"Economic Development and Private Sector Growth in the Low-Income CIS-7 Countries: Challenges and Policy Implications"*, background paper to the Lucerne CIS-7 conference, January 2003, www.cis7.org

[8] The diversity of Uzbekistan vis-à-vis other countries treated in this paper will emerge in several occasions and deserves a word of warning. Uzbekistan never had a population census since the last census conducted by the Soviet Union in 1989 which implies that any figure drawn from sample surveys should be treated with caution. Moreover, macroeconomic official statistical figures have been questions by the ADB, EBRD, IMF and World Bank in several occasions, including GDP figures and particularly during the period 1998-2002. There are several indications that GDP has been overestimated due to a consistent underestimation of inflation and the deflators used to deflate GDP.

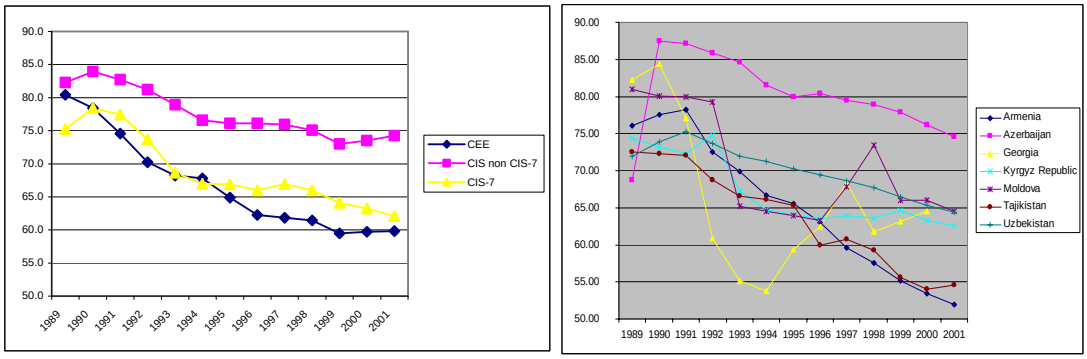
Figure 1.1 Output (1989=100)



Source: Unicef TransMONEE database (2002)

As in other CIS countries, *employment* declined during the 1990s but at a much slower rate than output while employment ratios in the CIS-7 have been kept above those of other CIS economies (figure 1.2). During the 1989-1995 recession, employment fell in all countries with the exception of Uzbekistan where it actually increased by 10%. Georgia, the country that experienced the deepest recession, also experienced the deepest fall in employment by about 30%. Moldova followed with a 20% employment decline while all other countries constrained employment fall within 10% points. It is also evident that the employment ratio for most transitional economies continued to decline throughout the growth period making growth 'jobless'. The employment decline has also been larger for the non-CIS countries that evidently continued to gain productivity margins over the CIS economies.

Figure 1.2 Employment ratio*



Source: Unicef TransMONEE database (2002). (*) Employed as % of population in working age 15-59

The combination of the described trends in output and employment has resulted in an e*mployment-output elasticity* during the recession period lower in the CIS-7 than elsewhere in transitional economies. If we estimate the output-employment gap during the recession period and we compare this gap with other transitional economies, we find that the CIS-7 have experienced by far the largest gap between the decline in output and the decline in the employment ratio (table 1.3).

The output-employment gap evidently turned into *productivity* losses - the larger the gap, the larger the loss - and these losses eventually turned into *real wages* declines (table 1.3). In all the CIS-7, the early 1990s recession has been accompanied by a deep fall in real wages, deeper than

anywhere else in transitional economies. In fact, considering the parallel growth in wage arrears and the loss of non-wage benefits for workers, the slow decline in employment is probably fully explained by these factors alone. It could be argued that losses in real wages absorbed most of the output shock and explain labor retention in the CIS-7. From an initial situation of labor hoarding in enterprises combined with excess of labor in the market, the recessional period contributed to increase the excess supply of labor within and outside enterprises. And this phenomenon was larger in the CIS-7 than anywhere else in transitional economies.

Table 1.3 The Output-Employment Gap During the Recession

	GDP growth (%)	Empl. Ratio growth (%)	O-E diff (*)	Real wages growth (%)
CIS-7 (1989-1995)	-53.6	-11.1	-42.5	-75.4
Other CIS (1989-1996)	-44.2	-7.5	-36.7	-54.8
Non CIS (1989-1993)	-34.0	-15.2	-18.8	-36.3

Source: Unicef TransMONEE database (2002). (*) Output-Employment growth difference

Since the second half of the 1990s and following the stabilization period, the situation has partly reversed. Output growth has been significant and consistent for all transitional economies including the CIS-7 and the employment ratio growth continues to be negative, although less negative. The result is increased productivity. The productivity gains made in recent years have, in turn, allowed wages to grow and the growth has been larger the larger had been the fall during the recession period. The CIS-7 in this respect have outperformed other transitional economies although the starting point was the lowest (table 1.4 and figure 1.3). Yet, real wages are still below the pre-transition level and *we could reasonably expect that employment growth will hardly start before wages will have regained the pre-transition level*. In fact, we should expect wages to by-pass such threshold before employment takes off given the already existing low labor productivity and labor hoarding during the pre-transition period.[9]

Table 1.4 The Output-Employment Gap During the Growth Period

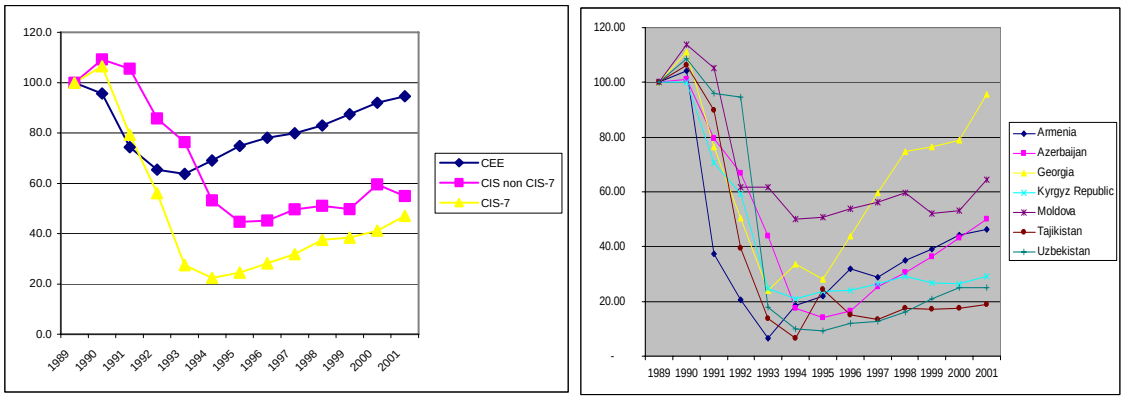
	GDP growth (%)	Empl. Ratio growth (%)	O-E diff	Real wages growth
CIS-7 (1996-2001)	27.1	-5.9	33.0	67.0
Other CIS (1997-2001)	27.5	-2.2	29.7	10.5
Non CIS (1994-2001)	26.5	-11.7	38.2	37.0

Source: Unicef TransMONEE database (2002)

More scarce and less clear to interpret are figures on *unemployment*. *Registered unemployment* has been generally low as compared to other transitional economies. All countries reformed the labor exchange systems in the early 1990s and started to register the unemployed and offer income support and active labor market programs. However, the unemployment compensation on offer has been generally poor and declining over the 1990s with increasing restrictions for registration while services provided could not be of great support when labor demand was very depressed. Low registered unemployment figure reflect the relative value of the income compensation and services on offer rather than the actual labor market status of potential applicants.

[9] The question of why wages are now growing with excess supply of labor in the market is related to labor market segmentation which will be explored later in the paper.

Figure 1.3 Real Wages (1989=100)



Source: Unicef TransMONEE database (2002).

O*pen ILO unemployment* figures are more scarce and very distant from registered unemployment figures. Proper labor force surveys, which allow for measuring ILO unemployment rates, have been very few during the early 1990s and reliable figures started to emerge only after the mid-1990s. These showed that ILO unemployment rates are several folds higher than registered unemployment, in fact close to figures observed for CEE countries during the same period. Such a large gap between registered and open unemployment reinforces the hypothesis that registered unemployment figures reflected only the relative value of being registered which was - and still is - generally very low.

Even ILO figures cannot be said to be a proper measure of unemployment in the CIS-7. The ILO itself in its recommendations recognizes that in particular situations when the labor market is very informal and depressed the formal requirements to define the unemployment status may be relaxed. When people are really poor they are obviously forced to do something with their time even if remuneration is equal or below subsistence. The World Bank poverty assessment for Tajikistan, based on a 1999 household survey, found an unemployment rate of 3% and a poverty rate of 98%. It is obvious that very poor people cannot afford to be unemployed, particularly in rural areas which are typically distant from employment exchanges and where some form of under occupation is always possible.

An overview of the main labor market indicators (table 1.5) shows that the Labor Force Participation Rate and the Employment Rate - on average - have decreased during the recession and during the growth period. The exceptions to these trends are Azerbaijan and Moldova which managed to reverse the negative path during the growth period. Unemployment rates remained generally low in all countries with significant increases prevalent during the growth period.

The sharp deterioration of wages and employment also contributed to a sharp rise in *poverty* while the wild privatization process of the early 1990s and the asymmetric economic performance of different sectors of the economy throughout the 1990s contributed to a surge in *inequality*. Atkinson and Micklewright (1992) found that poverty was already higher in Central Asia and in the Trans-Caucasus during the Soviet period. Within a few years from the desegregation of the Soviet Union, poverty increased in all countries by two to three folds. Poverty also continued to increase during the first couple of years of the growth period and is only starting from 1999 that downward trends have been observed in almost all the CIS-7. Inequality also followed a similar pattern with

a sharp rise in the early years, stabilization during the late 1990s and a tendency to decline in the last two to three years.[10]

Table 1.5 Labor Market Indicators

	1992	1996	2002	1992	1996	2002
		Population (000)			**Labor Force Participation Rate**	
Armenia	3600	3774	3212	82	76	61
Azerbaijan	7200	7488	8172	75	72	77
Moldova	4400	4325	3623	86	69	73
Kyrgiz Republic	4500	4543	4965	83	79	72
Tajikistan	5600	5904	6441	76	64	56
Uzbekistan*	21100	23130	24965	82	78	68
CIS-7 (average)				81	73	68
		Employment Rate			**Unemployment Rate***	
Armenia	64	55	45	2.0	9.4	10.8
Azerbaijan	62	59	66	0.2	1.1	1.4
Moldova	66	53	55	0.1	1.5	6.8
Kyrgiz Republic	67	60	57	0.0	7.8	8.6
Tajikistan	60	54	48	0.3	2.6	2.5
Uzbekistan*	68	64	60	0.1	0.4	0.4
CIS-7 (average)	65	58	55	0	4	5

Source: CIS-Stat (1998 and 2004). (*) The Unemployment Rate (UR) is neither registered nor open unemployment. It is calculated as a difference between labor resources and employment and inactivity (UR=LR-E-NA). Labor resources is a concept heritage of the Soviet Statistical system and still in use among CIS statistical agencies. It includes the labor force (employed and unemployed) and the economically non active in working age

The economic decline deeply affected *state finances*. Public spending shrunk in absolute terms and also relative to GDP and public debts surged qualifying five of these countries for the CIS-5 debt initiative (Armenia, Georgia, Kyrgyzstan, Moldova and Tajikistan). On average, the CIS-7 general government spending declined from 37% of GDP in 1992 to 23% in 2002 with the decline continuing during the more recent growth period. Only Moldova managed to maintain the relative level of spending (with large annual fluctuations) while all other republics saw a net decline. Government deficits have been higher during the 1992-1994 period, in the range of 20-30% of the budget (Unicef TransMONEE database 2002) and these have been financed for the most part with loans from multilateral organizations. In 2000, debt service alone - as % of government revenues - ranged from 15.5% in Armenia to 41.9% in Moldova and total debts averaged for the CIS-5 at 73.5% of GDP.[11]

By the time the recession ended in 1996, the CIS-7 looked much more like developing economies than their transitional neighbors. The process of de-industrialization brought many of these economies back to a scenario dominated by subsistence agriculture and transitional issues turned progressively into development issues. The growth period that followed is very encouraging but also expressed a number of inconsistencies that need to be understood in a developmental type of framework.

[10] Verme, P. (2004) *An Update On Growth, Poverty and Pro-poor Policies in the CIS-7*, World Bank, mimeo

[11] For more details see IMF and WB (2002) *Poverty Reduction, Growth and Debt Sustainability in Low-Income CIS Countries*, mimeo,www.cis7.org

2. GROWTH IN SEGMENTED LABOR MARKETS

The 'dual' labor market

From the picture presented in the previous section, it may be argued that the CIS-7 rolled development back by perhaps 20-30 years within a few years in the 1990s and that the memory of industrial development present in these countries is not the kind of industrialization process that these countries need now. The early 1990s have witnessed a deep process of *de-industralization* and the challenge of the late 1990s has been how to generate a process of *re-industralization* not only in the more traditional manufacturing sectors but also in more modern sectors.

If we leave aside for a moment the transitional path and we assume that the CIS-7 are simply countries in an early stage of economic development, we should imagine a future development process similar to the path followed by most countries that moved from a prevalently agricultural society to an advanced industrialized one. The development process transits through a first phase of agricultural development and the improvement of agricultural production, productivity and value added, the subsequent generation of an agricultural surplus and the creation of an excess supply of labor, the development of a processing industry absorbing excess labor and production and the subsequent development of an urban industrial sector fuelled by savings generated by mass production in manufacturing. Indeed, this is the development path observed in the transition from agricultural to industrial societies in the 19th century in Western Europe, in the 1960s and 1970s in South-East Asia and more recently in China and Vietnam.

In the course of the transition from agricultural to industrial societies, the rural/agriculture and urban/industry dichotomy is one useful framework to read transformation. In fact, one of the frame works that has been traditionally used in development economics to look at labor markets in developing countries is the dual labor market framework. The labor market is expected to be segmented into a primary and a secondary market where the primary market is found in urban and industrialized areas and the secondary market is found in rural and agricultural areas. Segmentation is generated by entry barriers in the urban sector, skills mismatch, distances and other frictions and imperfections that prevent the two markets from functioning as a single market and wages from equalizing. One test of dual labor markets is precisely the existing wage differentials between the two sectors which is evident and significant in all the CIS-7.[12]

Dual performance

Given that the CIS-7 have been able to grow almost continuously since 1997, a number of questions arise as to the structure and consequences of growth in a dual labor market context. Is growth occurring as a result of a process of re-industrialization? Are workers being pulled out of agriculture and into urban and industrial areas and are their wages improving? What are the other key development aspects characterizing this growth phase?

A **first** aspect to notice is that GDP growth in industry and agriculture has been very uneven. Industry has undergone a much deeper recession than agriculture and has recovered slowly during the growth period. In 2002, almost all the CIS-7 had an industrial output in between 40% and 60% below the 1991 level. Only Uzbekistan seems to have embarked into a real industrialization process having managed to increase industrial output by over 40% since 1991. On the contrary, agricultural output decline was contained within 40% of the 1991 value and in 2002 output was

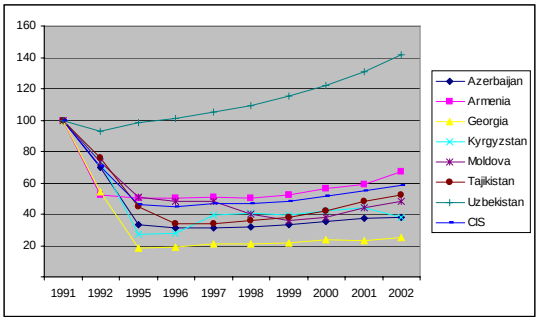
[12] National Statistical agency websites and CIS-Stat (1998 and 2004)

above the 1991 level in four of the seven countries and progress was also visible in the remaining three countries.

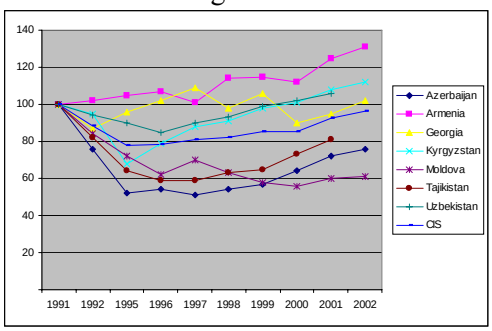
Relatively to other CIS countries, the CIS-7 suffered from a much worse recession in industry while they show a better performance in agriculture (table 2.1). It is also evident that the industrial recession has not been clearly reversed during the recent growth period which is an opposite trend to what it can be observed in other CIS countries during the same period.

Figure 2.1 GDP growth (1991=100)

Industry



Agriculture



Source: http://www.cisstat.com

Table 2.1 Volume Indices of Agricultural and Industrial Output (1991=100)

	1991	1992	1995	2000	2001	2002	2003
Industry CIS-7	100	70.2	43.1	47.7	51.1	54.0	47.8
Industry other CIS	100	87.6	56.0	70.8	77.3	82.0	89.3
Agriculture CIS-7	100	88.6	78.1	82.8	92.4	97.8	98.0
Agriculture other CIS	100	98.8	76.4	67.3	73.5	74.5	74.5

Source: http://www.cisstat.com

The relatively better performance of agriculture in the CIS-7 has been achieved thanks to small farming rather than through the re-organization of agriculture into large and better productive private industrial complexes. Land reforms have been fairly successful in distributing land to a large number of people (see section 5) and the privatization process that saw the dismantling of large *Kolkhoz* and *Sovkhoz* and the distribution of land and assets to members resulted in an effective and relatively egalitarian redistribution process, at least in comparison to urban areas and industrial enterprises. In Armenia in 1997 over 99% of agricultural output was produced by household plots.

Small farming is also not a phenomenon limited to rural areas. The 2001-2002 Georgian Household Budget Survey found that almost 60% of all households had access to land including over 30% of households in urban areas. However, the average land size used for agriculture per household was very small, about 0.8 hectares.

Second, the decline in industry is mainly explained by the decline in industrial manufacturing. Manufacturing output collapsed during the recessional period and continued to decline very significantly during the growth period (table 2.2). This is perhaps the most worrying trend from a welfare and employment perspective. Historically and worldwide rapid reductions in poverty and increases in employment have been closely associated to the development of the manufacturing sector. That is because the development of manufacturing during the early development stages is

labor intensive and job creation is usually led by this sector. In the CIS-7, growth has been driven instead by the production of a few export items mostly in extraction and heavy industry, by retail trade and commerce and, to a minor extent, by services.

Table 2.2 CIS-7 Output shares by sector

		Beg. Trans.	End reces.	Latest
Azerbaijan		**1992**	**1996**	**2002**
	Agriculture	40.3	37.6	40.2
	Business Services	18.6	24.5	24.2
	Manufacturing	20.5	14.3	10.5
	Public Services	20.7	23.6	25.1
Georgia			**1998**	**2002**
	Agriculture		48.5	53.8
	Business Services		17.7	18.3
	Manufacturing		8.9	6.8
	Public Services		24.9	21.1
Kyrgystan		**1992**	**1996**	**1999**
	Agriculture	38.2	47.1	52.4
	Business Services	14.9	18.2	16.8
	Manufacturing	21.4	13.4	10.3
	Public Services	25.6	21.2	20.5
Moldova			**1999**	**2002**
	Agriculture		48.9	49.6
	Business Services		17.7	17.7
	Manufacturing		12.2	12.7
	Public Services		21.2	20.0
Tajikistan		**1992**	**1997**	
	Agriculture	49.4	49.8	
	Business Services	9.9	8.6	
	Manufacturing	21.1	17.1	
	Public Services	19.6	24.5	

Source: Constructed from http://www.cisstat.com

In fact, the CIS-7 output structure shifted away from production of goods towards services. In Georgia, production of goods decreased from 48.4% to 40.7% of GDP between 1998 and 2002 while services grew from 47.7% to 53.6%. Construction, trade and transport were the sectors that grew faster during the period. In Armenia, production of goods decreased from 60.2% to 55.6% between 1997 and 2001 while services expanded marginally from 34.3% to 36.8%. In Moldova, production of goods decreased from 54% to 41% of output between 1995 and 2001 with the share of services increasing from 37% to 49%.

Third, output trends in industry and agriculture have been consistent with employment trends. Throughout the transition period, employment in agriculture continued to grow in relative terms and employment in industry - particularly manufacturing - continued to decline. In Georgia, employment in agriculture between 1998 and 2002 increased from 48.8% of total employment to 53.8% while employment in manufacturing decreased from an already very low level of 7% to 4.6%. Even among services, it is only employment in trade that shows a significant improvement during the period. In Armenia, agriculture is the only major employment sector that shows relative growth between 1997 and 2000 with industry declining and services remaining approximately stable. In Kyrgyzstan, the employment share of agriculture increased uninterrupted between 1989 and 2000 while employment in manufacturing declined uninterrupted and by a staggering two-thirds during the period.

At the end of the recession in 1996, agriculture was by far the largest employment sector in all CIS-7 countries with Georgia leading the way with about 52% of the employed population work-

ing in this sector. By 2002, all countries expanded significantly the share of employment in agriculture with four countries with well over 50% of the workers in this sector while the share in industry declined in all countries. On the contrary, other sectors do not show consistent trends. Employment in transport and communication, trade and catering and other services have all mixed performances during the growth period. On average, employment in industry declined by 4 percentage points while employment in agriculture increased by 6 percentage points between 1996 and 2002.

Table 2.3 Employment Structure by economic Sector During the Growth Phase (1996-2002)

	Industry and Construction	Agriculture	Transport & Communication	Trade & Catering	Other Services	Total
			1996			
Armenia	23	41	3	8	26	100
Azerbaijan	15	31	6	16	32	100
Georgia	10	52	6	9	23	100
Moldova	15	42	4	16	22	100
Kyrgizstan	15	46	5	9	25	100
Tajikistan	14	58	3	4	20	100
CIS-7*	15	45	5	10	25	100
Othe CIS	30	18	8	14	30	100
			2002			
Armenia	16	45	4	9	27	100
Azerbaijan	12	40	5	16	27	100
Georgia	10	52	4	10	24	100
Moldova	14	50	4	10	22	100
Kyrgizstan	10	53	4	11	22	100
Tajikistan	8	66	2	4	20	100
CIS-7*	12	51	4	10	24	100
Othe CIS	27	20	8	15	31	100
			1996-2002 (% changes)			
Armenia	-6	4	0	1	1	0
Azerbaijan	-4	9	-1	1	-5	0
Georgia	0	0	-2	1	1	0
Moldova	-1	7	0	-6	-1	0
Kyrgizstan	-4	7	-1	2	-3	0
Tajikistan	-6	8	-1	-1	0	0
CIS-7*	-4	6	-1	0	-1	0
Othe CIS	-3	1	0	1	1	0

Source: CIS-Stat (1998 and 2004). (*) Uzbekistan excluded (data not available for 2002)

Part of this relative employment shift toward agriculture is explained by the privatization process, restructuring and changes in productivity. In agriculture, privatization has generated a large number of small household farms and the economic recession has pushed people to seek refuge in subsistence agriculture. In industry and manufacturing initially delayed reforms and the heritage of labor hoarding kept workers formally on the job. By the time growth started, there were plenty of productivity gains to be made with the existing workforce and the need to accelerate restructuring has in fact pushed more workers out of industrial production. Some of these workers are evidently still taking up farming as the only available alternative in the labor market. Thus industrial growth in recent years (if and where it occurred) has been achieved by increasing productivity and not by increased employment. Productivity and wages have in fact closely followed output developments and explain the low employment-output elasticity as illustrated in previous sections.

Fourth, relative wages have not followed the relative performance of industry and agriculture. In Armenia, Georgia and Kyrgyzstan, nominal wages in agriculture between 1997 and 2002 have been in between one-fourth and one-half of the wages in industrial manufacturing and the gap between agricultural and industrial wages has been constantly growing in nominal terms during the

period[13]. This is a confirmation that there is a dual type of labor market operating and also that rigidities between these two markets are still growing. Output and employment in manufacturing are decreasing but productivity and wages are increasing suggesting a certain scarcity of skilled labor in this sector. It is also true that living in rural areas is less costly and self-production and self-consumption is higher which partly compensates wages differentials between the two sectors. However, the trend indicates an increasing divide rather than a decreasing divide and this cannot be explained by these compensating factors alone as it will be further shown in section 4.

Fifth, during the recent growth period, we are not able to see a reversing trend in the process of population migration from urban to rural areas that characterised the recession period. The share of urban population is still decreasing, although at a lower pace than observed during the recession. This is consistent with output and employment figures and contrary to what has been observed elsewhere during rapid development processes.

Table 2.4 Urban Population (% of total)

	1989	1996	2002
Armenia	68.7	67.3	64.3
Georgia	55,4	53,8	52,3
Kyrgystan	38.2	35.3	34.9

Source: National Stastical Agencies Websites

In the next two sections we move from facts to causality. We try to assess what may be the factors that prevent the industrial sector in general and the manufacturing sector in particular from growing. We look at two possible means of growth. One is the restructuring and growth of enterprises in the formal sector (section 3) and the second is the transition from self-employment to small businesses which usually implies a transition from the informal to the formal sector (section 4). Performances in these two areas are evidently the cornerstones for stimulating growth *cum* jobs.

3. GROWTH CONTRAINTS IN THE FORMAL SECTOR

This section turns to enterprises in the formal sector and attempts to review all those factors that would potentially constitute barriers to growth and job creation. We will try to establish what are the most critical bottlenecks currently existing in the CIS-7. In the previous sections, we observed that the economy and the labor markets in these countries are segmented into a rural/agricultural sector and an urban/industrial one. By turning to enterprises and given the quasi non-existence of large enterprises in the rural sector, this section evidently focuses on the urban/industrial sector. Moreover, the rise of self-employment in rural and urban areas alike determined a certain segmentation of employment also in urban areas with two rather distinct pools of workers, the employees in enterprises and the self-employed outside enterprises. While the former pool belongs essentially to the formal sector and will be covered in this section, the latter pool is often found in the informal sector to which the next section will turn. Thus, we should keep in mind that this section covers only a share of existing workers.

We mostly draw on data collected by the World Bank Business Environment and Enterprise Performance Survey (BEEPS)[14] and integrate these data with other available databases and data pub-

[13] See the official websites of the national statistical agencies for a complete set of data on wages.
[14] For details on this survey see http://info.worldbank.org/governance/beeps/

lished by the national statistical agencies of the CIS-7. We review the statistics first and then we proceed with a multivariate analysis using the BEEPS database. Possible barriers to growth and job creation are grouped into four categories: Economic barriers (internal and external demand, competition, predictability of changes in policies and legislation, infrastructure), financial barriers (finance, banking, interest rates, taxes), institutional barriers (governance, corruption, customs, judiciary and others) and internal barriers to the enterprise (ownership, management and workers' skills).

Economic barriers

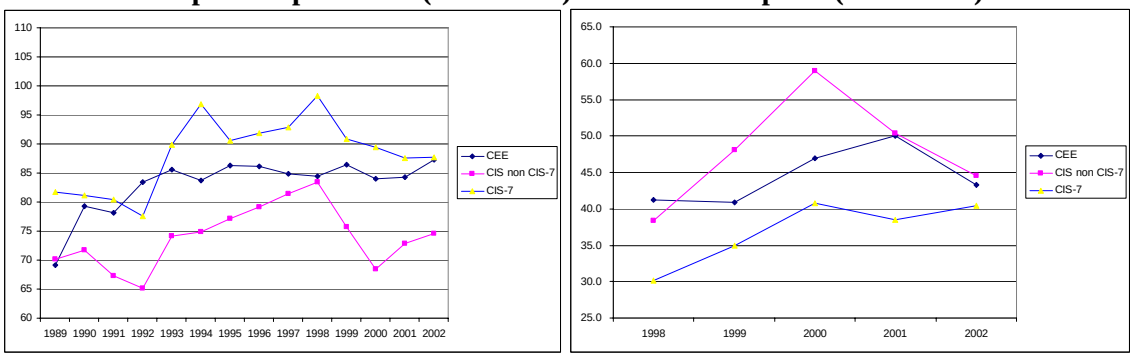
Internal demand. One measure of internal demand is final consumption expenditure. Figure 3.1 compares final consumption expenditure as % of GDP for the three groups of countries, CIS-7, Other CIS and Non CIS. The share of internal demand over GDP is generally very high for the CIS-7, in a range comprised between 70% and 90% of GDP and higher than in other transitional economies. This is partly a reflection of the large informal sector in these countries. In 1994 in Georgia, final consumption expenditure reached a figure of over 140% of GDP. It is also evident that internal demand in the CIS-7 declined significantly in the aftermath of the 1998 Russian financial crisis and has yet to recover.

External demand. The devaluation of the national currencies that followed the 1998 Russian financial crisis has instead prompted a positive growth path in external demand. The share of exports over GDP have increased between 1998 and 2000 and then stabilised around 40% of GDP in the subsequent period.

In sum, the key to understanding demand for goods and services during the recent growth period in the CIS-7 is the 1998 Russian financial crisis. This has affected negatively internal demand (about -10% of GDP) and positively external demand (about +10% of GDP). Thus, the two effects have roughly cancelled each other out.

Figure 3.1 Internal and External Demand

Final Consumption expenditure (% of GDP) **Exports (% of GDP)**



Source: http://www.cisstat.com

Competition. Despite improvements in exports, local firms at the end of the 1990s were still relatively little exposed to world competition. For most enterprises in the CIS-7, competition was feared from domestic enterprises, SMEs above all. According to the BEEPS, the number of enterprises that ranked domestic firms as the main competitors was similar across transitional economies with the exception of Armenia where this share was almost twice as large as elsewhere perhaps suggesting that SMEs in this country are much more active than in other countries. Firms in Uzbekistan also ranked competition from large private and state owned enterprises much more

often than firms elsewhere. Competition from goods smugglers is also perceived as a major competitive threat in Azerbaijan and Georgia, much more than in any other countries, confirming that informal and illegal activities in these countries are a major phenomenon.

Predictability of changes in policies and legislation. Perceived predictability of the business environment determined by changes in economic and financial policies or changes in laws and regulations is an important aspect that affects business decisions, particularly investments and other long-term decisions. According to enterprises and in relation to predictability of economic and financial policies, the CIS-7 rank well across transitional economies with an average predictability higher than in both other CIS countries and non CIS countries. Within the CIS-7, there are however great differences with Azerbaijan and Uzbekistan being the most predictable environments and with Kyrgyzstan and Moldova being the least predictable. The situation is very much the same relatively to predictability of laws and regulations affecting businesses with Azerbaijan showing best predictability and Kyrgyzstan the lowest.

Infrastructures. Some of the essential services for the functioning of firms are ranked very poorly in the CIS-7. On average, postal services are ranked as the worst service in all three groups of countries considered. Telephones and electricity also rank for all groups within the four worst services in a list of 14 services. As already remarked in previous sections, telephones density is extremely low in the CIS-7 (Pomfret 2003) and the cost of telephones calls per minute is higher than anywhere else (WBI[15]). Electricity consumption per capita in the CIS-7 is only about two-thirds than elsewhere in transition and increased only marginally between 1998 and 2000 while commercial energy use was only about one-third during the same period (WBI), both measures reflecting relatively lower income and output. Generally, much better ranked are roads and public works. WBI data show that the percentage of paved roads in the CIS-7 is rather high as compared to the average in other transitional economies with over 92% of roads paved although we do not have statistics on the general state and maintenance of roads.

Financial barriers

Sources of finance. According to enterprises interviewed in the BEEPS, among the sources of finance, banks contribute to a very small share of enterprises in the CIS-7 (only about 4.3% of enterprises reported to be financed by banks). This is a phenomenon that extends to all transitional economies but it is much more evident in CIS countries in general and in the CIS-7 in particular. As a main source of finance, firms use by far internal funds and retained earnings. In Armenia and Azerbaijan, a very large share is also constituted by finance from family and friends. In some countries, the state is also still a supplier of finance, particularly in Azerbaijan, Uzbekistan and Kyrgyzstan. State finance is on average a larger contribution in the CIS-7 than in the other transitional economies.

Interest rates. Among the biggest obstacles to businesses in relation to banking, high interest rates is what most firms rank at the top in the BEEPS. In general, the problems faced by enterprises in relation to banking are the same across transitional economies but the CIS-7 stand out for having a larger proportion of enterprises declaring that there is a lack of access to long-term loans or lack of money to lend altogether as if these countries suffered from liquidity shortages. This shortage seems particularly acute in Azerbaijan and this may be associated with corruption of bank officials which is ranked as one of the major problem in this country. Real interest rates are higher in the CIS-7 than anywhere else in transition. In 2002, real interest rates were estimated at about

[15] World Bank Indicators, see www.worldbank.org

15% in the CIS-7 on average against an average of 6% for the other CIS countries and the non CIS countries alike (WDI).

Banking efficiency. The BEEPS asked enterprises about the average number of days necessary to make a bank transfer locally. Bank transfers within countries are usually made within three working days in the CIS-7. This is a reasonable time and also a relatively better performance than in other CIS countries and also relative to non CIS countries. Armenia and Moldova are two countries where a larger share of firms declared that bank transfers take more than three days while Uzbekistan seems the country within the CIS-7 where bank transfers are within the three days limit according to almost all enterprises surveyed (94%).

Tax level and regulations: When asked about what is the major obstacle to growth, enterprises in the BEEPS put high taxes and tax regulations and administration at the top of the list in virtually all transitional economies. In this respect, the CIS-7 are not different from other groups of transitional economies. Instead, tax rates are generally lower in the CIS-7 than elsewhere for both the corporate and personal income tax rates. Data on social security contributions are scattered but the CIS-7 pay evidently less than other transitional economies also in this respect while the cumulated collection of other forms of taxes seems to be higher among the CIS-7 than elsewhere in transition (WDI). Thus, the CIS-7 probably rely more on indirect taxation than on direct taxation, a typical feature of developing and largely informal economies.

Institutional barriers

Governance. CIS-7 firms tend to be relatively unhappy about government performance with few exceptions. The perception of governance is rather diverse across transitional economies and also among the CIS-7. Generally, the majority of firms rank the government performance as inefficient and CIS-7 countries firms tend to be more pessimistic with the exception of firms in Uzbekistan where the large majority think that the government is efficient. Firms in Azerbaijan are also relatively optimistic while in Armenia, Georgia and Moldova firms are mostly very negative about the government. The CIS-7 also stand out for the ranking of the central government leaders. These are generally relatively well ranked in other countries while in the CIS-7 they are ranked as the third worst public service in a list of 17 public services. This finding is fairly consistent in all the CIS-7 with the exception of Uzbekistan. Parliaments are usually better ranked by enterprises but this is a common feature in all transitional economies. Also, in the CIS-7, the actual power of parliaments is relatively modest with presidents and -to a lesser extents- governments concentrating most of the executive and legislative (initiative) powers.

Government meddling in business matters. With some exceptions, government intervention is not very heavy in matters related to firms direct activities such as investments, employment, sales, pricing, dividends and wages. In this respect, the CIS-7 do not differ a great deal from other transitional economies although they differ from other CIS countries because the latter seem to express a higher degree of control of the state over these functions. One exception in the CIS-7 is Uzbekistan where the state evidently interfere much more with management functions according to the enterprises interviewed in this country. This may also be due to the larger share of state ownership present in the Uzbek sample. The country where the government seems to be less intrusive in the CIS-7 is Armenia where also the share of state owned enterprises in the sample is relatively small.

Corruption. Enterprises' perception of corruption is on average higher in the CIS-7 than elsewhere in transitional economies. It is particularly high in Azerbaijan where almost 60% of firms declared that it is common (always, mostly or frequently) to pay 'irregular' payments. Uzbekistan

comes next with 46% of enterprises followed by Armenia and Georgia. In Kyrgyzstan this share is the lowest (28%). When they pay, firms pay generally less than 10% of revenues. The largest payments on average are due in Georgia and Azerbaijan and the smallest in Uzbekistan. When dealing with the government, the majority of firms have to pay to obtain a contract except in Armenia where less than 50% of firms declared to have to pay for government contracts. Azerbaijan and Georgia are the two countries where is most frequent to pay for government contracts and also where payments are larger while in Uzbekistan payments are much less frequent and also smaller when they occur.

Customs. Customs procedures are still very slow in the CIS-7 as compared to non CIS countries but the situation is relatively better than in other CIS countries where customs procedures are exceptionally long. Firms were asked how many days are necessary to collect imports from the time of arrival in the country. In non CIS countries, only 8.7% of firms replied that it takes more than one week while in the CIS-7 and in other CIS countries these shares were 25.2% and 41.3% respectively. In Kyrgyzstan and Uzbekistan however, processing time was much slower and for about half of the firms in these countries the processing time was over one week. Inspection processing time for export goods is generally less time consuming everywhere but again in other CIS countries this process was slower than in the CIS-7 and much slower than in non CIS countries. Within the CIS-7, Kyrgyzstan and Uzbekistan processing time far exceeded the CIS-7 average and most other transitional economies.

Judiciary. Firms perception of the judiciary in the CIS-7 falls in between other CIS countries and non CIS countries. Generally all firms do not show a great deal of trust in the judiciary tending in all groups toward non satisfaction. However, this non satisfaction is greater in non CIS-7 countries. The less unsatisfied with the judiciary in the CIS-7 are firms in Uzbekistan where we have seen that firms in general are more satisfied with government services. In Azerbaijan, the judiciary is also relatively better perceived while in Armenia, Kyrgyzstan and Moldova, the judiciary system is very poorly perceived by enterprises relatively to other countries.

Other obstacles to growth. Other than taxes and customs, firms in the CIS-7 rank business licensing high in the list of obstacles to growth. Business licensing is also perceived as a problem in the CIS and much less elsewhere. Other potential constraints to growth such as labor regulations rank last in terms of obstacles to growth in the CIS while this issue ranks third in non CIS countries. Fire and safety regulations and environmental regulations do not seem to be a major concern for firms anywhere in transition including the CIS-7.

Internal barriers to enterprises

Ownership. Individual and family businesses are a very important form of ownership in the CIS-7.[16] For all transitional economies, the relative majority of surveyed firms are individually owned. This share is larger in CIS countries but family businesses are more frequent in the CIS-7 than else-where. Businesses where the government owns a major share follow in terms of ownership for all countries. Among the CIS-7, Armenia and Azerbaijan are the countries with the largest share of individually or family owned businesses followed by Georgia. In the Trans-Caucasian countries, other forms of ownership -government apart- are almost non existent in the surveyed sample while in Kyrgyzstan, Moldova and Uzbekistan workers'-owned firms are rather common, especially in Uzbekistan where they represent more than one-third of the sample. This form of ownership is typical of the CIS and very marginal in other transitional economies.

[16] It should be noted that the BEEPS samples in each country are not necessarily representative of the existing forms of ownership and this paragraph mostly reflects the characteristics of the samples.

Management. Dismissing a manager on performance ground is generally less frequent in the CIS-7 than elsewhere in transitional economies but this is not true in Azerbaijan and Kyrgyzstan where this explains about 40% of all management changes. Poaching instead is most frequent in Georgia and Uzbekistan and to a lesser extent in Armenia and these countries resemble in this respect to non-CIS countries.

Workers skills. When asked about the desired level of workers' skills, enterprises in the CIS-7 seem to be overly optimistic about the level as compared with other transitional economies. On average, the percentage of enterprises who think that the level of skilled workers is too high is about 24% in the CIS-7 as compared to 7% in other CIS countries and 15% in non CIS countries. Vice-versa, the share of enterprises that think that the desired level of skilled workers is too low in the CIS-7 is 13% as compared to 29% in other CIS countries and 19% in non CIS countries. The situation varies also a great deal across the CIS-7 with Armenian enterprises being the most satisfied with the level of skilled labor and firms in Uzbekistan being the least satisfied.

This brief overview has highlighted a number of potential and significant obstacles to growth that seem to be particularly acute in the CIS-7. These are poor infrastructures, limited sources of finance, high interest rates, governance and corruption. Other factors discussed are either little relevant for the CIS-7 or are not a feature that can be attributed to these countries as a group. We now turn to multivariate analysis to verify the robustness of these findings.

Multivariate analysis

The BEEPS allows for a cross-section multivariate analysis of the potential factors that could hamper or induce growth in output and employment. In the interpretation of results, it should be kept in mind that the BEEPS asks the opinions of enterprises. Answers are evidently subjective perceptions of explanatory variables rather than objectively measured variables. For example, enterprises are asked if taxes are a major or minor obstacle to growth and we use answers to this question as explanatory variables in our regressions but these answers may be unrelated to the actual tax rate in each country. Therefore, the BEEPS allows only to study 'perceived' explanatory factors in output and employment growth.

We distinguish between CIS-7 enterprises and other transitional economies and between enterprises that have reported growth in sales or employment during the previous three years ('ups'), those that have experienced negative performances in sales and employment ('downs') and those that approximately maintained the same level in these two variables ('stables'). Explanatory and control variables constructed are grouped into areas and listed in table A.1 in the annex. We attempt to address the following three questions:

1. What are those critical factors that divide successful enterprises ('ups') from unsuccessful ones ('downs')?
2. Do size and ownership matter in explaining enterprises' sales and employment growth?
3. Are CIS-7 countries different from other transitional economies in their perception of barriers to sales and employment growth?

Model. We use a probit and a multinomial logit model to address the first two questions. In the probit model, the dependent variable is a binary variable where we code 1 the 'ups' and 0 the 'downs'. We run this model with and without control variables for size and ownership and for the CIS-7 and other transitional economies separately. We repeat the regressions for sales and employment (tables A.2 and A.3 in the annex). In the multinomial model we use three categories for the dependent variable - 'ups', 'down' and 'stables' - using 'stables' as the reference category. We

run the regressions for the CIS-7 and for other transitional economies and for sales and employment separately (tables A.4 and A.5). For the last question, we also run a probit regression with the dependent variable equal to 1 for the CIS-7 and to 0 for either the other CIS countries or the other transitional countries (table A.6).

The purpose of using the multinomial logit in addition to the probit model for the first two questions is to test the consistency of the results. If we find significant variables that distinguish the ups from the downs in the probit model, we may test whether this significance persists for the same variables in the multinomial logit model and if it shows opposite signs for the ups and downs relatively to the stables. If this is the case, we would have pointed out critical factors that may explain growth in sales and employment.

Results. Probit regressions for sales in the CIS-7 (table A.2 in the annex) show significantly different explanatory factors for ups and downs. These are: unpredictability of economic policies, family as a source of finance, bank efficiency and interest rates, customs and also parliament rating. With the exception of the custom rating, where a low rating is positively associated with growth in sales, all other variables have the expected negative sign signalling that these may be real barriers for sales growth. Results are consistent with and without control variables. Significant variables for the other transitional economies are inflation, internal funds as a source of finance, supplier credits as a source of finance, bank paperwork and the existence of corruption. All these factors have the expected negative sign and findings are consistent with or without control variables.

Probit regressions for employment in the CIS-7 (table A.3 in the annex) show that labor regulation is positively associated with enterprises showing employment growth. In other words, those enterprises that declared labor regulations to be a major obstacle to growth are also those enterprises who are mostly growing. The same applies to bank collaterals (enterprises that declared bank collaterals a major problem tend to be those where employment is growing) and customs rating (enterprises that declared customs to be bad or very bad tend to be those where employment is growing). On the contrary, financial problems in general, slow customs in processing imports and parliament rating are also significant factors and with the expected negative sign. Financial factors and customs are also significant variables for other transitional economies but again the signs are not always those expected. In sum, the employment regressions do not depict univocally possible constraints to employment growth.

The multinomial logit regressions for sales in the CIS-7 (table A.4 in the annex) show that among all explanatory variables only one is significant in both the ups and downs columns. This is organized crime but the sign of this variable is the same for ups and down indicating that this factor is significantly different from the stables category but similar between ups and downs and that there is no ranking between the three states. The multinomial logit for employment tells a similar story (table A.5 in annex). Again we don't find variables that are significant for both the ups and downs in the CIS-7 and with opposite signs and the significant variables are also different between the CIS-7 and other transitional economies.

In conclusion, there are a number of significant variables that divide 'ups' from 'downs' in terms of sales such as economic policies, sources of finance, bank efficiency, interest rates and customs. These variables are meaningful in an economic sense and consistent with other findings in this paper, particularly in relation to sources of finance and interest rates. Results are also robust to the use of control variables for size and ownership. However, the significance of these same variables does not persist in the multinomial model when we compare ups and downs to the stables and this

finding weakens somehow the overall significance of the variables indicated by the probit model as determinants of sales growth.

Explaining employment performances is even more arduous. Several significant variables in the probit regressions do not have the expected signs and the multinomial regressions results are not consistent with the probit results. Therefore, pinpointing critical variables for employment generation is not possible with available data and results.

Concerning the question related to whether size and ownership matter in explaining enterprises growth barriers, this is generally negative. We showed that in all models where we compared coefficients between regressions with or without the sales and ownership control variables we did not find very significant differences which would indicate that the inclusion of these control variables does not substantially affect the explanatory power of the 'barriers to growth' variables.

Finally, the answer to the question of whether CIS-7 countries are different from other transitional economies in their perception of output and employment growth barriers is clearly positive with the difference being larger between CIS-7 and non-CIS than between CIS-7 and other CIS countries (table A.6). This was expected and confirms the statistics presented in the previous section. Significantly different variables between the CIS-7 and other CIS countries relate to the perception of taxes, inflation, predictability of economic policies, customs, judiciary, corruption and infrastructure. Significantly different variables between the CIS-7 and non-CIS countries relate to taxes, labor regulation, inflation, exchange rates, instability, banking, customs, judiciary, parliament, central bank, police, government intervention, corruption and infrastructure. The difference between the CIS-7 and non-CIS countries touches almost all domains and is robust being consistent with or without control variables.

In conclusion, the multivariate analysis adds a certain amount of weight to the finding that difficult access to finance, high interest rates and corruption are critical perceived obstacles to output (sales) growth. On the other hand, neither the statistics presented in the previous section nor the multivariate analysis in this section have been able to pinpoint critical constraints to employment growth. Consequently, the macroeconomic explanation provided in section 2 for the negative employment growth related to changes in productivity and labor market segmentation remains the main finding of this paper in this respect.

4. FROM SUBSISTENCE TO GROWTH IN THE SMALL INFORMAL SECTOR[17]

The previous discussion has covered the formal sector of the economy which tend to be found among larger enterprises. This section turns to the small business environment, looking at the thin line between subsistence and value-added activities and distinguishing between formal and informal activities and between wage and non-wage labor. The framework of analysis is still segmentation as we will see that this helps to explain several apparent inconsistencies in the CIS-7 labor markets.

[17] This chapter also draws on some background material prepared by Jan Babetski for the World Bank ECA Labor Market Study.

The rise of self-employment

In the Southern republics of the CIS including the CIS-7, the great reallocation of labor during the 1990s has occurred from enterprises to self-employment or, in other words, from wage employment to non-wage employment (table 4.1). On average, between 1991 and 1996, the share of self-employment in total employment has increased from 16% to 35% in the CIS-7 and from 6% to 14% in other CIS countries. This is a trend that was somehow expected during the deep recession. However, self-employment continued to increase very significantly during the growth period and in some cases even more rapidly than during the recession. Between 1996 and 2002, the average share of self-employment for the CIS-7 increased from 35% to 49% while it increased only marginally for the other CIS countries from 14% to 16%. We have countries like Moldova and Azerbaijan that doubled or tripled the share of the self-employed during the growth period. This phenomenon is the cornerstone to comprehend labor market changes in the CIS-7.

Table 4.1 Self-employment (% of total employment)

	1991	1996	2002
Armenia	20	42	50
Azerbaijan	16	29	68
Georgia	12	46	57
Moldova	13	12	41
Kyrgiz Republic	13	50	61
Tajikistan	19	34	43
Uzbekistan	17	30	25
CIS-7	**16**	**35**	**49**
Other CIS	**6**	**14**	**17**

Source: CIS-Stat (1998, 2003)

The rise of self-employment may be explained essentially by three factors. The first factor relates to privatization. In urban areas, small-scale privatization has implied the sale of commercial activities such as retail trade and transport vehicles to the public splitting large state activities into small household businesses. In rural areas, privatization of large *Kolkhoz* and *Sovkhoz* entailed the creation of a large number of households farms where, depending from the country considered, the head of the household became formally registered as a self-employed individual or remained vaguely classified as farmer without formal tax or social security status. We saw that privatization in some countries has been delayed due to conflict or slow reforms, particularly in rural areas with late implementation of land reforms. This is an aspect that may contribute to explain the persistence of self-employment growth during the output growth period.

The second factor relates to the general economic conditions. Self-employment in urban areas may have become an attractive formal status for semi-informal activities given the lower tax rate and the lower administrative barriers present to enter this sector. Rural areas instead may have become an escape from urban poverty for many of those formally state employees that could not find opportunities in the new emerging private sector, partly for lack of jobs and partly for lack of skills. Subsistence agriculture for many could have been a forced option to escape extreme urban poverty and unemployment.

The third factor may be an healthy growth of self-employment explained by a gold rush to enter a sector that may be perceived by workers as a potential springboard for SMEs creation. While the first factor is simply a structural development and the second factor is a negative turn in economic fortunes, this third factor would be a very positive indication of labor market developments, provided we can observe some form of initial transition of workers from self-employment to SMEs.

Before we turn to testing this last hypothesis with a panel survey, we need a better understanding of informality in the CIS-7 and of the relationship between informality and self-employment.

Informality

The question of self-employment and the transition from self-employment to SMEs is closely related to the question of informality. In the Soviet Union, belonging to a recognized category was essential for obtaining any formal right including pension, health insurance, access to schools and others. People outside formal categories were not officially contemplated and the real unemployed or people who had no interest in joining the labor force had to find some form of licit or illicit mean to be recognized as a formal category.

This type of attitude continued during the transition period. Owners of informal or illegal activities would still have the incentives to be registered formally somewhere, usually as self-employed, to keep a pension or a health record alive. Thus, informality is not necessarily expressed in terms of non registered activities but in terms of registered activities or self-employed who in fact conduct most of the business in informal or illegal form. By far, informality in the East (and in the West) occurs in formally registered activities with the known system of 'double accounting'[18].

Estimates of the informal sector for transition countries are numerous and the methodologies for these estimates variable. Kaufmann and Kaliberda (1996) have pioneered estimates based on electricity consumption, Johnson et Al. (1997) and Lacko (2000) have also followed this approach reaching very large estimates of the informal sectors in transition. Alexeev and Pyle (2003) have been somehow critical of the approach and of the causes that explain the informal sector and Hanousek and Palda (2004) have shown that this approach may be unsound. Schneider and Klinglmair (2004) review these approaches and also propose a different estimation procedure reaching their own figures on estimates of the informal sector in transition and non transition economies.

Tables 4.2 and 4.3 report the various estimates for the CIS-7 countries and for the averages calculated for other CIS and non-CIS countries. Schneider and Klinglmair (2004) figures show that the size of the shadow economy varies in percentage of GDP from a minimum of 34.1% in Uzbekistan to a maximum of 67.3% in Georgia (1999/2000). These shares are higher on average for the CIS-7 (48.9%) than for Non-CIS countries (29.6%) with the other CIS countries following very closely (47.4%).

The size of the shadow economy seems to have declined in all transitional economies in the decade preceding the transition period (1979-1989) while it rose dramatically between 1989 and 1995 in all countries considered with the exception of Uzbekistan (table 4.2). Later figures are not easily comparable because coming from different sources and methodologies but it would appear a certain tendency to stabilization of the figures moving toward the year 2000 (table 4.3).

From the figures we dispose of, the shadow economy seems to have increased in parallel with self-employment during the recession years and has stabilised in parallel with the growth of self-employment during the growth years. Being a measure of output itself, the fact that the shadow economy grows during recessions and contracts during growth evidently reduces GDP variance. Including the estimates of shadow output would reduce the scale of the output decline and would increase growth marginally less for every growth year. Given the different GDP performances of different transitional economies, the shadow economy contributes to reduce inequality in GDP

[18] We refer to 'double accounting' to indicate that enterprises tend to keep two sets of accounting records, a white set for the tax authorities and a black set to register all transactions. Skilled accountants in this practice are in high demand in CIS countries.

estimates across transitional economies although inequality remains very marked even including this measure of output.

Table 4.2 The size of the shadow economy 1979-2000 (% of GNP)

	1979 (1)	1989 (1)	1995 (1)	1995 (2)	1999/2000 (3)
Azerbaijan	50.0	33.0	69.9	60.6	60.6
Georgia	50.0	33.0	71.4	62.6	67.3
Moldova	43.0	29.0	47.8	35.7	45.1
Uzbekistan	50.0	33.0	28.5	6.5	34.1
CIS-7	**48.3**	**32.0**	**54.40**	**41.35**	**51.78**
Belarus	43.0	29.0	34.5	19.3	48.1
Kazakhstan	50.0	33.0	49.8	34.3	43.2
Russia	27.0	18.0	45.6	41.6	46.1
Ukraine	38.0	25.0	56.5	48.9	52.2
Other CIS	**39.5**	**26.3**	**46.60**	**36.03**	**47.40**

Source: (1) Alexeev and Pyle (2002); (2) Johnson et Al (1997); (3) Schneider and Klinglmair (2004)

Table 4.3 The size of the shadow economy 2000

	GNP at market prices (current US$ bn) 2000	Shadow economy in % of GDP 1999/2000	Shadow economy (current US$ bn) 2000	Shadow economy GNP per capita (current US$)	GNP per capita 2000 Atlas method
Armenia	19.3	46.3	8.9	240.8	520
Azerbaijan	49.2	60.6	29.8	363.6	600
Georgia	30.5	67.3	20.5	424	630
Kyrgyz	12.2	39.8	4.9	107.5	270
Moldova	13.6	45.1	6.1	180.4	400
Uzbekistan	74.2	34.1	25.3	122.8	360
CIS 7	**33.2**	**48.9**	**15.9**	**239.9**	**463**
Other CIS	**815.8**	**47.4**	**381.0**	**767.3**	**1630**
Non-CIS	**468.9**	**29.6**	**129.0**	**991.7**	**3549**

Source: Schneider, F. and Klinglmair, R. (2004)

Thus, the shadow economy seems to be a natural compensating mechanism of the formal economy performance. But is this an economics law and applicable cross-country? And, is the shadow economy a good or a bad thing, i.e. does it constrain further growth (formal and informal) or is simply a natural survival mechanism in the absence of which many people would face poverty and possibly starvation?

Schneider and Klinglmair (2004) report a somehow puzzling result. In their regressions of growth in the formal sector, they find that the shadow economy positively contributes to growth in transitional and industrialized economies and negatively in developing economies over the 1990s. They also review the literature on the causes of the shadow economy highlighting tax and social security contributions burdens (higher taxes => higher shadow economy), the degree of regulation (higher regulation => higher shadow economy) and the vicious cycle of state revenues (higher taxes =>higher shadow economy=>higher taxes on the formal sector). This would seem consistent with their regression findings given that industrialized and transitional economies share a higher degree of taxes and regulation in relation to developing economies. Industrialized countries with significant taxes and regulations turn to the informal sector for further growth while in prevalently agricultural societies, where taxes and regulations are either few or poorly enforced, the informal sector is almost a natural status mostly related to subsistence activities.

In section three of this study, we could not find taxes and regulations among the potential barriers to sales and employment growth that clearly separated the ups from the downs in the formal sector. We also showed that the large sector has become a smaller share of the economy rather than a bigger share due to self-employment growth and due to the process of de-industrialisation.

In substance, the CIS-7 may fit the developing countries scenario better than the transitional countries scenario in the Schneider and Klinglmair (2004) regressions. If this is the case, we should expect that the growth of the informal sector negatively contributes to growth. The data we have do not contradict this hypothesis given that the shadow economy has been on the rise during the recession period and has stabilised during the growth period.

This digression on informality suggests that self-employment may partially act as an host to informal and illegal activities especially during recessions where self-employment may constitute a refuge for small informal and illegal businesses. Self-employment is also evidently a sector of necessity for those who wish to keep health and pension records alive and do not want to formally register anywhere else. In times of growth this sector may instead function as a first step to formality, an entry gate to the formal sector given its lower entry barriers and taxes. Has this happened during the recent growth period in the CIS-7?

Explaining labor market flows

The key to understanding output and employment growth in the CIS-7 is evidently the relationship between self-employment which is largely informal and employees in the formal sector. And the transition from non wage (informal) to wage (formal) labor can occur thanks to 1) A migration of workers from self-employment to wage labor or 2) Endogenous growth of self-employment turning into SMEs and generating formal employment. We have in fact introduced one further dimension of labor market segmentation, the wage/non-wage labor divide. Labor flows between these different states may contribute to explain the employment puzzle.

For this purpose, we turn to Moldova, a country that in many respects could be considered as the average scenario in our CIS-7 sample. Moldova is also the only country that disposes of a consistent longitudinal panel survey between 1997 and 2002 which can be used to assess labor market flows during the growth period and test some hypotheses on the evolution of the labor market. We use the whole longitudinal sample and the restricted panel sample to compute the statistics, the transitional probabilities and the probit regressions presented below.[19]

In figure 4.1, we show the distribution of the population across working categories and between 1998 ad 2002. The employed population has marginally increased in percentage of the total population. A migration of workers has also occurred from wage labor to non wage labor and this migration has taken place mostly within agriculture. The most significant change in fact occurred among rural workers with farmers growing very significantly at the expenses of agricultural employees. Non agricultural labor has remained practically unchanged during the period while agricultural employment has increased marginally. This phenomenon occurred during the post-1998 recession (1998-1999) and during the subsequent growth period (2000-2002).

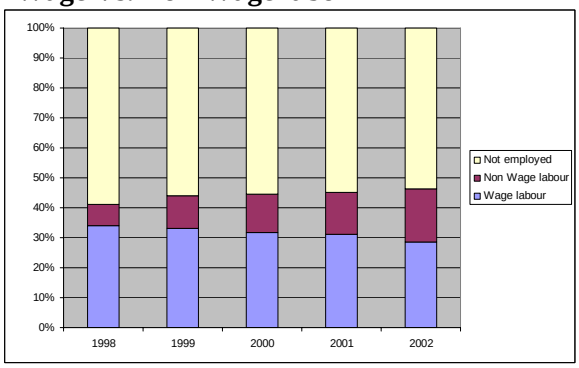
In table 4.4, we report the population structure by category[20]. It is visible the constant growth of private agriculture and the constant decline of employment in agricultural enterprises in both the public and private sectors. Among non-agricultural enterprises, there is a growth in the private sector and a decline in the pubic sector suggesting a migration of workers between the two sectors

[19] See http://www.statistica.md/ for details on the survey.
[20] Categories are identified on the basis of the main source of income of respondents.

due probably to privatization. The number of pensioners also increases while the overall number of dependants decreases resulting in a decline of the economically inactive pool. Other categories are very small, including the unemployed on benefits (less than 0.5% of the sample).

Figure 4.1 Labor market changes

Wage Vs. Non-Wage labor



Agriculture Vs.Non-Agriculture Labor

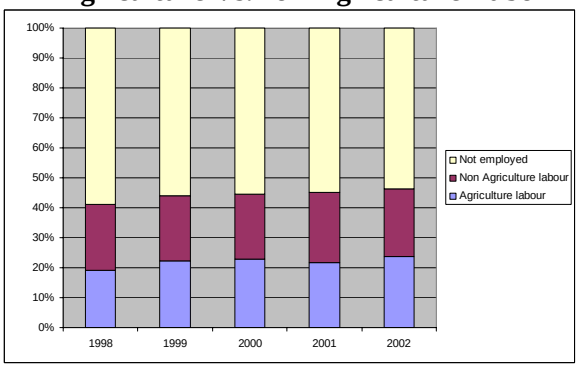


Table 4.4 Structure of the Population by Source of Income

	1997	1998	1999	2000	2001	2002
Private agriculture	5	6	10	12	13	16
Agric public sector	3	1	1	0	0	0
Agric private sector	12	12	12	11	9	7
Entrepreneur	1	1	1	1	1	1
Non agric. Public sector	15	12	11	9	12	9
Non agric. Private sector	6	9	10	11	11	12
Professional	0	0	0	0	0	0
Unemployment benefits	0	0	0	0	0	0
Stipend	1	1	0	0	0	0
Pension	21	22	22	23	25	24
Social assistance	2	1	1	1	1	1
Dependent	34	34	31	30	27	27
Other	1	1	1	1	1	2
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Moldova HBS

In table 4.5, we look at the flows of employed across employment categories closing our sample to the households included into the panel over the period 1998-2002. We calculate the transition probabilities for all the possible flows of workers between four different labor market states: Agricultural Employees (AE); Non Agricultural Employees (NAE); Farmers (F) and Self-Employed (SE) taking two subsequent years at the time (Markov transition probabilities). We also indicate the growth and recession years to see whether labor market flows change following output performances.

Flows into AE are all declining over the period while flows into F are all increasing indicating a major reallocation of workers into individual farming. These flows are larger from AE but they also become very large from NAE showing a very significant flow of people from non agricultural activities into individual farming. Flows into NAE are higher on average but remain stable from AE and decline from F and from SE. These flows are also confirmed by data on agricultural

output of agricultural enterprises versus household farms where the latter production passed from 45% to 74% of total agricultural production between 1995 and 2000.[21]

Also noteworthy is the fact that our four different categories have different degrees of internal stability (the values of the diagonal of the Markov transition probability matrix) and that this degree changes over the period. Between 1998 and 1999 (recession year), the most stable category is NAE followed by AE, F and SE. At the end of the growth period we consider (1999-2002), the most stable category is still NAE but this is now followed by F while AE has almost halved its degree of stability and SE has more than doubled it.

In fact, wage workers (W=AE+NAE) are much more stable as a category than Non Wage workers (NW=F+SE) in 1998/1999 but this stability decreases over the period 1999-2002 from 75% to 61% while the degree of stability of non-wage workers almost doubles. Most of the growth in W instability is explained by the flow of NW into W which significantly decreases over the period accompanied by a growth of the reverse flow from W to NW workers.

Table 4.5 Transition Probabilities between Labor Market Statuses

	Recession 98/99	Growth 99/00	Growth 00/01	Growth 01/02
AE-AE	32	26	24	17
NAE-AE	28	30	23	14
F-AE	25	24	22	16
SE-AE	38	19	19	20
AE-NAE	41	43	43	42
NAE-NAE	49	39	47	48
F-NAE	50	49	41	39
SE-NAE	42	47	39	40
AE-F	23	26	25	37
NAE-F	17	25	26	31
F-F	18	23	32	39
SE-F	16	26	39	30
AE-SE	5	6	8	4
NAE-SE	6	6	5	7
F-SE	6	4	5	6
SE-SE	4	8	3	10
W-W	75	68	68	61
NW-W	77	71	62	56
W-NW	25	32	32	39
NW-NW	23	29	38	44

Source: Moldova HBS 1998-2002. Legenda: F= Farmer; AE=Agricultural Employee; NAE=Non-Agricultural Employee; SE=Self-Employed (non-farmer); W=Wage workers (AE+NAE); NW=Non Wage workers (F+SE)

So, why have people continued to move into private farming and into the non-wage sector during the recent growth period? The two possible answers can be classified as a 'pull' factor, i.e. private farming offers better income opportunities or as a 'push' factor, i.e. private farming is only an escape from unemployment and poverty. To test these two hypotheses we use the Moldova HBS panel 1998-2002 and split the sample of workers into wage and non-wage workers and into 'stayers' and 'movers' between the two categories defining four groups: Stayers into wage, movers from wage to non wage, stayers into non-wage and movers from non wage to wage. We then run a probit regression between stayers and movers in the two wage and non wage groups. We use a

[21] http://www.statistica.md/

number of variables including personal, household and location characteristics as control variables and the log of disposable income per capita as the explanatory variable.[22]

Results are shown in table 4.6. We can see that income is very significant and a positive variable explaining stayers in the wage category versus those that moved from wage to non-wage labor (col 1). This would suggest that staying in wage labor 'pays' better. In fact, we calculated the premium earned by moving from wage to non-wage employment and found a value of (-) 2.2%. In other words, those who moved have - on average - a disposable income 2.2% lower than those who stayed in wage labor.

Vice-versa, income is not a significant variable that distinguishes stayers in the non wage category from those who moved from the non wage category to the wage category (col. 2). In this case, the premium paid for moving into the wage category is (+)1.9% suggesting that moving into the wage category from the non wage category pays off. We can also note that all other variables which we used as control variables are in fact all significant and could potentially be explanatory variables themselves. Premiums for moving and not moving are small and the decision to move may be more related to non-income factors. However, the conclusion we have to draw from the probit regressions is that disposable income is not what is attracting workers into individual farming.

In sum, the flow from wage (employees) to non wage (self-employed) workers has increased during the 1990-1996 deep recession, continued during the 1998-1999 moderate recession and was still visible during the 2000-2002 growth period.[23] Our micro data for Moldova have fully supported in this respect the macro data we showed for the CIS-7 and provided by CIS-Stat. From the probit regressions on stayers and movers we concluded that disposable income is not what is attracting workers into individual farming. By default, we have to conclude that other factors have been at work.

Possibly, self-employment during the recession phase can be understood as a combination of structural reforms (privatization) and as an escape from unemployment and poverty. The Schumpeterian entrepreneur was rare among the self-employed. We did not find evidence that self-employment constituted a springboard to SMEs creation. It is rather the dismantling of collective agriculture and the lack of growth in agricultural and non-agricultural enterprises that is still pushing people into individual farming contributing to explaining these trends.

Past research on Kazakhstan has shown two aspects that could further support these conclusions.[24] One is that poverty among the self-employed was found to be much higher than poverty among the employees at the end of the recessional period in 1996 suggesting that self-employment could hardly be considered an attractive status for the employees. And the second is that when employment in the formal sector started to expand in 2002, self-employment rather than unemployment has constituted the recruitment ground for enterprises. Many of the self-employed were evidently in the waiting for a better opportunity to join the employees and remained constrained for many years in the subsistence self-employment 'trap'. While in Kazakhstan some signs of revival in the industrial manufacturing sector are visible, this phenomenon is still not happening in the CIS-7.

[22] We do not use the wage as explanatory variable because the variable is not provided in the sample but also because disposable income is a much better indicator to compare non-wage with wage workers.
[23] Transition probabilities were also calculated for the entire samples, including non panel observations. Results were very close in size and the described trends almost identical indicating that the households panel is not a significantly different sample from the entire longitudinal sample, at least in relation to the transition probabilities.
[24] Verme (2000) and (2001)

Table 4.6 Stayers Vs. Movers (Probit)

	Stayers Wage=1	Stayers Non Wage=1
	Movers Wage-Non Wage=0	**Movers Non Wage-Wage=0**
Log Disp. Income Per Capita	**0.103**	**-0.001**
	(25.45)**	**(0.25)**
sex	0.083	0.067
	(13.71)**	(9.66)**
age	-0.006	0.028
	(3.89)**	(17.93)**
age2	0.000	-0.000
	(3.83)**	(21.32)**
EDUC_Secondary	-0.008	0.646
	(1.13)	(30.35)**
EDUC_Primary	0.246	0.455
	(22.56)**	(20.59)**
EDUC_Inc. prim.or ill.		0.771
		(22.21)**
HH SIZE	0.008	-0.099
	(2.77)**	(26.99)**
HH head female	-0.033	0.135
	(4.90)**	(16.69)**
HH No. of child.<16	0.027	0.005
	(6.15)**	(1.00)
Rural	-0.168	0.005
	(27.95)**	(0.47)
Constant	0.003	-1.024
	(0.06)	(20.95)**
Observations	*230334*	*150488*

Source: Moldova HBS 1998-2002. Absolute value of z statistics in parentheses. * significant at 5%; ** significant at 1%

5. JOB CREATION POLICIES IN SEGMENTED LOW-INCOME COUNTRIES

Despite the deindustrialization process observed in the course of transition, agriculture and industry together remain the largest sectors in the CIS-7 and contribute to in between 30% and 60% of total output and in between 50% and 60% of total employment which would make these sectors the primary concern of governments. Yet, agricultural and industrial policies have been marginalized in the 1990s and today do not appear in any substantial form in government policies plans and programs.

Agricultural policies during the 1990s have focused on land reforms and privatization and in this respect they have been relatively successful. Armenia distributed more than 80% of the arable land to more than 320,000 families starting in 1995 and the 2002 World Bank Poverty Update for this country found a clear inverse correlation between land ownership and poverty. Georgia implemented land reforms in 1992 and 1996 distributing full land rights covering about a third of arable land with an additional 20% of the land leased to large producers. By April 1999, 918,000 hectares had been transferred to 1,026,000 rural households, while 825,000 additional hectares had been leased to 46,000 entities. Despite two severe droughts in the late 1990s, poverty rates in rural areas in Georgia have been maintained below urban levels[25]. In Kyrgyzstan, land reforms occurred in 1995 and 1997 and received a further boost after the 1998 referendum on land ownership with the introduction of a 99 years lease system. Several studies have pointed out that the

[25] World Bank (2002) Georgia Poverty Update, Report No. 22350-ge

outstanding agricultural performance of this country is to be partly explained by the successful land reform.[26]. Moldova and Azerbaijan both allowed private land ownership early in the 1990s by issuing land certificates but they converted such certificates into land plots only in 1998. Uzbekistan has also moved on with the same forms of privatization and land reforms but much later than the other CIS-7 pushing privatization of large state cooperatives only in the late 1990s and still struggling to complete the process and undertake comprehensive land reforms.

Land reforms have had the merit of providing large parts of the population with assets that enabled them to survive during the recession period and after. However, the transitional recession has severely debilitated agricultural infrastructure and extension services once organized around large state cooperatives. A 1999 summary of the situation in Georgia provided by the Ministry of Agriculture well capture the general situation that the CIS-7 faced at the end of the 1990s.

"Transition to a market economy has been partial and sometimes stalled. Lack of access to markets (partly due to the high cost of fuel), scarcity of rural credit, as well as limited off-farm earnings have driven farmers to near subsistence economy, with a major shift towards staple food (wheat, potatoes and maize) and away from barley and fodder crops which affected the quality and volume of livestock output. This has also reduced the size of planted area. Despite some liberalization of prices and trade there is unfair competition, illegal imports and poor law enforcement (...). *Large areas remain neither leased nor privatized. Land tenure law and security of land ownership are poorly defined and many farmers lack the necessary documentation for their plots. Levels of investment in farms are generally low. Reasonably priced credit is unavailable. Delays in the registration of land has prevented farmers to use land as a collateral for loans. For lack of cash, barter is widely used. (...) Labor force is oversized and large amount of machinery is run down. The irrigation infrastructure needs to be repaired and re-organized to take account the need of small farms. The availability of power remains erratic. Severe drop in the use of fertilisers and fuel (due to their cost) and an increased use (90%) of poor quality farm saved seed (FSS) influenced crop yields. Loss of farmer expertise in seed production, poor machinery and lack of herbicides and spare parts was also reported..."*[27]

With such a sharp and negative picture of the situation, one would expect that the same government of Georgia would be moving toward a comprehensive agricultural policy development. In reality, a review of the legislation passed by parliament to date shows that no laws have been passed to stimulate agricultural production and re-organization with the exception of land and privatization reforms and no policy agenda has been put forward by the Ministry of Agriculture or the Government of Georgia, at least until 2003[28].

This is profoundly different from the Chinese experience. In 1978, a first small number of collectives were allowed to lease their land for private production to individual households. A year later, measured yields proved that private households were more productive than collectives and the authorities were encouraged to expand the system which became known as the 'household responsibility system'. In 1981, the system was officially recognized and, by the end of 1983, 98% of agricultural collectives in China had adopted it.[29] A rather 'big bang' approach to agricultural reforms.

[26] World Bank (2003) Enhancing Pro-Poor Growth, Report No. 24638-KG
[27] http://agroweb.home.ge/show.php?page=country#nap
[28] See http://www.parliament.ge/LEGAL_ACTS/kanon_en.html, the government of Georgia and the Ministry of Agriculture websites.
[29] Lin, Cai and Li (1996) *"The Lessons of China's Transition to a Market Economy"*, the Cato Journal Vol. 16, No. 2, fall 1996

In its theoretical framework, the Chinese approach was not substantially different from what happened in the early years of transition in the CIS-7 with the dismantling of state cooperatives and the allocation of land to household farms. In fact, the CIS-7 too were able to improve household farms production rather quickly although the reform process in this respect was slower than in China[30].

So, what went wrong in the CIS-7? We can depict at least two essential factors. The first is the fact that the Chinese government continued to maintain and support the agricultural extension services guaranteeing the provision of agricultural inputs and the purchase of farmers production surplus and continuing to control agricultural prices. On the contrary, the CIS-7 agricultural extension services collapsed with the collapse of state cooperatives and small farmers were left on their own with the search for agricultural inputs and markets in the course of price liberalization which increased uncertainty and discouraged investments. The main factors which are still preventing farmers from moving beyond subsistence today.

The second important difference between the CIS-7 and China during the early stages of reforms was the existence in China of non-state Town and Villages Enterprises (TVEs) established well before 1978. These were initially allowed by the government in an effort to mechanize agriculture and develop rural processing industries. With the 1978 agricultural reforms, TVEs could quickly link-up with the surplus and finance emerging from increased productivity in the household farming system and this opportunity sparked the sustained development of the TVEs sector which effectively became the intermediary between the agricultural and rural economy and the industrial and urban one.

In the CIS-7, on the contrary, during the Soviet period all kind of processing of agricultural products was demanded to very large processing state enterprises and small and medium enterprises were virtually non-existent in rural and urban areas alike. There was no structure, public or private, that could function as a 'bridge' between agriculture and industrial manufacturing and as a provider of inputs and markets for farmers. During the recession, the agricultural and industrial systems were in fact compartmentalized, a phenomenon that is clearly evident in the statistics on manufacturing and in input-output tables where the middle quadrant values (intermediate manufacturing) declined more than the values in the periphery (energy and raw materials on the one hand and households consumption on the other hand). The absence of agricultural policies in the post-land reforms scenario is partly responsible for the current incapacity of farmers to move beyond subsistence.

Government policies have also been very weak on the front of industrial policies. If one looks at the development plans developed in the post-war Western Europe and Japan, the development plans developed by South-Korea in the 1960s and 1970s and those developed in other parts of South-East and South Asia in the 1970s, 1980s and 1990s, it is evident that the greater emphasis was devoted to industrial policies, defining the role of the state in facilitating the growth and development of industry in the public and private sectors. Post-war industrial development in Italy for example was driven by IRI (Institute for Industrial Reconstruction) a state run conglomerate only recently dismantled. The reason for such a heavy state direct involvement in the economy is explained by the fact that no other national institution had the necessary financial resources and capacity to undertake a task such as post-war reconstruction. There was little debate about state-private division of responsibility because the private sector was too weak to take on the reconstruction task alone. In fact the state too was incapable of generating the necessary financial re-

[30] It is worth noting that while Chinese reforms have been usually labelled as gradual and piecemeal, the implementation of the household responsibility system has in fact been faster than any other similar reforms implemented elsewhere in transition economies.

sources and welcomed the Marshall plan. The critical issue was not about the public-private dichotomy but about governance and the capacity of the government to manage reforms honestly and efficiently.

In contemporary emerging economies, development plans also rely to a great extent on industrial policies. Countries that managed to grow very quickly in the 1970s, 1980s and 1990s such as South-Korea, Singapore, Malaysia, India, China and Vietnam placed industrial policies at centers stage of the development agendas during the post-agricultural reforms phase. Reforms and investments in these countries have been driven initially by highly centralised governments committed to the development of a strong and independent private sector.

One significant example is Malaysia. Although in a different development stage vis-à-vis the CIS-7, Malaysia's concern today is all about technology and competitiveness and the role of industry in driving the growth process where the transformation of manufacturing stands at the top of government priorities. The first point found in the Malaysian industrial master plan of the Ministry of Trade and Industry is *"Moving along the value chain from assembly-based and low value-added activities towards higher value-added activities, such as: R&D and Product Design; Distribution and Marketing"* (http://www.miti.gov.my/). This is strikingly different from the first point found in the development agenda of the Armenian Ministry of Trade and Economic Development which is *"Further enlargement and improvement of the legislative and normative field, aimed at further deepening of economic amendments, at forming and confirming the economic institutes"* (http://www.minted.am/en). The centrality of industrial development in the Malaysian development plans is also not confined to recent challenges, it was evident already in the first plan (1966-1970) and accompanied Malaysia's exceptional growth period[31].

While the state can safely withdraw from direct economic management in an advanced industrialized economy and limit its role to regulation, in a low income country is rare to find private financial and industrial poles able to gather the financial critical mass for initial investments. Hence, the state becomes - by default - the only national entity capable of performing this function. On the contrary, with growth and economic development direct economic management intervention on the part of the state becomes a constraint to further growth. Having graduated from low income to middle income countries in the 1970s and 1980s, South-East Asian countries have moved toward dismantling state investment and development corporations also thanks to financial crises that proved that the heritage of the state driven system was no longer suitable for a modern and more advanced economy.

Why then are the CIS-7 not taking seriously agricultural and industrial policies? This may derive from a combination of factors. First, there is an evident limit to expansionary public policies determined by macroeconomic stabilization which has been one of the few evidently successful policies of the mid-1990s. Second, there is the justified aspirations of CIS-7 to join the WTO that prevents government from implementing agricultural or industrial policies that may appear subsidising local industries. Third, there is an ideological confusion that equates no government intervention in the economy with no government policies, plans and strategies. In fact, there is (understandably) great suspicion of the word 'plan'. Fourth, there has been a process of ideological knowledge transfer from industrialized advanced nations to the CIS-7 that gave for granted that what works for the industrialized nations should necessarily work for the CIS-7. An ideological

[31] Haslam, M. and Hassan, A. A. G. (2003) *"Development Planning and Regional Imbalances in Malaysia"*, University of Malaya, FEA Working Papers No. 2003-5. See Also Aun, L. H. (2001) *"Industrial Development and Equity Distribution in Malaysian Manufacturing: Institutional Perspectives*" University of Malaya, FEA Working Papers No. 2001-12

confusion that comes from applying a state-private sector economic framework suitable for middle and high income economies to low income ones.

Moreover, rather than focusing on how to allocate state resources efficiently the focus has been on downsizing the size of government relative to GDP. With the exception of Kyrgyzstan, the state relative size in the economy has shrunk very significantly in all the CIS-7 between 1994 and 2001 and the decline continued during both the recession and growth periods. On average, public expenditure as a percentage of GDP in the CIS-7 has declined from 40% in 1994 to 25.3% in 2001. Public spending per capita while it increased in all countries between 1994 and 1997 (during the initial stabilization period) it actually declined in five of the seven countries between 1997 and 2001 (during the growth period).

There is also little evidence that public spending is being adjusted to boost either agricultural or industrial policies. In relative terms (% of total budgetary spending) there is no general pattern visible in the CIS-7 between 1996 and 2001. The share of general government services spending (general public services, defence and public order and safety) has decreased in four of the seven countries, the share of commercial and social services (education, health, social security and welfare, housing and culture) has decreased in five countries, the share of economic services (fuel and energy, agriculture, mining, transport and communication and other) has decreased in four countries and the share of other non specified services has decreased in three of the seven countries.[32]

The rationale for downsizing the size of the state derives from an understandable desire to improve state efficiency and from the idea that if you cannot improve governance you should reduce the government size. However, reforming the government and improving governance is not related to the government size *per se* but to the capacity of the government to attract the best and the brightest. State budget and public administration reforms have not focused on improving the incentives to attract the best staff but have focused on costs and resulted in a further downgrading of government capacities. In practice, the largest enterprises present in the CIS-7 and the most important regulators of economic activities (public administrations) have been increasingly managed by under-qualified staff. It is evident that under these circumstances governance and the governments capacity to design sound economic policies cannot improve.

While the state has not invested in the development of agriculture and manufacturing, other potential investors have also refrained from investing in these areas. The CIS-7 have generally been perceived as countries at high risk from foreign investors given the repeated conflict and political and economic instability accompanied by uncertain reforms. And risk takers have been those investors that invest in sectors with potentially relatively high returns (oil, gas, gold) which are also typically capital intensive sectors. Domestic investors are also discouraged by high interest spreads between lending and credit rates and by low access to credits due to collaterals or other banks requirements. International Financial Institutions (IFIs) have contributed significantly to CIS-7 investments as all of these countries qualified for low interest credits. However, IFIs have been reluctant to invest in the real sector, focussed on natural resources, investments have been perceived as rather ineffective and eventually contributed to build a foreign debt that qualified five of these countries for the heavily indebted countries initiative.[33] Thus, for different reasons, agriculture and industrial manufacturing have remained significantly underinvested.

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[32] Betley, M. (2003) *"Public Expenditure in the CIS-7"* , background paper to the CIS-7 Lucerne Conference, January 2003, www.cis7.org

[33] Vandycke, N. (2003) *"Economic Development and Private Sector Growth in the Low-Income CIS-7 Countries: Challenges and Policy Implications"*, background paper to the Lucerne CIS-7 conference, January 2003, www.cis7.org

In sum, a coherent development policy able to boost output and employment at the same time will require the determination of those actions necessary to move agriculture from subsistence to value added production, to foster the development of the 'missing link' between agriculture and industrial manufacturing and to set the pre-conditions for industrial manufacturing growth. In order to tackle these issues, economic reforms will have to shift from cost saving to investment. Investment in people via public administration reforms able to attract the best and the brightest and investments in agricultural and industrial policies.

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ANNEX - Regression Tables

Table A.1 BEEPS - Regression Variables

Var Group	Var code	Var name	Type of var	Var=1 if
Govt. Pol.	tax	taxes major obstacle	Binary 0/1	Q49Tax=4
	taxreg	tax regulation major obstacle	Binary 0/1	
	taxlev	tax	Binary 0/1	
	labreg	labor regulation major obstacle	Binary 0/1	
	infl	inflation major obstacle	Binary 0/1	Q49Infl=4
	exch	exchange rate major obstacle	Binary 0/1	Q49Exc=4
	inst	policy instability major obstacle	Binary 0/1	Q49Pol=4
	unpredp	econ policy unpredictability	Binary 0/1	Q35=5&6
	unpredl	laws and reg. unpredictability	Binary 0/1	Q36=5&6
Finance and banking				
	fin	finance (major problem)	Binary 0/1	Q49Fin=4
	fint	finance source internal funds	Binary 0/1	Q38bInt>50%
	fequ	finance source equities	Binary 0/1	Q38bEqu>50%
	floc	finance source local banks	Binary 0/1	Q38bLoc>50%
	finv	finance source invest, funds et al	Binary 0/1	Q38bInv>50%
	ffor	finance source foreign banks	Binary 0/1	Q38bFor>50%
	ffam	finance source family	Binary 0/1	Q38bFam>50%
	fmon	finance source money lenders	Binary 0/1	Q38bMon>50%
	fsup	finance source supplier credits	Binary 0/1	Q38bSup>50%
	flea	finance source leasing	Binary 0/1	Q38bLea>50%
	fsta	finance source state	Binary 0/1	Q38bSta>50%
	banks	banks slow (int paym. time)	Binary 0/1	Q40a>3 days
	bcoll	bank collaterals (major probl.)	Binary 0/1	Q42=1
	bpap	bank paperwork (major probl.)	Binary 0/1	Q42=2
	brate	bank interest rate (major probl.)	Binary 0/1	Q42=3
Government institutions				
	custimp	custom imports process time	Binary 0/1	Q13>3 days
	custexp	custmom exports process time	Binary 0/1	Q14b>3 days
	custrate	customs bad or very bad	Binary 0/1	Q11Cus=5&6
	judo	judiciary major obstacle	Binary 0/1	Q49Jud=4
	judi	judiciary bad assessment A	Binary 0/1	∑Q22*>20
	judirate	judiciary bad assessment B	Binary 0/1	Q11Jud=5&6
	centgov	central government good	Binary 0/1	Q11Cgv=5&6
	parl	parliament good	Binary 0/1	Q11Par=5&6
	cbank	central bank good	Binary 0/1	Q11Cbk=5&6
	police	police good	Binary 0/1	Q11Pol=5&6
Governance				
	govine	govt. inefficiency	Binary 0/1	Q48b=5&6
	ginter	govt. meddling in enterprises activities	Binary 0/1	∑Q19*>24
	corobs	corruption major obstacle	Binary 0/1	Q49Cor=4
	corry	corruption existence	Binary 0/1	Q25=1&2
	corqb	corruption large	Binary 0/1	Q27=5&6&7
Infrastructure	infr	infrastructure major problem	Binary 0/1	Q49Infr=4
	roads	roads bad	Binary 0/1	Q11Roa=5&6
	post	post bad	Binary 0/1	Q11Pos=5&6

	elec	electricity bad	Binary 0/1	Q11Ele=5&6
	water	water bad	Binary 0/1	Q11Wat=5&6
Crime	crimest	crime street	Binary 0/1	
	crimeorg	crime organized	Binary 0/1	
Control Vari-ables	sale 1	Under 250,000 USD/year		Q51
	sale 2	Above 250,000 USD/year	Binary 0/1	Q51
	owind	Individual ownership	Binary 0/1	Q4=1
	owfam	Family ownership	Binary 0/1	Q4=2
	owork	Workers ownership	Binary 0/1	Q4=8
	owsta	State ownership	Binary 0/1	Q4=9
	sales==2	Sales have grown last 3 years	Binary 0/1	Q50b=1
	sales==3	Sales have decline last 3 years	Binary 0/1	Q50b=2
	empl==2	Empl. has grown last 3 years	Binary 0/1	Q50b=1
	empl==3	Empl. has declined last 3 years	Binary 0/1	Q50b=2

Table A.2 Sales: Probit CIS-7 Vs.Others

Dep var: sales up=1 sales down=0	CIS-7	CIS-7 with contr.var.	Other	Other with contr.vr.
	salegr	salegr	salegr	salegr
tax	0.039	0.084	-0.022	-0.021
	(0.26)	(0.56)	(0.34)	(0.33)
taxreg	-0.029	-0.004	0.001	0.013
	(0.21)	(0.03)	(0.01)	(0.22)
taxlev	-0.065	-0.063	-0.085	-0.088
	(0.43)	(0.40)	(1.27)	(1.31)
labreg	0.436	0.447	0.162	0.134
	(1.38)	(1.38)	(1.63)	(1.33)
infl	0.094	0.072	-0.162	-0.173
	(0.55)	(0.41)	(2.28)*	(2.41)*
exch	0.155	0.176	0.035	0.040
	(0.93)	(1.04)	(0.48)	(0.54)
inst	0.080	0.050	-0.026	-0.026
	(0.47)	(0.29)	(0.42)	(0.41)
unpredp	-0.658	-0.617	-0.038	-0.036
	(2.70)**	(2.47)*	(0.47)	(0.45)
unpredl	0.408	0.436	-0.071	-0.073
	(1.69)	(1.77)	(0.89)	(0.91)
fin	-0.106	-0.055	-0.259	-0.233
	(0.78)	(0.40)	(4.54)**	(4.05)**
fint	-0.202	-0.171	0.017	0.035
	(1.34)	(1.11)	(0.30)	(0.61)
fequ	-0.416	-0.638	-0.003	-0.022
	(0.45)	(0.65)	(0.03)	(0.18)
floc	0.698	0.573	-0.108	-0.141
	(1.40)	(1.15)	(0.92)	(1.19)
finv	0.119	0.264	0.307	0.324
	(0.10)	(0.23)	(1.11)	(1.16)
ffor	0.090	0.220	0.208	0.154
	(0.17)	(0.40)	(0.85)	(0.63)
ffam	-1.095	-1.159	-0.081	-0.053
	(3.65)**	(3.77)**	(0.49)	(0.31)
fmon	-0.075	-0.071	-0.212	-0.230
	(0.08)	(0.07)	(0.75)	(0.80)
fsup	0.342	0.320	-0.434	-0.432
	(0.74)	(0.68)	(2.58)**	(2.55)*
flea	0.637	0.735	-0.004	0.011
	(0.95)	(1.07)	(0.02)	(0.05)
fsta	-0.396	-0.190	-0.133	-0.039
	(1.29)	(0.57)	(0.89)	(0.26)
banks	-0.418	-0.341	-0.053	-0.039
	(3.14)**	(2.47)*	(0.90)	(0.66)
bcoll	-0.130	-0.213	-0.011	-0.018
	(0.39)	(0.62)	(0.12)	(0.18)
bpap	0.281	0.179	-0.243	-0.240
	(0.98)	(0.61)	(2.30)*	(2.26)*
brate	-0.284	-0.313	-0.080	-0.090
	(2.18)*	(2.35)*	(1.39)	(1.57)
custimp	-0.114	-0.031	-0.134	-0.093
	(0.60)	(0.16)	(1.91)	(1.31)
custexp	-0.270	-0.235	-0.076	-0.039
	(1.37)	(1.16)	(1.02)	(0.51)
custrate	0.414	0.411	0.107	0.091
	(2.33)*	(2.29)*	(1.37)	(1.16)
judo	-0.426	-0.398	-0.041	-0.034

	(1.96)	(1.82)	(0.47)	(0.38)
judi	-0.200	-0.177	0.040	0.029
	(1.51)	(1.31)	(0.70)	(0.50)
judirate	-0.084	-0.092	-0.074	-0.081
	(0.46)	(0.50)	(1.12)	(1.21)
centgov	-0.065	-0.077	0.012	0.030
	(0.31)	(0.36)	(0.16)	(0.38)
parl	-0.502	-0.490	-0.054	-0.054
	(2.60)**	(2.52)*	(0.72)	(0.73)
cbank	0.135	0.136	-0.106	-0.094
	(0.74)	(0.73)	(1.32)	(1.16)
police	0.167	0.112	0.029	0.021
	(1.11)	(0.73)	(0.43)	(0.31)
govine	0.014	-0.001	-0.060	-0.061
	(0.10)	(0.01)	(1.01)	(1.02)
ginter	-0.062	-0.055	-0.038	-0.066
	(0.40)	(0.34)	(0.62)	(1.05)
corobs	0.180	0.210	-0.085	-0.083
	(1.04)	(1.19)	(1.11)	(1.08)
corry	-0.017	-0.041	-0.189	-0.206
	(0.11)	(0.26)	(2.44)*	(2.62)**
corqb	-0.045	-0.053	-0.022	-0.023
	(0.24)	(0.28)	(0.19)	(0.20)
infr	-0.022	-0.004	0.159	0.164
	(0.11)	(0.02)	(1.77)	(1.83)
roads	-0.117	-0.087	0.019	0.010
	(0.87)	(0.64)	(0.31)	(0.16)
post	0.110	0.070	0.211	0.212
	(0.60)	(0.38)	(1.81)	(1.80)
elec	-0.039	-0.029	-0.086	-0.078
	(0.23)	(0.17)	(0.86)	(0.78)
water	-0.183	-0.158	0.031	0.029
	(1.10)	(0.93)	(0.35)	(0.33)
crimest	0.249	0.267	-0.019	-0.012
	(1.23)	(1.31)	(0.24)	(0.15)
crimeorg	0.007	-0.039	0.093	0.105
	(0.04)	(0.19)	(1.07)	(1.20)
sale1		0.179		0.075
		(0.52)		(0.73)
sale2		0.737		0.296
		(2.02)*		(2.93)**
owind		0.057		-0.038
		(0.28)		(0.50)
owfam		0.204		-0.025
		(0.87)		(0.25)
owork		0.011		-0.173
		(0.05)		(1.59)
owsta		-0.200		-0.230
		(0.81)		(2.44)*
Constant	0.914	0.357	0.915	0.746
	(2.97)**	(0.73)	(8.69)**	(5.15)**
Observations	532	532	2560	2560

Source: BEEPS. Absolute value of z statistics in parentheses; * significant at 5%; ** significant at 1%

Table A.3 Employment: Probit CIS-7 Vs.Others

Dep Var: Empl. up=1 Empl down=0	CIS-7	CIS-7 with contr. var.	Others	Others with contr var.
	empgr	empgr	empgr	empgr
tax	-0.022	-0.015	0.054	0.055
	(0.12)	(0.08)	(0.78)	(0.78)
taxreg	0.244	0.287	-0.010	0.015
	(1.41)	(1.61)	(0.15)	(0.22)
taxlev	-0.282	-0.326	-0.119	-0.174
	(1.49)	(1.66)	(1.66)	(2.36)*
labreg	1.015	1.075	-0.025	-0.021
	(2.91)**	(2.97)**	(0.24)	(0.20)
infl	-0.020	-0.027	-0.125	-0.160
	(0.11)	(0.14)	(1.62)	(2.01)*
exch	0.298	0.253	0.015	0.025
	(1.66)	(1.36)	(0.19)	(0.31)
inst	-0.163	-0.113	0.026	0.056
	(0.79)	(0.53)	(0.38)	(0.80)
unpredp	-0.163	-0.257	-0.047	-0.049
	(0.63)	(0.96)	(0.54)	(0.55)
unpredl	-0.297	-0.268	0.038	0.022
	(1.14)	(1.02)	(0.43)	(0.25)
fin	-0.393	-0.332	-0.270	-0.186
	(2.46)*	(2.00)*	(4.31)**	(2.88)**
fint	0.140	0.133	0.059	0.073
	(0.78)	(0.72)	(0.98)	(1.18)
fequ	-0.953	-0.654	-0.217	-0.310
	(0.68)	(0.47)	(1.66)	(2.31)*
floc	0.941	0.852	-0.339	-0.327
	(1.74)	(1.57)	(2.71)**	(2.55)*
finv	0.791	0.646	-0.009	0.154
	(0.87)	(0.67)	(0.03)	(0.54)
ffor	1.228	0.999	-0.201	-0.121
	(1.95)	(1.52)	(0.77)	(0.46)
ffam	-0.316	-0.556	0.044	-0.282
	(0.86)	(1.45)	(0.23)	(1.43)
fmon	-2.472	-2.314	0.662	0.601
	(1.70)	(1.55)	(2.12)*	(1.95)
fsup	0.509	0.508	-0.044	-0.088
	(0.95)	(0.89)	(0.26)	(0.51)
flea	-0.042	0.077	0.002	-0.008
	(0.07)	(0.12)	(0.01)	(0.04)
fsta	-0.714	-0.541	-0.502	-0.112
	(1.92)	(1.37)	(3.06)**	(0.66)
banks	-0.286	-0.277	-0.017	0.016
	(1.68)	(1.55)	(0.26)	(0.24)
bcoll	0.845	0.931	0.002	-0.011
	(2.69)**	(2.85)**	(0.02)	(0.11)
bpap	0.021	0.006	-0.068	-0.069
	(0.05)	(0.01)	(0.59)	(0.58)
brate	-0.009	0.002	-0.020	-0.038
	(0.06)	(0.01)	(0.33)	(0.59)
custimp	-0.724	-0.637	-0.234	-0.207
	(2.98)**	(2.52)*	(3.09)**	(2.64)**
custexp	0.143	0.180	0.201	0.169
	(0.60)	(0.73)	(2.54)*	(2.06)*
custrate	0.625	0.673	0.210	0.155
	(2.94)**	(3.08)**	(2.46)*	(1.78)
judo	-0.069	0.012	0.002	0.004

	(0.27)	(0.05)	(0.02)	(0.04)
judi	-0.086	-0.196	0.070	0.055
	(0.53)	(1.16)	(1.13)	(0.86)
judirate	-0.183	-0.170	-0.031	-0.029
	(0.83)	(0.75)	(0.43)	(0.40)
centgov	0.435	0.474	-0.017	0.007
	(1.57)	(1.66)	(0.20)	(0.08)
parl	-0.654	-0.644	-0.065	-0.075
	(2.58)**	(2.48)*	(0.81)	(0.92)
cbank	0.111	0.104	-0.042	-0.053
	(0.48)	(0.44)	(0.47)	(0.58)
police	0.126	0.115	0.014	0.014
	(0.68)	(0.61)	(0.20)	(0.19)
govine	0.392	0.315	0.080	0.026
	(2.37)*	(1.84)	(1.19)	(0.38)
ginter	0.176	0.159	0.120	0.072
	(0.93)	(0.80)	(1.77)	(1.03)
corobs	0.233	0.200	0.012	0.034
	(1.17)	(0.98)	(0.14)	(0.38)
corry	0.276	0.290	0.090	-0.010
	(1.55)	(1.58)	(1.02)	(0.12)
corqb	-0.173	-0.245	0.078	-0.035
	(0.80)	(1.13)	(0.58)	(0.25)
infr	-0.169	-0.053	0.029	-0.017
	(0.75)	(0.23)	(0.30)	(0.18)
roads	-0.055	0.015	0.131	0.117
	(0.34)	(0.09)	(2.01)*	(1.75)
post	0.189	0.198	0.192	0.147
	(0.85)	(0.86)	(1.50)	(1.13)
elec	0.022	-0.089	-0.121	-0.101
	(0.11)	(0.42)	(1.06)	(0.87)
water	-0.006	0.034	0.014	-0.018
	(0.03)	(0.16)	(0.14)	(0.18)
crimest	0.026	0.033	0.105	0.117
	(0.11)	(0.14)	(1.15)	(1.25)
crimeorg	0.145	0.186	-0.173	-0.206
	(0.65)	(0.81)	(1.77)	(2.07)*
sale1		-0.850		-0.207
		(2.61)**		(1.88)
sale2		-0.384		-0.087
		(1.12)		(0.82)
owind		0.296		0.397
		(1.29)		(4.96)**
owfam		0.392		0.641
		(1.40)		(5.71)**
owork		-0.456		-0.249
		(1.54)		(2.11)*
owsta		-0.240		-0.441
		(0.90)		(4.45)**
Constant	0.005	0.540	0.125	0.193
	(0.01)	(0.98)	(1.12)	(1.25)
Observations	431	431	2094	2094

Source: BEEPS. Absolute value of z statistics in parentheses; * significant at 5%; ** significant at 1%

Table A.4 Sales: Multinomial Logit CIS-7 Vs.Others

Dep: Sales	CIS-7	CIS-7	Other	Other
Ref.Cat:Stables	Up	Down	Up	Down
tax	0.153	0.007	0.153	0.180
	(0.59)	(0.03)	(1.32)	(1.45)
taxreg	0.083	0.051	0.085	0.049
	(0.35)	(0.23)	(0.74)	(0.40)
taxlev	0.001	0.136	0.049	0.196
	(0.00)	(0.53)	(0.42)	(1.49)
labreg	-0.607	-1.340	0.259	0.050
	(1.31)	(2.74)**	(1.30)	(0.23)
infl	-0.091	-0.220	-0.204	0.076
	(0.31)	(0.78)	(1.55)	(0.55)
exch	0.665	0.377	0.213	0.165
	(2.40)*	(1.41)	(1.55)	(1.15)
inst	-0.283	-0.321	0.254	0.282
	(0.98)	(1.15)	(2.18)*	(2.27)*
unpredp	-0.897	0.088	-0.222	-0.198
	(2.12)*	(0.23)	(1.53)	(1.27)
unpredl	0.815	0.143	0.027	0.165
	(1.95)	(0.37)	(0.19)	(1.05)
fin	0.018	0.144	-0.129	0.262
	(0.08)	(0.65)	(1.23)	(2.33)*
fint	-0.427	-0.193	-0.043	-0.093
	(1.65)	(0.74)	(0.40)	(0.80)
fequ	-0.381	0.280	0.139	0.182
	(0.26)	(0.22)	(0.57)	(0.69)
floc	1.294	0.402	-0.155	0.086
	(0.97)	(0.29)	(0.67)	(0.35)
finv	-1.092	-1.457	1.011	0.510
	(0.91)	(1.06)	(1.74)	(0.78)
ffor	2.701	2.291	0.733	0.465
	(1.88)	(1.57)	(1.28)	(0.74)
ffam	-0.953	0.986	-1.383	-1.351
	(1.68)	(2.10)*	(5.80)**	(5.19)**
fmon	0.094	0.360	-0.204	0.145
	(0.07)	(0.28)	(0.37)	(0.25)
fsup	0.001	-0.407	-0.393	0.355
	(0.00)	(0.48)	(1.14)	(1.06)
flea	-0.266	-1.229	-0.117	-0.162
	(0.31)	(1.26)	(0.31)	(0.39)
fsta	-0.887	-0.639	-0.254	-0.207
	(1.78)	(1.35)	(1.01)	(0.77)
banks	-0.271	0.279	-0.173	-0.122
	(1.19)	(1.34)	(1.65)	(1.09)
bcoll	-0.981	-0.525	0.157	0.176
	(1.81)	(1.08)	(0.85)	(0.88)
bpap	-0.132	-0.651	0.071	0.462
	(0.29)	(1.38)	(0.35)	(2.16)*
brate	-0.390	0.138	-0.235	-0.103
	(1.73)	(0.64)	(2.29)*	(0.92)
custimp	-0.753	-0.667	-0.356	-0.204
	(1.97)*	(1.73)	(2.56)*	(1.32)
custexp	-0.874	-0.464	-0.121	-0.048
	(2.25)*	(1.17)	(0.81)	(0.29)
custrate	-0.087	-0.776	0.190	0.067
	(0.30)	(2.78)**	(1.22)	(0.41)
judo	-0.171	0.592	0.172	0.223
	(0.47)	(1.76)	(0.94)	(1.18)
judi	0.403	0.630	-0.006	-0.046

	(1.74)	(2.89)**	(0.06)	(0.41)
judirate	-0.101	0.000	-0.050	0.111
	(0.33)	(0.00)	(0.39)	(0.83)
centgov	0.074	0.193	0.055	0.006
	(0.20)	(0.58)	(0.37)	(0.04)
parl	-0.401	0.368	0.024	0.105
	(1.19)	(1.16)	(0.18)	(0.71)
cbank	0.096	-0.012	-0.013	0.131
	(0.31)	(0.04)	(0.09)	(0.82)
police	-0.047	-0.285	-0.082	-0.123
	(0.18)	(1.14)	(0.67)	(0.94)
govine	-0.096	-0.192	0.032	0.123
	(0.40)	(0.85)	(0.28)	(1.04)
ginter	-0.111	0.051	0.038	0.159
	(0.43)	(0.20)	(0.35)	(1.34)
corobs	0.258	-0.042	0.204	0.347
	(0.88)	(0.15)	(1.33)	(2.16)*
corry	0.430	0.521	-0.022	0.321
	(1.59)	(2.00)*	(0.14)	(2.05)*
corqb	-0.341	-0.393	-0.056	-0.003
	(1.10)	(1.33)	(0.26)	(0.01)
infr	-0.347	-0.276	-0.044	-0.309
	(1.13)	(0.96)	(0.27)	(1.79)
roads	0.243	0.420	0.103	0.064
	(1.04)	(1.92)	(0.92)	(0.53)
post	0.239	0.215	0.295	-0.087
	(0.77)	(0.74)	(1.36)	(0.36)
elec	-0.166	-0.175	-0.163	0.001
	(0.59)	(0.66)	(0.90)	(0.00)
water	-0.175	0.041	-0.153	-0.215
	(0.62)	(0.16)	(0.98)	(1.29)
crimest	0.322	-0.190	-0.129	-0.150
	(0.98)	(0.61)	(0.84)	(0.93)
crimeorg	-0.694	-0.678	0.118	-0.017
	(2.12)*	(2.19)*	(0.71)	(0.10)
sale1	1.836	1.529	0.489	0.407
	(3.57)**	(3.69)**	(3.14)**	(2.44)*
sale2	2.725	1.465	1.316	0.849
	(4.98)**	(3.13)**	(8.33)**	(4.94)**
owind	0.567	0.373	-0.074	-0.009
	(1.66)	(1.19)	(0.52)	(0.06)
owfam	1.078	0.591	0.131	0.172
	(2.75)**	(1.63)	(0.71)	(0.85)
owork	1.135	0.936	-0.360	-0.101
	(2.64)**	(2.22)*	(1.79)	(0.47)
owsta	0.118	0.264	-0.550	-0.154
	(0.30)	(0.71)	(3.26)**	(0.83)
Constant	-0.538	-0.995	0.526	-0.715
	(0.67)	(1.34)	(2.11)*	(2.57)*
Observations	788	788	3316	3316

Source: BEEPS. Absolute value of z statistics in parentheses; * significant at 5%; ** significant at 1%

Table A.5 Employment: Multinomial Logit CIS-7 Vs.Others

Dep: Employment	CIS-7	CIS-7	Others	Others
Ref.Cat: Sta-bles	Up	Down	Up	Down
tax	-0.084	-0.074	-0.008	-0.121
	(0.30)	(0.32)	(0.07)	(1.10)
taxreg	0.396	-0.057	0.144	0.120
	(1.51)	(0.27)	(1.37)	(1.11)
taxlev	-0.163	0.297	-0.175	0.126
	(0.57)	(1.26)	(1.57)	(1.08)
labreg	0.884	-0.764	0.352	0.353
	(1.91)	(1.52)	(1.96)*	(1.96)
infl	-0.153	-0.013	-0.131	0.109
	(0.47)	(0.05)	(1.06)	(0.88)
exch	0.972	0.410	0.120	0.095
	(3.17)**	(1.65)	(0.94)	(0.75)
inst	-0.280	-0.045	0.255	0.166
	(0.90)	(0.18)	(2.37)*	(1.51)
unpredp	0.077	0.323	-0.024	0.071
	(0.18)	(0.94)	(0.17)	(0.51)
unpredl	-0.659	-0.063	-0.070	-0.125
	(1.52)	(0.18)	(0.52)	(0.89)
fin	-0.026	0.418	-0.004	0.330
	(0.10)	(2.03)*	(0.04)	(3.31)**
fint	-0.060	-0.304	-0.254	-0.369
	(0.21)	(1.30)	(2.67)**	(3.64)**
fequ	-0.906	1.185	-0.186	0.289
	(0.36)	(0.91)	(0.85)	(1.32)
floc	1.166	0.511	-0.387	0.145
	(1.18)	(0.52)	(1.79)	(0.71)
finv	-0.260	-1.917	0.131	-0.075
	(0.20)	(1.57)	(0.28)	(0.15)
ffor	1.631	-0.556	-0.194	0.003
	(1.73)	(0.46)	(0.43)	(0.01)
ffam	-0.464	0.353	-1.233	-0.884
	(0.87)	(0.83)	(4.91)**	(3.33)**
fmon	-1.343	1.940	0.799	-0.091
	(0.54)	(1.52)	(1.64)	(0.15)
fsup	-0.107	-0.804	0.450	0.624
	(0.13)	(1.12)	(1.38)	(1.92)
flea	-0.061	-0.140	0.469	0.528
	(0.05)	(0.17)	(1.25)	(1.36)
fsta	-0.554	0.279	-0.612	-0.382
	(0.86)	(0.65)	(2.14)*	(1.65)
banks	-0.693	-0.181	-0.151	-0.144
	(2.70)**	(0.91)	(1.52)	(1.42)
bcoll	1.400	0.090	0.262	0.310
	(2.82)**	(0.18)	(1.57)	(1.80)
bpap	-0.830	-1.259	0.101	0.262
	(1.48)	(2.80)**	(0.55)	(1.40)
brate	-0.095	0.015	-0.131	-0.058
	(0.39)	(0.07)	(1.37)	(0.58)
custimp	-0.448	0.555	-0.103	0.246
	(1.31)	(1.55)	(0.86)	(1.87)
custexp	-0.208	-0.488	-0.078	-0.335
	(0.53)	(1.47)	(0.59)	(2.43)*
custrate	0.165	-0.936	0.314	0.041
	(0.55)	(3.43)**	(2.34)*	(0.28)
judo	-0.099	0.027	0.016	0.023
	(0.26)	(0.08)	(0.10)	(0.14)

judi	0.092	0.112	0.092	0.004
	(0.37)	(0.55)	(0.96)	(0.04)
judirate	0.108	0.159	-0.080	-0.006
	(0.33)	(0.59)	(0.71)	(0.05)
centgov	0.084	-0.579	-0.110	-0.136
	(0.22)	(1.77)	(0.81)	(0.97)
parl	-0.067	0.801	-0.038	0.112
	(0.18)	(2.65)**	(0.30)	(0.86)
cbank	-0.041	-0.181	-0.096	-0.026
	(0.12)	(0.66)	(0.68)	(0.18)
police	-0.165	-0.266	0.060	0.067
	(0.59)	(1.14)	(0.53)	(0.58)
govine	-0.083	-0.415	-0.075	-0.122
	(0.33)	(1.96)	(0.74)	(1.15)
ginter	0.186	0.175	0.185	0.048
	(0.63)	(0.74)	(1.76)	(0.46)
corobs	-0.085	-0.390	0.031	-0.028
	(0.27)	(1.50)	(0.23)	(0.20)
corry	0.595	0.314	-0.044	-0.010
	(2.17)*	(1.31)	(0.33)	(0.07)
corqb	-0.058	0.511	-0.228	-0.228
	(0.18)	(1.80)	(1.21)	(1.09)
infr	-0.210	0.020	0.015	-0.037
	(0.62)	(0.07)	(0.10)	(0.24)
roads	0.245	0.388	0.279	0.065
	(0.99)	(1.87)	(2.75)**	(0.61)
post	-0.011	-0.297	0.312	0.049
	(0.03)	(1.05)	(1.61)	(0.23)
elec	-0.063	-0.225	-0.379	-0.206
	(0.21)	(0.88)	(2.25)*	(1.18)
water	-0.218	-0.073	-0.082	-0.082
	(0.73)	(0.30)	(0.56)	(0.54)
crimest	-0.263	-0.389	0.062	-0.093
	(0.71)	(1.33)	(0.44)	(0.65)
crimeorg	0.301	0.143	-0.149	0.174
	(0.84)	(0.48)	(0.99)	(1.14)
sale1	-0.328	0.675	-0.337	0.086
	(0.74)	(1.72)	(2.17)*	(0.53)
sale2	0.766	0.824	0.336	0.514
	(1.59)	(1.90)	(2.18)*	(3.17)**
owind	-0.322	-0.946	0.039	-0.640
	(0.90)	(3.17)**	(0.30)	(4.87)**
owfam	-0.451	-1.463	0.181	-0.843
	(1.09)	(4.19)**	(1.11)	(4.64)**
owork	-0.311	0.563	-0.199	0.198
	(0.61)	(1.50)	(0.99)	(1.11)
owsta	-0.510	-0.251	-0.435	0.298
	(1.18)	(0.73)	(2.52)*	(1.93)
Constant	-0.038	-0.581	0.171	-0.226
	(0.05)	(0.87)	(0.73)	(0.93)
Observations	788	788	3316	3316

Source: BEEPS. Absolute value of z statistics in parentheses; * significant at 5%; ** significant at 1%

Table A.6 Probit CIS-7 Vs.Others

Dep. Var.	CIS-7=1 Other CIS=0	CIS-7=1 Other CIS=0 with contr. var.	CIS-7=1 Non-CIS=0	CIS-7=1 Non-CIS=0 with contr. var.
tax	-0.106	-0.116	-0.090	-0.114
	(1.30)	(1.38)	(1.24)	(1.48)
taxreg	-0.141	-0.142	0.099	0.091
	(1.89)	(1.86)	(1.40)	(1.20)
taxlev	-0.257	-0.252	0.154	0.159
	(2.92)**	(2.80)**	(2.12)*	(2.06)*
labreg	-0.096	-0.074	-0.552	-0.577
	(0.58)	(0.43)	(4.14)**	(3.97)**
infl	-0.257	-0.249	0.495	0.505
	(2.77)**	(2.62)**	(6.22)**	(5.95)**
exch	-0.066	-0.033	0.533	0.593
	(0.77)	(0.37)	(6.51)**	(6.76)**
inst	-0.110	-0.100	-0.438	-0.436
	(1.31)	(1.16)	(5.71)**	(5.34)**
unpredp	-0.429	-0.463	-0.102	-0.215
	(4.09)**	(4.31)**	(1.02)	(2.01)*
unpredl	0.049	0.070	0.087	0.112
	(0.46)	(0.65)	(0.88)	(1.06)
fin	-0.012	-0.037	0.005	-0.126
	(0.17)	(0.50)	(0.07)	(1.79)
fint	0.167	0.162	0.443	0.388
	(2.17)*	(2.03)*	(6.82)**	(5.58)**
fequ	-0.308	-0.324	-0.955	-1.070
	(0.82)	(0.85)	(4.03)**	(4.12)**
floc	-0.324	-0.274	-0.423	-0.271
	(1.32)	(1.13)	(2.30)*	(1.43)
finv	-0.559	-0.466	-0.034	-0.006
	(1.45)	(1.16)	(0.10)	(0.02)
ffor	0.393	0.662	0.521	0.659
	(1.15)	(1.89)	(2.00)*	(2.46)*
ffam	0.498	0.446	0.122	-0.072
	(2.73)**	(2.36)*	(0.92)	(0.51)
fmon	0.307	0.274	-0.656	-0.671
	(0.75)	(0.63)	(1.88)	(1.85)
fsup	-0.291	-0.252	0.477	0.648
	(1.34)	(1.13)	(2.14)*	(2.80)**
flea	-0.148	-0.235	-0.115	-0.119
	(0.52)	(0.82)	(0.46)	(0.45)
fsta	0.242	-0.076	0.808	0.541
	(1.55)	(0.46)	(5.73)**	(3.43)**
banks	0.153	0.108	-0.050	-0.101
	(2.12)*	(1.44)	(0.78)	(1.47)
bcoll	-0.319	-0.300	-0.593	-0.625
	(2.20)*	(2.03)*	(4.63)**	(4.60)**
bpap	0.114	0.119	-0.463	-0.488
	(0.75)	(0.78)	(3.80)**	(3.77)**
brate	0.165	0.157	-0.101	-0.076
	(2.34)*	(2.16)*	(1.59)	(1.12)
custimp	-0.452	-0.533	0.665	0.417
	(3.52)**	(4.02)**	(7.87)**	(4.56)**
custexp	-0.085	-0.127	0.325	0.239
	(0.69)	(0.99)	(3.59)**	(2.43)*
custrate	0.230	0.228	0.303	0.405
	(2.45)*	(2.35)*	(3.54)**	(4.38)**
judo	-0.048	-0.054	-0.158	-0.243

	(0.39)	(0.43)	(1.49)	(2.13)*
judi	-0.422	-0.414	-0.202	-0.198
	(5.84)**	(5.60)**	(3.20)**	(2.95)**
judirate	0.063	0.081	-0.394	-0.397
	(0.68)	(0.85)	(4.81)**	(4.54)**
centgov	-0.664	-0.667	-0.122	-0.100
	(6.50)**	(6.31)**	(1.24)	(0.94)
parl	0.025	-0.005	-0.233	-0.280
	(0.26)	(0.05)	(2.57)*	(2.89)**
cbank	-0.193	-0.183	0.334	0.315
	(2.08)*	(1.92)	(3.48)**	(3.08)**
police	0.096	0.115	0.402	0.432
	(1.20)	(1.40)	(5.38)**	(5.41)**
govine	-0.021	-0.009	-0.046	-0.017
	(0.28)	(0.11)	(0.67)	(0.23)
ginter	0.043	0.094	0.282	0.287
	(0.55)	(1.15)	(4.07)**	(3.85)**
corobs	0.470	0.480	0.050	0.066
	(4.74)**	(4.70)**	(0.59)	(0.72)
corry	0.272	0.308	0.268	0.286
	(3.03)**	(3.32)**	(3.32)**	(3.33)**
corqb	0.365	0.363	0.653	0.638
	(3.33)**	(3.20)**	(5.95)**	(5.52)**
infr	0.105	0.044	0.050	0.039
	(1.05)	(0.44)	(0.52)	(0.38)
roads	0.381	0.378	0.009	0.004
	(4.99)**	(4.85)**	(0.13)	(0.05)
post	0.323	0.320	0.629	0.644
	(2.86)**	(2.79)**	(5.89)**	(5.64)**
elec	0.640	0.586	0.534	0.551
	(6.33)**	(5.66)**	(5.89)**	(5.73)**
water	0.137	0.135	0.067	0.037
	(1.41)	(1.36)	(0.77)	(0.40)
crimest	-0.003	-0.013	-0.191	-0.204
	(0.03)	(0.13)	(2.02)*	(2.02)*
crimeorg	0.166	0.133	0.129	0.094
	(1.57)	(1.22)	(1.30)	(0.89)
sale1		0.566		0.698
		(4.41)**		(5.92)**
sale2		0.258		-0.211
		(1.83)		(1.72)
owind		-0.044		-0.294
		(0.40)		(3.05)**
owfam		-0.037		0.140
		(0.29)		(1.19)
owork		-0.186		0.999
		(1.47)		(6.84)**
owsta		0.423		0.335
		(3.22)**		(3.00)**
sales==2		-0.313		-0.247
		(3.36)**		(2.94)**
sales==3		-0.191		0.014
		(2.03)*		(0.16)
empl==2		-0.327		-0.078
		(3.52)**		(0.90)
empl==3		0.014		0.162
		(0.16)		(1.99)*
Constant	0.610	0.541	-2.124	-1.972
	(3.41)**	(2.28)*	(16.42)**	(10.34)**